

**BODY & ACCESSORIES****09**  
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## 09-02A ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

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## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

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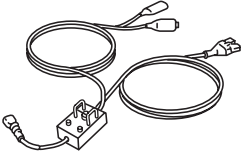
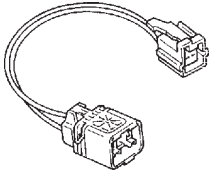
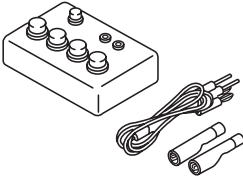
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ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

RESTRAINTS SST

id086000800100

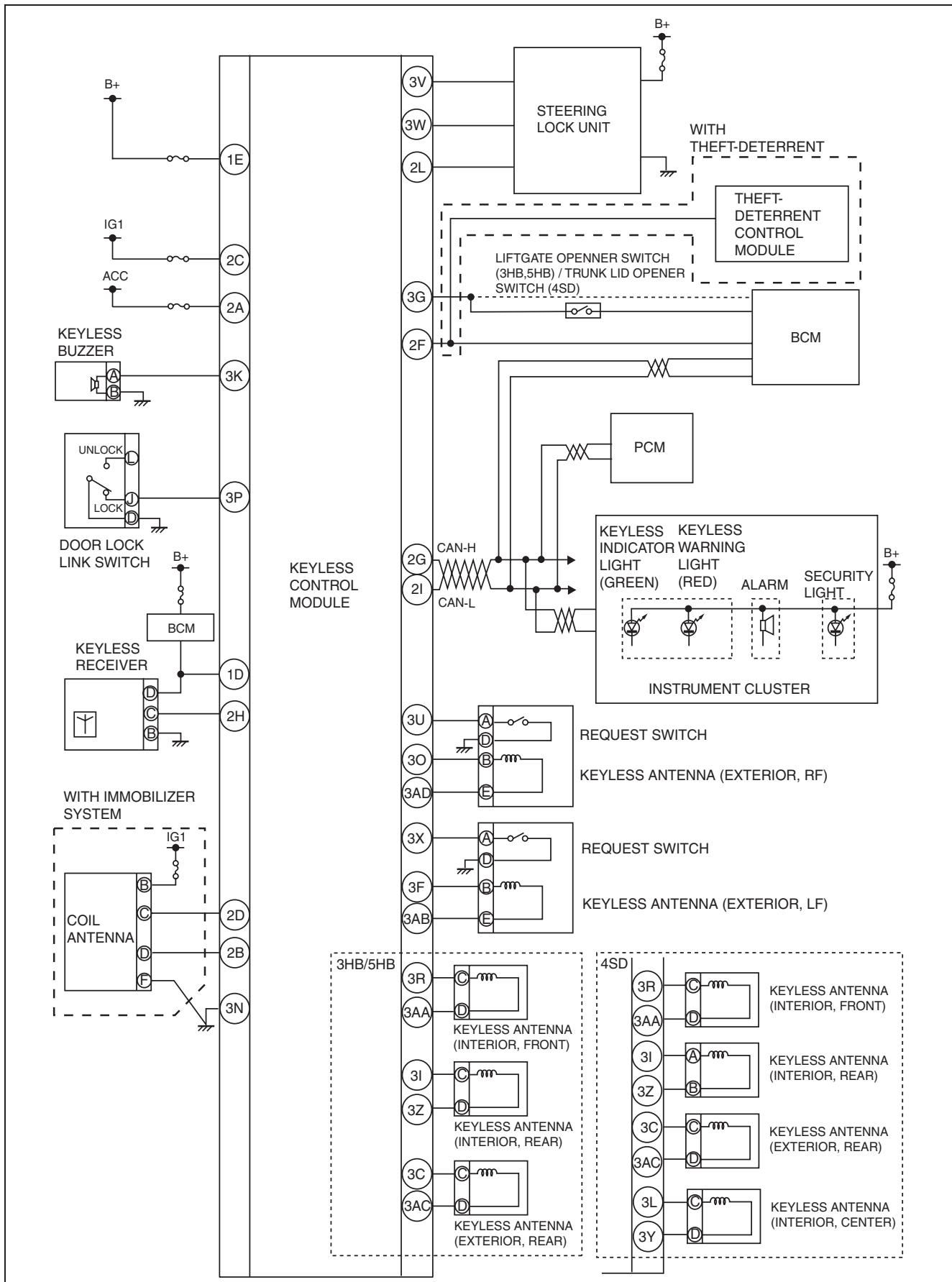
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| <div>49 H066 002</div> <div>Deployment tool</div> <div></div> | <div>49 D066 002</div> <div>Adapter harness</div> <div></div>              | <div>49 L066 002</div> <div>Adapter harness</div> <div></div> |
| <div>49 G066 003</div> <div>Adapter harness</div> <div></div> | <div>49 N088 0A0</div> <div>Fuel and Thermometer checker</div> <div></div> | <div>-</div>                                                                                                                                     |



# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## SYSTEM WIRING DIAGRAM [ADVANCED KEYLESS AND START SYSTEM]

id0902e1344500



am2zzw0000510

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## FOREWORD [ADVANCED KEYLESS AND START SYSTEM]

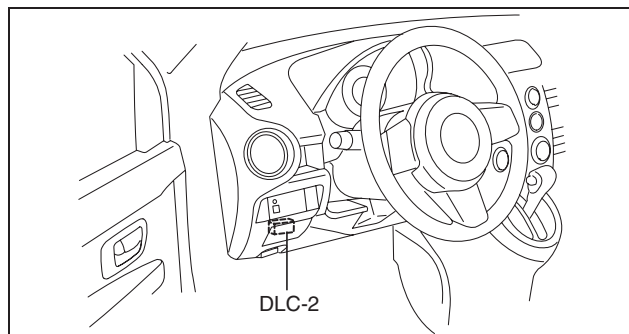
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- The OBD (on-board diagnostic) system has the following functions:
  - Malfunction detection function: Detects malfunctions in the advanced keyless and start system and outputs DTCs.
  - PID/data monitor function: Reads out specific input/output signals and the system status.
- Diagnostic DTCs can be read/cleared using the M-MDS.

## DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM]

id0902e1345400

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "RKE".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "RKE".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the keyless control module. (See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)

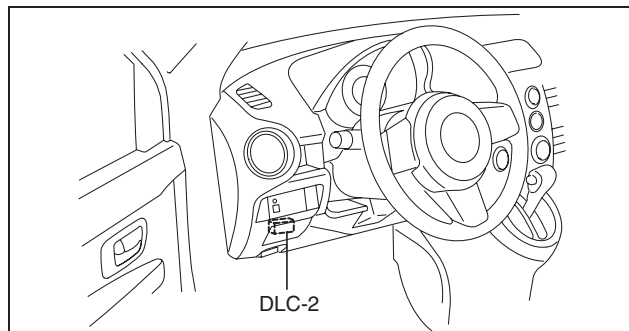


am2zzw0000210

## CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM]

id0902e1400300

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "RKE".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "RKE".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Turn the ignition switch to the LOCK position.
6. Turn the ignition switch to the ON position and wait for **5 s more**.
7. Perform DTC inspection. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)
8. Verify that no DTCs are displayed.



am2zzw0000210

## DTC TABLE [ADVANCED KEYLESS AND START SYSTEM]

id0902e1347100

| DTC           | Detection condition                                                       | Reference                                                         |
|---------------|---------------------------------------------------------------------------|-------------------------------------------------------------------|
| M-MDS display |                                                                           |                                                                   |
| B1026:51      | Steering lock unit not programmed                                         | (See 09-02A-9 DTC B1026:51 [ADVANCED KEYLESS AND START SYSTEM].)  |
| B1026:87      | Communication error between keyless control module and steering lock unit | (See 09-02A-9 DTC B1026:87 [ADVANCED KEYLESS AND START SYSTEM].)  |
| B1026:96      | Steering lock unit status malfunction signal detected                     | (See 09-02A-11 DTC B1026:96 [ADVANCED KEYLESS AND START SYSTEM].) |
| B102B:51      | No advanced key programming record (programming never performed in past)  | (See 09-02A-11 DTC B102B:51 [ADVANCED KEYLESS AND START SYSTEM].) |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| DTC           | Detection condition                                                                      | Reference                                                                   |
|---------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| M-MDS display |                                                                                          |                                                                             |
| B108A:29      | Push switch off signal detected while ignition switch is at ON                           | (See 09-02A-12 DTC B108A:29 [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10A5:12      | Keyless beeper output voltage malfunction                                                | (See 09-02A-14 DTC B10A5:12 [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10C6:1F      | Cannot receive signal correctly from keyless antenna (exterior, rear)                    | (See 09-02A-15 DTC B10C6:1F [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10C7:1F      | Cannot receive signal correctly from keyless antenna (interior, rear)                    | (See 09-02A-17 DTC B10C7:1F [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10C8:1F*1    | Cannot receive signal correctly from keyless antenna (interior, center)                  | (See 09-02A-18 DTC B10C8:1F [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10C9:1F      | Cannot receive signal correctly from keyless antenna (interior, front)                   | (See 09-02A-20 DTC B10C9:1F [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10D1:23      | Request switch (LF) ON signal detected while driving                                     | (See 09-02A-22 DTC B10D1:23 [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10D3:23      | Request switch (RF) ON signal detected while driving                                     | (See 09-02A-23 DTC B10D3:23 [ADVANCED KEYLESS AND START SYSTEM].)           |
| B10E7:16      | Keyless control module IG1 power voltage malfunction                                     | (See 09-02A-25 DTC B10E7:16 [ADVANCED KEYLESS AND START SYSTEM].)           |
| B113E:11      | Liftgate opener switch (3HB/5HB)/Trunk lid opener switch (4SD) input voltage malfunction | (See 09-02A-26 DTC B113E:11 [ADVANCED KEYLESS AND START SYSTEM].)           |
| B11FD:1F      | Cannot receive signal correctly from keyless antenna (LF)                                | (See 09-02A-28 DTC B11FD:1F [ADVANCED KEYLESS AND START SYSTEM].)           |
| B1210:1F      | Cannot receive signal correctly from keyless antenna (RF)                                | (See 09-02A-30 DTC B1210:1F [ADVANCED KEYLESS AND START SYSTEM].)           |
| P1794:16      | Keyless control module power voltage low (power from P/W 20 A fuse)                      | (See 09-02A-31 DTC P1794:16, P1794:17 [ADVANCED KEYLESS AND START SYSTEM].) |
| P1794:17      | Keyless control module power voltage rising (power from P/W 20 A fuse)                   |                                                                             |
| U0001:88      | Module communication error (HS-CAN)                                                      | (See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)          |
| U0028:87      | Correct data cannot be received from BCM (no response for <b>10 times</b> )              | (See 09-02A-33 DTC U0028:87 [ADVANCED KEYLESS AND START SYSTEM].)           |
| U0100:00      | Communication error (no response) between keyless control module and PCM                 | (See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)          |
| U0401:68      | Correct data cannot be received from PCM                                                 | (See 09-02A-34 DTC U0401:68 [ADVANCED KEYLESS AND START SYSTEM].)           |
| U201F:00      | Communication error between keyless control module and keyless receiver                  | (See 09-02A-34 DTC U201F:00 [ADVANCED KEYLESS AND START SYSTEM].)           |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| DTC           | Detection condition                                                     | Reference                                                                   |
|---------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| M-MDS display |                                                                         |                                                                             |
| U201F:13      | Keyless receiver not connecting                                         | (See 09-02A-36 DTC U201F:13 [ADVANCED KEYLESS AND START SYSTEM].)           |
| U2100:00      | Configuration error                                                     | (See 09-02A-37 DTC U2100:00 [ADVANCED KEYLESS AND START SYSTEM].)           |
| U3000:41      | Keyless control module internal malfunction                             | (See 09-02A-38 DTC U3000:41 [ADVANCED KEYLESS AND START SYSTEM].)           |
| U3003:16      | Keyless control module power voltage low (power from ROOM 15 A fuse)    | (See 09-02A-38 DTC U3003:16, U3003:17 [ADVANCED KEYLESS AND START SYSTEM].) |
| U3003:17      | Keyless control module power voltage rising (power from ROOM 15 A fuse) |                                                                             |
| U3004:16      | Keyless control module ACC power voltage malfunction                    | (See 09-02A-40 DTC U3004:16 [ADVANCED KEYLESS AND START SYSTEM].)           |

\*1 : 4SD

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### With Immobilizer System

| DTC           |                                                                                     | Detection condition                                                                                                                                             | Reference                                                                                                             |
|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| M-MDS display | Security light flashing pattern                                                     |                                                                                                                                                                 |                                                                                                                       |
| B10D5:13      |    | <ul style="list-style-type: none"><li>Coil antenna malfunction</li><li>The PCM determined a malfunction in the coil antenna even though it is normal.</li></ul> | (See 09-02B-8 SECURITY LIGHT: 12, DTC: B10D5:13/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)  |
| B10D7:05      |    | Key ID number program error                                                                                                                                     | (See 09-02B-9 SECURITY LIGHT: 13, DTC: B10D7:05/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)  |
| B10D7:51      |    | Keyless control module detected unprogrammed key ID number.                                                                                                     | (See 09-02B-14 SECURITY LIGHT: 15, DTC: B10D7:51/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| B10D7:81      |    | The keyless control module cannot read key ID number data normally.                                                                                             | (See 09-02B-13 SECURITY LIGHT: 14, DTC: B10D7:81/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| B10D7:94      |  | The key ID number data cannot be read.                                                                                                                          | (See 09-02B-11 SECURITY LIGHT: 13, DTC: B10D7:94/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| B10D8:00      |  | Only one key has been programmed.                                                                                                                               | (See 09-02B-17 SECURITY LIGHT: 21, DTC: B10D8:00/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| B10D9:87      |  | No detected communication with the coil antenna.                                                                                                                | (See 09-02B-6 SECURITY LIGHT: 11, DTC: B10D9:87/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)  |
| B10DA:51      |  | Communication error between keyless control module and PCM (data transfer error)                                                                                | (See 09-02B-18 SECURITY LIGHT: 22, DTC: B10DA:51/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| B10DA:62      |  | ID number data between keyless control module and PCM are different.                                                                                            | (See 09-02B-19 SECURITY LIGHT: 23, DTC: B10DA:62/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| U0100:87      |  | Communication error between the keyless control module and the PCM (no response/condition mismatch)                                                             | (See 09-02B-16 SECURITY LIGHT: 16, DTC: U0100:87/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### DTC B1026:51 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387000

#### Detection Condition

- Steering lock unit not programmed

#### Possible Causes

- Programmed not performed after steering lock unit replacement
- Steering lock unit malfunction
- Keyless control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM STEERING LOCK UNIT PROGRAMMING</b> <ul style="list-style-type: none"><li>Perform the steering lock unit programming.<br/>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Is the DTC B1026:51 displayed?</li></ul> | Yes<br>Go to the next step.                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                                                                                         |
| 2    | <b>INSPECT STEERING LOCK UNIT</b> <ul style="list-style-type: none"><li>Inspect the steering lock unit.<br/>(See 09-21-6 STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM].)</li><li>Is the steering lock unit normal?</li></ul>                                                                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Replace the steering lock unit and perform steering lock unit programming.<br><br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>Go to the next step. |
| 3    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"><li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Is the DTC B1026:51 displayed?</li></ul>                                                                                                                                                                                 | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                                                                                         |

### DTC B1026:87 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387100

#### Detection Condition

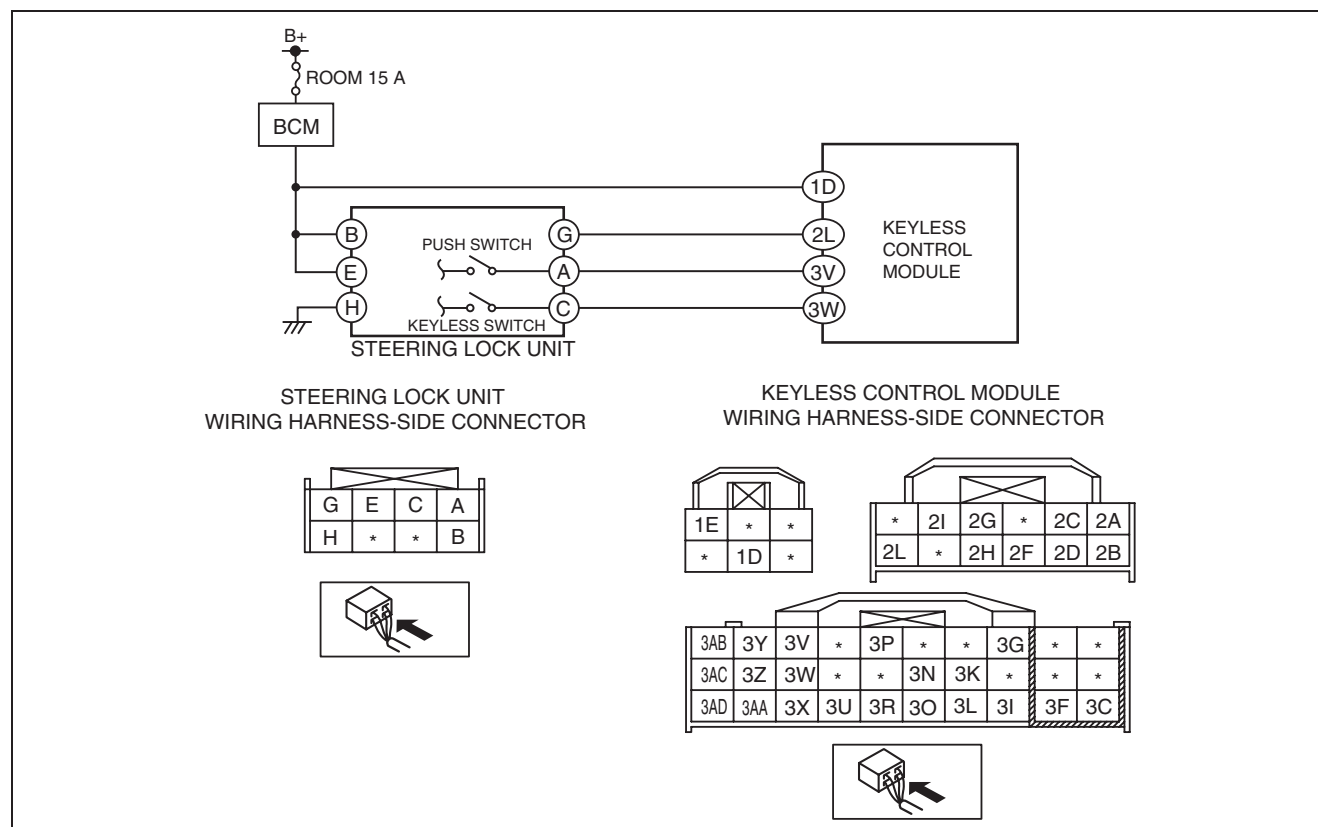
- Communication error between keyless control module and steering lock unit

#### Possible Causes

- Steering lock unit connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between steering lock unit and keyless control module
- Steering lock unit malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000503

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT STEERING LOCK UNIT CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the steering lock unit connector.</li> <li>Inspect the steering lock unit connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                               | Yes<br>Go to the next step.                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the steering lock unit connector or terminal, then <b>go to Step 5</b> .                                |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                           | Yes<br>Go to the next step.                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 5</b> .                            |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN STEERING LOCK UNIT AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between keyless control module terminal 2L and steering lock unit terminal G for the following: <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the wiring harness between steering lock unit and keyless control module, then <b>go to Step 5</b> . |



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>INSPECT STEERING LOCK UNIT</b> <ul style="list-style-type: none"> <li>Inspect the steering lock unit.<br/>(See 09-21-6 STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the steering lock unit normal?</li> </ul>                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Replace the steering lock unit and perform steering lock unit programming.<br>(See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>Go to the next step. |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B1026:87 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                |

### DTC B1026:96 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387200

#### Detection Condition

- Steering lock unit status malfunction signal detected

#### Possible Causes

- Steering lock unit malfunction
- Keyless control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                         | Action                                                                                                                                                                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT STEERING LOCK UNIT</b> <ul style="list-style-type: none"> <li>Inspect the steering lock unit.<br/>(See 09-21-6 STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the steering lock unit normal?</li> </ul>                                                                           | Yes<br>Go to the next step.                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                    | No<br>Replace the steering lock unit and perform steering lock unit programming.<br>(See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>Go to the next step. |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B1026:96 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                    | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                |

### DTC B102B:51 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387300

#### Detection Condition

- No advanced key programming record (programming never performed in past)

#### Note

- If the advanced key has never been programmed, DTC B102B:51 cannot be detected even if the advanced key is cleared.

#### Possible Causes

- Advanced key is not programmed.

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

- Keyless control module malfunction

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED ADVANCED KEYS</b> <ul style="list-style-type: none"><li>• Using the M-MDS, perform the PID/data monitor inspection and verify the number of programmed advanced keys.<br/>(See 09-02A-42 PID/DATA MONITOR INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)<br/>— NUMCARD<br/>(See 09-02A-42 PID/DATA MONITOR TABLE [ADVANCED KEYLESS AND START SYSTEM].)</li><li>• Is there a programmed advanced key?</li></ul> | Yes<br>Go to the next step.                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Program the advanced key, then go to the next step.<br>(See 09-14-123 ADVANCED KEY ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].) |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"><li>• Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li><li>• Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li><li>• Is the DTC B102B:51 displayed?</li></ul>                                                                                                            | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                                                                                |

### DTC B108A:29 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387400

#### Detection Condition

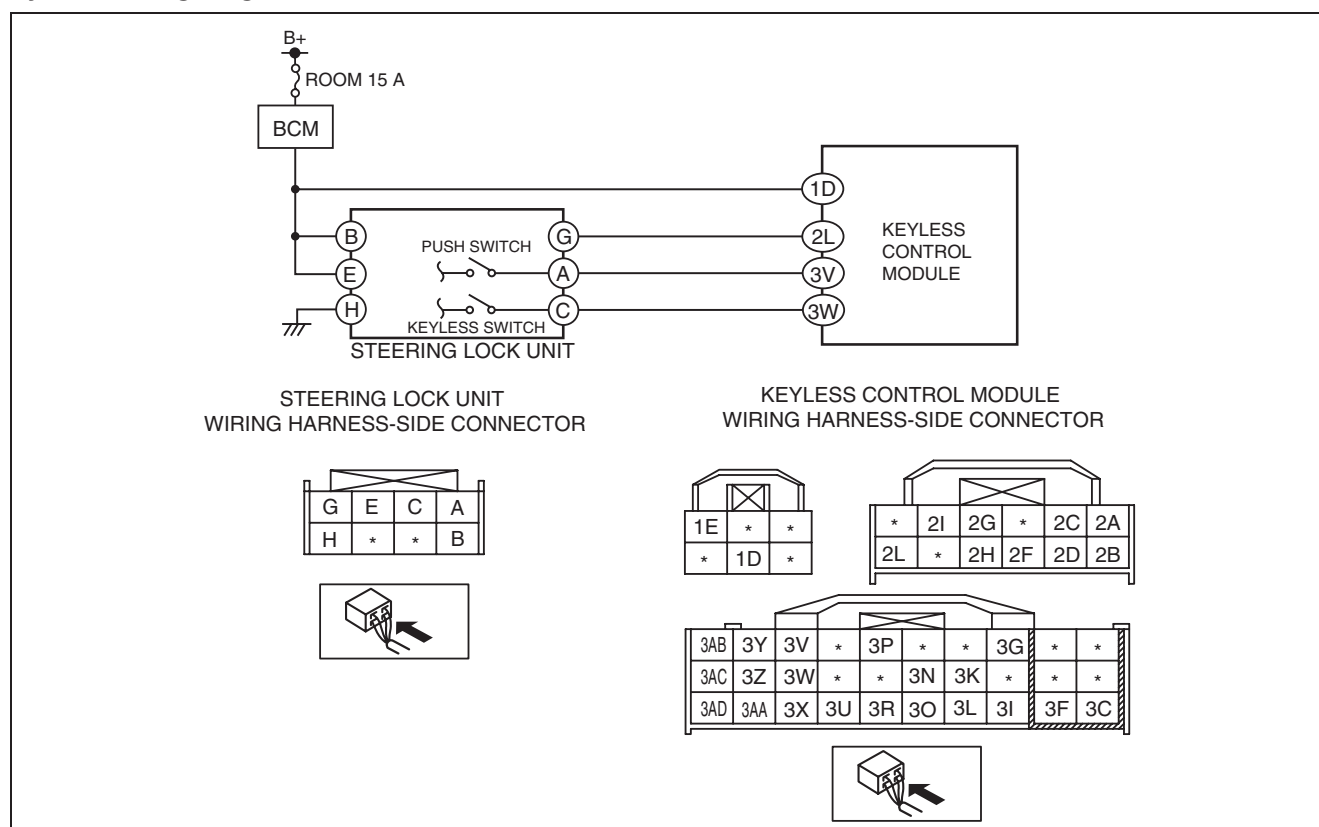
- Push switch off signal detected while ignition switch is at ON

#### Possible Causes

- Steering lock unit connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between steering lock unit and keyless control module
- Steering lock unit malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000503

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT STEERING LOCK UNIT CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the steering lock unit connector.</li> <li>Inspect the steering lock unit connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                               | Yes<br>Go to the next step.                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the steering lock unit connector or terminal, then <b>go to Step 5</b> .                                |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                           | Yes<br>Go to the next step.                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 5</b> .                            |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN STEERING LOCK UNIT AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between keyless control module terminal 3V and steering lock unit terminal A for the following: <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the wiring harness between steering lock unit and keyless control module, then <b>go to Step 5</b> . |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>STEERING LOCK UNIT INSPECTION</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the voltage of steering lock unit terminals A, B, E, and H.<br/>(See 09-21-6 STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the voltage normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Replace the steering lock unit and perform steering lock unit programming.<br>(See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>Go to the next step. |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B108A:29 displayed?</li> </ul>         | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                |

### DTC B10A5:12 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387600

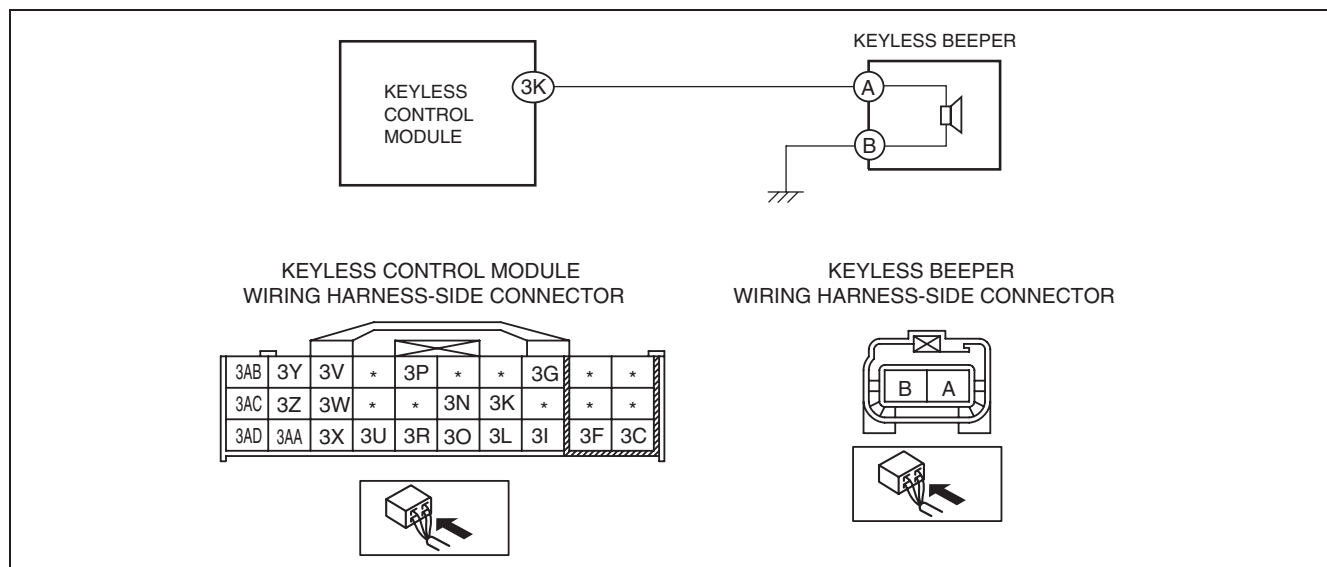
#### Detection Condition

- Keyless beeper output voltage malfunction

#### Possible Causes

- Keyless beeper connector or terminals malfunction
- Open circuit in wiring harness between keyless beeper and body ground
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between keyless beeper and keyless control module
- Keyless beeper malfunction
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000503

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                |     | Action                                                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS BEEPER CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless beeper connector.</li> <li>Inspect the keyless beeper connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                     | Yes | Go to the next step.                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                           | No  | Repair/replace the keyless beeper connector or terminal, then go to Step 6.                                                                    |
| 2    | <b>INSPECT WIRING HARNESS BETWEEN KEYLESS BEEPER AND GROUND</b> <ul style="list-style-type: none"> <li>Keyless beeper connector is disconnected.</li> <li>Inspect for continuity between keyless beeper terminal B (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                        | Yes | Go to the next step.                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                           | No  | Repair or replace the wiring harness between keyless beeper and body ground, then go to Step 6.                                                |
| 3    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                     | Yes | Go to the next step.                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                           | No  | Repair/replace the keyless control module connector or terminal, then go to Step 6.                                                            |
| 4    | <b>INSPECT WIRING HARNESS BETWEEN KEYLESS BEEPER AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between keyless beeper terminal A and keyless control module terminal 3K for the following: <ul style="list-style-type: none"> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul>                            | Yes | Go to the next step.                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                           | No  | Repair or replace the wiring harness between keyless beeper and keyless control module, then go to Step 6.                                     |
| 5    | <b>INSPECT KEYLESS BEEPER</b> <ul style="list-style-type: none"> <li>Inspect the keyless beeper. (See 09-14-131 KEYLESS BEEPER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless beeper normal?</li> </ul>                                                                                                                                                                                         | Yes | Go to the next step.                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                           | No  | Replace the keyless beeper, then go to the next step. (See 09-14-130 KEYLESS BEEPER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
| 6    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS. (See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10A5:12 displayed?</li> </ul> | Yes | Replace the keyless control module. (See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                           | No  | DTC troubleshooting completed.                                                                                                                 |

### DTC B10C6:1F [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387700

#### Detection Condition

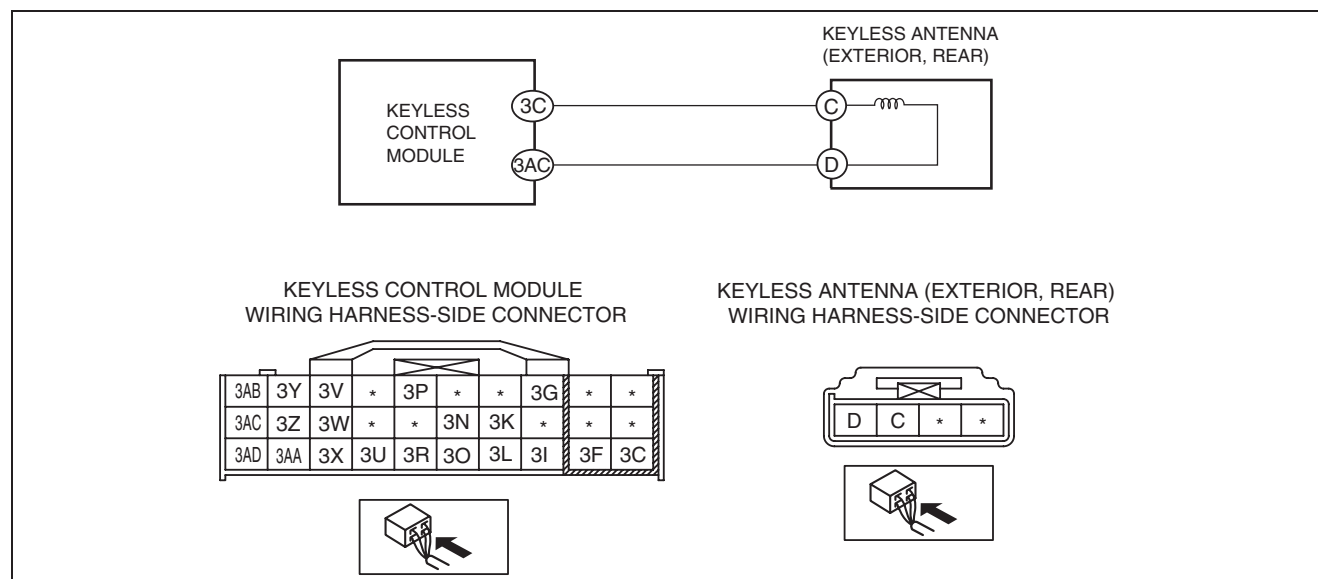
- Cannot receive signal correctly from keyless antenna (exterior, rear)

#### Possible Causes

- Keyless antenna (exterior, rear) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between keyless antenna (exterior, rear) and keyless control module
- Keyless antenna (exterior, rear) malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000503

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS ANTENNA (EXTERIOR, REAR) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless antenna (exterior, rear) connector.</li> <li>Inspect the keyless antenna (exterior, rear) connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                | Yes<br>Go to the next step.                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair/replace the keyless antenna (exterior, rear) connector or terminal, then <b>go to Step 5</b> .                                                              |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 5</b> .                                                                        |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN KEYLESS ANTENNA (EXTERIOR, REAR) AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between keyless antenna (exterior, rear) terminal C and keyless control module terminal 3C, and keyless antenna (exterior, rear) terminal D and keyless control module terminal 3AC for the following: <ul style="list-style-type: none"> <li>— Short to ground</li> <li>— Short to power supply</li> <li>— Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the wiring harness between keyless antenna (exterior, rear) and keyless control module, then <b>go to Step 5</b> .                               |
| 4    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS. (See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C6:1F displayed?</li> </ul>                                                                                                                                  | Yes<br>Replace the keyless antenna (exterior, rear), then go to the next step. (See 09-14-125 KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>DTC troubleshooting completed.                                                                                                                                     |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C6:1F displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                          |

### DTC B10C7:1F [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387800

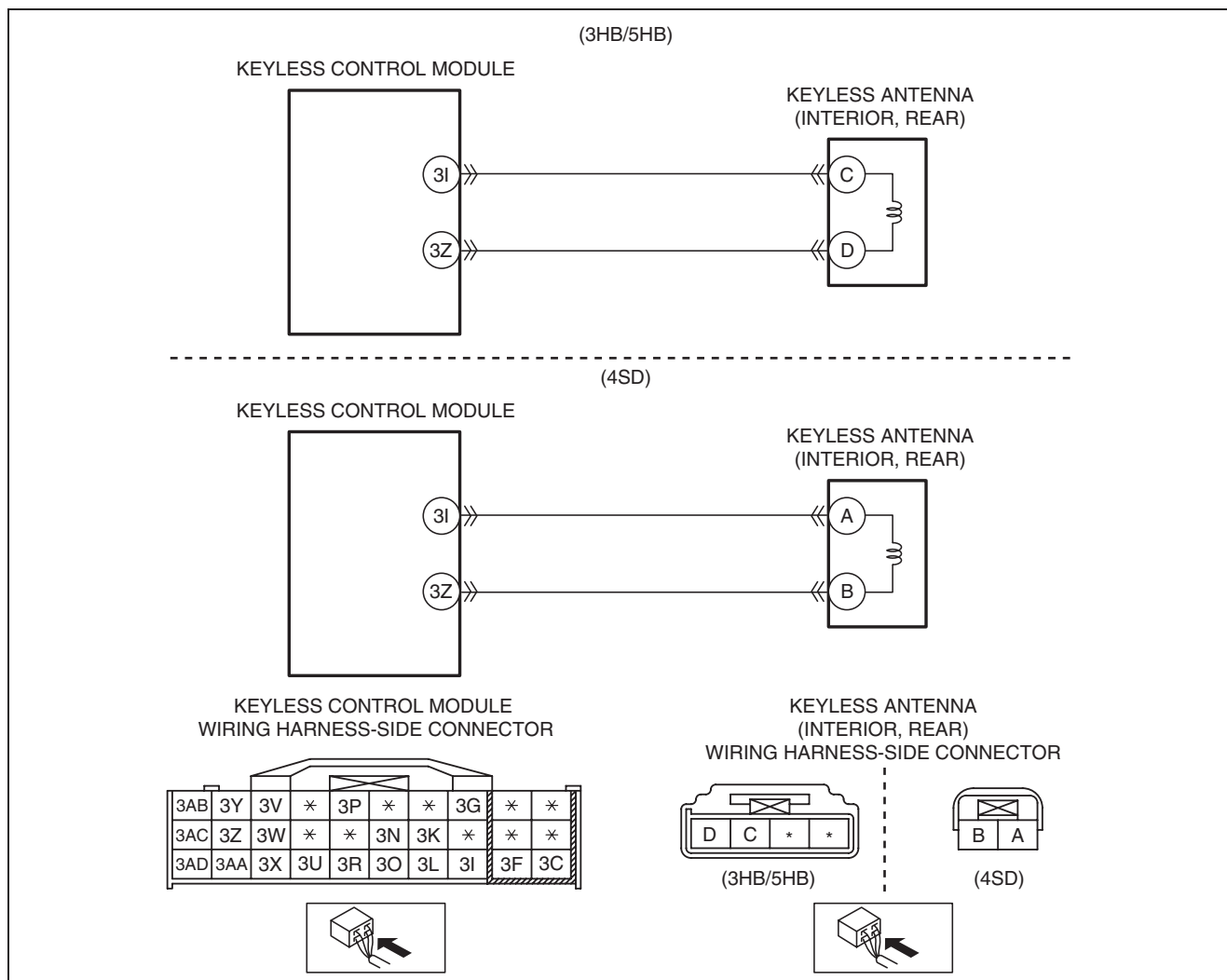
#### Detection Condition

- Cannot receive signal correctly from keyless antenna (interior, rear)

#### Possible Causes

- Keyless antenna (interior, rear) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between keyless antenna (interior, rear) and keyless control module
- Keyless antenna (interior, rear) malfunction
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000504



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS ANTENNA (INTERIOR, REAR) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless antenna (interior, rear) connector.</li> <li>Inspect the keyless antenna (interior, rear) connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair/replace the keyless antenna (interior, rear) connector or terminal, then go to Step 5.                                                                         |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair/replace the keyless control module connector or terminal, then go to Step 5.                                                                                   |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN KEYLESS ANTENNA (INTERIOR, REAR) AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between keyless antenna (interior, rear) terminal C (3HB/5HB)/terminal A (4SD) and keyless control module terminal 3I, and keyless antenna (interior, rear) terminal D (3HB/5HB)/terminal B (4SD) and keyless control module terminal 3Z for the following: <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the wiring harness between keyless antenna (interior, rear) and keyless control module, then go to Step 5.                                          |
| 4    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C7:1F displayed?</li> </ul>                                                                                                                                                                         | Yes<br>Replace the keyless antenna (interior, rear), then go to the next step.<br>(See 09-14-125 KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                                                        |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C7:1F displayed?</li> </ul>                                                                                                                                                                         | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                                                        |

### DTC B10C8:1F [ADVANCED KEYLESS AND START SYSTEM]

id0902e1387900

#### Detection Condition

- Cannot receive signal correctly from keyless antenna (interior, center)

#### Possible Causes

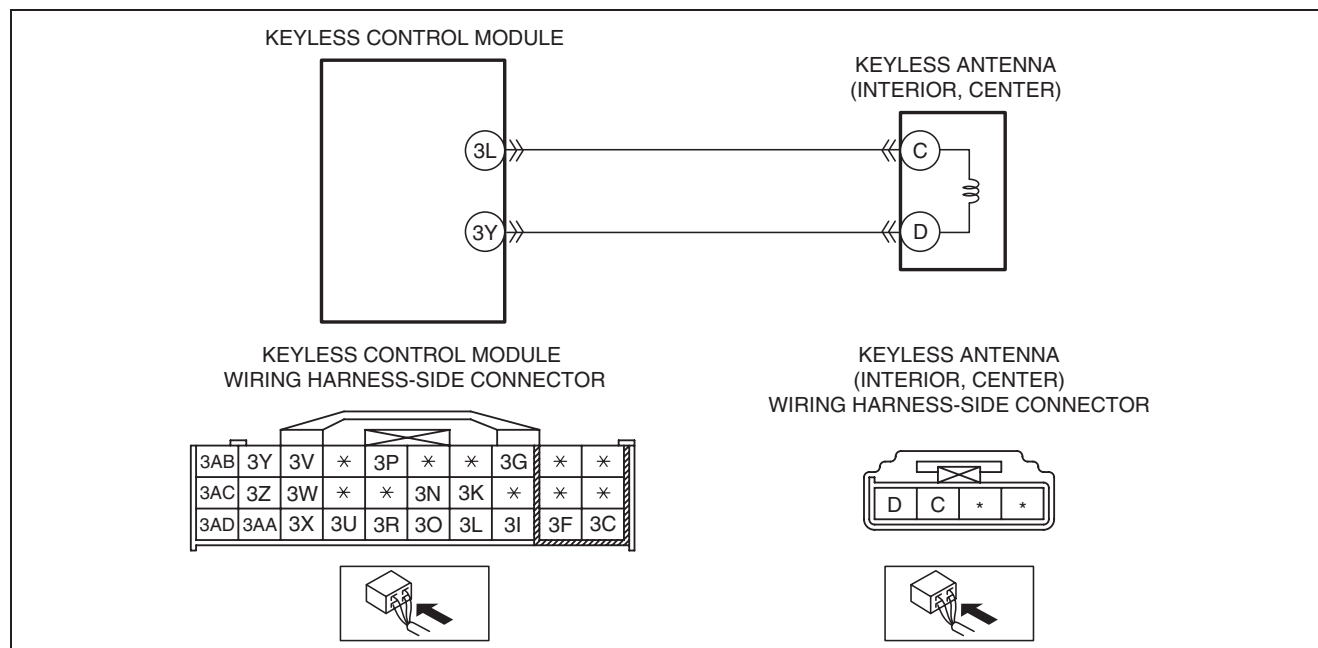
- Keyless antenna (interior, center) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Short to ground in wiring harness between keyless antenna (interior, center) and keyless control module
- Short to power supply in wiring harness between keyless antenna (interior, center) and keyless control module
- Open circuit in wiring harness between keyless antenna (interior, center) and keyless control module
- Keyless antenna (interior, center) malfunction

## 09-02A-18

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

- Keyless control module malfunction

### System Wiring Diagram



### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS ANTENNA (INTERIOR, CENTER) CONNECTOR</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Disconnect the keyless antenna (interior, center) connector.</li> <li>• Inspect the keyless antenna (interior, center) connector. (Corrosion, damage, and disconnected pins)</li> <li>• Are the connector and terminals normal?</li> </ul>                                                                       | Yes<br>Go to the next step.                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair/replace the keyless antenna (interior, center) connector or terminal, then <b>go to Step 7.</b> |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>• Disconnect the keyless control module connector.</li> <li>• Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>• Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 7.</b>             |
| 3    | <b>INSPECT KEYLESS ANTENNA (INTERIOR, CENTER) CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>• Keyless antenna (interior, center) and keyless control module connectors are disconnected.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— Keyless antenna (interior, center) terminal C</li> <li>— Keyless antenna (interior, center) terminal D</li> </ul> </li> <li>• Is there continuity?</li> </ul> | Yes<br>Repair or replace the wiring harness for a possible short to ground, then <b>go to Step 7.</b>        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Go to the next step.                                                                                   |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>INSPECT KEYLESS ANTENNA (INTERIOR, CENTER) CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Keyless antenna (interior, center) and keyless control module connectors are disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Keyless antenna (interior, center) terminal C</li> <li>— Keyless antenna (interior, center) terminal D</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                                                      | Yes<br>Repair or replace the wiring harness for a possible short to power supply, then go to Step 7.                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                                     |
| 5    | <b>INSPECT KEYLESS ANTENNA (INTERIOR, CENTER) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless antenna (interior, center) and keyless control module connectors are disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Keyless antenna (interior, center) terminal C—Keyless control module terminal 3L</li> <li>— Keyless antenna (interior, center) terminal D—Keyless control module terminal 3Y</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 7.                                                                                     |
| 6    | <b>VERIFY KEYLESS ANTENNA (INTERIOR, CENTER) MALFUNCTION</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C8:1F displayed?</li> </ul>                                                                                                                                                    | Yes<br>Replace the keyless antenna (interior, center), then go to the next step.<br>(See 09-14-125 KEYLESS ANTENNA REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                                                           |
| 7    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C8:1F displayed?</li> </ul>                                                                                                                                                                                              | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                                                           |

### DTC B10C9:1F [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388000

#### Detection Condition

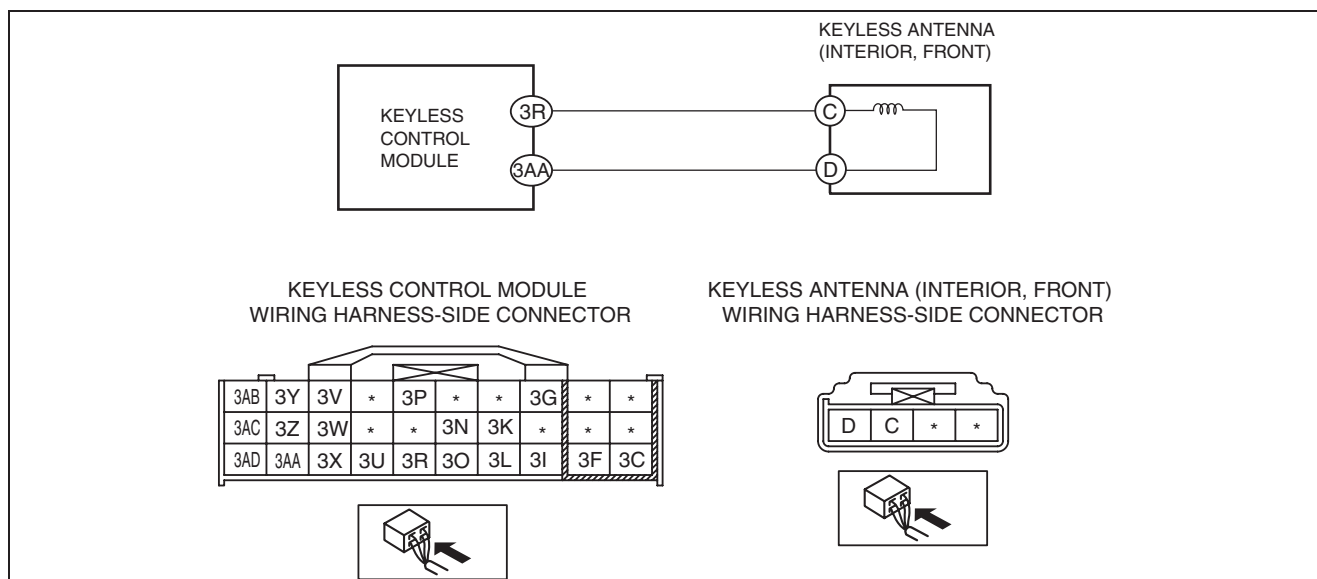
- Cannot receive signal correctly from keyless antenna (interior, front)

#### Possible Causes

- Keyless antenna (interior, front) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between keyless antenna (interior, front) and keyless control module
- Keyless antenna (interior, front) malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000504

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action |                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS ANTENNA (INTERIOR, FRONT) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless antenna (interior, front) connector.</li> <li>Inspect the keyless antenna (interior, front) connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                | Yes    | Go to the next step.                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Repair/replace the keyless antenna (interior, front) connector or terminal, then <b>go to Step 5</b> .                                                             |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                                                         | Yes    | Go to the next step.                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Repair/replace the keyless control module connector or terminal, then <b>go to Step 5</b> .                                                                        |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN KEYLESS ANTENNA (INTERIOR, FRONT) AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between keyless antenna (interior, front) terminal C and keyless control module terminal 3R, and keyless antenna (interior, front) terminal D and keyless control module terminal 3AA for the following: <ul style="list-style-type: none"> <li>— Short to ground</li> <li>— Short to power supply</li> <li>— Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes    | Go to the next step.                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Repair or replace the wiring harness between keyless antenna (interior, front) and keyless control module, then <b>go to Step 5</b> .                              |
| 4    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS. (See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C9:1F displayed?</li> </ul>                                                                                                                                     | Yes    | Replace the keyless antenna (interior, front), then go to the next step. (See 09-14-125 KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | DTC troubleshooting completed.                                                                                                                                     |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10C9:1F displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                          |

### DTC B10D1:23 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388100

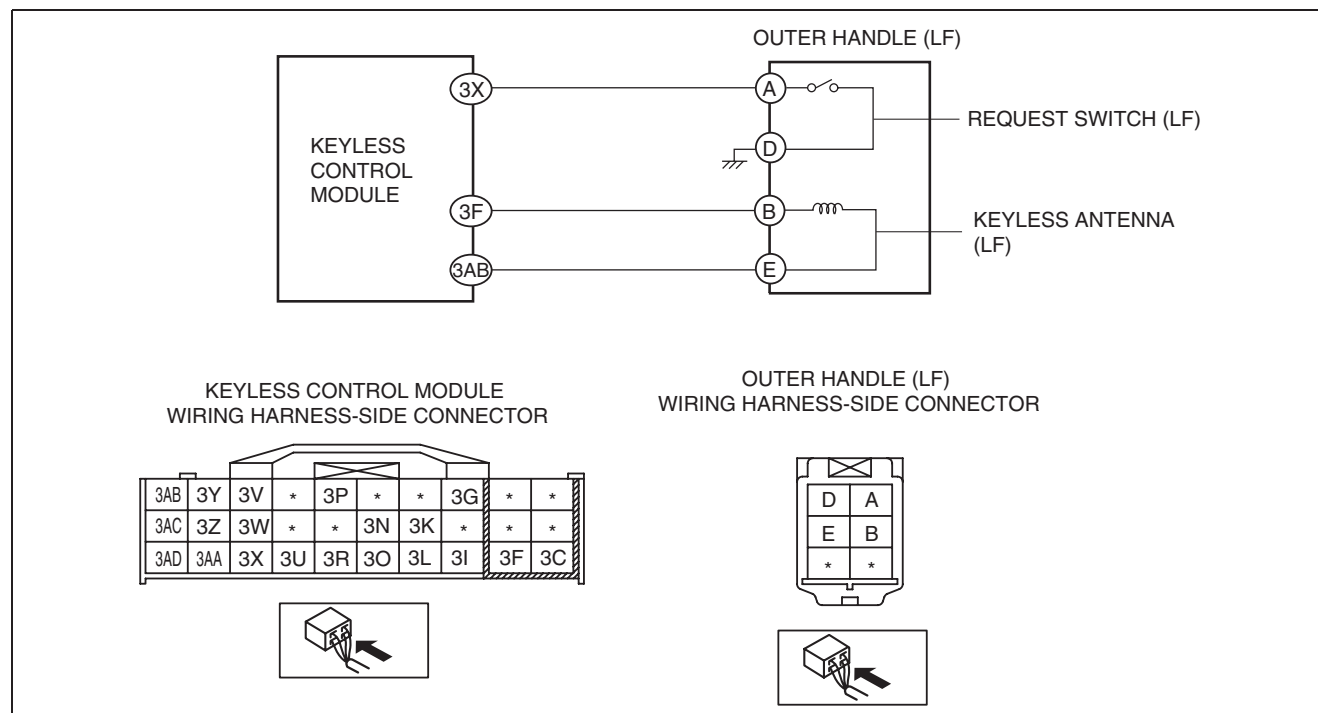
#### Detection Condition

- Request switch (LF) ON signal detected while driving

#### Possible Causes

- Outer handle (LF) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Short to ground in wiring harness between outer handle (LF) and keyless control module
- Request switch (LF) malfunction
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000504

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                         | Action                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1    | <b>INSPECT OUTER HANDLE (LF) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the outer handle (LF) connector.</li> <li>Inspect the outer handle (LF) connector.<br/>(Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Repair/replace the outer handle (LF) connector or terminal, then go to Step 5. |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair/replace the keyless control module connector or terminal, then go to Step 5.                                                                    |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN OUTER HANDLE (LF) AND KEYLESS CONTROL MODULE FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Outer handle (LF) and keyless control module connectors are disconnected.</li> <li>Inspect for continuity between outer handle (LF) terminal A (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                      | Yes<br>Repair or replace the wiring harness between outer handle (LF) and keyless control module, then go to Step 5.                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Go to the next step.                                                                                                                                   |
| 4    | <b>INSPECT REQUEST SWITCH (LF)</b> <ul style="list-style-type: none"> <li>Inspect the request switch (LF).<br/>(See 09-14-132 REQUEST SWITCH INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the request switch (LF) normal?</li> </ul>                                                                                                                                                                              | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Replace the request switch (LF), then go to the next step.<br>(See 09-14-132 REQUEST SWITCH REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10D1:23 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                                         |

### DTC B10D3:23 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388200

#### Detection Condition

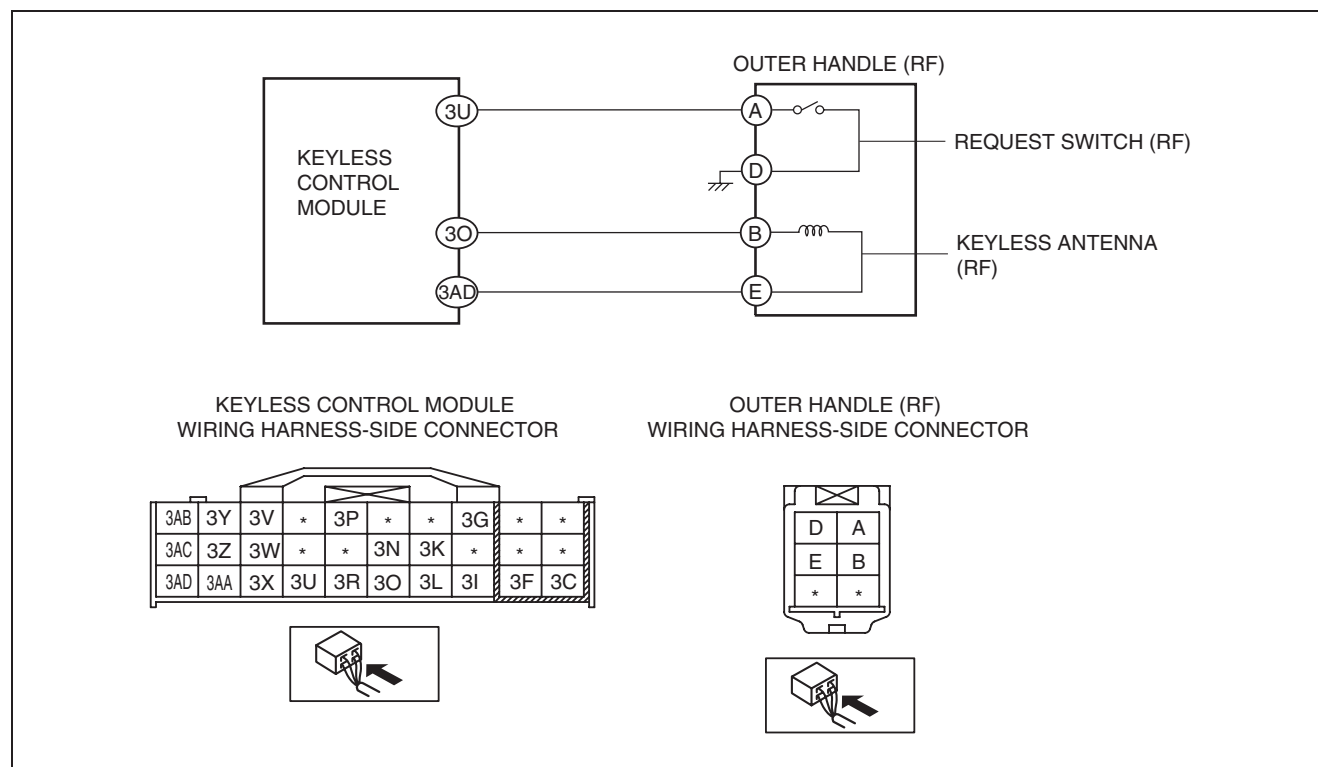
- Request switch (RF) ON signal detected while driving

#### Possible Causes

- Outer handle (RF) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Short to ground in wiring harness between outer handle (RF) and keyless control module
- Request switch (RF) malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000504

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                                        |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT OUTER HANDLE (RF) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the outer handle (RF) connector.</li> <li>Inspect the outer handle (RF) connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Repair/replace the outer handle (RF) connector or terminal, then <b>go to Step 5</b> .                                                                  |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                          | Yes<br>Go to the next step.                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 5</b> .                                                             |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN OUTER HANDLE (RF) AND KEYLESS CONTROL MODULE FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Outer handle (RF) and keyless control module connectors are disconnected.</li> <li>Inspect for continuity between outer handle (RF) terminal A (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                   | Yes<br>Repair or replace the wiring harness between outer handle (RF) and keyless control module, then <b>go to Step 5</b> .                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                    |
| 4    | <b>INSPECT REQUEST SWITCH (RF)</b> <ul style="list-style-type: none"> <li>Inspect the request switch (RF).<br/>(See 09-14-132 REQUEST SWITCH INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the request switch (RF) normal?</li> </ul>                                                                                                                                           | Yes<br>Go to the next step.                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Replace the request switch (RF), then go to the next step.<br>(See 09-14-132 REQUEST SWITCH REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10D3:23 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                          |

### DTC B10E7:16 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388300

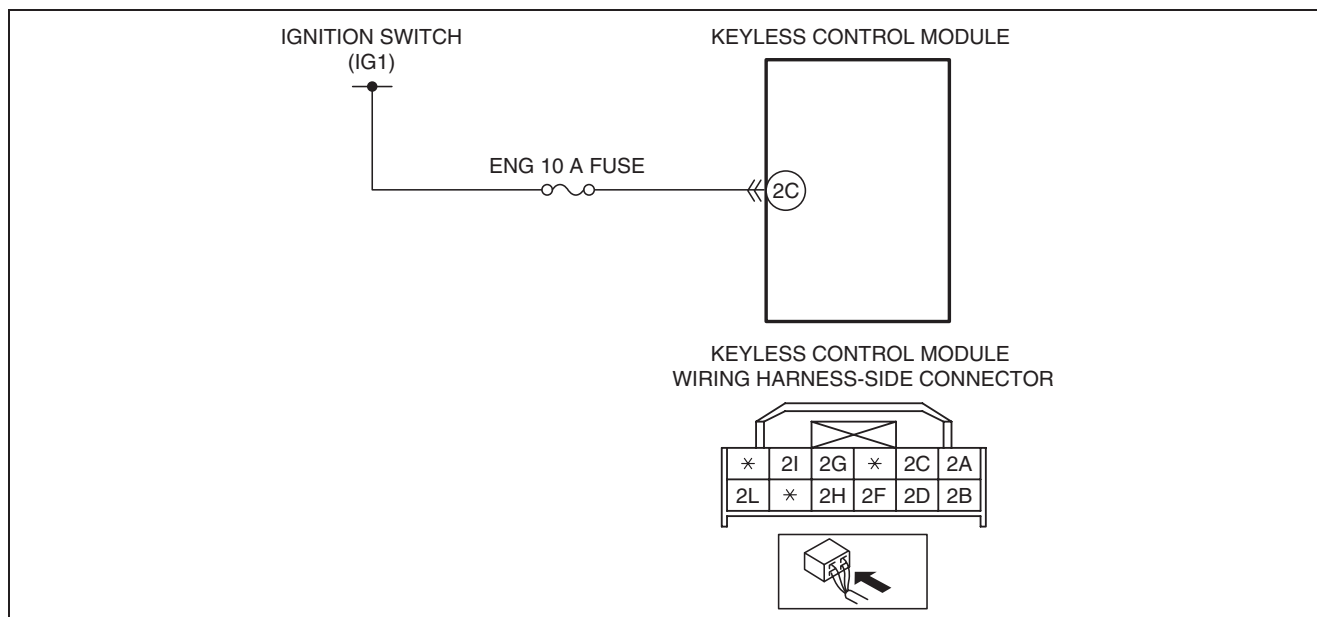
#### Detection Condition

- Keyless control module IG1 power voltage malfunction

#### Possible Causes

- Battery malfunction
- Generator malfunction
- Keyless control module connector or terminals malfunction
- Short to ground or open circuit in wiring harness between ignition switch (IG1) and keyless control module
  - Short to ground in wiring harness between ignition switch (IG1) and keyless control module terminal 2C
  - ENG 10 A fuse malfunction
  - Open circuit in wiring harness between ignition switch (IG1) and keyless control module terminal 2C
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000506

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                           | Action                                                                             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1    | <b>VERIFY PCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the PCM DTCs using the M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)</li> <li>Are any DTCs displayed?</li> </ul> | Yes<br>Go to the applicable DTC inspection.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].) |
|      |                                                                                                                                                                                                      | No<br>Go to the next step.                                                         |



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>BATTERY INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the battery.<br/>(See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)<br/>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the battery normal?</li> </ul>                                                                                                                                                                  | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Recharge or replace the battery, then go to Step 6.<br>(See 01-17A-5 BATTERY RECHARGING [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 3    | <b>GENERATOR INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the generator.<br/>(See 01-17A-7 GENERATOR INSPECTION [ZJ, ZY].)</li> <li>Is the generator normal?</li> </ul>                                                                                                                                                                                                                                                                              | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Replace the generator, then go to Step 6.<br>(See 01-17A-6 GENERATOR REMOVAL/INSTALLATION [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                         | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Repair/replace the keyless control module connector or terminal, then go to Step 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5    | <b>INSPECT WIRING HARNESS BETWEEN IGNITION SWITCH (IG1) AND KEYLESS CONTROL MODULE FOR SHORT TO GROUND AND OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless control module connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at the keyless control module terminal 2C (wiring harness-side).</li> <li>Is the voltage <b>B+</b>?</li> </ul> | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Inspect the ENG 10 A fuse. <ul style="list-style-type: none"> <li>If the fuse is melt:               <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible short to ground.</li> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is deterioration:               <ul style="list-style-type: none"> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is normal:               <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible open circuit.</li> </ul> </li> </ul> Go to the next step. |
| 6    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B10E7:16 displayed?</li> </ul>   | Yes    | Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### DTC B113E:11 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388400

#### Detection Condition

- Liftgate opener switch (3HB/5HB)/Trunk lid opener switch (4SD) input voltage malfunction

#### Possible Causes

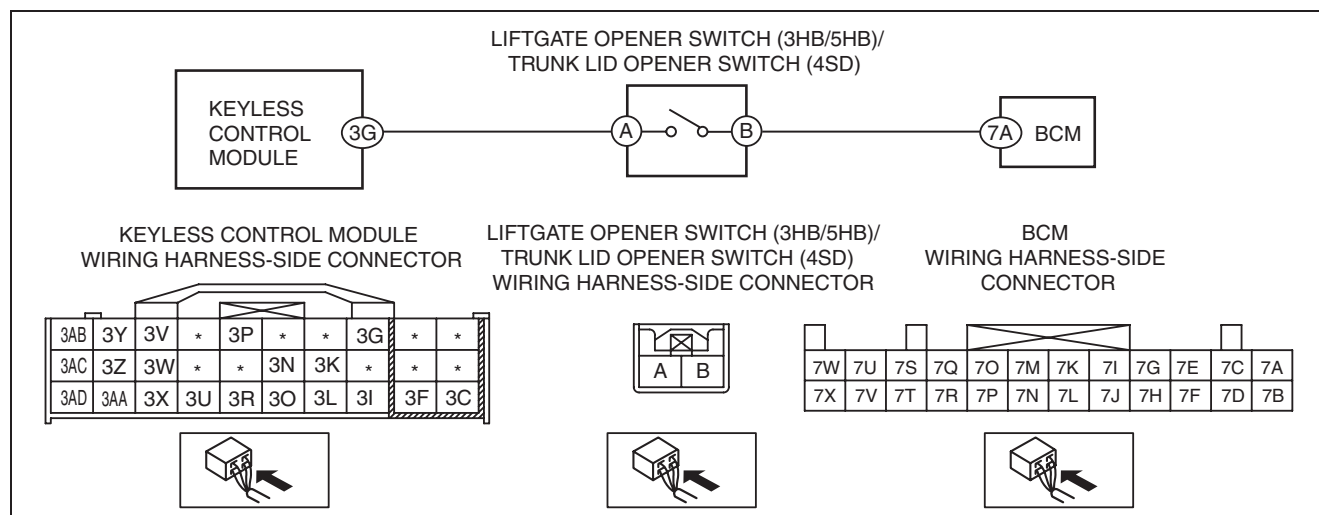
- Liftgate opener switch (3HB/5HB)/Trunk lid opener switch (4SD) connector or terminals malfunction

## 09-02A-26

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

- BCM connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Short to ground in wiring harness between BCM and liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD)
- Short to ground in wiring harness between keyless control module and liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD)
- Liftgate opener switch (3HB/5HB)/Trunk lid opener switch (4SD) malfunction
- BCM malfunction
- Keyless control module malfunction

### System Wiring Diagram



am2zzw0000504

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT LIFTGATE OPENER SWITCH (3HB/5HB)/TRUNK LID OPENER SWITCH (4SD) CONNECTOR</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Disconnect the liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD) connector.</li> <li>• Inspect the liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD) connector. (Corrosion, damage, and disconnected pins)</li> <li>• Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD) connector or terminal, then <b>go to Step 7</b> . |
| 2    | <b>INSPECT BCM CONNECTOR</b> <ul style="list-style-type: none"> <li>• Disconnect the BCM connector.</li> <li>• Inspect the BCM connector. (Corrosion, damage, and disconnected pins)</li> <li>• Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                                                                                              | Yes<br>Go to the next step.                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the BCM connector or terminal, then <b>go to Step 7</b> .                                                            |
| 3    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>• Disconnect the keyless control module connector.</li> <li>• Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>• Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 7</b> .                                         |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action                                                                                                                                                                                                                              |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>INSPECT LIFTGATE OPENER SWITCH (3HB/5HB)/TRUNK LID OPENER SWITCH (4SD) CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD), BCM and keyless control module connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>Liftgate opener switch (3HB/5HB)/Trunk lid opener switch (4SD) terminal A</li> <li>Liftgate opener switch (3HB/5HB)/Trunk lid opener switch (4SD) terminal B</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Repair or replace the wiring harness for a possible short to ground, then go to Step 7.                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Go to the next step.                                                                                                                                                                                                          |
| 5    | <b>INSPECT LIFTGATE OPENER SWITCH (3HB/5HB)/TRUNK LID OPENER SWITCH (4SD)</b> <ul style="list-style-type: none"> <li>Inspect the liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD).<br/>(See 09-14-92 LIFTGATE OPENER SWITCH INSPECTION.)<br/>(See 09-14-97 TRUNK LID OPENER SWITCH INSPECTION.)</li> <li>Is the liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD) normal?</li> </ul>                                                                                                                                                                                                                              | Yes<br>Go to the next step.                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Replace the liftgate opener switch (3HB/5HB)/trunk lid opener switch (4SD), then go to Step 7.<br>(See 09-14-91 LIFTGATE OPENER SWITCH REMOVAL/INSTALLATION.)<br>(See 09-14-97 TRUNK LID OPENER SWITCH REMOVAL/INSTALLATION.) |
| 6    | <b>INSPECT BCM</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the BCM terminal 7A (wiring harness-side).<br/>(See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)</li> <li>Is the voltage normal?</li> </ul>                                                                                                                                                                                                                                                                                                                | Yes<br>Go to the next step.                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Replace the BCM, then go to the next step.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                                   |
| 7    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B113E:11 displayed?</li> </ul>                                                                                                                                                                                                            | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>DTC troubleshooting completed.                                                                                                                                                                                                |

### DTC B11FD:1F [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388500

#### Detection Condition

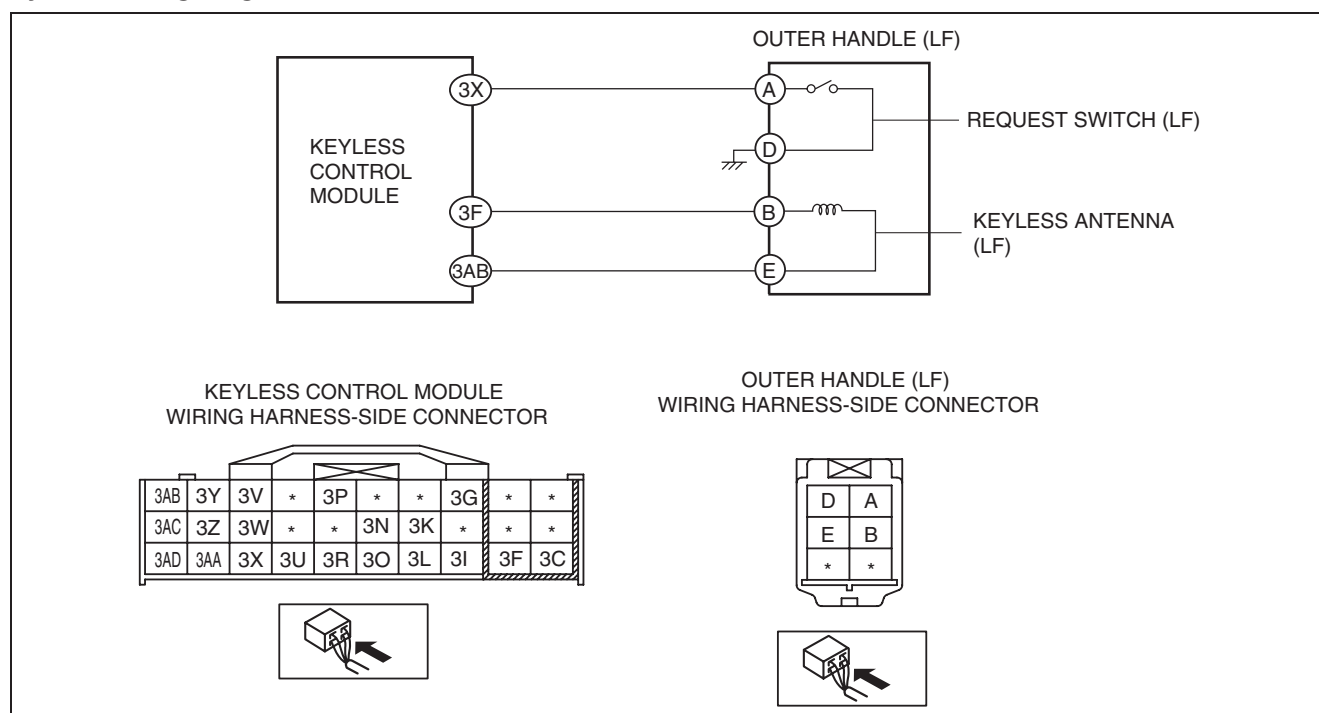
- Cannot receive signal correctly from keyless antenna (LF)

#### Possible Causes

- Outer handle (LF) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between outer handle (LF) and keyless control module
- Keyless antenna (LF) malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000504

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | <b>INSPECT OUTER HANDLE (LF) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the outer handle (LF) connector.</li> <li>Inspect the outer handle (LF) connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                          | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No     |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                   | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No     |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN OUTER HANDLE (LF) AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between outer handle (LF) terminal B and keyless control module terminal 3F, and outer handle (LF) terminal E and keyless control module terminal 3AB for the following: <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No     |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B11FD:1F displayed?</li> </ul> | Yes<br>Replace the keyless antenna (LF), then go to the next step.<br>(See 09-14-125 KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                                            |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B11FD:1F displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                                            |

### DTC B1210:1F [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388600

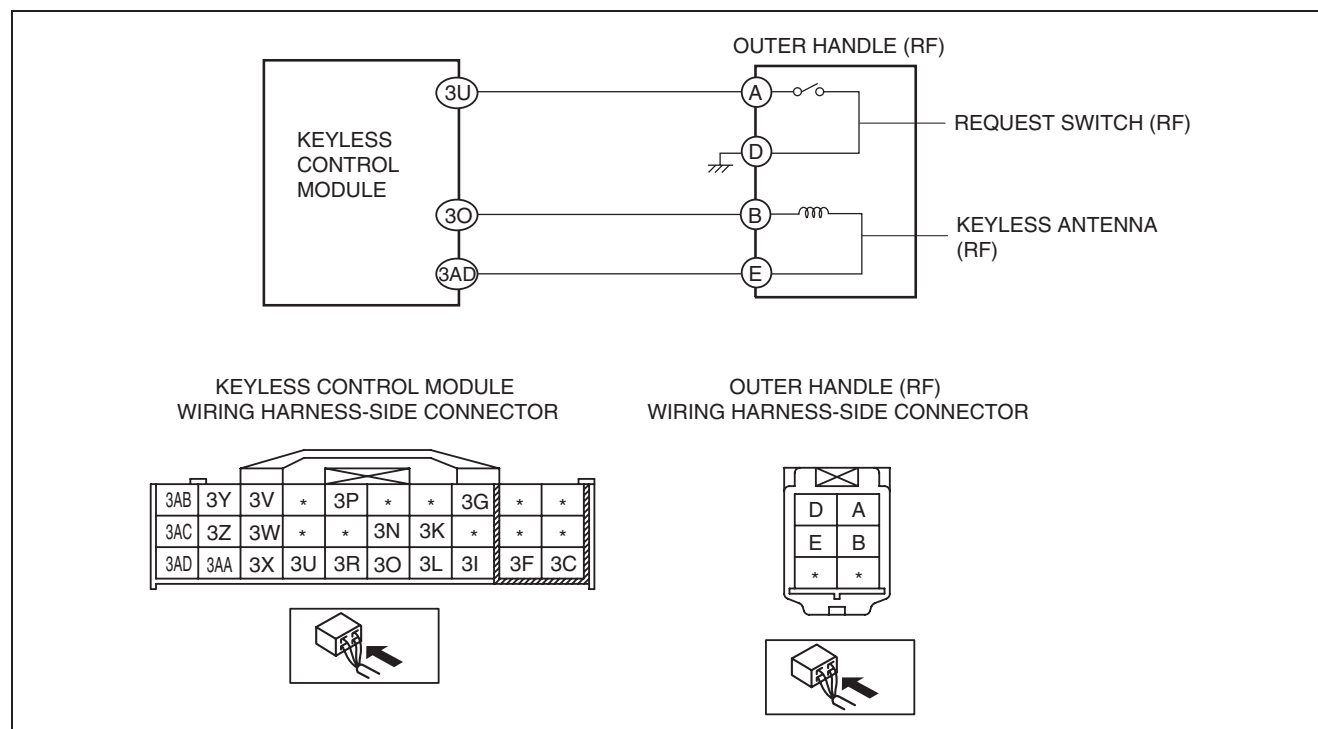
#### Detection Condition

- Cannot receive signal correctly from keyless antenna (RF)

#### Possible Causes

- Outer handle (RF) connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open or short circuit in wiring harness between outer handle (RF) and keyless control module
- Keyless antenna (RF) malfunction
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000504

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action                                                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT OUTER HANDLE (RF) CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the outer handle (RF) connector.</li> <li>Inspect the outer handle (RF) connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                          | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Repair/replace the outer handle (RF) connector or terminal, then go to Step 5.                                                                         |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Repair/replace the keyless control module connector or terminal, then go to Step 5.                                                                    |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN OUTER HANDLE (RF) AND KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between outer handle (RF) terminal B and keyless control module terminal 3O, and outer handle (RF) terminal E and keyless control module terminal 3AD for the following: <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Repair or replace the wiring harness between outer handle (RF) and keyless control module, then go to Step 5.                                          |
| 4    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS. (See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B1210:1F displayed?</li> </ul>                                                                               | Yes<br>Replace the keyless antenna (RF), then go to the next step. (See 09-14-125 KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>DTC troubleshooting completed.                                                                                                                         |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS. (See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC B1210:1F displayed?</li> </ul>                                                                               | Yes<br>Replace the keyless control module. (See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>DTC troubleshooting completed.                                                                                                                         |

### DTC P1794:16, P1794:17 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388700

#### Detection Condition

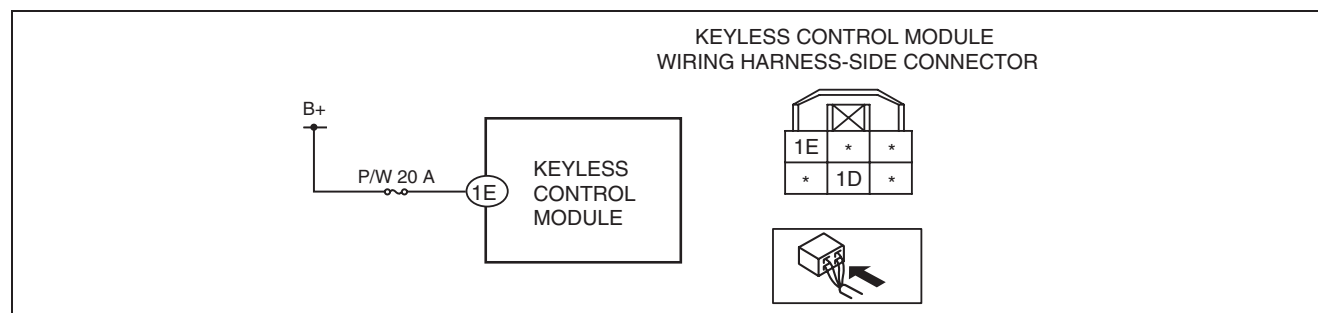
- P1794:16: Keyless control module power voltage low (power from P/W 20 A fuse)
- P1794:17: Keyless control module power voltage rising (power from P/W 20 A fuse)

#### Possible Causes

- Battery malfunction
- Generator malfunction
- Keyless control module connector or terminals malfunction
- Short to ground or open circuit in wiring harness between battery and keyless control module
  - Short to ground in wiring harness between battery positive terminal and keyless control module terminal 1E
  - P/W 20 A fuse malfunction
  - Open circuit in wiring harness between battery positive terminal and keyless control module terminal 1E
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000259

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY PCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the PCM DTCs using the M-MDS. (See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)</li> <li>Are any DTCs displayed?</li> </ul>                                                                              | Yes<br>Go to the applicable DTC inspection.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2    | <b>BATTERY INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the battery.<br/>(See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)<br/>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the battery normal?</li> </ul>                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Recharge or replace the battery, then <b>go to Step 6</b> .<br>(See 01-17A-5 BATTERY RECHARGING [ZJ, ZY].)<br>(See 01-17C-3 BATTERY RECHARGING [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-3 BATTERY RECHARGING [MZ-CD 1.4 DI Turbo].)<br>(See 01-17A-1 BATTERY REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17C-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].) |
| 3    | <b>GENERATOR INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the generator.<br/>(See 01-17A-7 GENERATOR INSPECTION [ZJ, ZY].)<br/>(See 01-17C-5 GENERATOR INSPECTION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-4 GENERATOR INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the generator normal?</li> </ul>                                                                                              | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Replace the generator, then <b>go to Step 6</b> .<br>(See 01-17A-6 GENERATOR REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17C-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)                                                                                                                                                                      |
| 4    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 6</b> .                                                                                                                                                                                                                                                                                                                                 |



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <b>INSPECT WIRING HARNESS BETWEEN BATTERY AND KEYLESS CONTROL MODULE FOR SHORT TO GROUND AND OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless control module connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the keyless control module terminal 1E (wiring harness-side).</li> <li>Is the voltage <b>B+</b>?</li> </ul>                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Inspect the P/W 20 A fuse. <ul style="list-style-type: none"> <li>If the fuse is melt: <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible short to ground.</li> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is deterioration: <ul style="list-style-type: none"> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is normal: <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible open circuit.</li> </ul> </li> </ul> Go to the next step. |
| 6    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the following DTC displayed? <ul style="list-style-type: none"> <li>P1794:16</li> <li>P1794:17</li> </ul> </li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### DTC U0028:87 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1399500

#### Detection Condition

- Correct data cannot be received from BCM (no response for **10 times**)

#### Possible Causes

- BCM malfunction
- Keyless control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                           | Action                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U0028:87 displayed?</li> </ul> | Yes<br>Go to the next step.                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>DTC troubleshooting completed.                                                                            |
| 2    | <b>VERIFY BCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the BCM DTCs using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Are any DTCs displayed?</li> </ul>                                                                                                                                                                              | Yes<br>Go to the applicable DTC inspection, then <b>go to Step 4.</b><br>(See 09-02G-3 DTC TABLE [BCM].)        |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                      |
| 3    | <b>VERIFY BCM</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U0028:87 displayed?</li> </ul>  | Yes<br>Replace the BCM, then go the next step.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>DTC troubleshooting completed.                                                                            |



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                           | Action                                                                                                                                        |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U0028:87 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>DTC troubleshooting completed.                                                                                                          |

### DTC U0401:68 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1399300

#### Detection Condition

- Correct data cannot be received from PCM

#### Possible Causes

- PCM malfunction
- Keyless control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                           | Action                                                                                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY PCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the PCM DTCs using the M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)</li> <li>Are any DTCs displayed?</li> </ul>                                 | Yes<br>Go to the applicable DTC inspection.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                                                                                                           |
| 2    | <b>VERIFY PCM</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U0401:68 displayed?</li> </ul>  | Yes<br>Replace the PCM, then go to the next step.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].) |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>DTC troubleshooting completed.                                                                                                                                                                                                 |
| 3    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U0401:68 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                      | No<br>DTC troubleshooting completed.                                                                                                                                                                                                 |

### DTC U201F:00 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388800

#### Detection Condition

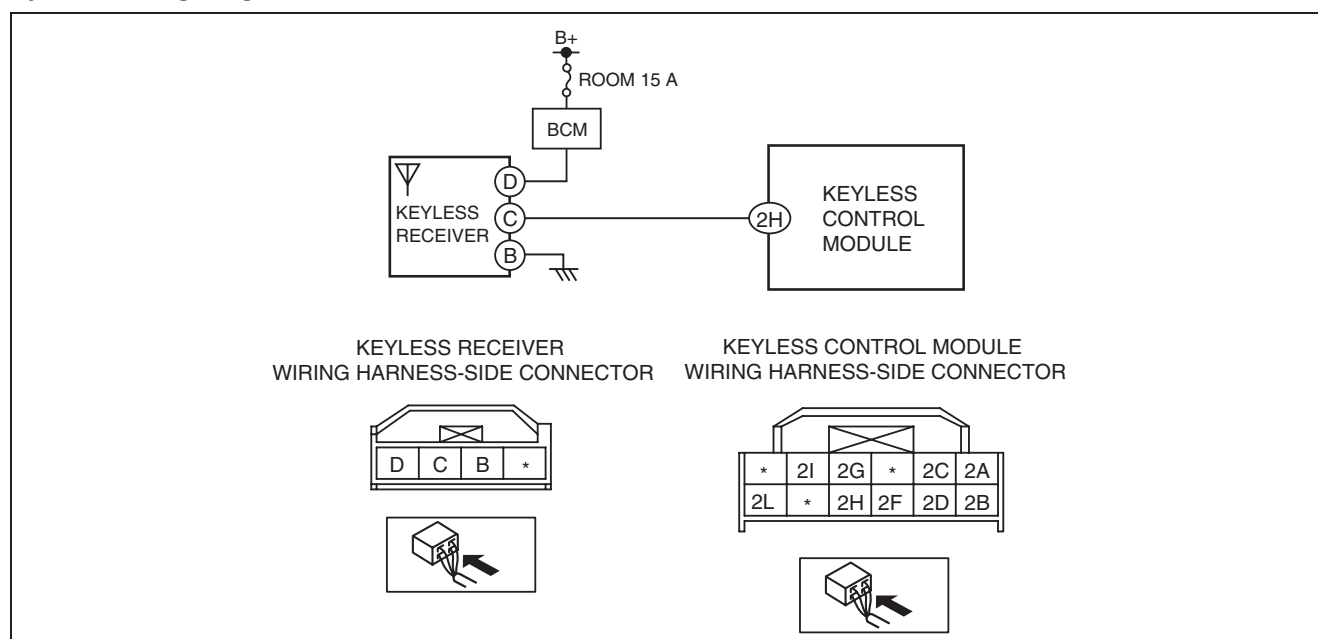
- Communication error between keyless control module and keyless receiver

#### Possible Causes

- Keyless receiver connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Short circuit in wiring harness between keyless receiver and keyless control module
- Keyless receiver malfunction
- Keyless control module malfunction

# ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

## System Wiring Diagram



am2zzw0000259

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS RECEIVER CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless receiver connector.</li> <li>Inspect the keyless receiver connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair/replace the keyless receiver connector or terminal, then <b>go to Step 5</b> .                                                              |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                       | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 5</b> .                                                        |
| 3    | <b>INSPECT KEYLESS RECEIVER SIGNAL CIRCUIT</b> <ul style="list-style-type: none"> <li>Inspect the wiring harnesses between keyless receiver terminal C and keyless control module terminal 2H for the following: <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul>                        | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the wiring harness between keyless receiver and keyless control module, then <b>go to Step 5</b> .                               |
| 4    | <b>INSPECT KEYLESS RECEIVER</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Inspect the keyless receiver. (See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless receiver normal?</li> </ul>                                                    | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Replace the keyless receiver, then go to the next step. (See 09-14-108 KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U201F:00 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                          |

### DTC U201F:13 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1388900

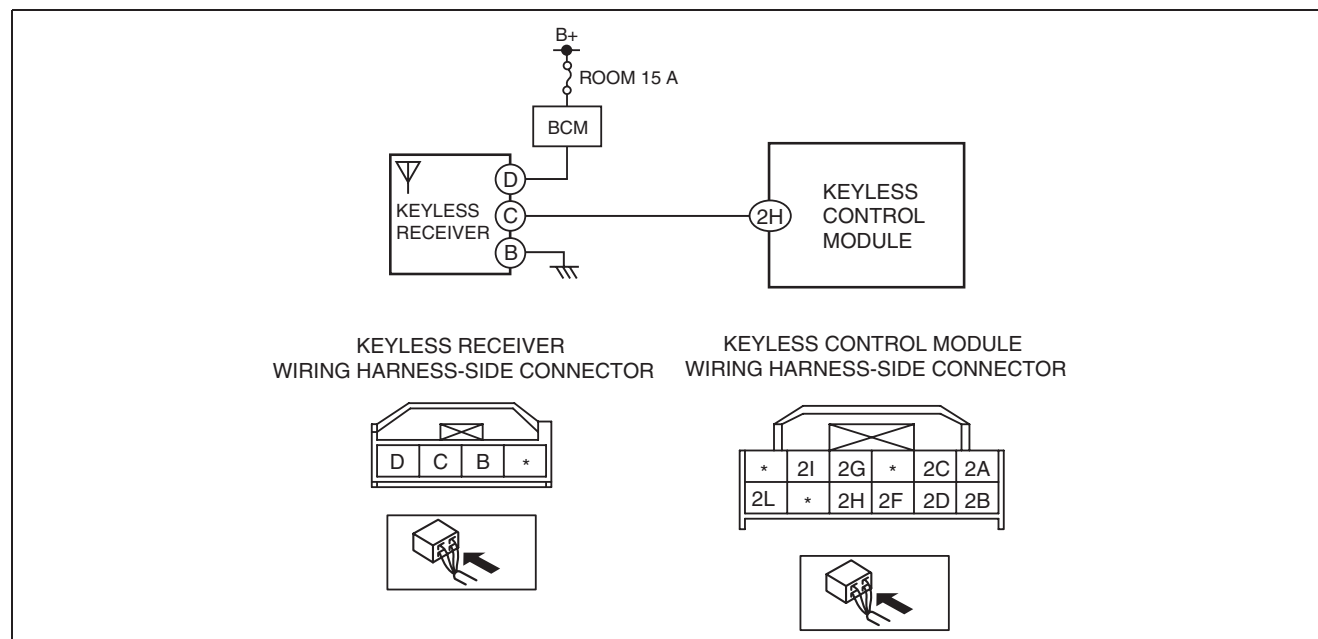
#### Detection Condition

- Keyless receiver not connecting

#### Possible Causes

- Keyless receiver connector or terminals malfunction
- Keyless control module connector or terminals malfunction
- Open circuit in wiring harness between keyless receiver and keyless control module
- Keyless receiver malfunction
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000089

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1    | <b>INSPECT KEYLESS RECEIVER CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless receiver connector.</li> <li>Inspect the keyless receiver connector.<br/>(Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair/replace the keyless receiver connector or terminal, then go to Step 5. |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair/replace the keyless control module connector or terminal, then go to Step 5.                                                                   |
| 3    | <b>INSPECT KEYLESS RECEIVER SIGNAL OUTPUT CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless receiver and keyless control module connectors are disconnected.</li> <li>Inspect for continuity between keyless receiver terminal C (wiring harness-side) and keyless control module terminal 2H (wiring harness-side).</li> <li>Is there continuity?</li> </ul>                                           | Yes<br>Go to the next step.                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 5.                                                                  |
| 4    | <b>INSPECT KEYLESS RECEIVER</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Inspect the keyless receiver.<br/>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless receiver normal?</li> </ul>                                                                                      | Yes<br>Go to the next step.                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Replace the keyless receiver, then go to the next step.<br>(See 09-14-108 KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U201F:13 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                                                                                        |

### DTC U2100:00 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1399000

#### Detection Condition

- Configuration error

#### Possible Causes

- Configuration was not done correctly for some reason.
- Keyless control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM CONFIGURATION</b> <ul style="list-style-type: none"> <li>Perform the configuration for the keyless control module using the M-MDS.<br/>(See 09-14-102 KEYLESS CONTROL MODULE CONFIGURATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U2100:00 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>DTC troubleshooting completed.                                                                                                          |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### DTC U3000:41 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1399100

#### Detection Condition

- Keyless control module internal malfunction

#### Possible Causes

- Keyless control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"><li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Verify the DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Is the DTC U3000:41 displayed?</li></ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                           |

### DTC U3003:16, U3003:17 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1399400

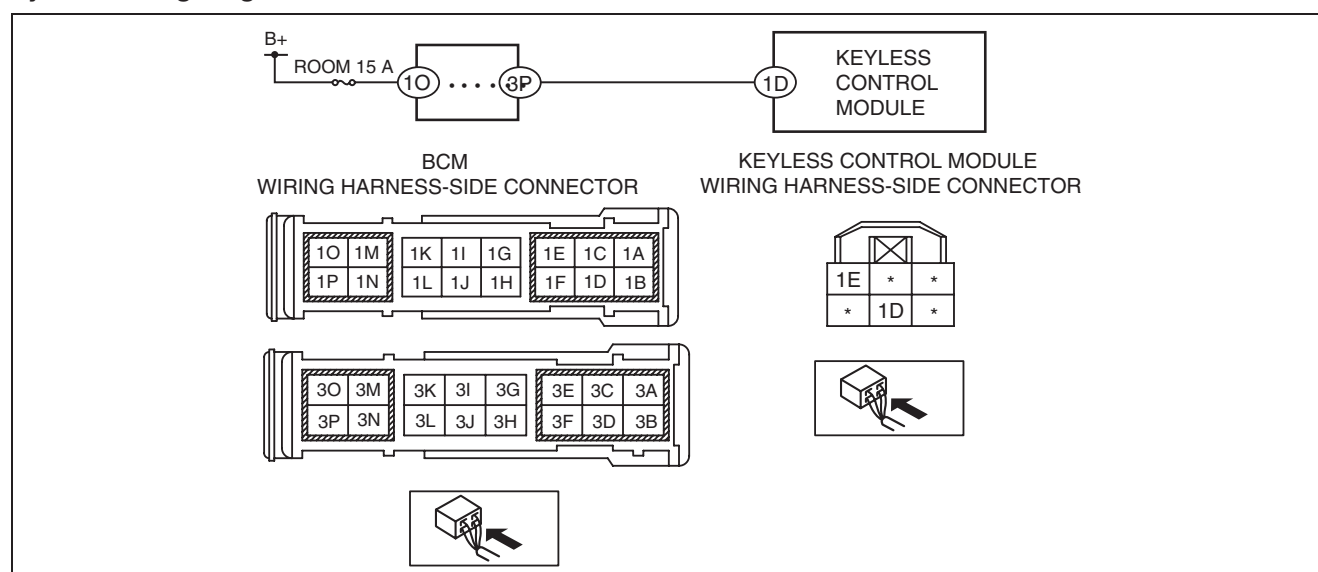
#### Detection Condition

- U3003:16: Keyless control module power voltage low (power from ROOM 15 A fuse)
- U3003:17: Keyless control module power voltage rising (power from ROOM 15 A fuse)

#### Possible Causes

- Battery malfunction
- Generator malfunction
- BCM connector or terminals malfunction
- Short to ground or open circuit in wiring harness between battery and BCM
  - Short to ground in wiring harness between battery positive terminal and BCM terminal 1O
  - ROOM 15 A fuse malfunction
  - Open circuit in wiring harness between battery positive terminal and BCM terminal 1O
- Keyless control module connector or terminals malfunction
- Short to ground or open circuit in wiring harness between BCM and keyless control module
  - Short to ground in wiring harness between BCM terminal 3P and keyless control module terminal 1D
  - Open circuit in wiring harness between BCM terminal 3P and keyless control module terminal 1D
- BCM malfunction
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000089

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY PCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the PCM DTCs using the M-MDS. (See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)</li> <li>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)</li> <li>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)</li> <li>Are any DTCs displayed?</li> </ul>            | Yes<br>Go to the applicable DTC inspection. (See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2    | <b>VERIFY BCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the BCM DTCs using the M-MDS. (See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Are any DTCs displayed?</li> </ul>                                                                                                                                                                   | Yes<br>Go to the applicable DTC inspection. (See 09-02G-3 DTC TABLE [BCM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3    | <b>BATTERY INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the battery. (See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)</li> <li>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the battery normal?</li> </ul>                                            | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Recharge or replace the battery, then <b>go to Step 10</b> .<br>(See 01-17A-5 BATTERY RECHARGING [ZJ, ZY].)<br>(See 01-17C-3 BATTERY RECHARGING [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-3 BATTERY RECHARGING [MZ-CD 1.4 DI Turbo].)<br>(See 01-17A-1 BATTERY REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17C-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)                                                                                                                 |
| 4    | <b>GENERATOR INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the generator. (See 01-17A-7 GENERATOR INSPECTION [ZJ, ZY].)</li> <li>(See 01-17C-5 GENERATOR INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>(See 01-17B-4 GENERATOR INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the generator normal?</li> </ul>                                | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the generator, then <b>go to Step 10</b> .<br>(See 01-17A-6 GENERATOR REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17C-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)                                                                                                                                                                                                                                                                                      |
| 5    | <b>INSPECT BCM CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the BCM connector.</li> <li>Inspect the BCM connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>  | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair/replace the BCM connector or terminal, then <b>go to Step 10</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 6    | <b>INSPECT WIRING HARNESS BETWEEN BATTERY AND BCM FOR SHORT TO GROUND AND OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>BCM connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the BCM terminal 10 (wiring harness-side).</li> <li>Is the voltage <b>B+</b>?</li> </ul>              | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Inspect the ROOM 15 A fuse. <ul style="list-style-type: none"> <li>If the fuse is melt: <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible short to ground.</li> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is deterioration: <ul style="list-style-type: none"> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is normal: <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible open circuit.</li> </ul> </li> </ul> <b>Go to Step 10.</b> |
| 7    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 10</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Action                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <b>INSPECT WIRING HARNESS BETWEEN BCM AND KEYLESS CONTROL MODULE FOR SHORT TO GROUND AND OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>BCM and keyless control module connectors are disconnected.</li> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the keyless control module terminal 1D (wiring harness-side).</li> <li>Is the voltage <b>B+</b>?</li> </ul>                                                                                                | Yes<br>Go to the next step.                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Repair or replace the wiring harness for a possible short to ground or open circuit, then go to Step 10.                                |
| 9    | <b>INSPECT BCM</b> <ul style="list-style-type: none"> <li>Measure the voltage at the BCM terminals 1O and 3P (wiring harness-side).<br/>(See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)</li> <li>Is the voltage normal?</li> </ul>                                                                                                                                                                                                                                                                                                                 | Yes<br>Go to the next step.                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Replace the BCM, then go to the next step.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                             |
| 10   | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the following DTC displayed? <ul style="list-style-type: none"> <li>— U3003:16</li> <li>— U3003:17</li> </ul> </li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>DTC troubleshooting completed.                                                                                                          |

### DTC U3004:16 [ADVANCED KEYLESS AND START SYSTEM]

id0902e1399200

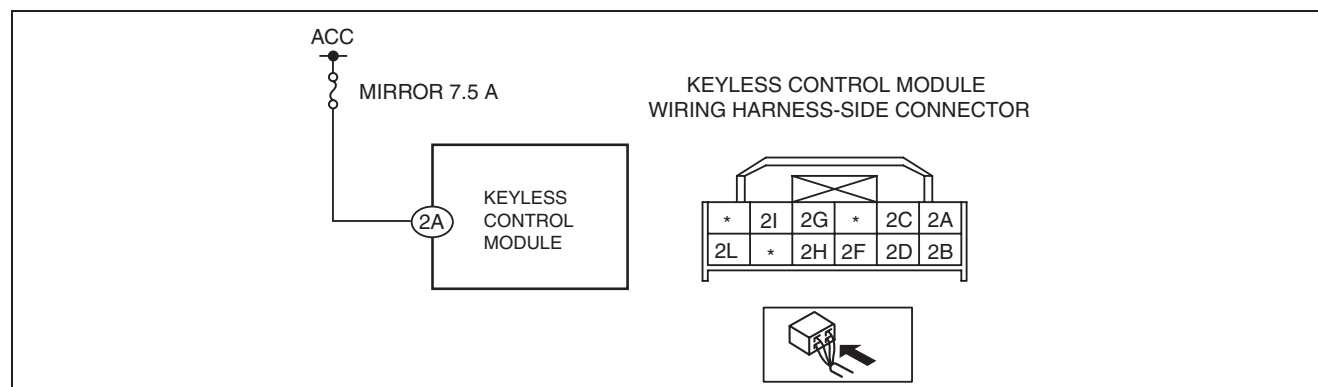
#### Detection Condition

- Keyless control module ACC power voltage malfunction

#### Possible Causes

- Battery malfunction
- Generator malfunction
- Keyless control module connector or terminals malfunction
- Short to ground or open circuit in wiring harness between ignition switch (ACC) and keyless control module
  - Short to ground in wiring harness between ignition switch (ACC) and keyless control module terminal 2A
  - MIRROR 7.5 A fuse malfunction
  - Open circuit in wiring harness between ignition switch (ACC) and keyless control module terminal 2A
- Keyless control module malfunction

#### System Wiring Diagram



am2zzw0000089



## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY PCM DTCs</b> <ul style="list-style-type: none"> <li>Verify the PCM DTCs using the M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)</li> <li>Are any DTCs displayed?</li> </ul>                                                                                                                                   | Yes<br>Go to the applicable DTC inspection.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2    | <b>BATTERY INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the battery.<br/>(See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)<br/>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the battery normal?</li> </ul>                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Recharge or replace the battery, then <b>go to Step 6</b> .<br>(See 01-17A-5 BATTERY RECHARGING [ZJ, ZY].)<br>(See 01-17C-3 BATTERY RECHARGING [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-3 BATTERY RECHARGING [MZ-CD 1.4 DI Turbo].)<br>(See 01-17A-1 BATTERY REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17C-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)                                                                                                                                                              |
| 3    | <b>GENERATOR INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the generator.<br/>(See 01-17A-7 GENERATOR INSPECTION [ZJ, ZY].)<br/>(See 01-17C-5 GENERATOR INSPECTION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-4 GENERATOR INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>Is the generator normal?</li> </ul>                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Replace the generator, then <b>go to Step 6</b> .<br>(See 01-17A-6 GENERATOR REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17C-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-17B-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)                                                                                                                                                                                                                                                                                                                                   |
| 4    | <b>INSPECT KEYLESS CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless control module connector.</li> <li>Inspect the keyless control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Repair/replace the keyless control module connector or terminal, then <b>go to Step 6</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5    | <b>INSPECT WIRING HARNESS BETWEEN IGNITION SWITCH (ACC) AND KEYLESS CONTROL MODULE FOR SHORT TO GROUND AND OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless control module connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Turn the ignition switch to the ACC position.</li> <li>Measure the voltage at the keyless control module terminal 2A (wiring harness-side).</li> <li>Is the voltage <b>B+</b>?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Inspect the MIRROR 7.5 A fuse. <ul style="list-style-type: none"> <li>If the fuse is melt:               <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible short to ground.</li> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is deterioration:               <ul style="list-style-type: none"> <li>Replace the fuse.</li> </ul> </li> <li>If the fuse is normal:               <ul style="list-style-type: none"> <li>Repair or replace the wiring harness for a possible open circuit.</li> </ul> </li> </ul> Go to the next step. |

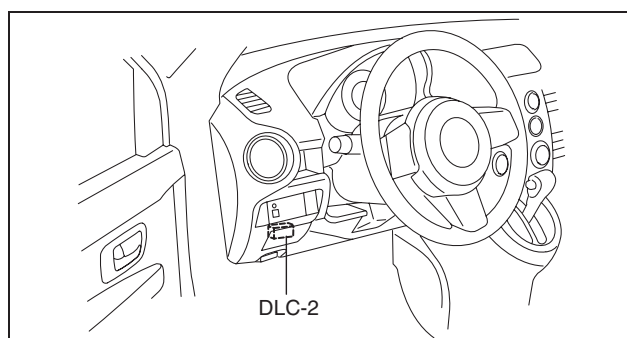
## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02A-5 CLEARING DTC [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Verify the advanced keyless and start system DTCs using the M-MDS.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC U3004:16 displayed?</li> </ul> | Yes<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                          |

### PID/DATA MONITOR INSPECTION [ADVANCED KEYLESS AND START SYSTEM]

id0902e1960600

- Connect the M-MDS to the DLC-2.
- After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    - Select "DataLogger".
    - Select "Modules".
    - Select "RKE".
  - When using the PDS (Pocket PC)
    - Select "Module Tests".
    - Select "RKE".
    - Select "DataLogger".
- Select the applicable PID from the PID table.
- Verify the PID data according to the directions on the screen.



am2zzw0000210

#### Note

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

### PID/DATA MONITOR TABLE [ADVANCED KEYLESS AND START SYSTEM]

id0902e1960700

| PID name (definition)                                | Unit/Operation        | Data contents                                                                                                                                 | Inspection item (s)               | Terminal |
|------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------|
| BZR_OUT<br>(Keyless beeper status)                   | Off/On                | <ul style="list-style-type: none"> <li>Keyless beeper sound: On</li> <li>Keyless beeper not sound: Off</li> </ul>                             | Keyless beeper inspection         | 3K       |
| DTC_CNT<br>(Number of DTCs)                          | —                     | <ul style="list-style-type: none"> <li>DTC detected: 1—255</li> <li>DTC not detected: 0</li> </ul>                                            | Separate DTC inspection           | —        |
| IG_KEY_IN<br>(Ignition key cylinder status)          | Key-Out/Key-In        | <ul style="list-style-type: none"> <li>Ignition key auxiliary key inserted: Key-In</li> <li>No ignition key auxiliary key: Key-Out</li> </ul> | Steering lock unit inspection     | 3W       |
| IG_SW_ST<br>(Ignition switch status)                 | Not Pushed/<br>Pushed | <ul style="list-style-type: none"> <li>Push switch pushed: Pushed</li> <li>Push switch released: Not pushed</li> </ul>                        | Steering lock unit inspection     | 3V       |
| IMMOBI<br>(Immobilizer function present/not present) | Off/On*               | <ul style="list-style-type: none"> <li>Immobilizer function present: On</li> <li>Immobilizer function not present: Off</li> </ul>             | Keyless control module inspection | —        |

## ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS AND START SYSTEM]

| PID name<br>(definition)                                 | Unit/Operation        | Data contents                                                                                                                      | Inspection item (s)               | Terminal |
|----------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------|
| LOCK_SW_D<br>(Door lock-link switch status)              | Lock/Unlock           | <ul style="list-style-type: none"> <li>Driver's door: UNLOCK: Unlock</li> <li>Driver's door: LOCK: Lock</li> </ul>                 | Door lock-link switch inspection  | 3P       |
| MASTERKEY*<br>(Master key present/not present)           | Not Pushed/<br>Pushed | <ul style="list-style-type: none"> <li>Master key present: Present</li> <li>Master key not present: Not present</li> </ul>         | Keyless control module inspection | —        |
| NUMCARD<br>(Number of advanced keys)                     | —                     | <ul style="list-style-type: none"> <li>Number of programmed advanced keys: 0—6</li> </ul>                                          | Keyless control module inspection | —        |
| NUMKEY*<br>(Number of key codes)                         | —                     | <ul style="list-style-type: none"> <li>Number of programmed key codes: 0—8</li> </ul>                                              | Keyless control module inspection | —        |
| PWR_ACC<br>(ACC power supply status)                     | Off/On                | <ul style="list-style-type: none"> <li>Ignition switch at ACC: On</li> <li>Ignition switch at LOCK: Off</li> </ul>                 | Ignition switch inspection        | 2A       |
| REQ_SW_BK<br>(Liftgate opener switch status)             | Off/On                | <ul style="list-style-type: none"> <li>Liftgate opener switch pressed: On</li> <li>Liftgate opener switch released: Off</li> </ul> | Liftgate opener switch inspection | 3G       |
| REQ_SW_R<br>Request switch (RF) status                   | Off/On                | <ul style="list-style-type: none"> <li>Request switch (RF) pressed: On</li> <li>Request switch (RF) released: Off</li> </ul>       | Request switch (RF) inspection    | 3U       |
| REQ_SW_L<br>Request switch (LF) status                   | Off/On                | <ul style="list-style-type: none"> <li>Request switch (LF) pressed: On</li> <li>Request switch (LF) released: Off</li> </ul>       | Request switch (LF) inspection    | 3X       |
| VPWR_B+<br>(Keyless control module power supply voltage) | V                     | <ul style="list-style-type: none"> <li>Continuous: Approx. 12 V</li> </ul>                                                         | Battery inspection                | 1D       |

\* : With immobilizer system

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**09-02B ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]**

|                                                                                                                   |                  |                                                                                                                   |                  |
|-------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------|------------------|
| <b>FOREWORD [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> .....                                    | <b>09-02B-1</b>  | <b>SECURITY LIGHT: 14, DTC: B10D7:81/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-13</b> |
| <b>DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> .....                              | <b>09-02B-2</b>  | Diagnostic Procedure .....                                                                                        | <b>09-02B-13</b> |
| Security light .....                                                                                              | <b>09-02B-2</b>  | <b>SECURITY LIGHT: 15, DTC: B10D7:51/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-14</b> |
| M-MDS .....                                                                                                       | <b>09-02B-2</b>  | Diagnostic Procedure .....                                                                                        | <b>09-02B-15</b> |
| <b>CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> .....                                | <b>09-02B-3</b>  | <b>SECURITY LIGHT: 16, DTC: U0100:87/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-16</b> |
| <b>DTC TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> .....                                   | <b>09-02B-3</b>  | Diagnostic Procedure .....                                                                                        | <b>09-02B-16</b> |
| <b>SECURITY LIGHT: 11, DTC: B10D9:87/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-6</b>  | <b>SECURITY LIGHT: 21, DTC: B10D8:00/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-17</b> |
| System wiring diagram .....                                                                                       | <b>09-02B-7</b>  | Diagnostic Procedure .....                                                                                        | <b>09-02B-17</b> |
| Diagnostic Procedure .....                                                                                        | <b>09-02B-7</b>  | <b>SECURITY LIGHT: 22, DTC: B10DA:51 /P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-18</b> |
| <b>SECURITY LIGHT: 12, DTC: B10D5:13/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-8</b>  | Diagnostic Procedure .....                                                                                        | <b>09-02B-18</b> |
| Diagnostic Procedure .....                                                                                        | <b>09-02B-8</b>  | <b>SECURITY LIGHT: 23, DTC: B10DA:62/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-19</b> |
| <b>SECURITY LIGHT: 13, DTC: B10D7:05/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-9</b>  | Diagnostic Procedure .....                                                                                        | <b>09-02B-19</b> |
| Diagnostic Procedure .....                                                                                        | <b>09-02B-10</b> | <b>PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ....                  | <b>09-02B-20</b> |
| <b>SECURITY LIGHT: 13, DTC: B10D7:94/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ..... | <b>09-02B-11</b> | <b>PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]</b> ....                       | <b>09-02B-21</b> |
| Diagnostic Procedure .....                                                                                        | <b>09-02B-11</b> |                                                                                                                   |                  |

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## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

### FOREWORD [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3345500

- DTCs are recorded in the PCM and keyless control module when a malfunction is detected. The stored DTCs can be verified using the flashing pattern of the security light and M-MDS. There are some DTCs which cannot be verified using the security light. Verify the DTCs that were detected using the M-MDS prior to beginning the servicing.  
(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)
- If more than one DTC is detected, the security light only displays the DTC with the lowest number. Begin repairs based on the DTC displayed by the security light. All DTCs can be read by the M-MDS.
- It is possible for several DTCs to be displayed for a one malfunction cause. Erase the DTCs after one repair and then re-inspect the DTCs.
- If immobilizer system DTCs are not recorded even if the engine cannot be started, perform symptom troubleshooting.  
(See 01-03-12 NO.3 WILL NOT CRANK [ZJ, ZY].)
- The PID/data monitor function can be used to verify the number of key ID numbers programmed for a single vehicle.  
(See 09-02B-21 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)

#### Note

- Due to the possibility that the engine cannot be started because transmission between the key and the vehicle is obstructed, do not allow the following items to contact the key ring.
  - Any metallic object
  - Spare keys or keys for other vehicles equipped with an immobilizer system
  - Any electronic device, or any credit or other card with magnetic strips

#### EXAMPLES:



METAL RING LYING ON KEY HEAD



METAL PART OF ANOTHER KEY TOUCHING KEY HEAD



KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

ac9uuw00001496

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

### DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3345400

#### Security light

1. Turn the ignition switch to the ON position.
2. Verify the security light status.
  - If a malfunction is detected, the DTC pattern begins flashing after the security light flashes or illuminates for approx. 1 min according to the DTC. However, because there are DTCs which cannot be confirmed using the security light, verify the DTCs that were detected using the M-MDS prior to beginning the servicing.
    - DTC 16 or below: Flashes for **approx. 1 min** and the DTC flash pattern repeats 10 times.
    - DTC 21 or higher: Illuminates for **approx. 1 min** and the DTC flash pattern repeats 10 times.
    - If more than one DTC is detected, only the DTC with the lowest number is displayed.
  - If there is no malfunction, the security light illuminates for **approx. 3 s**, and then turns off.

#### Note

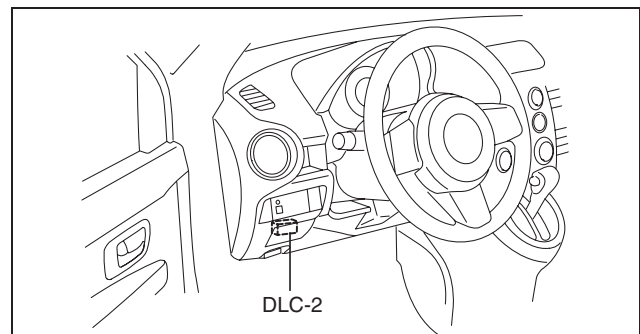
- The service code flashing pattern repeats **10 times**.
  - If more than one DTC is detected, only the DTC with the lowest number is displayed.
3. If there is a malfunction, verify the DTCs using the M-MDS. When several DTCs are detected, repair the malfunctioning location based on the DTC displayed by the security light.

#### Note

- Because of the possibility that one malfunction cause could result in several DTCs being detected, erase the DTCs after the repair is completed, and then re-inspect the DTCs.
4. After completion of repairs, clear all DTCs stored in the keyless control module. (See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)

#### M-MDS

1. Connect the M-MDS to the DLC-2.
2. After vehicle identification, the following can be selected from the M-MDS initialization screen.
  - Using an IDS (laptop PC)
    1. Select "Self-test".
    2. Select "Module".
    3. Select "RKE".
  - Using a PDS (pocket PC):
    1. Select "Module test".
    2. Select "RKE".
    3. Select "Self-test".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection. When several DTCs are detected, repair the malfunctioning location based on the DTC displayed by the security light. (See 09-02B-3 DTC TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)



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## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

### Note

- Because of the possibility that one malfunction cause could result in several DTCs being detected, erase the DTCs after the repair is completed, and then check for DTCs again.

- After completion of repairs, clear all DTCs stored in the keyless control module. (See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)

### CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

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- Connect the M-MDS to the DLC-2.
- After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

- When using the IDS (laptop PC)
  - Select "Self Test".
  - Select "Modules".
  - Select "RKE".
- When using the PDS (Pocket PC)
  - Select "Module Tests".
  - Select "RKE".
  - Select "Self Test".

- Verify the DTC according to the directions on the screen.

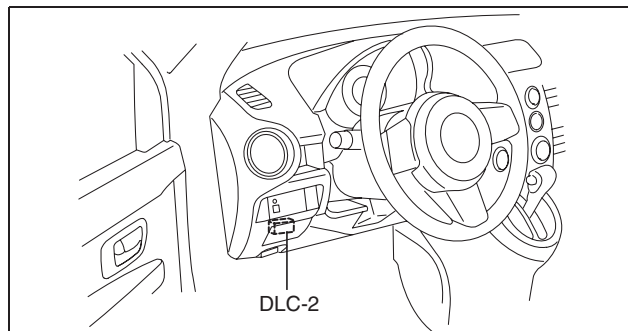
- Press the clear button on the DTC screen to clear the DTC.

- Turn the ignition switch to the LOCK position.

- Turn the ignition switch to the ON position and wait for **5 s more**.

- Perform DTC inspection. (See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)

- Verify that no DTCs are displayed.



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### DTC TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

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### Note

- The security light flashes or illuminates under the following conditions when the ignition switch is turned to the LOCK or ACC position.
  - If there is any malfunction:
    - DTC 16 or below: Flashes for **approx. 1 min** and the DTC flash pattern indicated in the table below repeats 10 times.
    - DTC 21 or higher: Illuminates for **approx. 1 min** and the DTC flash pattern indicated in the table below repeats 10 times.
    - If more than one DTC is detected, only the DTC with the lowest number is displayed.
  - If there is no malfunction:
    - The security light illuminates for **approx. 3 s** and then turns off.

| DTC                             |                                                                                     |                       |                        |          | Detection Condition                              | Reference                                                                                                            |
|---------------------------------|-------------------------------------------------------------------------------------|-----------------------|------------------------|----------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Security light flashing pattern |                                                                                     | Keyless warning light | M-MDS display*         |          |                                                  |                                                                                                                      |
|                                 |                                                                                     |                       | Keyless control module | PCM      |                                                  |                                                                                                                      |
| 11                              |  | Illuminated           | B10D9:87               | P1260:00 | No detected communication with the coil antenna. | (See 09-02B-6 SECURITY LIGHT: 11, DTC: B10D9:87/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |



## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| DTC                             |                                                                                     |                       |                        |              | Detection Condition                                                                                                                                             | Reference                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------|-----------------------|------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Security light flashing pattern |                                                                                     | Keyless warning light | M-MDS display*         |              |                                                                                                                                                                 |                                                                                                                       |
|                                 |                                                                                     |                       | Keyless control module | PCM          |                                                                                                                                                                 |                                                                                                                       |
| 12                              |    | Illuminated           | B10D5:13               | P1260:0<br>0 | <ul style="list-style-type: none"><li>Coil antenna malfunction</li><li>The PCM determined a malfunction in the coil antenna even though it is normal.</li></ul> | (See 09-02B-8 SECURITY LIGHT: 12, DTC: B10D5:13/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)  |
| 13                              |   | Not illuminated       | B10D7:05               | P1260:0<br>0 | Key ID number program error                                                                                                                                     | (See 09-02B-9 SECURITY LIGHT: 13, DTC: B10D7:05/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)  |
|                                 |                                                                                     | Not illuminated       | B10D7:94               | P1260:0<br>0 | The key ID number data cannot be read.                                                                                                                          | (See 09-02B-11 SECURITY LIGHT: 13, DTC: B10D7:94/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| 14                              |  | Not illuminated       | B10D7:81               | P1260:0<br>0 | The keyless control module cannot read key ID number data normally.                                                                                             | (See 09-02B-13 SECURITY LIGHT: 14, DTC: B10D7:81/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| 15                              |  | Not illuminated       | B10D7:51               | P1260:0<br>0 | Keyless control module detected unprogrammed key ID number.                                                                                                     | (See 09-02B-14 SECURITY LIGHT: 15, DTC: B10D7:51/ P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| DTC                             |                                                                                     |                       |                        |          | Detection Condition                                                                                 | Reference                                                                                                            |
|---------------------------------|-------------------------------------------------------------------------------------|-----------------------|------------------------|----------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Security light flashing pattern |                                                                                     | Keyless warning light | M-MDS display*         |          |                                                                                                     |                                                                                                                      |
|                                 |                                                                                     |                       | Keyless control module | PCM      |                                                                                                     |                                                                                                                      |
| 16                              |    | Not illuminated       | U0100:87               | P1260:00 | Communication error between the keyless control module and the PCM (no response/condition mismatch) | (See 09-02B-16 SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| 21                              |    | Illuminated           | B10D8:00               | P1260:00 | Only one key has been programmed.                                                                   | (See 09-02B-17 SECURITY LIGHT: 21, DTC: B10D8:00/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| 22                              |  | Not illuminated       | B10DA:51               | P1260:00 | Communication error between keyless control module and PCM (data transfer error)                    | (See 09-02B-18 SECURITY LIGHT: 22, DTC: B10DA:51/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
| 23                              |  | Not illuminated       | B10DA:62               | P1260:00 | ID number data between keyless control module and PCM are different.                                | (See 09-02B-19 SECURITY LIGHT: 23, DTC: B10DA:62/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| DTC                             |                       |                        |          | Detection Condition                 | Reference                                                                                                                                |
|---------------------------------|-----------------------|------------------------|----------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Security light flashing pattern | Keyless warning light | M-MDS display*         |          |                                     |                                                                                                                                          |
|                                 |                       | Keyless control module | PCM      |                                     |                                                                                                                                          |
| Not illuminated                 | Illuminated           | U0001:88               | U0073:00 | Module communication error (HS-CAN) | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                 | Illuminated           | U0100:00               | -        | PCM communication error             | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |

\* : The letters at the beginning of each DTC are only displayed when using the M-MDS, and refer to the following:  
B= Body system, P= Powertrain system, U= Network communication system.

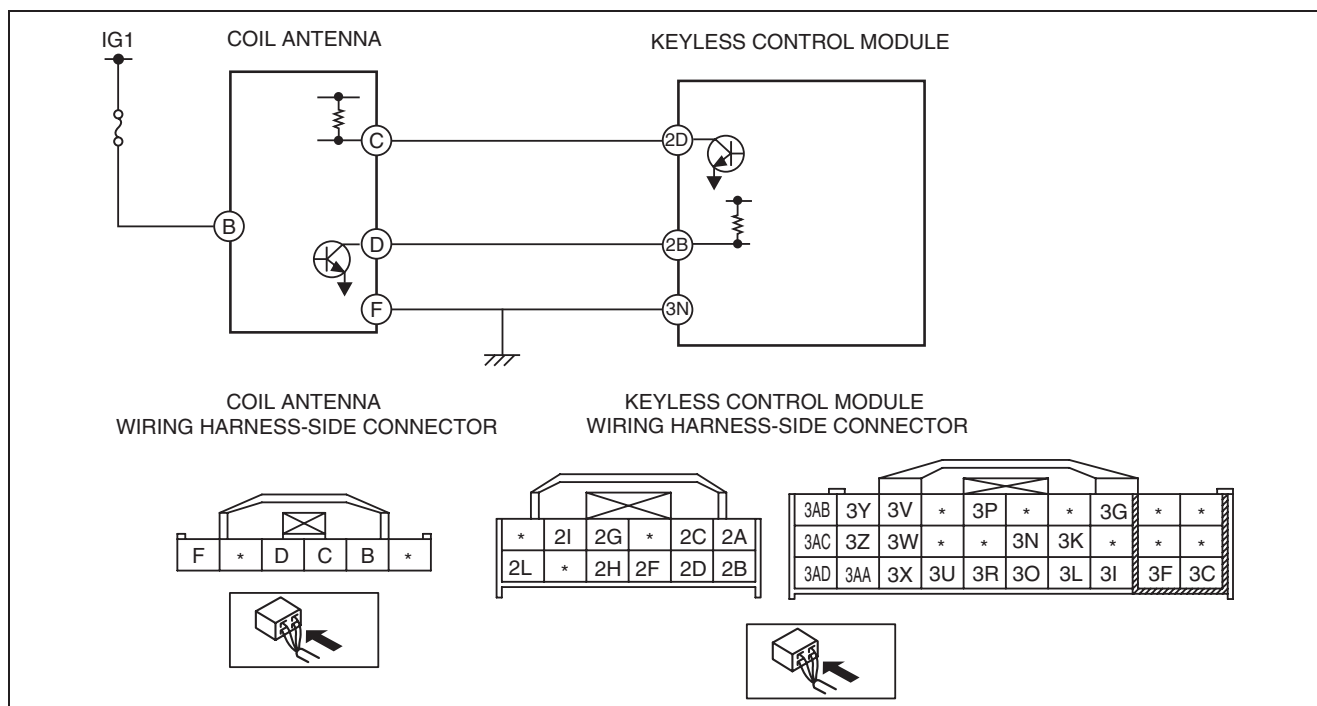
### SECURITY LIGHT: 11, DTC: B10D9:87/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

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|                |                                 |                        |          |                                                                                                                                                                                                                                                      |
|----------------|---------------------------------|------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 11       | No detected communication with coil antenna.                                                                                                                                                                                                         |
|                | M-MDS display                   | Keyless control module | B10D9:87 |                                                                                                                                                                                                                                                      |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                                                                      |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• ENG 10 A fuse malfunction</li><li>• The coil antenna is pulled out.</li><li>• Coil antenna malfunction</li><li>• Keyless control module malfunction</li><li>• Related wiring harnesses malfunction</li></ul> |

# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

## System wiring diagram



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## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                               | Action                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY COIL ANTENNA CORRECTLY INSTALLED</b> <ul style="list-style-type: none"> <li>Verify the installation condition of the coil antenna.</li> <li>Is the coil antenna correctly installed? (Is the connector pulled out?)</li> </ul>                                                                                                                 | Yes<br>Go to the next step.                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>Install the coil antenna correctly, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
| 2    | <b>FUSE INSPECTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Remove the ENG 10 A fuse.</li> <li>Is the fuse normal?</li> </ul>                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>Replace the fuse, then go to Step 9.                                                                                                                     |
| 3    | <b>INSPECT COIL ANTENNA POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Disconnect the coil antenna connector.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at coil antenna connector terminal B.</li> <li>Is the voltage 8 V or more?</li> </ul>             | Yes<br>Go to the next step.                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair or replace the wiring harness, then go to Step 9.                                                                                                 |
| 4    | <b>INSPECT WIRING HARNESS BETWEEN COIL ANTENNA AND GROUND</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Measure the continuity of the wiring harness between coil antenna connector terminal C and ground.</li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair or replace the wiring harness, then go to Step 9.                                                                                                 |
| 5    | <b>INSPECT COMMUNICATION CIRCUIT (INPUT) FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Disconnect the keyless control module connector</li> <li>Measure the continuity of the wiring harness between coil antenna connector terminal C and keyless control module connector terminal 2D.</li> <li>Is there continuity?</li> </ul>            | Yes<br>Go to the next step.                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair or replace the wiring harness between the coil antenna and the keyless control module, then go to Step 9.                                         |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <b>INSPECT COMMUNICATION CIRCUIT (OUTPUT) FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Measure the continuity of the wiring harness between coil antenna connector terminal D and keyless control module connector terminal 2B.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the wiring harness between the coil antenna and the keyless control module, then go to Step 9.                                                                                                                                                                                                                                                                  |
| 7    | <b>INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT</b> <ul style="list-style-type: none"> <li>Connect the coil antenna connector.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at coil antenna connector terminal C.<br/>— Is the voltage <b>8 V or more</b>?</li> </ul>                                                                                                                                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No <ul style="list-style-type: none"> <li>Replacing the coil antenna.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to Step 9.</li> </ul>                                                                                                                                                                                      |
| 8    | <b>INSPECT COMMUNICATION CIRCUIT (OUTPUT) FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Measure the continuity of the wiring harness between coil antenna connector terminal D and ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No <ul style="list-style-type: none"> <li>Replacing the coil antenna.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                                                                                                               |
| 9    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D9:87<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                              |
| 10   | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                    |

### SECURITY LIGHT: 12, DTC: B10D5:13/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

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|                |                                 |                        |          |                                                                                                                                                              |
|----------------|---------------------------------|------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 12       | <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• PCM determined a malfunction in coil antenna even though it is normal.</li></ul>  |
|                | M-MDS display                   | Keyless control module | B10D5:13 |                                                                                                                                                              |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                              |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• Poor connection of the coil antenna connector</li><li>• PCM malfunction</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                                                     |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT COIL ANTENNA CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the coil antenna connector.</li> <li>Is the coil antenna connector and the keyless control module connector securely connected without corrosion, damage or disconnected pins.</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replacing the coil antenna.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Securely connect the connectors, and go to the next step.                                                                                                                                            |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 2    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again? <ul style="list-style-type: none"> <li>Keyless control module: B10D5:13</li> <li>PCM:P1260:00</li> </ul> </li> </ul> | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Go to the next step.                                           |
| 3    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                      | Yes<br>Perform the corresponding DTC inspection.                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>DTC troubleshooting completed.                                 |

### SECURITY LIGHT: 13, DTC: B10D7:05/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

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|                |                                 |                        |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------|---------------------------------|------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 13       | Key ID number program error                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                | M-MDS display                   | Keyless control module | B10D7:05 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• Errors during key ID number program procedure</li><li>• If any of the following items are touching or near key head, signal communication between key and vehicle is negatively affected, resulting in engine not starting.<ul style="list-style-type: none"><li>— Spare keys</li></ul></li></ul> <p>EXAMPLES:</p> <div><div></div><div>METAL RING LYING ON KEY HEAD</div><div></div><div>METAL PART OF ANOTHER KEY TOUCHING KEY HEAD</div><div></div><div>KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY</div><ul style="list-style-type: none"><li>— Keys for other vehicles equipped with immobilizer system</li><li>— Any metallic object</li><li>— Any electronic device, or any credit or other card with magnetic strips</li></ul></div> |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02B-20 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)<br/>— NUMKEY<br/>(See 09-02B-21 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)<br/>• Are two or more keys programmed?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No <ul style="list-style-type: none"> <li>Program an additional key referring to the immobilizer system-related parts programming.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)<br/>• Go to the next step.</li> </ul> |
| 2    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:05<br/>— PCM:P1260:00</li> </ul>                        | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                     |
| 3    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                           |



# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

SECURITY LIGHT: 13, DTC: B10D7:94/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3356000

|                |                                 |                        |          |                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
|----------------|---------------------------------|------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| DTC            | Security light flashing pattern |                        | 13       | Key ID number data cannot be read.                                                                                                                                                                                                                                                                                                                                                        |  |  |  |
|                | M-MDS display                   | Keyless control module | B10D7:94 |                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• There is no transponder in the key</li><li>• Transponder malfunction (key code is not output)</li><li>• If any of the following items are touching or near key head, signal communication between key and vehicle is negatively affected, resulting in engine not starting.<ul style="list-style-type: none"><li>— Spare keys</li></ul></li></ul> |  |  |  |
|                |                                 |                        |          | EXAMPLES:                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |
|                |                                 |                        |          | <div></div> <div>METAL RING LYING ON KEY HEAD</div>                                                                                                                                                                                                                                                      |  |  |  |
|                |                                 |                        |          | <div></div> <div>METAL PART OF ANOTHER KEY TOUCHING KEY HEAD</div>                                                                                                                                                                                                                                       |  |  |  |
|                |                                 |                        |          | <div></div> <div>KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY</div>                                                                                                                                                                                                                           |  |  |  |
|                |                                 |                        |          | <ul style="list-style-type: none"><li>— Keys for other vehicles equipped with immobilizer system</li><li>— Any metallic object</li><li>— Any electronic device, or any credit or other card with magnetic strips</li></ul>                                                                                                                                                                |  |  |  |
|                |                                 |                        |          | <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• Keyless control module malfunction</li></ul>                                                                                                                                                                                                                                                                   |  |  |  |

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     | Action                                                                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Is the DTC displayed again? <ul style="list-style-type: none"> <li>— Keyless control module: B10D7:94</li> <li>— PCM:P1260:00</li> </ul> </li> </ul> | Yes | Go to Step 3.                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No  | Go to the next step.                                                                                                                                                         |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Is the DTC displayed again? <ul style="list-style-type: none"> <li>— Keyless control module: B10D7:05</li> <li>— PCM:P1260:00</li> </ul> </li> </ul> | Yes | Security light: 13, M-MDS: Inspect B10D7:05/P1260:00.<br>(See 09-02B-9 SECURITY LIGHT: 13, DTC: B10D7:05/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No  | Go to the next step.                                                                                                                                                         |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <b>VERIFY WHETHER KEY IS VALID OR NOT</b> <ul style="list-style-type: none"> <li>Are there any keys with which the engine can be started, other than the key that is a cause of the displayed DTC?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                              |
| 4    | <b>VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA</b> <ul style="list-style-type: none"> <li>Program an additional key.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:94<br/>— PCM:P1260:00</li> </ul> | Yes<br>Replace the coil antenna, then go to Step 6.<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No <ul style="list-style-type: none"> <li>Dispose of the malfunctioning key.</li> <li>Program a new key if necessary.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to Step 8.</li> </ul>                                                                                                                                      |
| 5    | <b>VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Using another valid key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:94<br/>— PCM:P1260:00</li> </ul>                                                                                    | Yes<br>Replace the coil antenna, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No <ul style="list-style-type: none"> <li>Dispose of the malfunctioning key.</li> <li>Program a new key if necessary.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)</li> <li>Go to Step 8.</li> </ul>                                                                                                                                                   |
| 6    | <b>INSPECT KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:94<br/>— PCM:P1260:00</li> </ul>                                                                                                         | Yes <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to Step 8.                                                                                                                                                                                                                                                                                                                                                                     |
| 7    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:94<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                                                            | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                              |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                             |     | Action                                    |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------|
| 8    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul> | Yes | Perform the corresponding DTC inspection. |
|      |                                                                                                                                                                        | No  | DTC troubleshooting completed.            |

### SECURITY LIGHT: 14, DTC: B10D7:81/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3356600

|                |                                 |                        |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|---------------------------------|------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 14       | The keyless control module cannot read key ID number data normally.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                | M-MDS display                   | Keyless control module | B10D7:81 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• Transponder (key) malfunction</li><li>• Coil antenna installation malfunction</li><li>• Coil antenna malfunction</li><li>• Keyless control module malfunction</li><li>• If any of the following items are touching or near key head, signal communication between key and vehicle is negatively affected, resulting in engine not starting.<ul style="list-style-type: none"><li>— Spare keys</li></ul></li></ul> <p>EXAMPLES:</p> <div><div></div><div>METAL RING LYING ON KEY HEAD</div><div></div><div>METAL PART OF ANOTHER KEY TOUCHING KEY HEAD</div><div></div><div>KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY</div></div> <ul style="list-style-type: none"><li>— Keys for other vehicles equipped with an immobilizer system</li><li>— Any metallic object</li><li>— Any electronic device, or any credit or other card with magnetic strips</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                             |     | Action                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY COIL ANTENNA CORRECTLY INSTALLED</b> <ul style="list-style-type: none"> <li>Verify the installation condition of the coil antenna.</li> <li>Is the coil antenna correctly installed? (Is the connector not completely connected?)</li> </ul> | Yes | Go to the next step.                                                                                                                                     |
|      |                                                                                                                                                                                                                                                        | No  | Install the coil antenna correctly, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>VERIFY WHETHER KEY IS VALID OR NOT</b> <ul style="list-style-type: none"> <li>Using another programmed key, turn the ignition switch to the ON position.</li> <li>If there is not another programmed key, program an additional key and turn the ignition key to the ON position using the programmed key.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:81<br/>— PCM:P1260:00</li> </ul> | Yes<br>Replace the coil antenna, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No <ul style="list-style-type: none"> <li>Dispose of the malfunctioning key.</li> <li>Program a new key if necessary.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to Step 4.</li> </ul>                                                                                                                           |
| 3    | <b>INSPECT KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Using another programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:81<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                                                             | Yes <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                     |
| 4    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:81<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                                                                                                                                                            | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                              |
| 5    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                    |

### SECURITY LIGHT: 15, DTC: B10D7:51/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3356700

|                |                                 |                        |          |                                                                                                                                                                                                                                                 |
|----------------|---------------------------------|------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 15       | Keyless control module has detected unprogrammed key ID number.                                                                                                                                                                                 |
|                | M-MDS display                   | Keyless control module | B10D7:51 |                                                                                                                                                                                                                                                 |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                                                                 |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• No keys have been programmed after replacing keyless control module.</li><li>• Unprogrammed key used</li><li>• Attempt made to program ninth key</li><li>• Keyless control module malfunction</li></ul> |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action |                                                                                                                                                                                                                                                                                                                                                                                     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02B-20 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)<br/>— NUMKEY<br/>(See 09-02B-21 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are one or more keys programmed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Go to Step 3.                                                                                                                                                                                                                                                                                                                                                                       |
| 2    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02B-20 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)<br/>— NUMKEY<br/>(See 09-02B-21 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are eight keys programmed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                            | Yes    | Erase the key ID number, then go to the next step.<br>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                |
| 3    | <b>INSPECT KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Program the key ID number.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Two or more keys need to be programmed to start the engine.</li> </ul> <ul style="list-style-type: none"> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:51<br/>— PCM:P1260:00</li> </ul> | Yes    | <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                       |
| 4    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10D7:51<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                | Yes    | Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                |
| 5    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes    | Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                      |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3356800

|                |                                 |                        |          |                                                                                                                                                                                                          |
|----------------|---------------------------------|------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 16       | Communication error between keyless control module and PCM (no response/condition mismatch)                                                                                                              |
|                | M-MDS display                   | Keyless control module | U0100:87 |                                                                                                                                                                                                          |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                          |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• Malfunction in wiring harness (CAN line) between keyless control module and PCM</li><li>• PCM malfunction</li><li>• Keyless control module malfunction</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                     | Action |                                                                                                                                                                                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Is a DTC displayed for either the keyless control module or PCM, or both?<br/>— U0001:88</li> </ul> | Yes    | Perform troubleshooting according to the corresponding DTC inspection.<br>(See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output?<br/>— Keyless control module: U0100:87<br/>— PCM:P1260:00</li> </ul>               | Yes    | <ul style="list-style-type: none"> <li>Inspect DTC P1260:00.<br/>(See 01-02A-148 DTC P1260:00 [ZJ, ZY].)</li> <li>Go to the next step.</li> </ul>                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | Go to step 4.                                                                                                                                                                                                                                                                                                                                                                       |
| 3    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: U0100:87<br/>— PCM:P1260:00</li> </ul> | Yes    | <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                |
| 4    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                         | Yes    | Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                      |



## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

SECURITY LIGHT: 21, DTC: B10D8:00/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3358000

|                |                                 |                        |          |                                   |
|----------------|---------------------------------|------------------------|----------|-----------------------------------|
| DTC            | Security light flashing pattern |                        | 21       | Only one key has been programmed. |
|                | M-MDS display                   | Keyless control module | B10D8:00 |                                   |
|                |                                 | PCM                    | P1260:00 |                                   |
| POSSIBLE CAUSE |                                 |                        |          | Only one key has been programmed. |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Action |                                                                                                                                                                                                                                                                                                                                                                                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02B-20 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)<br/>— NUMKEY<br/>(See 09-02B-21 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are two or more keys programmed?</li> </ul>                                               | Yes    | <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to Step 3.</li> </ul>        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No     | <ul style="list-style-type: none"> <li>Program an additional key referring to the immobilizer system-related parts programming.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                                 |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B108D:00<br/>— PCM:P1260:00</li> </ul> | Yes    | <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No     | Go to Step 4.                                                                                                                                                                                                                                                                                                                                                                  |
| 3    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B108D:00<br/>— PCM:P1260:00</li> </ul>                                                                         | Yes    | Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                           |
| 4    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                 | Yes    | Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No     | DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                 |



## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

SECURITY LIGHT: 22, DTC: B10DA:51/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3358500

|                |                                 |                        |          |                                                                                                                                                                                                                                                                                                                              |
|----------------|---------------------------------|------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 22       | Communication error between keyless control module and PCM (data transfer error)                                                                                                                                                                                                                                             |
|                | M-MDS display                   | Keyless control module | B10DA:51 |                                                                                                                                                                                                                                                                                                                              |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                                                                                                                                              |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• Malfunction in wiring harness (CAN line) between keyless control module and PCM</li><li>• Keyless control module malfunction</li><li>• PCM malfunction</li><li>• The immobilizer system-related parts have not been programmed after replacing the keyless control module.</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | Action                                                                                                                                                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Is a DTC displayed for either the keyless control module or PCM, or both?<br/>— U0001:88</li> </ul>                    | Yes | Perform troubleshooting according to the corresponding DTC inspection.<br>(See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                               |
| 2    | <b>INSPECT KEYLESS CONTROL MODULE</b> <ul style="list-style-type: none"> <li>After replacing the keyless control module, have the immobilizer system-related parts been programmed?</li> </ul>                                                                                                                                                                                                                                                    | Yes | Go to step 7.                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | <ul style="list-style-type: none"> <li>Perform programming of immobilizer system-related parts only when replacing the keyless control module.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                      |
| 3    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:51<br/>— PCM:P1260:00</li> </ul>                            | Yes | <ul style="list-style-type: none"> <li>Perform programming of immobilizer system-related parts only when replacing the PCM.<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                      |
| 4    | <b>EXAMINE KEYLESS CONTROL MODULE AND PCM</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:51<br/>— PCM:P1260:00</li> </ul> | Yes | <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM])</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                      |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <b>EXAMINE PCM</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:51<br/>— PCM:P1260:00</li> </ul>         | <ul style="list-style-type: none"> <li>Replace the PCM and program the immobilizer system-related parts.<br/>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br/>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br/>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:51<br/>— PCM:P1260:00</li> </ul> | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                         | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                          |

### SECURITY LIGHT: 23, DTC: B10DA:62/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3358600

|                |                                 |                        |          |                                                                                                                                                                                                       |
|----------------|---------------------------------|------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                        | 23       | ID number data between keyless control module and PCM are different.                                                                                                                                  |
|                | M-MDS display                   | Keyless control module | B10DA:62 |                                                                                                                                                                                                       |
|                |                                 | PCM                    | P1260:00 |                                                                                                                                                                                                       |
| POSSIBLE CAUSE |                                 |                        |          | <ul style="list-style-type: none"><li>• Necessary procedures were not performed using the M-MDS after replacing PCM.</li><li>• Keyless control module malfunction</li><li>• PCM malfunction</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Is a DTC displayed for either the keyless control module or PCM, or both?<br/>— U0001:88</li> </ul> | Yes<br>Perform troubleshooting according to the corresponding DTC inspection.<br>(See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                                                                                |

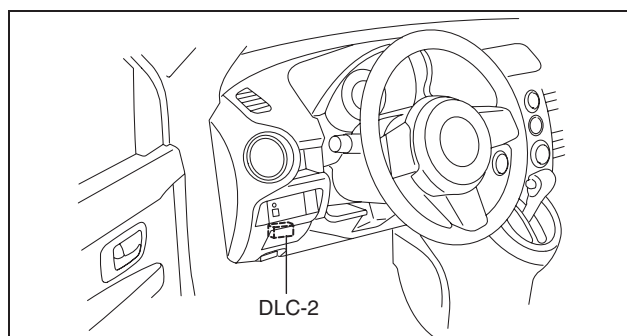
## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>EXAMINE KEYLESS CONTROL MODULE AND PCM</b> <ul style="list-style-type: none"> <li>Perform programming of immobilizer system-related parts only when replacing the PCM<br/>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:62<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the keyless control module and program the immobilizer system-related parts.<br/>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM])</li> <li>Go to the next step.</li> </ul>                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3    | <b>EXAMINE PCM</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:62<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                               | Yes <ul style="list-style-type: none"> <li>Replace the PCM and program the immobilizer system-related parts.<br/>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)</li> <li>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)</li> <li>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)</li> <li>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02B-3 CLEARING DTC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02B-2 DTC INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Keyless control module: B10DA:62<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                       | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                             |

## PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

id0902e3400500

- Connect the M-MDS to the DLC-2.
- After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    - Select "DataLogger".
    - Select "Modules".
    - Select "RKE".
  - When using the PDS (Pocket PC)
    - Select "Module Tests".
    - Select "RKE".
    - Select "DataLogger".
- Select the applicable PID from the PID table.
- Verify the PID data according to the directions on the screen.



am2zzw0000210

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND

### Note

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

### PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]

100902e3345900

| PID name (definition)                                                     | Detection Condition                      |
|---------------------------------------------------------------------------|------------------------------------------|
| NUMKEY<br>(Number of key ID numbers programmed in keyless control module) | Number of programmed key ID numbers: 0—8 |

## **09-02C ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]**

|                                                                                                          |                 |                                                                                                          |                  |
|----------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------|------------------|
| <b>FOREWORD [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . .                                    | <b>09-02C-1</b> | <b>SECURITY LIGHT: 14, DTC: B10D7:81/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-11</b> |
| <b>DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . .                              | <b>09-02C-2</b> | Diagnostic Procedure . . . . .                                                                           | <b>09-02C-11</b> |
| Security Light . . . . .                                                                                 | <b>09-02C-2</b> | <b>SECURITY LIGHT: 15, DTC: B10D7:51/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-12</b> |
| M-MDS . . . . .                                                                                          | <b>09-02C-2</b> | Diagnostic Procedure . . . . .                                                                           | <b>09-02C-12</b> |
| <b>CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . .                                | <b>09-02C-3</b> | <b>SECURITY LIGHT: 16, DTC: U0100:87/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-13</b> |
| <b>DTC TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . .                                   | <b>09-02C-3</b> | Diagnostic Procedure . . . . .                                                                           | <b>09-02C-13</b> |
| <b>SECURITY LIGHT: 11, DTC: B10D9:87/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-5</b> | <b>SECURITY LIGHT: 21, DTC: B10D8:00/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-14</b> |
| System wiring diagram . . . . .                                                                          | <b>09-02C-5</b> | Diagnostic Procedure . . . . .                                                                           | <b>09-02C-14</b> |
| Diagnostic Procedure . . . . .                                                                           | <b>09-02C-5</b> | <b>SECURITY LIGHT: 22, DTC: B10DA:51/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-15</b> |
| <b>SECURITY LIGHT: 12, DTC: B10D5:13/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-7</b> | Diagnostic Procedure . . . . .                                                                           | <b>09-02C-15</b> |
| Diagnostic Procedure . . . . .                                                                           | <b>09-02C-7</b> | <b>SECURITY LIGHT: 23, DTC: B10DA:62/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-16</b> |
| <b>SECURITY LIGHT: 13, DTC: B10D7:05 /P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-8</b> | Diagnostic Procedure . . . . .                                                                           | <b>09-02C-16</b> |
| Diagnostic Procedure . . . . .                                                                           | <b>09-02C-8</b> | <b>PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . .                 | <b>09-02C-17</b> |
| <b>SECURITY LIGHT: 13, DTC: B10D7:94/ P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . . | <b>09-02C-9</b> | <b>PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]</b> . . . . .                      | <b>09-02C-18</b> |
| Diagnostic Procedure . . . . .                                                                           | <b>09-02C-9</b> |                                                                                                          |                  |

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# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

## FOREWORD [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

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- DTCs are recorded in the PCM and instrument cluster when a malfunction is detected. The stored DTCs can be verified using the flashing pattern of the security light and M-MDS. There are some DTCs which cannot be verified using the security light. Verify the DTCs that were detected using the M-MDS prior to beginning the servicing.  
(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)
- If more than one DTC is detected, the security light only displays the DTC with the lowest number. Begin repairs based on the DTC displayed by the security light. All DTCs can be read by the M-MDS.
- It is possible for several DTCs to be displayed for one malfunction cause. Erase the DTCs after one repair and then re-inspect the DTCs.
- If immobilizer system DTCs are not recorded even if the engine cannot be started, perform symptom troubleshooting.  
(See 01-03-12 NO.3 WILL NOT CRANK [ZJ, ZY].)
- The PID/data monitor function can be used to verify the number of key ID numbers programmed for a single vehicle.  
(See 09-02C-17 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)

### Note

- Due to the possibility that the engine cannot be started because transmission between the key and the vehicle is obstructed, do not allow the following items to contact the key ring.
  - Any metallic object
  - Spare keys or keys for other vehicles equipped with an immobilizer system
  - Any electronic device, or any credit or other card with magnetic strips

#### EXAMPLES:



METAL RING LYING ON KEY HEAD



METAL PART OF ANOTHER  
KEY TOUCHING KEY HEAD



KEY IS NEAR OR TOUCHING  
ANOTHER IMMOBILIZER SYSTEM KEY

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## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

### DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

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#### Security Light

1. Turn the ignition switch to the ON position.
2. Verify the security light status.
  - If a malfunction is detected, the DTC pattern begins flashing after the security light flashes or illuminates for approx. 1 min according to the DTC. However, because there are DTCs which cannot be confirmed using the security light, verify the DTCs that were detected using the M-MDS prior to beginning the servicing.
    - DTC 16 or below: Flashes for **approx. 1 min** and the DTC flash pattern repeats 10 times.
    - DTC 21 or higher: Illuminates for **approx. 1 min** and the DTC flash pattern repeats 10 times.
    - If more than one DTC is detected, only the DTC with the lowest number is displayed.
  - If there is no malfunction, the security light illuminates for **approx. 3 s**, and then turns off.

#### Note

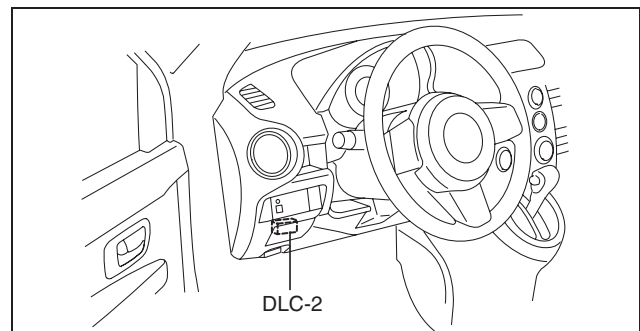
- The service code flashing pattern repeats **10 times**.
  - If more than one DTC is detected, only the DTC with the lowest number is displayed.
3. If there is a malfunction, verify the DTCs using the M-MDS. When several DTCs are detected, repair the malfunctioning location based on the DTC displayed by the security light.

#### Note

- Because of the possibility that one malfunction cause could result in several DTCs being detected, erase the DTCs after the repair is completed, and then re-inspect the DTCs.
4. After completion of repairs, clear all DTCs stored in the Instrument cluster. (See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)

#### M-MDS

1. Connect the M-MDS to the DLC-2.
2. After vehicle identification, the following can be selected from the M-MDS initialization screen.
  - Using an IDS (laptop PC)
    1. Select "Self-test".
    2. Select "Module".
    3. Select "IC".
  - Using a PDS (pocket PC):
    1. Select "Module test".
    2. Select "IC".
    3. Select "Self-test".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection. When several DTCs are detected, repair the malfunctioning location based on the DTC displayed by the security light. (See 09-02C-3 DTC TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)



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#### Note

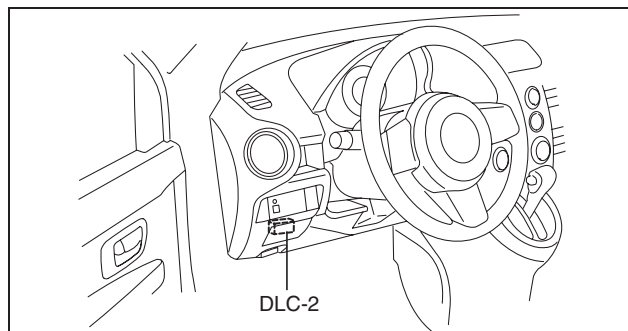


## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

- Because of the possibility that one malfunction cause could result in several DTCs being detected, erase the DTCs after the repair is completed, and then check for DTCs again.
4. After completion of repairs, clear all DTCs stored in the Instrument cluster. (See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)

### CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "IC".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "IC".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Turn the ignition switch to the LOCK position.
6. Turn the ignition switch to the ON position and wait for **5 s more**.
7. Perform DTC inspection. (See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)
8. Verify that no DTCs are displayed.



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### DTC TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

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#### Note

- The security light flashes or illuminates under the following conditions when the ignition switch is turned to the LOCK or ACC position.
  - There is a malfunction:
    - DTC 16 or below: Flashes for **approx. 1 min** and the DTC flash pattern indicated in the table below repeats 10 times.
    - DTC 21 or higher: Illuminates for **approx. 1 min** and the DTC flash pattern indicated in the table below repeats 10 times.
    - If more than one DTC is detected, only the DTC with the lowest number is displayed.
  - There is no malfunction
    - The security light illuminates for **approx. 3 s** and then turns off.

| DTC                             |  |                    |          | Detection Condition                                                                                                                                                 | Page                                                                                                   |
|---------------------------------|--|--------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Security light flashing pattern |  | M-MDS display *    |          |                                                                                                                                                                     |                                                                                                        |
|                                 |  | Instrument cluster | PCM      |                                                                                                                                                                     |                                                                                                        |
| 11                              |  | B10D9:87           | P1260:00 | No detected communication with the coil antenna.                                                                                                                    | (See 09-02C-5 SECURITY LIGHT: 11, DTC: B10D9:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
| 12                              |  | B10D5:13           | P1260:00 | <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• The PCM determined a malfunction in the coil antenna even though it is normal.</li></ul> | (See 09-02C-7 SECURITY LIGHT: 12, DTC: B10D5:13/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| DTC                             |                                                                                     | M-MDS display*     |          | Detection Condition                                                                    | Page                                                                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|--------------------|----------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Security light flashing pattern |                                                                                     | Instrument cluster | PCM      |                                                                                        |                                                                                                                                          |
| 13                              |    | B10D7:05           | P1260:00 | Key ID number program error                                                            | (See 09-02C-8 SECURITY LIGHT: 13, DTC: B10D7:05/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                   |
|                                 |                                                                                     | B10D7:94           | P1260:00 | The key ID number data cannot be read.                                                 | (See 09-02C-9 SECURITY LIGHT: 13, DTC: B10D7:94/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                   |
| 14                              |    | B10D7:81           | P1260:00 | The instrument cluster cannot read key ID number data normally.                        | (See 09-02C-11 SECURITY LIGHT: 14, DTC: B10D7:81/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                  |
| 15                              |    | B10D7:51           | P1260:00 | The instrument cluster has detected an unprogrammed key ID number.                     | (See 09-02C-12 SECURITY LIGHT: 15, DTC: B10D7:51/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                  |
| 16                              |  | U0100:87           | P1260:00 | Communication error between the instrument cluster and the PCM (no response)           | (See 09-02C-13 SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                  |
| 21                              |  | B10D8:00           | P1260:00 | Only one key has been programmed.                                                      | (See 09-02C-14 SECURITY LIGHT: 21, DTC: B10D8:00/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                  |
| 22                              |  | B10DA:51           | P1260:00 | Communication error between the instrument cluster and the PCM (data transfer failure) | (See 09-02C-15 SECURITY LIGHT: 22, DTC: B10DA:51/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                  |
| 23                              |  | B10DA:62           | P1260:00 | Communication error between the instrument cluster and the PCM (condition mismatch)    | (See 09-02C-16 SECURITY LIGHT: 23, DTC: B10DA:62/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)                                  |
| Not illuminated                 |                                                                                     | U0001:88           | U0073:00 | Module communication error (HS-CAN)                                                    | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                 |                                                                                     | U0100:00           | -        | PCM communication error                                                                | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |

# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

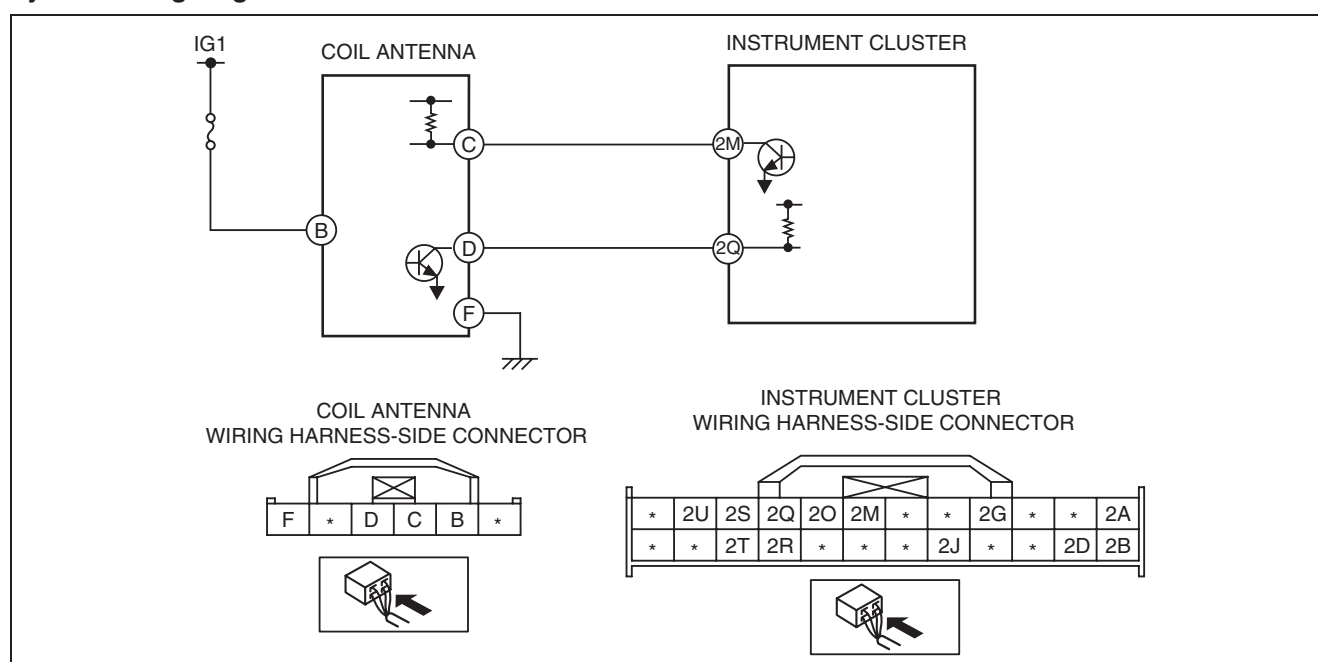
\* : The letters at the beginning of each DTC are only displayed when using the M-MDS, and refer to the following:  
B= Body system, P= Powertrain system, U= Network communication system.

## SECURITY LIGHT: 11, DTC: B10D9:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5353000

|                |                                 |                    |          |                                                                                                                                                                                                          |
|----------------|---------------------------------|--------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 11       | No detected communication with coil antenna.                                                                                                                                                             |
|                | M-MDS display                   | Instrument cluster | B10D9:87 |                                                                                                                                                                                                          |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                          |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• METER 10 A fuse malfunction</li><li>• Coil antenna malfunction</li><li>• Instrument cluster malfunction</li><li>• Related wiring harnesses malfunction</li></ul> |

### System wiring diagram



am2zzw0000089

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                            |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY COIL ANTENNA CORRECTLY INSTALLED</b> <ul style="list-style-type: none"> <li>Verify the installation condition of the coil antenna.</li> <li>Is the coil antenna correctly installed? (Is the connector pulled out?)</li> </ul>                                                                                                       | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                | No<br>Install the coil antenna correctly, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].) |
| 2    | <b>FUSE INSPECTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Remove the METER 10 A fuse.</li> <li>Is the fuse normal?</li> </ul>                                                                                                      | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                | No<br>Replace the fuse, then go to Step 9.                                                                                                        |
| 3    | <b>INSPECT COIL ANTENNA POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Disconnect the coil antenna connector.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at coil antenna connector terminal B.</li> <li>— Is the voltage 8 V or more?</li> </ul> | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                | No<br>Repair or replace the wiring harness, then go to Step 9.                                                                                    |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>INSPECT WIRING HARNESS BETWEEN COIL ANTENNA AND GROUND</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Measure the continuity of the wiring harness between coil antenna connector terminal C and ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the wiring harness, then go to Step 9.                                                                                                                                                                                                                                                            |
| 5    | <b>INSPECT COMMUNICATION CIRCUIT (INPUT) FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Disconnect the instrument cluster connector.</li> <li>Measure the continuity of the wiring harness between coil antenna connector terminal C and instrument cluster connector terminal 2M.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                        | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the wiring harness between the coil antenna and the instrument cluster, then go to Step 9.                                                                                                                                                                                                        |
| 6    | <b>INSPECT COMMUNICATION CIRCUIT (OUTPUT) FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Measure the continuity of the wiring harness between coil antenna connector terminal D and instrument cluster connector terminal 2Q.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the wiring harness between the coil antenna and the instrument cluster, then go to Step 9.                                                                                                                                                                                                        |
| 7    | <b>INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT</b> <ul style="list-style-type: none"> <li>Connect the coil antenna connector.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at coil antenna connector terminal C.</li> <li>— Is the voltage <b>8 V or more</b>?</li> </ul>                                                                                                                                                                                                                                    | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No <ul style="list-style-type: none"> <li>Replacing the coil antenna.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)</li> <li>Go to Step 9.</li> </ul>                                                                                                                                    |
| 8    | <b>INSPECT COMMUNICATION CIRCUIT (OUTPUT) FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Measure the continuity of the wiring harness between coil antenna connector terminal ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No <ul style="list-style-type: none"> <li>Replacing the coil antenna.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                                                             |
| 9    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Clear the DTC.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify if any DTCs are displayed.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D9:87<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                |
| 10   | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                      |

# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

SECURITY LIGHT: 12, DTC: B10D5:13/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5353100

|                |                                 |                    |          |                                                                                                                                                              |
|----------------|---------------------------------|--------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 12       | <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• PCM determined a malfunction in coil antenna even though it is normal.</li></ul>  |
|                | M-MDS display                   | Instrument cluster | B10D5:13 |                                                                                                                                                              |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                              |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• Poor connection of the coil antenna connector</li><li>• PCM malfunction</li></ul> |

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     | Action                                                                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT COIL ANTENNA CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the coil antenna connector.</li> <li>Is the coil antenna connector and the instrument cluster connector securely connected without corrosion, damage or disconnected pins.</li> </ul>                                                                                                         | Yes | <ul style="list-style-type: none"> <li>Replace the coil antenna.<br/>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Securely connect the connectors, and go to the next step.                                                                                                                                |
| 2    | <b>Verify after repair</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D5:13<br/>— PCM:P1260:00</li> </ul> | Yes | Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Go to the next step.                                                                                                                                                                     |
| 3    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                        | Yes | Perform the corresponding DTC inspection.                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | DTC troubleshooting completed.                                                                                                                                                           |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

SECURITY LIGHT: 13, DTC: B10D7:05/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5353200

|                |                                 |                    |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|---------------------------------|--------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 13       | Key ID number program error                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                | M-MDS display                   | Instrument cluster | B10D7:05 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• Errors during key ID number program procedure</li><li>• If any of the following items are touching or near key head, signal communication between key and vehicle is negatively affected, resulting in engine not starting.<ul style="list-style-type: none"><li>— Spare</li></ul></li></ul> <p>EXAMPLES:</p> <div><div></div><div>METAL RING LYING ON KEY HEAD</div><div></div><div>METAL PART OF ANOTHER KEY TOUCHING KEY HEAD</div><div></div><div>KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY</div></div> <p>keys</p> <ul style="list-style-type: none"><li>— Keys for other vehicles equipped with an immobilizer system</li><li>— Any metallic object</li><li>— Any electronic device, or any credit or other card with magnetic strips</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02C-17 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)<br/>— NUMKEYS<br/>(See 09-02C-18 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are two or more keys programmed?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Program an additional key referring to the immobilizer system-related parts programming.<br>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].) |
| 2    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:05<br/>— PCM:P1260:00</li> </ul>                                | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to the next step.                                                                                                                                                             |
| 3    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                          | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                                                                                                                   |

# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

SECURITY LIGHT: 13, DTC: B10D7:94/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5356000

|                |                                 |                    |          |                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
|----------------|---------------------------------|--------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| DTC            | Security light flashing pattern |                    | 13       | Key ID number data cannot be read.                                                                                                                                                                                                                                                                                                                                                       |  |  |  |
|                | M-MDS display                   | Instrument cluster | B10D7:94 |                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• There is no transponder in the key</li><li>• Transponder malfunction (key code is not output)</li><li>• If any of the following items are touching or near key head, signal communication between key and vehicle is negatively affected, resulting in the engine not starting.<ul style="list-style-type: none"><li>— Spare</li></ul></li></ul> |  |  |  |
|                |                                 |                    |          | EXAMPLES:                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                |                                 |                    |          | <div><div>METAL RING LYING ON KEY HEAD</div></div>                                                                                                                                                                                                                                                      |  |  |  |
|                |                                 |                    |          | <div><div>METAL PART OF ANOTHER KEY TOUCHING KEY HEAD</div></div>                                                                                                                                                                                                                                       |  |  |  |
|                |                                 |                    |          | <div><div>KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY</div></div>                                                                                                                                                                                                                           |  |  |  |
|                |                                 |                    |          | <div>keys</div> <ul style="list-style-type: none"><li>— Keys for other vehicles equipped with immobilizer system</li><li>— Any metallic object</li><li>— Any electronic device, or any credit or other card with magnetic strips</li></ul> <ul style="list-style-type: none"><li>• Coil antenna malfunction</li><li>• Instrument cluster malfunction</li></ul>                           |  |  |  |

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action |                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Is the DTC displayed again? <ul style="list-style-type: none"> <li>Instrument cluster: B10D7:94</li> <li>PCM: P1260:00</li> </ul> </li> </ul> | Yes    | Go to Step 3.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | Go to the next step.                                                                                                                                          |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Is the DTC displayed again? <ul style="list-style-type: none"> <li>Instrument cluster: B10D7:05</li> <li>PCM: 1260:00</li> </ul> </li> </ul>  | Yes    | Security light: 13, inspect DTCs B10D7:05/P1260:00.<br>(See 09-02C-8 SECURITY LIGHT: 13, DTC: B10D7:05/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | Go to the next step.                                                                                                                                          |
| 3    | <b>VERIFY WHETHER KEY IS VALID OR NOT</b> <ul style="list-style-type: none"> <li>Are there any keys with which the engine can be started other than the key that is a cause of the displayed DTC?</li> </ul>                                                                                                                                                                                                                                   | Yes    | Go to Step 5.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No     | Go to the next step.                                                                                                                                          |



## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA</b> <ul style="list-style-type: none"> <li>Program an additional key.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:94<br/>— PCM:P1260:00</li> </ul> | Yes<br>Replace the coil antenna, then go to Step 6.<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No <ul style="list-style-type: none"> <li>Dispose of the malfunctioning key.</li> <li>Program a new key if necessary.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to Step 8.</li> </ul>                                                                         |
| 5    | <b>VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Using another valid key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:94<br/>— PCM:P1260:00</li> </ul>                                                                       | Yes<br>Replace the coil antenna, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No <ul style="list-style-type: none"> <li>Dispose of the malfunctioning key.</li> <li>Program a new key if necessary.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to Step 8.</li> </ul>                                                                         |
| 6    | <b>INSPECT INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:94<br/>— PCM:P1260:00</li> </ul>                                                                                                | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 8.                                                                                                                                                                                                                                                                                                      |
| 7    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:94<br/>— PCM:P1260:00</li> </ul>                                                                                                                                                                                                                                               | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
| 8    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                     |

# ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

## SECURITY LIGHT: 14, DTC: B10D7:81/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5356600

|                |                                 |                    |          |                                                                                                                                                                                                                                                                                                                      |  |  |  |
|----------------|---------------------------------|--------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| DTC            | Security light flashing pattern |                    | 14       | Instrument cluster cannot read key ID number data normally.                                                                                                                                                                                                                                                          |  |  |  |
|                | M-MDS display                   | Instrument cluster | B10D7:81 |                                                                                                                                                                                                                                                                                                                      |  |  |  |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                                                                                                                                      |  |  |  |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• Transponder (key) malfunction</li><li>• If any of the following items are touching or near key head, signal communication between key and vehicle is negatively affected, resulting in engine not starting.<ul style="list-style-type: none"><li>— Spare</li></ul></li></ul> |  |  |  |
|                |                                 |                    |          | EXAMPLES:                                                                                                                                                                                                                                                                                                            |  |  |  |
|                |                                 |                    |          | <div></div> <div>METAL RING LYING ON KEY HEAD</div>                                                                                                                                                                                 |  |  |  |
|                |                                 |                    |          | <div></div> <div>METAL PART OF ANOTHER KEY TOUCHING KEY HEAD</div>                                                                                                                                                                  |  |  |  |
|                |                                 |                    |          | <div></div> <div>KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY</div>                                                                                                                                                      |  |  |  |
|                |                                 |                    |          | keys                                                                                                                                                                                                                                                                                                                 |  |  |  |
|                |                                 |                    |          | <ul style="list-style-type: none"><li>— Keys for other vehicles equipped with an immobilizer system</li><li>— Any metallic object</li><li>— Any electronic device, or any credit or other card with magnetic strips</li></ul>                                                                                        |  |  |  |
|                |                                 |                    |          | <ul style="list-style-type: none"><li>• Coil antenna installation malfunction</li><li>• Coil antenna malfunction</li><li>• Instrument cluster malfunction</li></ul>                                                                                                                                                  |  |  |  |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY COIL ANTENNA CORRECTLY INSTALLED</b> <ul style="list-style-type: none"> <li>Verify the installation condition of the coil antenna.</li> <li>Is the coil antenna correctly installed? (Is the connector not completely connected?)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Install the coil antenna correctly, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)                                                                                                |
| 2    | <b>VERIFY WHETHER KEY IS VALID OR NOT</b> <ul style="list-style-type: none"> <li>Using another programmed key, turn the ignition switch to the ON position.</li> <li>If there is not another programmed key, program an additional key and turn the ignition key to the ON position using the programmed key.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again? <ul style="list-style-type: none"> <li>— Instrument cluster: B10D7:81</li> <li>— PCM:P1260:00</li> </ul> </li> </ul> | Yes<br>Replace the coil antenna, then go to the next step.<br>(See 09-14-133 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No <ul style="list-style-type: none"> <li>Dispose of the malfunctioning key.</li> <li>Program a new key if necessary.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to Step 4.</li> </ul> |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                                                                                                                                                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <b>INSPECT INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>Using another programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:81<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                      |
| 4    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:81<br/>— PCM:P1260:00</li> </ul>                                                                                            | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Go to the next step.                                                                                                                                                                                                                                                                                               |
| 5    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                      | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                     |

### SECURITY LIGHT: 15, DTC: B10D7:51/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5356700

|                |                                 |                    |          |                                                                                                                                                                                                                                           |
|----------------|---------------------------------|--------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 15       | Instrument cluster has detected unprogrammed key ID number.                                                                                                                                                                               |
|                | M-MDS display                   | Instrument cluster | B10D7:51 |                                                                                                                                                                                                                                           |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                                                           |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• No keys have been programmed after replacing instrument cluster.</li><li>• Unprogrammed key used</li><li>• Attempt made to program a ninth key</li><li>• Instrument cluster malfunction</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02C-17 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)<br/>— NUMKEYS<br/>(See 09-02C-18 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are one or more keys programmed?</li> </ul> | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to Step 3.                                                                                                                               |
| 2    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02C-17 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)<br/>— NUMKEYS<br/>(See 09-02C-18 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are eight keys programmed?</li> </ul>       | Yes<br>Erase the key ID number, then go to the next step.<br>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to the next step.                                                                                                                        |

## 09-02C-12

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <b>INSPECT INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>Program the key ID number.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> </ul> <b>Note</b> <ul style="list-style-type: none"> <li>Two or more keys need to be programmed to start the engine.</li> </ul>                                                                | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>Go to Step 5.</li> </ul>                                                                                                                                                                                                                                                       |
| 4    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10D7:51<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)</li> </ul>                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul>                                                                                                                                                                                                                                                |
| 5    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                           | Yes <ul style="list-style-type: none"> <li>Perform the corresponding DTC inspection.</li> </ul>                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>DTC troubleshooting completed.</li> </ul>                                                                                                                                                                                                                                      |

### SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5356800

|                |                                 |                    |          |                                                                                                                                                                                                  |
|----------------|---------------------------------|--------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 16       | Communication error between instrument cluster and PCM (no response)                                                                                                                             |
|                | M-MDS display                   | Instrument cluster | U0100:87 |                                                                                                                                                                                                  |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                  |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• Malfunction in wiring harness (CAN line) between instrument cluster and PCM</li><li>• PCM malfunction</li><li>• Instrument cluster malfunction</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Is a DTC displayed for either the instrument cluster or PCM, or both?<br/>— U0001:88</li> </ul> | Yes <ul style="list-style-type: none"> <li>Repair the malfunctioning part according to the separate DTC inspection.<br/>(See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br/>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul>                                                                                                                                                                                                    |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output?<br/>— Instrument cluster: U0100:87<br/>— PCM:P1260:00</li> </ul>               | Yes <ul style="list-style-type: none"> <li>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)</li> <li>Go to the next step.</li> </ul>                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to step 4.                                                                                                                                                                                                                                                                                                       |
| 3    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: U0100:87<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                |
| 4    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                           | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                      |

### SECURITY LIGHT: 21, DTC: B10D8:00/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5358000

|                |                                 |          |                                   |
|----------------|---------------------------------|----------|-----------------------------------|
| DTC            | Security light flashing pattern | 21       | Only one key has been programmed. |
|                | M-MDS display                   | B10D8:00 |                                   |
|                | Instrument cluster<br>PCM       | P1260:00 |                                   |
| POSSIBLE CAUSE |                                 |          | Only one key has been programmed. |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action                                                                                                                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY NUMBER OF PROGRAMMED KEYS</b> <ul style="list-style-type: none"> <li>Using the M-MDS, perform the PID/data monitor inspection and verify the programmed keys.<br/>(See 09-02C-17 PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)<br/>— NUMKEYS<br/>(See 09-02C-18 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are two or more keys programmed?</li> </ul>                                          | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to Step 3.</li> </ul>        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No <ul style="list-style-type: none"> <li>Program an additional key referring to the immobilizer system-related parts programming.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                      |
| 2    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Using the programmed key, turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B108D:00<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to Step 4.                                                                                                                                                                                                                                                                                                       |

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 3    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B108D:00<br/>— PCM:P1260:00</li> </ul> | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                           |
| 4    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                           | Yes<br>Perform the corresponding DTC inspection.                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                 |

### SECURITY LIGHT: 22, DTC: B10DA:51/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5358500

|                |                                 |                    |          |                                                                                                                                                                                                                                                                                                                  |
|----------------|---------------------------------|--------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 22       | Communication error between instrument cluster and PCM (data transfer failure)                                                                                                                                                                                                                                   |
|                | M-MDS display                   | Instrument cluster | B10DA:51 |                                                                                                                                                                                                                                                                                                                  |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                                                                                                                                                  |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• Malfunction in wiring harness (CAN line) between instrument cluster and PCM</li><li>• Instrument cluster malfunction</li><li>• PCM malfunction</li><li>• The immobilizer system-related parts have not been programmed after replacing the instrument cluster.</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                                                                                          |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Is a DTC displayed for either the instrument cluster or PCM, or both?<br/>— U0001:88</li> </ul> | Yes<br>Repair the malfunctioning part according to the separate DTC inspection.<br>(See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                                                                                                                                                      |
| 2    | <b>INSPECT INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>After replacing the instrument cluster, have the immobilizer system-related parts been programmed?</li> </ul>                                                                                                                                                                                                           | Yes<br>Go to Step 7.                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>Perform programming of immobilizer system-related parts only when replacing the instrument cluster.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
| 3    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10DA:51<br/>— PCM:P1260:00</li> </ul>         | Yes <ul style="list-style-type: none"> <li>Perform programming of immobilizer system-related parts only when replacing the PCM.<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul>               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to Step 7.                                                                                                                                                                                                                                                             |



## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>EXAMINE INSTRUMENT CLUSTER AND PCM</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10DA:51<br/>— PCM:P1260:00</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5    | <b>EXAMINE PCM</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10DA:51<br/>— PCM:P1260:00</li> </ul>                        | Yes <ul style="list-style-type: none"> <li>Replace the PCM and program the immobilizer system-related parts.<br/>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br/>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br/>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br/>(See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6    | <b>VERIFY AFTER REPAIR</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again?<br/>— Instrument cluster: B10DA:51<br/>— PCM:P1260:00</li> </ul>                | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                          | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                 |

### SECURITY LIGHT: 23, DTC: B10DA:62/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5358600

|                |                                 |                    |          |                                                                                                                                                                                               |
|----------------|---------------------------------|--------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC            | Security light flashing pattern |                    | 23       | ID number data in instrument cluster and PCM do not match.                                                                                                                                    |
|                | M-MDS display                   | Instrument cluster | B10DA:62 |                                                                                                                                                                                               |
|                |                                 | PCM                | P1260:00 |                                                                                                                                                                                               |
| POSSIBLE CAUSE |                                 |                    |          | <ul style="list-style-type: none"><li>• Necessary procedures were not performed using M-MDS after replacing PCM.</li><li>• Instrument cluster malfunction</li><li>• PCM malfunction</li></ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Is a DTC displayed for either the instrument cluster or PCM, or both?<br/>— U0001:88</li> </ul> | Yes<br>Repair the malfunctioning part according to the separate DTC inspection.<br>(See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                                                                                                  |



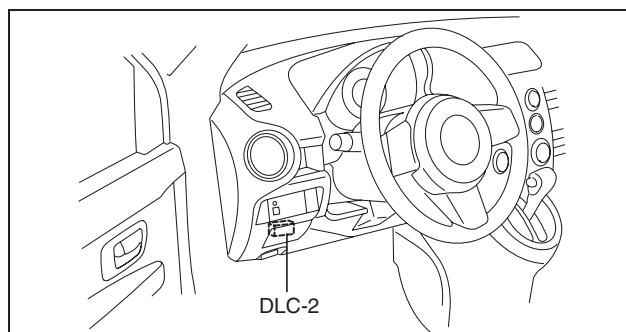
## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>EXAMINE INSTRUMENT CLUSTER AND PCM</b> <ul style="list-style-type: none"> <li>Perform programming of immobilizer system-related parts only when replacing the PCM (See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Clear DTCs using the M-MDS. (See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS. (See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again? <ul style="list-style-type: none"> <li>Instrument cluster: B10DA:62</li> <li>PCM:P1260:00</li> </ul> </li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the instrument cluster and program the immobilizer system-related parts. (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul>                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3    | <b>EXAMINE PCM</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS. (See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again? <ul style="list-style-type: none"> <li>Instrument cluster: B10DA:62</li> <li>PCM:P1260:00</li> </ul> </li> </ul>                                                                                                                                                                                                          | Yes <ul style="list-style-type: none"> <li>Replace the PCM and program the immobilizer system-related parts. (See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].) (See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) (See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].) (See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)</li> <li>Go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4    | <b>Verify after repair</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02C-3 CLEARING DTC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Verify DTCs using the M-MDS. (See 09-02C-2 DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>Are DTCs output again? <ul style="list-style-type: none"> <li>Instrument cluster: B10DA:62</li> <li>PCM:P1260:00</li> </ul> </li> </ul>                                                                                                                                                                                                  | Yes<br>Inspect DTC P1260:00. (See 01-02A-148 DTC P1260:00 [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                           |
| 5    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify if other DTCs are displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                 |

## PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5400500

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "DataLogger".
    2. Select "Modules".
    3. Select "IC".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "IC".
    3. Select "DataLogger".
3. Select the applicable PID from the PID table.
4. Verify the PID data according to the directions on the screen.



am2zzw0000210

## ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

### Note

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

### PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

id0902e5345900

| PID name (definition)                                                      | Detection Condition                      |
|----------------------------------------------------------------------------|------------------------------------------|
| NUMKEYS<br>(Number of key ID numbers programmed in the instrument cluster) | Number of programmed key ID numbers: 0–8 |

## **09-02D ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]**

|                                           |                  |
|-------------------------------------------|------------------|
| <b>SYSTEM WIRING DIAGRAM</b>              |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-2</b>  |
| Except AutoAlliance Thailand (AAT)        |                  |
| manufactured vehicles . . . . .           | <b>09-02D-2</b>  |
| AutoAlliance Thailand (AAT)               |                  |
| manufactured vehicles . . . . .           | <b>09-02D-3</b>  |
| <b>READING FREEZE FRAME DATA</b>          |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-3</b>  |
| <b>CLEARING FREEZE FRAME DATA</b>         |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-4</b>  |
| <b>DTC INSPECTION</b>                     |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-4</b>  |
| <b>CLEARING DTC</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-5</b>  |
| <b>DTC TABLE</b>                          |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-5</b>  |
| <b>DTC B109F:49</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-6</b>  |
| Detection Condition . . . . .             | <b>09-02D-6</b>  |
| Possible Causes . . . . .                 | <b>09-02D-6</b>  |
| Diagnostic Procedure . . . . .            | <b>09-02D-6</b>  |
| <b>DTC B109F:86</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-6</b>  |
| Detection Condition . . . . .             | <b>09-02D-6</b>  |
| Possible Causes . . . . .                 | <b>09-02D-6</b>  |
| System Wiring Diagram . . . . .           | <b>09-02D-7</b>  |
| Diagnostic Procedure . . . . .            | <b>09-02D-7</b>  |
| <b>DTC B109F:87</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-8</b>  |
| Detection Condition . . . . .             | <b>09-02D-8</b>  |
| Possible Causes . . . . .                 | <b>09-02D-8</b>  |
| System Wiring Diagram . . . . .           | <b>09-02D-8</b>  |
| Diagnostic Procedure . . . . .            | <b>09-02D-9</b>  |
| <b>DTC B10A5:49</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-9</b>  |
| Detection Condition . . . . .             | <b>09-02D-9</b>  |
| Possible Causes . . . . .                 | <b>09-02D-9</b>  |
| Diagnostic Procedure . . . . .            | <b>09-02D-9</b>  |
| <b>DTC B10A5:86</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-10</b> |
| Detection Condition . . . . .             | <b>09-02D-10</b> |
| Possible Causes . . . . .                 | <b>09-02D-10</b> |
| System Wiring Diagram . . . . .           | <b>09-02D-10</b> |
| Diagnostic Procedure . . . . .            | <b>09-02D-10</b> |
| <b>DTC B10A5:87</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-11</b> |
| Detection Condition . . . . .             | <b>09-02D-11</b> |
| Possible Causes . . . . .                 | <b>09-02D-11</b> |
| System Wiring Diagram . . . . .           | <b>09-02D-12</b> |
| Diagnostic Procedure . . . . .            | <b>09-02D-12</b> |
| <b>DTC U0300:00, U2100:00,</b>            |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-13</b> |
| Detection Condition . . . . .             | <b>09-02D-13</b> |
| Possible Causes . . . . .                 | <b>09-02D-13</b> |
| <b>DTC U3000:49</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-13</b> |
| Detection Condition . . . . .             | <b>09-02D-13</b> |
| Possible Causes . . . . .                 | <b>09-02D-13</b> |
| <b>DTC U3003:16, U3003:17</b>             |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-13</b> |
| Detection Condition . . . . .             | <b>09-02D-13</b> |
| Possible Causes . . . . .                 | <b>09-02D-13</b> |
| System Wiring Diagram . . . . .           | <b>09-02D-14</b> |
| Diagnostic Procedure . . . . .            | <b>09-02D-14</b> |
| <b>DTC B1172:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-16</b> |
| <b>DTC B1174:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-19</b> |
| <b>DTC B1175:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-24</b> |
| <b>DTC B1176:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-26</b> |
| <b>DTC B1178:11</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-28</b> |
| <b>DTC B11C0:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-30</b> |
| <b>DTC B11C1:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-32</b> |
| <b>DTC P254F:13</b>                       |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-34</b> |
| <b>PID/DATA MONITOR INSPECTION</b>        |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-36</b> |
| <b>PID/DATA MONITOR TABLE</b>             |                  |
| <b>[THEFT-DETERRENT SYSTEM]</b> . . . . . | <b>09-02D-36</b> |
| Foreword . . . . .                        | <b>09-02D-36</b> |

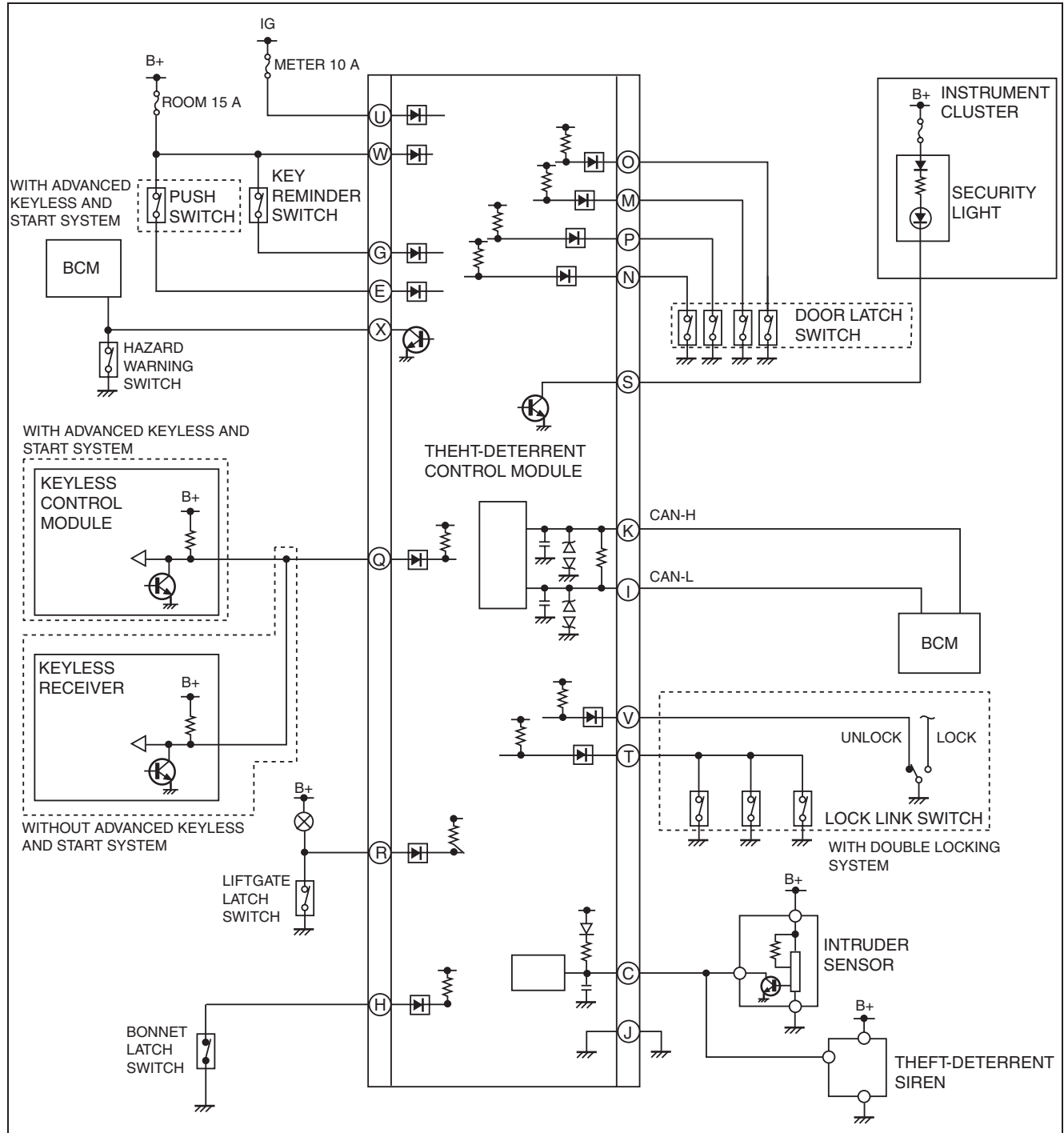
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# ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

## SYSTEM WIRING DIAGRAM [THEFT-DETERRENT SYSTEM]

id0902g7344500

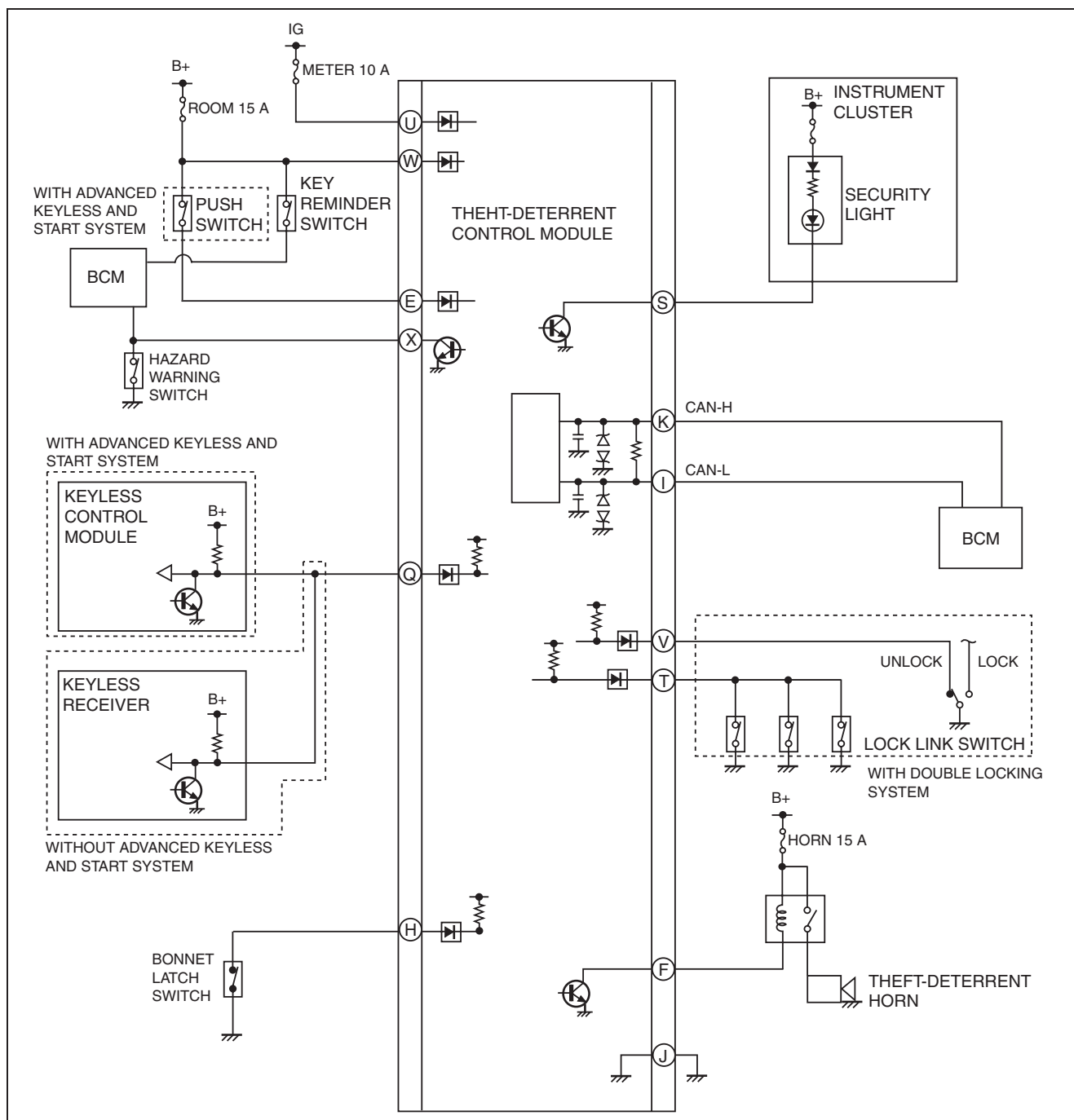
Except AutoAlliance Thailand (AAT) manufactured vehicles



am2zzw0000378

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

AutoAlliance Thailand (AAT) manufactured vehicles



am2zzw0000465

## READING FREEZE FRAME DATA [THEFT-DETERRENT SYSTEM]

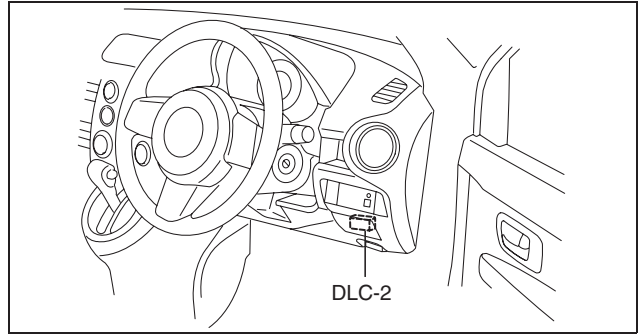
id0902g7466100

### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the READING FREEZE FRAME DATA.

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Body".
    2. Select "VSM Service Functions".
3. Then, select the following item from the screen menu.
  1. Select "Read FFD".
4. Read the record according to the directions on the screen.



am2zzw0000065

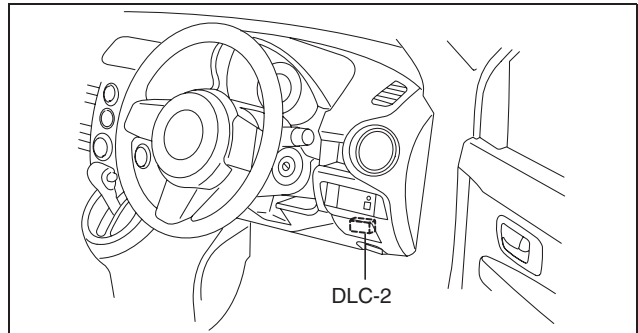
## CLEARING FREEZE FRAME DATA [THEFT-DETERRENT SYSTEM]

id0902g7466200

### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the CLEARING FREEZE FRAME DATA.

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Body".
    2. Select "VSM Service Functions".
3. Then, select the following item from the screen menu.
  1. Select "Clear FFD".
4. Clear the record according to the directions on the screen.

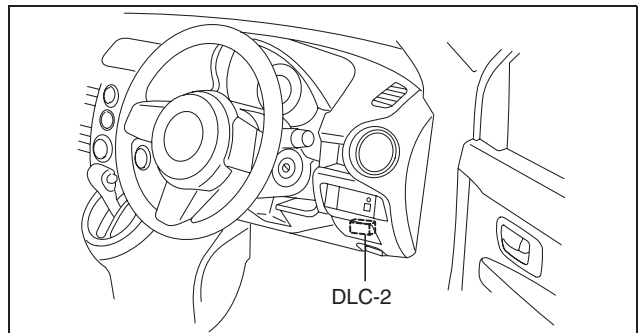


am2zzw0000065

## DTC INSPECTION [THEFT-DETERRENT SYSTEM]

id0902g7345400

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "VSM".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "VSM".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the theft-deterrent control module. (See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM])



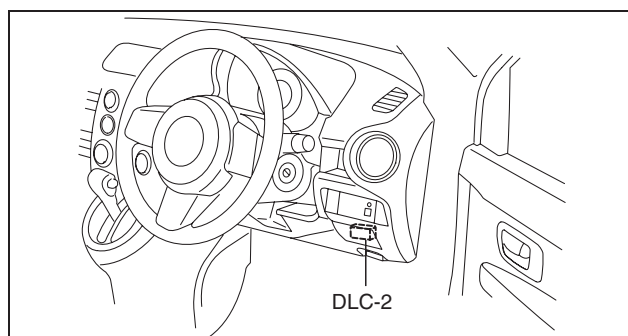
am2zzw0000065

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### CLEARING DTC [THEFT-DETERRENT SYSTEM]

id0902g7400300

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "VSM".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "VSM".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Turn the ignition switch to the LOCK position.
6. Turn the ignition switch to the ON position and wait for **5 s more**.
7. Perform DTC inspection. (See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)
8. Verify that no DTCs are displayed.



am2zzw0000065

### DTC TABLE [THEFT-DETERRENT SYSTEM]

id0902g7347100

| DTC                    | Detection Condition                                                                  | Reference                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| M-MDS display          |                                                                                      |                                                                                                                                          |
| B109F:49* <sup>1</sup> | Intruder sensor internal malfunction                                                 | (See 09-02D-6 DTC B109F:49 [THEFT-DETERRENT SYSTEM].)                                                                                    |
| B109F:86* <sup>1</sup> | Signal error from intruder sensor                                                    | (See 09-02D-6 DTC B109F:86 [THEFT-DETERRENT SYSTEM].)                                                                                    |
| B109F:87* <sup>1</sup> | Communication error between intruder sensor and theft-deterrent control module       | (See 09-02D-8 DTC B109F:87 [THEFT-DETERRENT SYSTEM].)                                                                                    |
| B10A5:49* <sup>1</sup> | Theft-deterrent siren internal malfunction                                           | (See 09-02D-9 DTC B10A5:49 [THEFT-DETERRENT SYSTEM].)                                                                                    |
| B10A5:86* <sup>1</sup> | Signal error from theft-deterrent siren                                              | (See 09-02D-10 DTC B10A5:86 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B10A5:87* <sup>1</sup> | Communication error between theft-deterrent siren and theft-deterrent control module | (See 09-02D-11 DTC B10A5:87 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B1172:13               | Door lock-link switch (driver-side) circuit malfunction                              | (See 09-02D-16 DTC B1172:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B1174:13               | Door lock-link switch (passenger-side/LR/RR) circuit malfunction                     | (See 09-02D-19 DTC B1174:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B1175:13* <sup>1</sup> | Front door latch switch (driver-side) circuit malfunction                            | (See 09-02D-24 DTC B1175:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B1176:13* <sup>1</sup> | Front door latch switch (passenger-side) circuit malfunction                         | (See 09-02D-26 DTC B1176:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B1178:11* <sup>1</sup> | Liftgate latch switch circuit malfunction                                            | (See 09-02D-28 DTC B1178:11 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B11C0:13* <sup>1</sup> | Rear door latch switch (RH) circuit malfunction                                      | (See 09-02D-30 DTC B11C0:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| B11C1:13* <sup>1</sup> | Rear door latch switch (LH) circuit malfunction                                      | (See 09-02D-32 DTC B11C1:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| P254F:13               | Bonnet latch switch (LH) circuit malfunction                                         | (See 09-02D-34 DTC P254F:13 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| U0001:88               | Module communication error (HS-CAN)                                                  | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| DTC           | Detection Condition                                                             | Reference                                                                                                                                |
|---------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| M-MDS display |                                                                                 |                                                                                                                                          |
| U0100:00      | PCM communication error                                                         | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
| U0140:00      | BCM communication error                                                         |                                                                                                                                          |
| U0300:00      | Configuration error                                                             | (See 09-02D-13 DTC U0300:00, U2100:00, [THEFT-DETERRENT SYSTEM].)                                                                        |
| U2100:00      |                                                                                 |                                                                                                                                          |
| U3000:49      | Theft-deterrent control module internal malfunction                             | (See 09-02D-13 DTC U3000:49 [THEFT-DETERRENT SYSTEM].)                                                                                   |
| U3003:16      | Theft-deterrent control module power supply voltage is <b>other than 9–16 V</b> | (See 09-02D-13 DTC U3003:16, U3003:17 [THEFT-DETERRENT SYSTEM].)                                                                         |
| U3003:17      |                                                                                 |                                                                                                                                          |

\*1 : Except AutoAlliance Thailand (AAT) manufactured vehicles

### DTC B109F:49 [THEFT-DETERRENT SYSTEM]

id0902g7850000

#### Detection Condition

- Intruder sensor internal malfunction

#### Possible Causes

- Intruder sensor malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                        | Action                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC B109F:49 displayed?</li> </ul> | Yes<br>Replace the intruder sensor.<br>(See 09-14-135 INTRUDER SENSOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                         |

### DTC B109F:86 [THEFT-DETERRENT SYSTEM]

id0902g7850100

#### Detection Condition

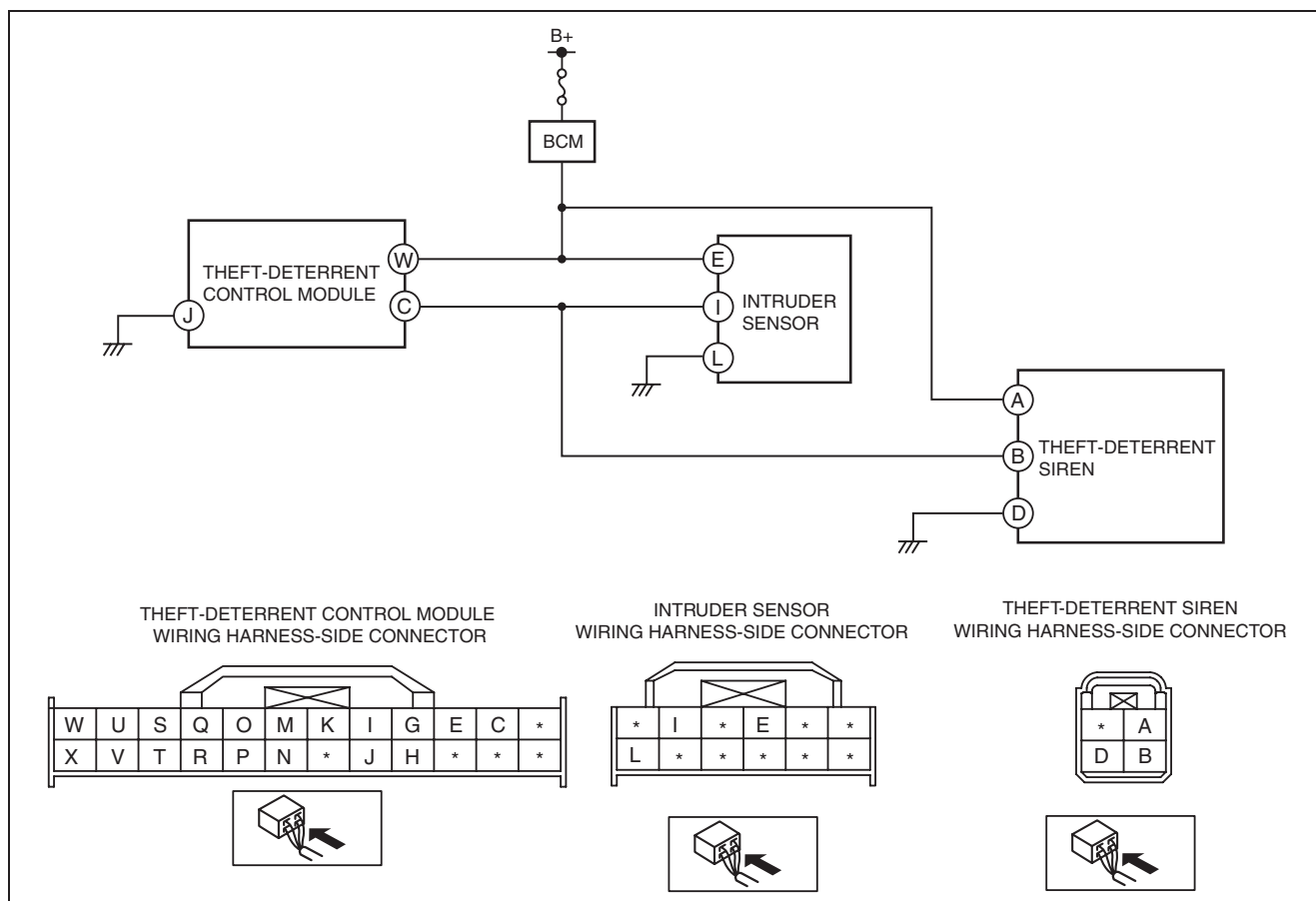
- Signal error from intruder sensor

#### Possible Causes

- Short circuit in wiring harness between intruder sensor and theft-deterrent control module
- Intruder sensor malfunction
- Theft-deterrent control module malfunction

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### System Wiring Diagram



am2zzw0000232

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT INTRUDER SENSOR CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the intruder sensor connector.</li> <li>Inspect the intruder sensor connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                    | Yes<br>Go to the next step.                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair/replace the intruder sensor connector or terminal.                                                |
| 2    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the theft-deterrent control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                               | Yes<br>Go to the next step.                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair/replace the theft-deterrent control module connector or terminal.                                 |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN INTRUDER SENSOR AND THEFT-DETERRENT CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between intruder sensor connector terminal I and theft-deterrent control module connector terminal C for the following: <ul style="list-style-type: none"> <li>Short to body ground</li> <li>Short to power supply</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the wiring harness between the intruder sensor and the theft-deterrent control module. |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                               | Action                                                                                                                            |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>INSPECT INTRUDER SENSOR</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the intruder sensor.<br/>(See 09-14-135 INTRUDER SENSOR INSPECTION.)</li> <li>Is the intruder sensor normal?</li> </ul> | Yes<br>Replace the intruder sensor, then go to the next step.<br>(See 09-14-135 INTRUDER SENSOR REMOVAL/INSTALLATION.)            |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                        |
| 5    | <b>INSPECT DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC B109F:86 displayed again?</li> </ul>                                                  | Yes<br>Replace the theft-deterrent system control module.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                          | No<br>DTC troubleshooting completed.                                                                                              |

### DTC B109F:87 [THEFT-DETERRENT SYSTEM]

id0902g7850200

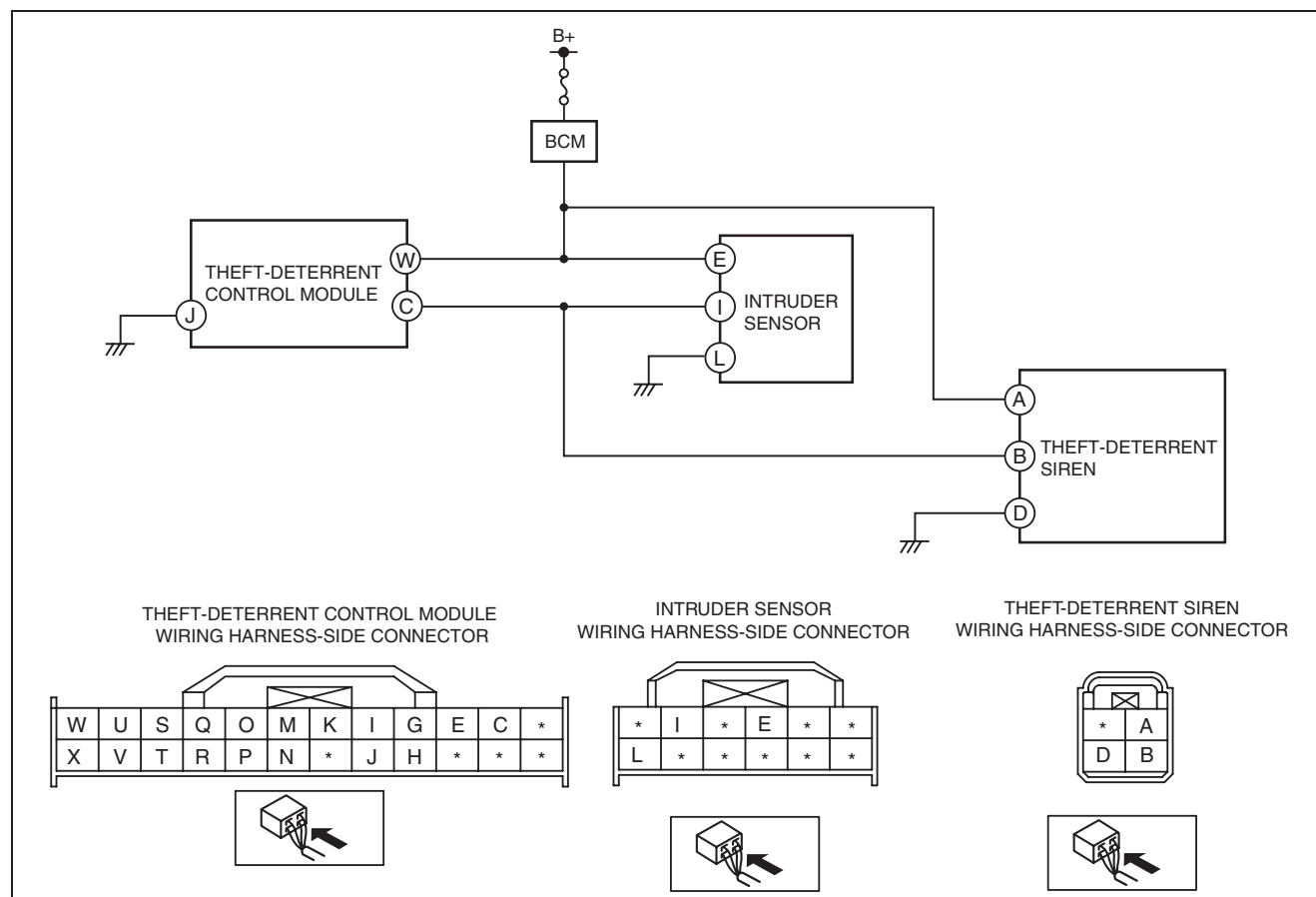
#### Detection Condition

- Communication error between intruder sensor and theft-deterrent control module

#### Possible Causes

- Open circuit or short in wiring harness between intruder sensor and theft-deterrent control module
- Intruder sensor malfunction
- Theft-deterrent control module malfunction

#### System Wiring Diagram



am2zzw0000232

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | Action                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT INTRUDER SENSOR CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the intruder sensor connector.</li> <li>Inspect the intruder sensor connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                          | Yes | Go to the next step.                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Repair/replace the intruder sensor connector or terminal.                                                               |
| 2    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the theft-deterrent control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                     | Yes | Go to the next step.                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Repair/replace the theft-deterrent control module connector or terminal.                                                |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN INTRUDER SENSOR AND THEFT-DETERRENT CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between intruder sensor connector terminal I and theft-deterrent control module connector terminal C for the following: <ul style="list-style-type: none"> <li>Short to body ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes | Go to the next step.                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Repair or replace the wiring harness between the intruder sensor and the theft-deterrent control module.                |
| 4    | <b>INSPECT INTRUDER SENSOR</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the intruder sensor. (See 09-14-135 INTRUDER SENSOR INSPECTION.)</li> <li>Is the intruder sensor normal?</li> </ul>                                                                                                              | Yes | Replace the intruder sensor, then go to the next step. (See 09-14-135 INTRUDER SENSOR REMOVAL/INSTALLATION.)            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Go to the next step.                                                                                                    |
| 5    | <b>INSPECT DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS. (See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC B109F:87 displayed again?</li> </ul>                                                                                                                                                                   | Yes | Replace the theft-deterrent system control module. (See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | DTC troubleshooting completed.                                                                                          |

### DTC B10A5:49 [THEFT-DETERRENT SYSTEM]

id0902g7850300

#### Detection Condition

- Theft-deterrent siren internal malfunction

#### Possible Causes

- Theft-deterrent siren malfunction

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                |     | Action                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS. (See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC B10A5:49 displayed?</li> </ul> | Yes | Replace the theft-deterrent siren. (See 09-14-102 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                           | No  | DTC troubleshooting completed.                                                                 |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### DTC B10A5:86 [THEFT-DETERRENT SYSTEM]

id0902g7850400

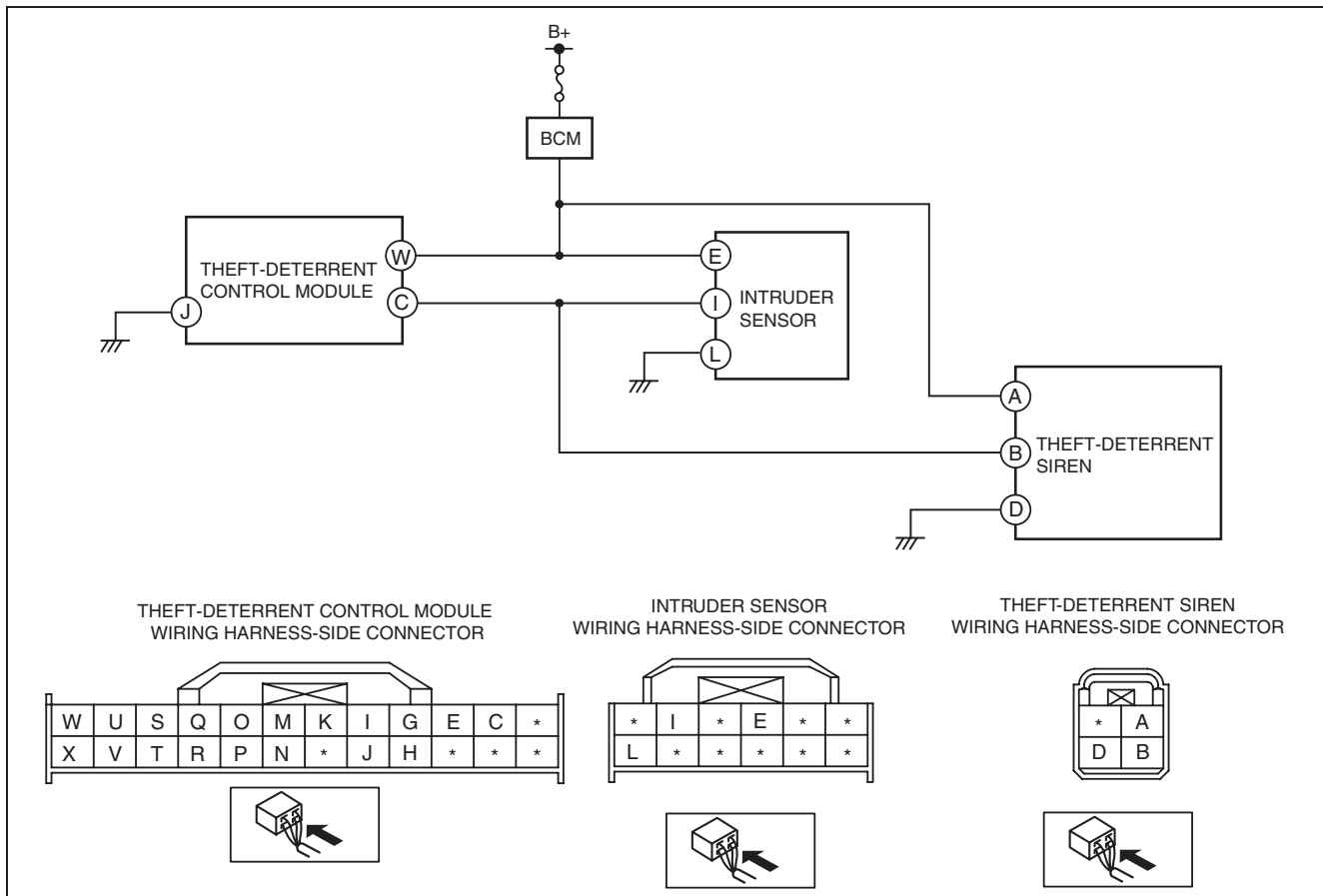
#### Detection Condition

- Signal error from theft-deterrent siren

#### Possible Causes

- Short to wiring harness between theft-deterrent siren and theft-deterrent control module
- Theft-deterrent siren malfunction
- Theft-deterrent control module malfunction

#### System Wiring Diagram



am2zzw0000233

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                           | Action                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1    | <b>INSPECT THEFT-DETERRENT SIREN CONNECTOR</b> <ul style="list-style-type: none"><li>Turn the ignition switch to the LOCK position.</li><li>Disconnect the negative battery cable.</li><li>Disconnect the theft-deterrent siren connector.</li><li>Inspect the theft-deterrent siren connector. (Corrosion, damage, and disconnected pins)</li><li>Are the connector and terminals normal?</li></ul> | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Repair/replace the theft-deterrent siren connector or terminal.          |
| 2    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"><li>Disconnect the theft-deterrent control module connector.</li><li>Inspect the theft-deterrent control module connector. (Corrosion, damage, and disconnected pins)</li><li>Are the connector and terminals normal?</li></ul>                                                                            | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Repair/replace the theft-deterrent control module connector or terminal. |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action |                                                                                                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------|
| 3    | <b>INSPECT WIRING HARNESS BETWEEN THEFT-DETERRENT SIREN AND THEFT-DETERRENT CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between theft-deterrent siren connector terminal B and theft-deterrent control module connector terminal C for the following: <ul style="list-style-type: none"> <li>— Short to body ground</li> <li>— Short to power supply</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes    | Go to the next step.                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No     | Repair or replace the wiring harness between the theft-deterrent siren and the theft-deterrent control module.              |
| 4    | <b>INSPECT THEFT-DETERRENT SIREN</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the theft-deterrent siren.<br/>(See 09-14-104 THEFT-DETERRENT SIREN INSPECTION.)</li> <li>Is the theft-deterrent siren normal?</li> </ul>                                                                            | Yes    | Replace the theft-deterrent siren, then go to the next step.<br>(See 09-14-102 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No     | Go to the next step.                                                                                                        |
| 5    | <b>INSPECT DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC B10A5:86 displayed again?</li> </ul>                                                                                                                                                     | Yes    | Replace the theft-deterrent system control module.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.)  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No     | DTC troubleshooting completed.                                                                                              |

### DTC B10A5:87 [THEFT-DETERRENT SYSTEM]

id0902g7850500

#### Detection Condition

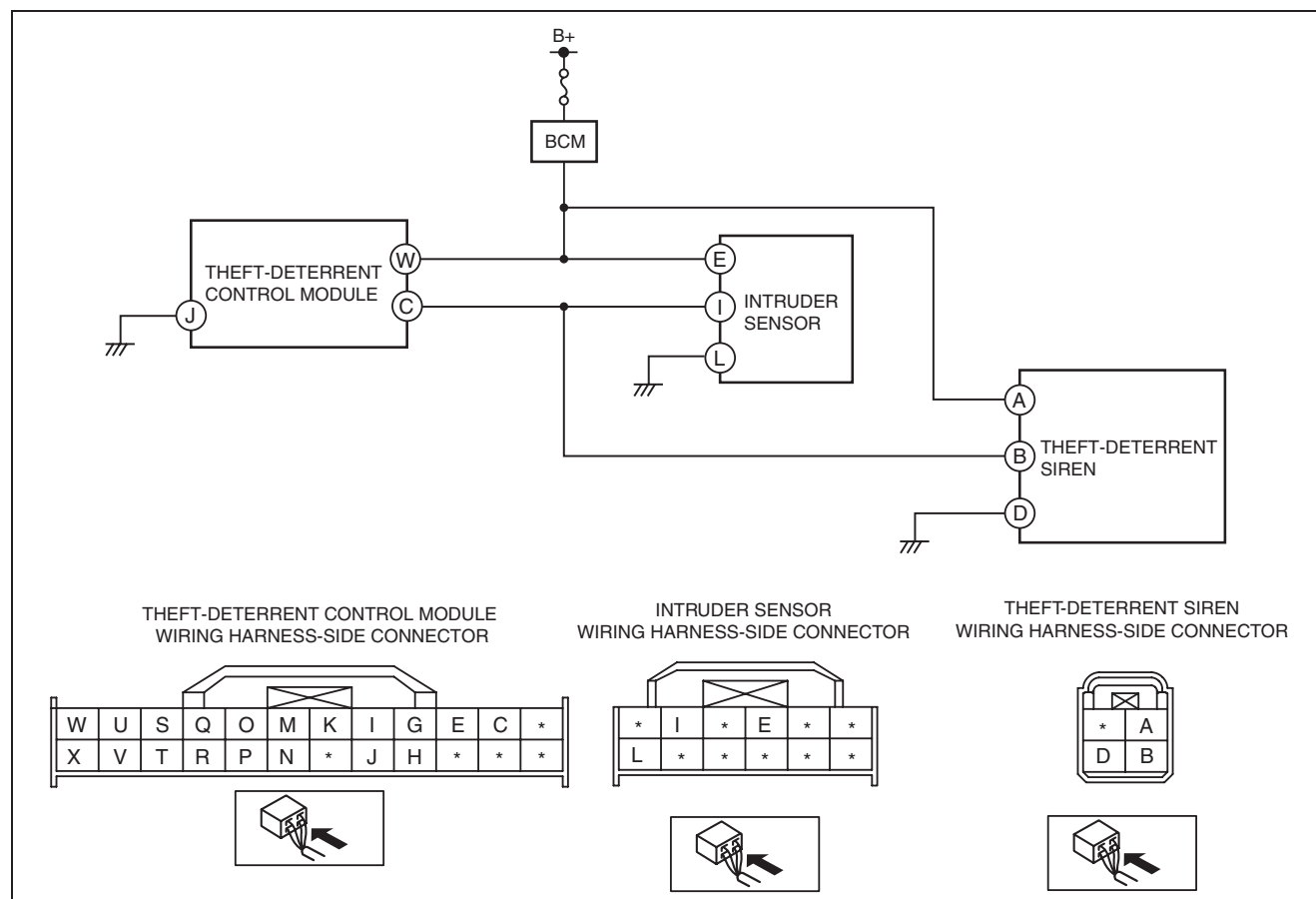
- Communication error between theft-deterrent siren and theft-deterrent control module

#### Possible Causes

- Open or short circuit to wiring harness between theft-deterrent siren and theft-deterrent control module
- Theft-deterrent siren malfunction
- Theft-deterrent control module malfunction

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### System Wiring Diagram



am2zzw0000077

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                               |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT THEFT-DETERRENT SIREN CONNECTOR</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent siren connector.</li> <li>Inspect the theft-deterrent siren connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                    | Yes<br>Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair/replace the theft-deterrent siren connector or terminal.                                                |
| 2    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR</b> <ul style="list-style-type: none"> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the theft-deterrent control module connector. (Corrosion, damage, and disconnected pins)</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                 | Yes<br>Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair/replace the theft-deterrent control module connector or terminal.                                       |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN THEFT-DETERRENT SIREN AND THEFT-DETERRENT CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between theft-deterrent siren connector terminal B and theft-deterrent control module connector terminal C for the following: <ul style="list-style-type: none"> <li>Short to body ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the wiring harness between the theft-deterrent siren and the theft-deterrent control module. |



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>INSPECT THEFT-DETERRENT SIREN</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the theft-deterrent siren.<br/>(See 09-14-104 THEFT-DETERRENT SIREN INSPECTION.)</li> <li>Is the theft-deterrent siren normal?</li> </ul> | Yes<br>Replace the theft-deterrent siren, then go to the next step.<br>(See 09-14-102 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                         |
| 5    | <b>INSPECT DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC B10A5:87 displayed again?</li> </ul>                                                                          | Yes<br>Replace the theft-deterrent system control module.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.)  |
|      |                                                                                                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                                                                               |

### DTC U0300:00, U2100:00, [THEFT-DETERRENT SYSTEM]

id0902g7850600

#### Detection Condition

- Possible configuration error

#### Possible Causes

- Configuration has not been correctly performed for some reason
- Theft-deterrent control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                   | Action                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC U0300:00 or U2100:00 displayed?</li> </ul> | Yes<br>Replace the theft-deterrent system control module.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                              | No<br>DTC troubleshooting completed.                                                                                              |

### DTC U3000:49 [THEFT-DETERRENT SYSTEM]

id0902g7850800

#### Detection Condition

- Theft-deterrent system control module internal malfunction

#### Possible Causes

- Theft-deterrent control module malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                       | Action                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC U3000:49 displayed?</li> </ul> | Yes<br>Replace the theft-deterrent system control module.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                                                                              |

### DTC U3003:16, U3003:17 [THEFT-DETERRENT SYSTEM]

id0902g7850900

#### Detection Condition

- Theft-deterrent control module power supply voltage is **other than 9—16 V**

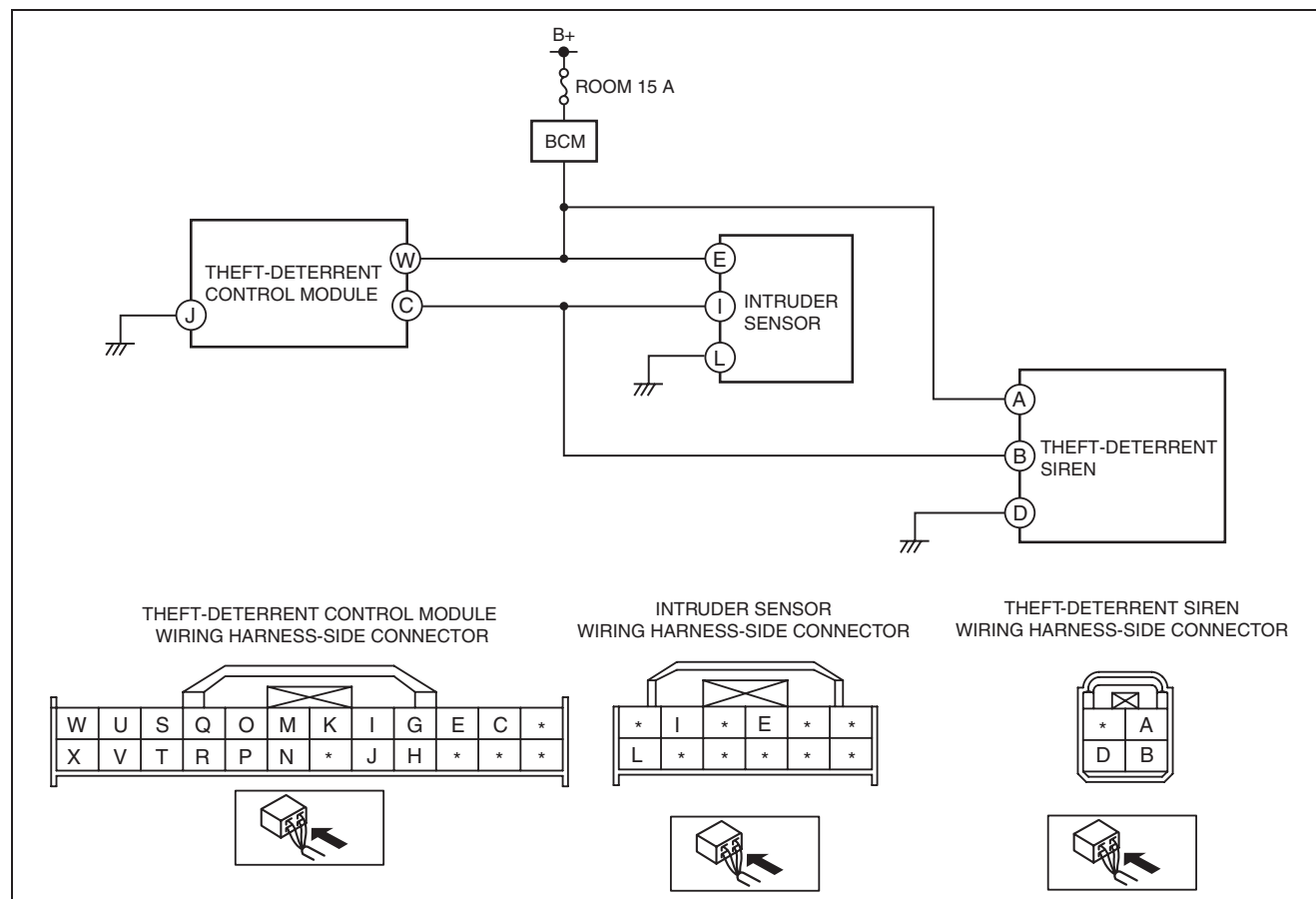
#### Possible Causes

- ROOM 15 A fuse malfunction
- Open or short circuit in wiring harness between battery and theft-deterrent control module
- Battery malfunction

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

- Theft-deterrent control module malfunction

### System Wiring Diagram



am2zzw0000253

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                | Action               |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1    | <b>FUSE INSPECTION</b>                                                                                                                                                                                                    | Yes                  |
|      | <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Remove the ROOM 15 A fuse.</li> <li>• Is the fuse normal?</li> </ul> | Go to the next step. |
|      |                                                                                                                                                                                                                           | No                   |
|      |                                                                                                                                                                                                                           | Replace the fuse.    |

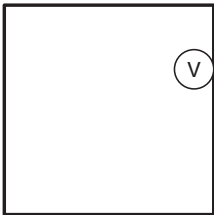
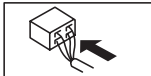
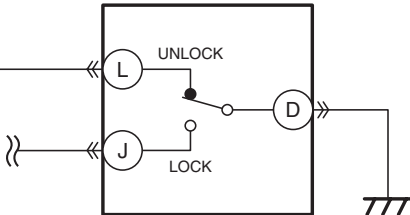
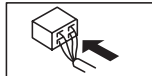
## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>BATTERY INSPECTION</b> <ul style="list-style-type: none"> <li>Measure the battery positive voltage.</li> <li>Is the voltage between <b>9—16 V</b>?</li> </ul>                                                                                                                                                                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br><b>Higher than specification</b> <ul style="list-style-type: none"> <li>Replace or inspection the battery.<br/>(See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)<br/>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)<br/>(See 01-17A-1 BATTERY REMOVAL/INSTALLATION [ZJ, ZY].)<br/>(See 01-17C-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)</li> <li>Go to Step 4.</li> </ul> <b>Lower than specification</b> <ul style="list-style-type: none"> <li>Replace or charge the battery.<br/>(See 01-17A-5 BATTERY RECHARGING [ZJ, ZY].)<br/>(See 01-17C-3 BATTERY RECHARGING [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-3 BATTERY RECHARGING [MZ-CD 1.4 DI Turbo].)<br/>(See 01-17A-1 BATTERY REMOVAL/INSTALLATION [ZJ, ZY].)<br/>(See 01-17C-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br/>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)</li> <li>Go to Step 4.</li> </ul> |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN BATTERY AND THEFT-DETERRENT CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the wiring harness between the battery and theft-deterrent control module connector terminal W for the following:                             <ul style="list-style-type: none"> <li>Short to ground</li> <li>Short to power supply</li> <li>Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the wiring harness between the battery and the theft-deterrent control module.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4    | <b>INSPECT BCM</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage of BCM connector terminal 3P.<br/>(See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)</li> <li>Is the wiring harness normal?</li> </ul>                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 5    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Verify DTCs using the M-MDS.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is DTC U3003:16, U3003:17 displayed?</li> </ul>                                                                                                                                                                                                                | Yes<br>Replace the theft-deterrent control module.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

# ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

## DTC B1172:13 [THEFT-DETERRENT SYSTEM]

id0902g7111400

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Door lock-link switch (driver-side) circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DETECTION CONDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>Open circuit in the door lock-link switch (driver-side) unlock-side circuit with the door lock-link switch (driver-side) unlocked.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| POSSIBLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"><li>Front door latch and lock actuator (driver-side) connector or terminals malfunction</li><li>Open circuit in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Front door latch and lock actuator (driver-side) terminal D—Body ground</li></ul></li><li>Door lock-link switch (driver-side) malfunction</li><li>Theft-deterrent control module connector or terminals malfunction</li><li>Open circuit in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Front door latch and lock actuator (driver-side) terminal L—Theft-deterrent control module terminal V</li></ul></li><li>Theft-deterrent control module malfunction</li></ul> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <div><div><p>THEFT-DETERRENT CONTROL MODULE</p><p>THEFT-DETERRENT CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR</p><table><tr><td>W</td><td>U</td><td>S</td><td>Q</td><td>O</td><td>M</td><td>K</td><td>I</td><td>G</td><td>E</td><td>C</td><td>A</td></tr><tr><td>X</td><td>V</td><td>T</td><td>R</td><td>P</td><td>N</td><td>K</td><td>J</td><td>H</td><td>F</td><td>D</td><td>B</td></tr></table></div><div><p>DOOR LOCK-LINK SWITCH (DRIVER-SIDE)</p><p>FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) WIRING HARNESS-SIDE CONNECTOR</p><table><tr><td>K</td><td>I</td><td>G</td><td>E</td><td>C</td><td>A</td></tr><tr><td>L</td><td>J</td><td>H</td><td>F</td><td>D</td><td>B</td></tr></table></div></div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | W | U | S | Q | O | M | K | I | G | E | C | A | X | V | T | R | P | N | K | J | H | F | D | B | K | I | G | E | C | A | L | J | H | F | D | B |
| W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | S | Q | O | M | K | I | G | E | C | A |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | T | R | P | N | K | J | H | F | D | B |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| K                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | G | E | C | A |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | H | F | D | B |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ACTION                                                                                                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the door lock-link switch (driver-side) unlocked.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>                            | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to Step 9.                                                                                                                                                |
| 2    | <b>INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front door latch and lock actuator (driver-side) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                               | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to the next step.                                                                                                                                         |
| 3    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Front door latch and lock actuator (driver-side) terminal L</li> <li>Is there any voltage?</li> </ul>                                                               | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to Step 6.                                                                                                                                                |
| 4    | <b>INSPECT DOOR LOCK-LINK SWITCH (DRIVER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Front door latch and lock actuator (driver-side) terminal D</li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 8.                                                                         |
| 5    | <b>INSPECT DOOR LOCK-LINK SWITCH (DRIVER-SIDE)</b> <ul style="list-style-type: none"> <li>Inspect the door lock-link switch (driver-side).<br/>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                   | Yes<br>Replace the front door latch and lock actuator (driver-side), then go to Step 8.<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to Step 8.                                                                                                                                                |
| 6    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                        | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to the next step.                                                                                                                                         |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ACTION |                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <b>INSPECT DOOR LOCK-LINK SWITCH (DRIVER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) and theft-deterrent control module connectors are disconnected.</li> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal V</li> </ul> </li> <li>Is there any voltage?</li> </ul> | Yes    | Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Go to the next step.                                                                                                                          |
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the door lock-link switch (driver-side) unlocked.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>                                     | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Go to the next step.                                                                                                                          |
| 9    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes    | Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | DTC troubleshooting completed.                                                                                                                |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

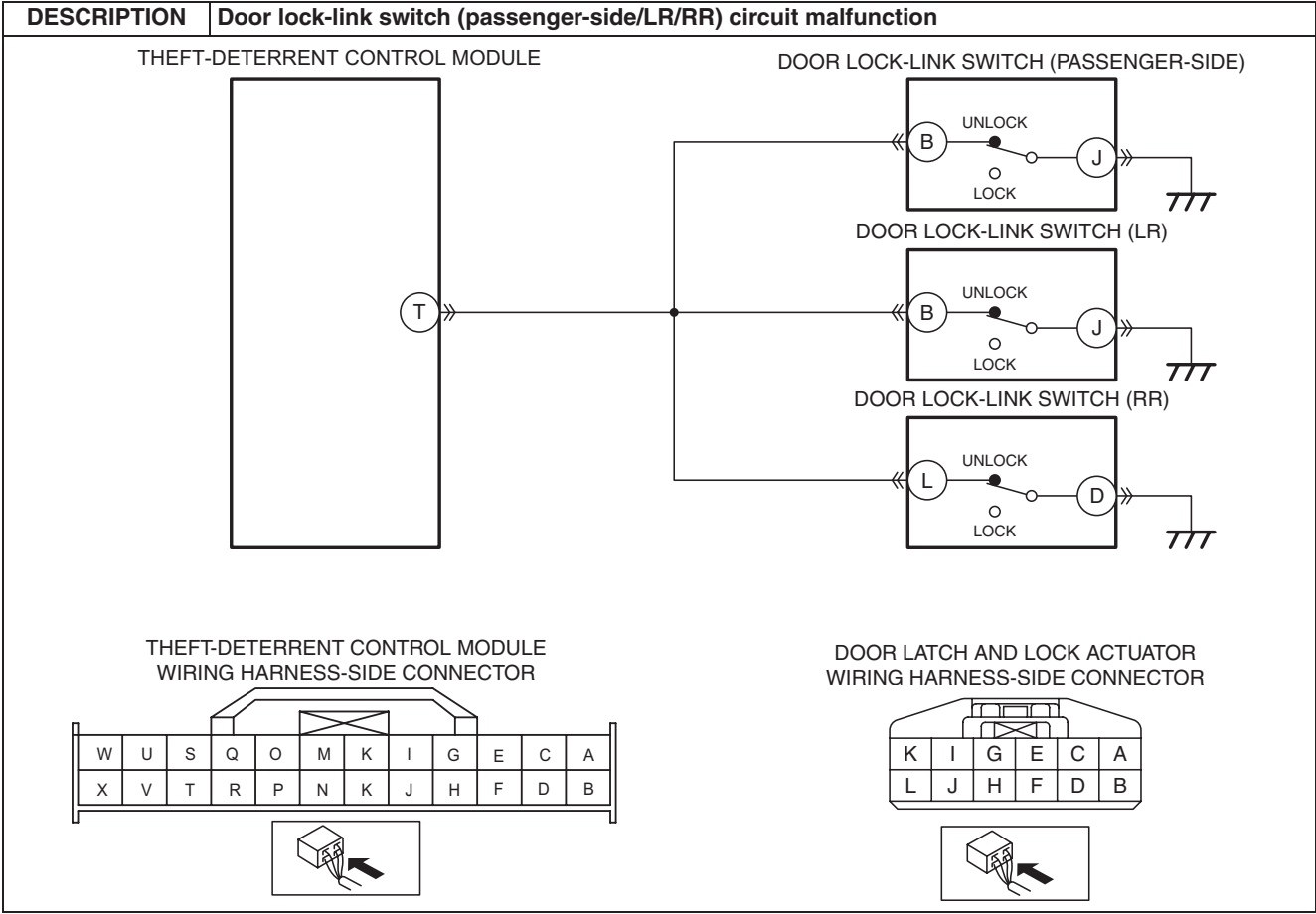
### DTC B1174:13 [THEFT-DETERRENT SYSTEM]

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|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DESCRIPTION</b>         | <b>Door lock-link switch (passenger-side/LR/RR) circuit malfunction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>DETECTION CONDITION</b> | <ul style="list-style-type: none"> <li>Open circuit in the door lock-link switch (passenger-side/LR/RR) circuit with the door lock-link switch (passenger-side/LR/RR) unlocked.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>POSSIBLE CAUSE</b>      | <p><b>All door lock-link switches do not operate:</b></p> <ul style="list-style-type: none"> <li>Theft-deterrent control module connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) terminal B/Rear door latch and lock actuator (LH) terminal B/Rear door latch and lock actuator (RH) terminal L—Theft-deterrent control module terminal T</li> </ul> </li> <li>Theft-deterrent control module malfunction</li> </ul> <p><b>Only the door lock-link switch (passenger-side) does not operate:</b></p> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) terminal J—Body ground</li> </ul> </li> <li>Door lock-link switch (passenger-side) malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) terminal B—Theft-deterrent control module terminal T</li> </ul> </li> <li>Theft-deterrent control module malfunction</li> </ul> <p><b>Only the door lock-link switch (LR) does not operate:</b></p> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) terminal J—Body ground</li> </ul> </li> <li>Door lock-link switch (LR) malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) terminal B—Theft-deterrent control module terminal T</li> </ul> </li> <li>Theft-deterrent control module malfunction</li> </ul> <p><b>Only the door lock-link switch (RR) does not operate:</b></p> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) terminal D—Body ground</li> </ul> </li> <li>Door lock-link switch (RR) malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) terminal L—Theft-deterrent control module terminal T</li> </ul> </li> <li>Theft-deterrent control module malfunction</li> </ul> |



ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the door lock-link switch (passenger-side/LR/RR) unlocked.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>                              | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 21.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Operate the door lock-link switch lock and unlock.</li> <li>Is there a door lock-link switch that does not operate?</li> </ul>                                                                                                                                                                                                                                                                | Yes<br>All door lock-link switches do not operate: <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul> Only the door lock-link switch (passenger-side) does not operate: <ul style="list-style-type: none"> <li>Go to Step 5.</li> </ul> Only the door lock-link switch (LR) does not operate: <ul style="list-style-type: none"> <li>Go to Step 10.</li> </ul> Only the door lock-link switch (RR) does not operate: <ul style="list-style-type: none"> <li>Go to Step 15.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 20.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                              | Yes<br>Repair or replace the connector or terminals, then go to Step 20.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4    | <b>INSPECT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE/LR/RR) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Theft-deterrent control module terminal T</li> <li>Is the voltage normal?<br/>(See 09-14-112 THEFT-DETERRENT CONTROL MODULE INSPECTION.)</li> </ul> | Yes<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 20.                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 20.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5    | <b>INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front door latch and lock actuator (passenger-side) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                    | Yes<br>Repair or replace the connector or terminals, then go to Step 20.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Front door latch and lock actuator (passenger-side) terminal B</li> <li>Is there any voltage?</li> </ul>                                                                    | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 9.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTION |                                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <b>INSPECT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) terminal J</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes    | Go to the next step.                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Repair or replace the wiring harness for a possible open circuit, then <b>go to Step 20</b> .                                                                                        |
| 8    | <b>INSPECT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE)</b> <ul style="list-style-type: none"> <li>Inspect the door lock-link switch (passenger-side).</li> <li>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                                                              | Yes    | Replace the front door latch and lock actuator (passenger-side), then <b>go to Step 20</b> .<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | <b>Go to Step 20</b> .                                                                                                                                                               |
| 9    | <b>INSPECT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>Theft-deterrent control module terminal T</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                              | Yes    | Repair or replace the wiring harness between front door latch and lock actuator (passenger-side) terminal B and theft-deterrent control module terminal T.<br><b>Go to Step 20</b> . |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | <b>Go to Step 20</b> .                                                                                                                                                               |
| 10   | <b>INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (LH) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the rear door latch and lock actuator (LH) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                         | Yes    | Repair or replace the connector or terminals, then <b>go to Step 20</b> .                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Go to the next step.                                                                                                                                                                 |
| 11   | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) terminal B</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                                                                            | Yes    | Go to the next step.                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | <b>Go to Step 14</b> .                                                                                                                                                               |
| 12   | <b>INSPECT DOOR LOCK-LINK SWITCH (LR) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) terminal J</li> </ul> </li> <li>Is there continuity?</li> </ul>                                       | Yes    | Go to the next step.                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Repair or replace the wiring harness for a possible open circuit, then <b>go to Step 20</b> .                                                                                        |
| 13   | <b>INSPECT DOOR LOCK-LINK SWITCH (LR)</b> <ul style="list-style-type: none"> <li>Inspect the door lock-link switch (LR).</li> <li>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                                                                                      | Yes    | Replace the rear door latch and lock actuator (LH), then <b>go to Step 20</b> .<br>(See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No     | <b>Go to Step 20</b> .                                                                                                                                                               |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ACTION |                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14   | <b>INSPECT DOOR LOCK-LINK SWITCH (LR) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal T</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                                                                               | Yes    | Repair or replace the wiring between rear door latch and lock actuator (LH) terminal B and theft-deterrent control module terminal T, then go to Step 20.       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to Step 20.                                                                                                                                                  |
| 15   | <b>INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (RH) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the rear door latch and lock actuator (RH) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                   | Yes    | Repair or replace the connector or terminals, then go to Step 20.                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to the next step.                                                                                                                                            |
| 16   | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Rear door latch and lock actuator (RH) terminal L</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                                                                                                    | Yes    | Go to the next step.                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to Step 19.                                                                                                                                                  |
| 17   | <b>INSPECT DOOR LOCK-LINK SWITCH (RR) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— Rear door latch and lock actuator (RH) terminal D</li> </ul> </li> <li>Is there continuity?</li> </ul>                                                               | Yes    | Go to the next step.                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Repair or replace the wiring harness for a possible open circuit, then go to Step 20.                                                                           |
| 18   | <b>INSPECT DOOR LOCK-LINK SWITCH (RR)</b> <ul style="list-style-type: none"> <li>Inspect the door lock-link switch (RR).<br/>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                                                                                                                     | Yes    | Replace the rear door latch and lock actuator (RH), then go to Step 20.<br>(See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to Step 20.                                                                                                                                                  |
| 19   | <b>INSPECT DOOR LOCK-LINK SWITCH (RR) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal T</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                                                                               | Yes    | Repair or replace the wiring between rear door latch and lock actuator (RH) terminal L and theft-deterrent control module terminal T, then go to the next step. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to the next step.                                                                                                                                            |
| 20   | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the door lock-link switch (passenger-side/LR/RR) unlocked.<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul> | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.)                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to the next step.                                                                                                                                            |

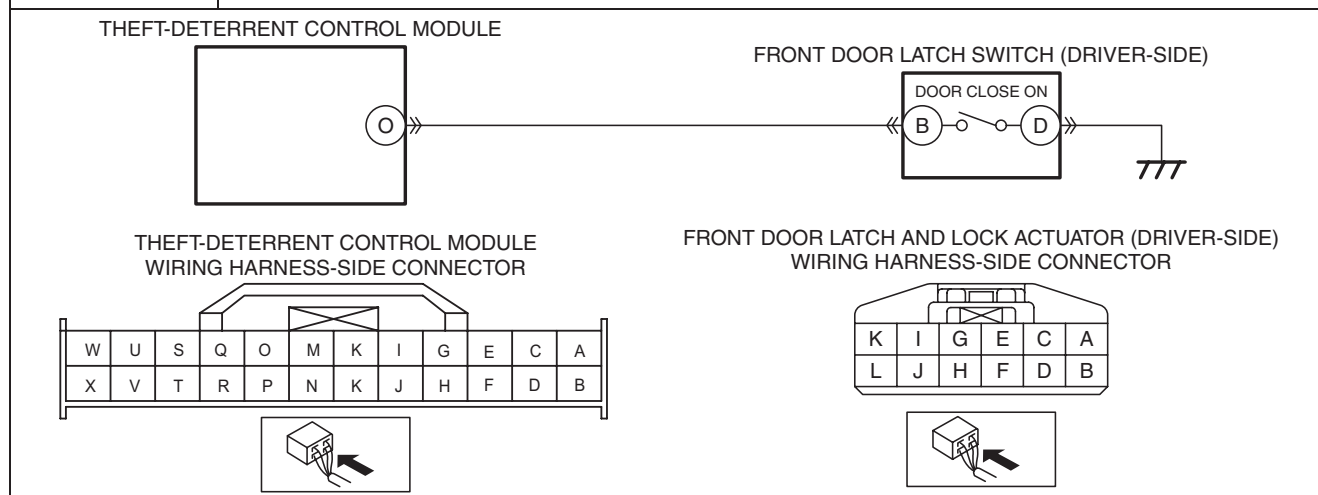
## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                              | ACTION                                                                                            |
|------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 21   | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b><br>• Are any DTCs present? | Yes<br>Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].) |
|      |                                                                         | No<br>DTC troubleshooting completed.                                                              |

### DTC B1175:13 [THEFT-DETERRENT SYSTEM]

id0902g7111500

| DESCRIPTION         | Front door latch switch (driver-side) circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DETECTION CONDITION | <ul style="list-style-type: none"> <li>Open circuit in the front door latch switch (driver-side) circuit with the front door (driver-side) closed (front door latch switch (driver-side) on).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| POSSIBLE CAUSE      | <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals:<br/>— Front door latch and lock actuator (driver-side) terminal D—Body ground</li> <li>Front door latch switch (driver-side) malfunction</li> <li>Theft-deterrent control module connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals:<br/>— Front door latch and lock actuator (driver-side) terminal B—Theft-deterrent control module terminal O</li> <li>Theft-deterrent control module malfunction</li> </ul> |



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

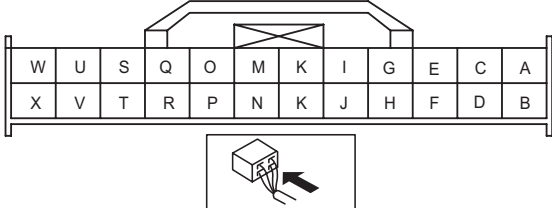
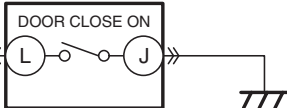
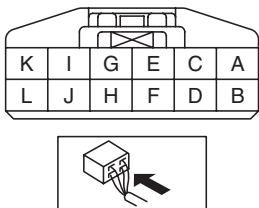
| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTION                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the front door (driver-side) closed (front door latch switch (driver-side) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Go to Step 9.                                                                                                                                                |
| 2    | <b>INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front door latch and lock actuator (driver-side) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                  | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Go to the next step.                                                                                                                                         |
| 3    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Front door latch and lock actuator (driver-side) terminal B</li> <li>Is there any voltage?</li> </ul>                                                                  | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Go to Step 6.                                                                                                                                                |
| 4    | <b>INSPECT FRONT DOOR LATCH SWITCH (DRIVER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) connector is disconnected.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Front door latch and lock actuator (driver-side) terminal D</li> <li>Is there continuity?</li> </ul>                                                  | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 8.                                                                         |
| 5    | <b>INSPECT FRONT DOOR LATCH SWITCH (DRIVER-SIDE)</b> <ul style="list-style-type: none"> <li>Inspect the front door latch switch (driver-side).</li> <li>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                           | Yes<br>Replace the front door latch and lock actuator (driver-side), then go to Step 8.<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Go to Step 8.                                                                                                                                                |
| 6    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                           | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Go to the next step.                                                                                                                                         |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ACTION |                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <b>INSPECT FRONT DOOR LATCH SWITCH (DRIVER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver-side) and theft-deterrent control module connectors are disconnected.</li> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage between the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal O</li> </ul> </li> <li>Is there any voltage?</li> </ul> | Yes    | Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No     | Go to the next step.                                                                                                                          |
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the front door (driver-side) closed (front door latch switch (driver-side) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>              | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No     | Go to the next step.                                                                                                                          |
| 9    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes    | Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No     | DTC troubleshooting completed.                                                                                                                |

### DTC B1176:13 [THEFT-DETERRENT SYSTEM]

id0902g7111600

| DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Front door latch switch (passenger-side) circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DETECTION CONDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Open circuit in the front door latch switch (passenger-side) circuit with the front door (passenger-side) closed (front door latch switch (passenger-side) on).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| POSSIBLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>— Front door latch and lock actuator (passenger-side) terminal J—Body ground</li> </ul> </li> <li>Front door latch switch (passenger-side) malfunction</li> <li>Theft-deterrent control module connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>— Front door latch and lock actuator (passenger-side) terminal L—Theft-deterrent control module terminal M</li> </ul> </li> <li>Theft-deterrent control module malfunction</li> </ul> |
| <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>THEFT-DETERRENT CONTROL MODULE</p>  <p>THEFT-DETERRENT CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR</p>  </div> <div style="text-align: center;"> <p>FRONT DOOR LATCH SWITCH (PASSENGER-SIDE)</p>  <p>FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) WIRING HARNESS-SIDE CONNECTOR</p>  </div> </div> <p>The diagram shows a circuit connection from terminal M of the Theft-Deterrent Control Module to terminal L of the Front Door Latch Switch (Passenger-Side). The switch is labeled 'DOOR CLOSE ON' and has terminals L and J. Terminal J is connected to ground (GND). The wiring harness-side connectors for both the control module and the latch switch are shown with terminal layouts. The control module connector has terminals W, U, S, Q, O, M, K, I, G, E, C, A in the top row and X, V, T, R, P, N, K, J, H, F, D, B in the bottom row. The latch switch connector has terminals K, I, G, E, C, A in the top row and L, J, H, F, D, B in the bottom row. Arrows indicate the connection between terminal M and terminal L.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

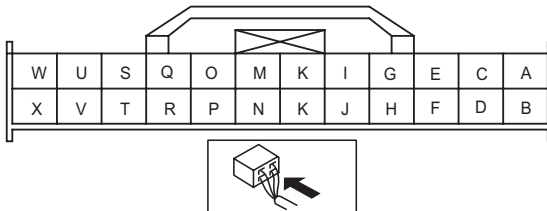
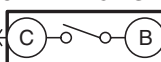
| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ACTION                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the front door (passenger-side) closed (front door latch switch (passenger-side) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>   | Yes<br>Go to the next step.                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 9.                                                                                                                                                   |
| 2    | <b>INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front door latch and lock actuator (passenger-side) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                    | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                            |
| 3    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Front door latch and lock actuator (passenger-side) terminal L</li> <li>Is there any voltage?</li> </ul>                                                                    | Yes<br>Go to the next step.                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 6.                                                                                                                                                   |
| 4    | <b>INSPECT FRONT DOOR LATCH SWITCH (PASSENGER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Front door latch and lock actuator (passenger-side) terminal J</li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 8.                                                                            |
| 5    | <b>INSPECT FRONT DOOR LATCH SWITCH (PASSENGER-SIDE)</b> <ul style="list-style-type: none"> <li>Inspect the front door latch switch (passenger-side).<br/>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                  | Yes<br>Replace the front door latch and lock actuator (passenger-side), then go to Step 8.<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 8.                                                                                                                                                   |
| 6    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                                   | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                            |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTION |                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <b>INSPECT FRONT DOOR LATCH SWITCH (PASSENGER-SIDE) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger-side) and theft-deterrent control module connectors are disconnected.</li> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal M</li> </ul> </li> <li>Is there any voltage?</li> </ul> | Yes    | Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No     | Go to the next step.                                                                                                                          |
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the front door (passenger-side) closed (front door latch switch (passenger-side) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>         | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No     | Go to the next step.                                                                                                                          |
| 9    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes    | Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No     | DTC troubleshooting completed.                                                                                                                |

### DTC B1178:11 [THEFT-DETERRENT SYSTEM]

id0902g7111100

| DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Liftgate latch switch circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| DETECTION CONDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"><li>Short to ground in the liftgate latch switch circuit with the liftgate closed (liftgate latch switch off).</li></ul>                                                                                                                                                                                                                                                                                                                             |  |
| POSSIBLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"><li>Liftgate latch switch connector or terminals malfunction</li><li>Theft-deterrent control module connector or terminals malfunction</li><li>Liftgate latch switch malfunction</li><li>Short to ground in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Liftgate latch switch terminal C—Theft-deterrent control module terminal R</li></ul></li><li>Theft-deterrent control module malfunction</li></ul> |  |
| <div><div><div>THEFT-DETERRENT CONTROL MODULE</div><div></div></div><div><div>THEFT-DETERRENT CONTROL MODULE<br/>WIRING HARNESS-SIDE CONNECTOR</div><div></div></div><div><div>LIFTGATE LATCH SWITCH</div><div></div></div><div><div>LIFTGATE LATCH AND LOCK ACTUATOR<br/>WIRING HARNESS-SIDE CONNECTOR</div><div></div></div></div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

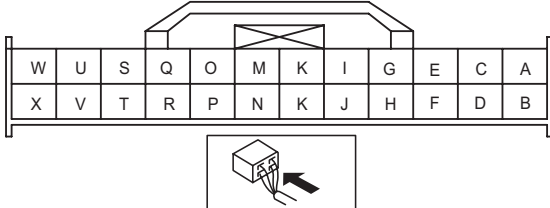
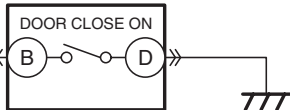
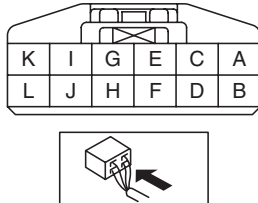
### Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTION                                                                                                                                               |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the liftgate closed (liftgate latch switch off).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>                                                                                                   | Yes<br>Go to the next step.                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to Step 7.                                                                                                                                  |
| 2    | <b>INSPECT LIFTGATE LATCH SWITCH CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the liftgate latch switch connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                           | Yes<br>Repair or replace the connector or terminals, then go to Step 6.                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                           |
| 3    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                              | Yes<br>Repair or replace the connector or terminals, then go to Step 6.                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                           |
| 4    | <b>INSPECT LIFTGATE LATCH SWITCH CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Liftgate latch switch and theft-deterrent control module connectors are disconnected.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Liftgate latch switch terminal C</li> <li>Is there continuity?</li> </ul>                                                                                                                                                   | Yes<br>Repair or replace the wiring harness for a possible short to ground, then go to Step 6.                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                           |
| 5    | <b>INSPECT LIFTGATE LATCH SWITCH</b> <ul style="list-style-type: none"> <li>Inspect the liftgate latch switch.<br/>(See 09-14-90 LIFTGATE LATCH SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                                                                                                                     | Yes<br>Replace the liftgate latch switch, then go to the next step.<br>(See 09-14-88 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                           |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the liftgate closed (liftgate latch switch off).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul> | Yes<br>Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                           |
| 7    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes<br>Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                                                                 |

# ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

## DTC B11C0:13 [THEFT-DETERRENT SYSTEM]

id0902g7111700

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rear door latch switch (RH) circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| DETECTION CONDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"><li>• Open circuit in the rear door latch switch (RH) circuit with the rear door (RH) closed (rear door latch switch (RH) on).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| POSSIBLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>• Rear door latch and lock actuator (RH) connector or terminals malfunction</li><li>• Open circuit in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Rear door latch and lock actuator (RH) terminal D—Body ground</li></ul></li><li>• Rear door latch switch (RH) malfunction</li><li>• Theft-deterrent control module connector or terminals malfunction</li><li>• Open circuit in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Rear door latch and lock actuator (RH) terminal B—Theft-deterrent control module terminal N</li></ul></li><li>• Theft-deterrent control module malfunction</li></ul> |  |
| <div><div><p>THEFT-DETERRENT CONTROL MODULE</p></div><div><p>THEFT-DETERRENT CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR</p></div></div> <div><p>REAR DOOR LATCH SWITCH (RH)</p></div> <div><p>REAR DOOR LATCH AND LOCK ACTUATOR (RH) WIRING HARNESS-SIDE CONNECTOR</p></div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACTION                                                                                                                                                  |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the rear door (RH) closed (rear door latch switch (RH) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul> | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 9.                                                                                                                                     |
| 2    | <b>INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (RH) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the rear door latch and lock actuator (RH) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                  | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                              |
| 3    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Rear door latch and lock actuator (RH) terminal B</li> <li>Is there any voltage?</li> </ul>                                                                  | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 6.                                                                                                                                     |
| 4    | <b>INSPECT REAR DOOR LATCH SWITCH (RH) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Rear door latch and lock actuator (RH) terminal D</li> <li>Is there continuity?</li> </ul>            | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 8.                                                              |
| 5    | <b>INSPECT REAR DOOR LATCH SWITCH (RH)</b> <ul style="list-style-type: none"> <li>Inspect the rear door latch switch (RH).<br/>(See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                 | Yes<br>Replace the rear door latch and lock actuator (RH), then go to Step 8.<br>(See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 8.                                                                                                                                     |
| 6    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                       | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                              |

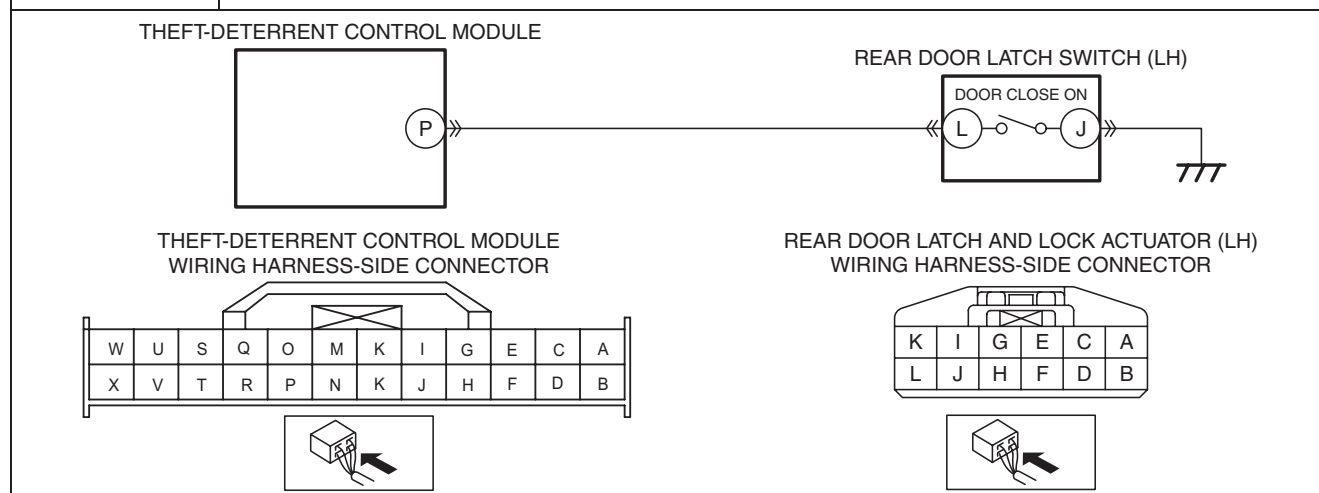
## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ACTION |                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <b>INSPECT REAR DOOR LATCH SWITCH (RH) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (RH) and theft-deterrent control module connectors are disconnected.</li> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal N</li> </ul> </li> <li>Is there any voltage?</li> </ul> | Yes    | Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No     | Go to the next step.                                                                                                                          |
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the rear door (RH) closed (rear door latch switch (RH) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>         | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No     | Go to the next step.                                                                                                                          |
| 9    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes    | Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No     | DTC troubleshooting completed.                                                                                                                |

### DTC B11C1:13 [THEFT-DETERRENT SYSTEM]

id0902g7111800

| DESCRIPTION                | Rear door latch switch (LH) circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DETECTION CONDITION</b> | <ul style="list-style-type: none"> <li>Open circuit in the rear door latch switch (LH) circuit with the rear door (LH) closed (rear door latch switch (LH) on).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>POSSIBLE CAUSE</b>      | <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>— Rear door latch and lock actuator (LH) terminal J—Body ground</li> </ul> </li> <li>Rear door latch switch (LH) malfunction</li> <li>Theft-deterrent control module connector or terminals malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>— Rear door latch and lock actuator (LH) terminal L—Theft-deterrent control module terminal P</li> </ul> </li> <li>Theft-deterrent control module malfunction</li> </ul> |



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACTION                                                                                                                                                  |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the rear door (LH) closed (rear door latch switch (LH) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul> | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 9.                                                                                                                                     |
| 2    | <b>INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (LH) CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the rear door latch and lock actuator (LH) connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                  | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                              |
| 3    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Rear door latch and lock actuator (LH) terminal L</li> <li>Is there any voltage?</li> </ul>                                                                  | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 6.                                                                                                                                     |
| 4    | <b>INSPECT REAR DOOR LATCH SWITCH (LH) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Rear door latch and lock actuator (LH) terminal J</li> <li>Is there continuity?</li> </ul>            | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 8.                                                              |
| 5    | <b>INSPECT REAR DOOR LATCH SWITCH (LH)</b> <ul style="list-style-type: none"> <li>Inspect the rear door latch switch (LH).<br/>(See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                 | Yes<br>Replace the rear door latch and lock actuator (LH), then go to Step 8.<br>(See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 8.                                                                                                                                     |
| 6    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                       | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                              |



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ACTION |                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <b>INSPECT REAR DOOR LATCH SWITCH (LH) CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rear door latch and lock actuator (LH) and theft-deterrent control module connectors are disconnected.</li> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side): <ul style="list-style-type: none"> <li>— Theft-deterrent control module terminal P</li> </ul> </li> <li>Is there any voltage?</li> </ul> | Yes    | Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No     | Go to the next step.                                                                                                                          |
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the rear door (LH) closed (rear door latch switch (LH) on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>         | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No     | Go to the next step.                                                                                                                          |
| 9    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes    | Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No     | DTC troubleshooting completed.                                                                                                                |

### DTC P254F:13 [THEFT-DETERRENT SYSTEM]

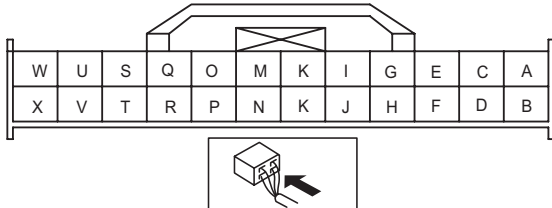
id0902g7111200

| DESCRIPTION            | Bonnet latch switch circuit malfunction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| DETECTION<br>CONDITION | <ul style="list-style-type: none"><li>• Open circuit in the bonnet latch switch circuit with the bonnet closed (bonnet latch switch on).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| POSSIBLE<br>CAUSE      | <ul style="list-style-type: none"><li>• Bonnet latch switch connector or terminals malfunction</li><li>• Open circuit in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Bonnet latch switch terminal B—Body ground</li></ul></li><li>• Bonnet latch switch malfunction</li><li>• Theft-deterrent control module connector or terminals malfunction</li><li>• Open circuit in wiring harness between the following terminals:<ul style="list-style-type: none"><li>— Bonnet latch switch terminal A—Theft-deterrent control module terminal H</li></ul></li><li>• Theft-deterrent control module malfunction</li></ul> |  |

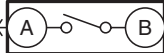
THEFT-DETERRENT CONTROL MODULE



THEFT-DETERRENT CONTROL MODULE  
WIRING HARNESS-SIDE CONNECTOR



BONNET LATCH SWITCH



BONNET LATCH SWITCH  
WIRING HARNESS-SIDE CONNECTOR



## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

### Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACTION                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>CONFIRM THEFT-DETERRENT CONTROL MODULE DTC</b> <ul style="list-style-type: none"> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the bonnet closed (bonnet latch switch on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul>                                                 | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 9.                                                                                                               |
| 2    | <b>INSPECT BONNET LATCH SWITCH CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Switch the ignition to off.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the bonnet latch switch connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                        | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                        |
| 3    | <b>VERIFY MALFUNCTIONING LOCATION</b> <ul style="list-style-type: none"> <li>Bonnet latch switch connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Bonnet latch switch terminal A</li> <li>Is there any voltage?</li> </ul>                                                                                                                                        | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 6.                                                                                                               |
| 4    | <b>INSPECT BONNET LATCH SWITCH CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Bonnet latch switch connector is disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminal (wiring harness-side) and body ground:<br/>— Bonnet latch switch terminal B</li> <li>Is there continuity?</li> </ul>                                                                                          | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Repair or replace the wiring harness for a possible open circuit, then go to Step 8.                                        |
| 5    | <b>INSPECT BONNET LATCH SWITCH</b> <ul style="list-style-type: none"> <li>Inspect the bonnet latch switch.<br/>(See 09-14-31 BONNET LATCH SWITCH INSPECTION.)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                                                                    | Yes<br>Replace the bonnet latch switch, then go to Step 8.<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to Step 8.                                                                                                               |
| 6    | <b>INSPECT THEFT-DETERRENT CONTROL MODULE CONNECTOR AND TERMINALS</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the theft-deterrent control module connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Is there any malfunction?</li> </ul>                                                                                                                       | Yes<br>Repair or replace the connector or terminals, then go to Step 8.                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                        |
| 7    | <b>INSPECT BONNET LATCH SWITCH CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Bonnet latch switch and theft-deterrent control module connectors are disconnected.</li> <li>Reconnect the theft-deterrent control module connector.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminal (wiring harness-side):<br/>— Theft-deterrent control module terminal H</li> <li>Is there any voltage?</li> </ul> | Yes<br>Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                        |

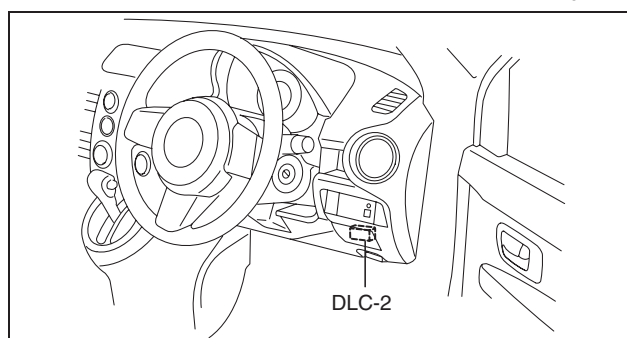
## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ACTION |                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Make sure to reconnect the disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTC using the M-MDS.<br/>(See 09-02D-5 CLEARING DTC [THEFT-DETERRENT SYSTEM].)</li> <li>Perform the theft-deterrent control module DTC inspection using the M-MDS with the bonnet closed (bonnet latch switch on).<br/>(See 09-02D-4 DTC INSPECTION [THEFT-DETERRENT SYSTEM].)</li> <li>Is the same DTC present?</li> </ul> | Yes    | Replace the theft-deterrent control module, then go to the next step.<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     | Go to the next step.                                                                                                                          |
| 9    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Are any DTCs present?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                             | Yes    | Go to the applicable DTC inspection.<br>(See 09-02D-5 DTC TABLE [THEFT-DETERRENT SYSTEM].)                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     | DTC troubleshooting completed.                                                                                                                |

### PID/DATA MONITOR INSPECTION [THEFT-DETERRENT SYSTEM]

id0902g7400500

- Connect the M-MDS to the DLC-2.
- After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    - Select "DataLogger".
    - Select "Modules".
    - Select "VSM".
  - When using the PDS (Pocket PC)
    - Select "Module Tests".
    - Select "VSM".
    - Select "DataLogger".
- Select the applicable PID from the PID table.
- Verify the PID data according to the directions on the screen.



am2zzw0000065

#### Note

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

### PID/DATA MONITOR TABLE [THEFT-DETERRENT SYSTEM]

id0902g7345900

#### Foreword

- When the theft-deterrent control module switches to the alert mode, it stores the related theft-deterrent control module control status data.
- Stored data up to the previous tow times can be checked using the PID/data monitor function.
- There are two storage fields (TRG\_1—TRG\_2), and the latest data is TRG\_1.

| PID name (definition)                                | Unit/Operation | Data contents                                                                                                   | Inspection item(s)                | Terminal |
|------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------|----------|
| DTC_CNT<br>(Number of DTCs)                          | —              | <ul style="list-style-type: none"> <li>DTC detected: 1–255</li> <li>DTC not detected: 0</li> </ul>              | Separate DTC inspection           | —        |
| DRSW_D<br>(Door latch switch (driver's door) status) | Close/Open     | <ul style="list-style-type: none"> <li>Driver's door open: Open</li> <li>Driver's door closed: Close</li> </ul> | Door latch switch (driver's side) | O        |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| PID name<br>(definition)                                         | Unit/Operation | Data contents                                                                                                                                                                           | Inspection item(s)                   | Terminal |
|------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|
| DRSW_P<br>(Door latch switch (passenger's door) status)          | Close/Open     | <ul style="list-style-type: none"> <li>Passenger's door open: Open</li> <li>Passenger's door closed: Close</li> </ul>                                                                   | Door latch switch (passenger's door) | M        |
| DRSW_RR*<br>1<br>(Door latch switch (rear door (RH)) status)     | Close/Open     | <ul style="list-style-type: none"> <li>Rear door (RH) open: Open</li> <li>Rear door (RH) closed: Close</li> </ul>                                                                       | Door latch switch (rear door (RH))   | N        |
| DRSW_LR*<br>1<br>(Door latch switch (rear door (LH)) status)     | Close/Open     | <ul style="list-style-type: none"> <li>Rear door (LH) open: Open</li> <li>Rear door (LH) closed: Close</li> </ul>                                                                       | Door latch switch (rear door (LH))   | P        |
| HOOD_SW<br>(Bonnet latch switch status)                          | Close/Open     | <ul style="list-style-type: none"> <li>Bonnet open: Open</li> <li>Bonnet closed: Close</li> </ul>                                                                                       | Bonnet latch switch                  | H        |
| LLSW_D<br>(Door lock-link switch status)                         | Unlock/Lock    | <ul style="list-style-type: none"> <li>Driver's door lock knob locked: Lock</li> <li>Driver's door lock knob unlocked: Unlock</li> </ul>                                                | Door lock-link switch                | V        |
| LLSW_P+R<br>(Door latch switch (passenger's door, rear) status)  | Unlock/Lock    | <ul style="list-style-type: none"> <li>Door lock knob other than driver's door locked: Lock</li> <li>Door lock knob other than driver's door unlocked: Unlock</li> </ul>                | Door lock-link switch                | T        |
| T_GATE_SW<br>(Liftgate latch switch status)                      | Close/Open     | <ul style="list-style-type: none"> <li>Liftgate open: Close</li> <li>Liftgate closed: Open</li> </ul>                                                                                   | Liftgate latch switch                | R        |
| TRG1_01<br>(Door lock-link switch status)                        | Off/On         | <ul style="list-style-type: none"> <li>Driver's door lock knob unlocked: On</li> <li>Driver's door lock knob locked: Off</li> </ul>                                                     | Door lock-link switch                | V        |
| TRG1_02<br>(Door latch switch (passenger's door, rear) status)   | Off/On         | <ul style="list-style-type: none"> <li>Door lock knob other than driver's door unlocked: On</li> <li>Door lock knob other than driver's door locked: Off</li> </ul>                     | Door lock-link switch                | T        |
| TRG1_03<br>(Theft-deterrent control module power supply voltage) | Off/On         | <ul style="list-style-type: none"> <li>Theft-deterrent control module power supply interrupted: On</li> <li>Theft-deterrent control module power supply not interrupted: Off</li> </ul> | Theft-deterrent control module       | W        |
| TRG1_04<br>(Angle sensor status)                                 | Off/On         | <b>Note</b> <ul style="list-style-type: none"> <li>Displayed but not used in the inspection.</li> </ul>                                                                                 |                                      | -        |
| TRG1_05<br>(Intruder sensor status)                              | Off/On         | <ul style="list-style-type: none"> <li>Intruder sensor detected intrusion: On</li> <li>Intruder sensor did not detect intrusion: Off</li> </ul>                                         | intruder sensor                      | C        |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| PID name<br>(definition)                                       | Unit/Operation | Data contents                                                                                                                                                                                    | Inspection item(s)                   | Terminal |
|----------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|
| TRG1_06<br>(Door latch switch (driver's door) status)          | Off/On         | <ul style="list-style-type: none"> <li>Driver's door open: On</li> <li>Driver's door closed: Off</li> </ul>                                                                                      | Door latch switch (driver's side)    | O        |
| TRG1_07<br>(Door latch switch (passenger's door) status)       | Off/On         | <ul style="list-style-type: none"> <li>Passenger's door open: On</li> <li>Passenger's door closed: Off</li> </ul>                                                                                | Door latch switch (passenger's door) | M        |
| TRG1_08*1<br>(Door latch switch (rear door (LH) status)        | Off/On         | <ul style="list-style-type: none"> <li>Rear door (LH) open: On</li> <li>Rear door (LH) closed: Off</li> </ul>                                                                                    | Door latch switch (rear door (LH))   | P        |
| TRG1_09*1<br>(Door latch switch (rear door (RH) status)        | Off/On         | <ul style="list-style-type: none"> <li>Rear door (RH) open: On</li> <li>Rear door (RH) closed: Off</li> </ul>                                                                                    | Door latch switch (rear door (RH))   | N        |
| TRG1_10<br>(Liftgate latch switch status)                      | Off/On         | <ul style="list-style-type: none"> <li>Liftgate open: On</li> <li>Liftgate closed: Off</li> </ul>                                                                                                | Liftgate latch switch                | R        |
| TRG1_11<br>(Bonnet latch switch status)                        | Off/On         | <ul style="list-style-type: none"> <li>Bonnet open: On</li> <li>Bonnet closed: Off</li> </ul>                                                                                                    | Bonnet latch switch                  | H        |
| TRG1_12<br>(Ignition key cylinder status)                      | Off/On         | <ul style="list-style-type: none"> <li>Key reminder switch or push switch off and ignition switch on: On</li> <li>Key reminder switch or push switch off and ignition switch off: Off</li> </ul> | Ignition key cylinder                | —        |
| TRG1_13<br>(Used key status)                                   | Off/On         | <b>Note</b> <ul style="list-style-type: none"> <li>Displayed but not used in inspection.</li> </ul>                                                                                              |                                      | -        |
| TRG1_ST_A<br>(Theft-deterrent system status)                   | Off/On         | <ul style="list-style-type: none"> <li>Theft-deterrent system in stand-by preparatory mode: On</li> <li>Theft-deterrent system initial mode: Off</li> </ul>                                      | Theft-deterrent control module       | —        |
| TRG1_ST_B<br>(Theft-deterrent system status)                   | Off/On         | <ul style="list-style-type: none"> <li>Theft-deterrent system in stand-by mode: On</li> <li>Theft-deterrent system stand-by preparatory mode: Off</li> </ul>                                     | Theft-deterrent control module       | —        |
| TRG2_01<br>(Door lock-link switch status)                      | Off/On         | <ul style="list-style-type: none"> <li>Driver's door lock knob unlocked: On</li> <li>Driver's door lock knob locked: Off</li> </ul>                                                              | Door lock-link switch                | V        |
| TRG2_02<br>(Door latch switch (passenger's door, rear) status) | Off/On         | <ul style="list-style-type: none"> <li>Door lock knob other than driver's door unlocked: On</li> <li>Door lock knob other than driver's door locked: Off</li> </ul>                              | Door lock-link switch                | T        |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| PID name<br>(definition)                                         | Unit/Operation | Data contents                                                                                                                                                                                    | Inspection item(s)                   | Terminal |
|------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|
| TRG2_03<br>(Theft-deterrent control module power supply voltage) | Off/On         | <ul style="list-style-type: none"> <li>Theft-deterrent control module power supply interrupted: On</li> <li>Theft-deterrent control module power supply not interrupted: Off</li> </ul>          | Theft-deterrent control module       | W        |
| TRG2_04<br>(Angle sensor status)                                 | Off/On         | <b>Note</b> <ul style="list-style-type: none"> <li>Displayed but not used in the inspection.</li> </ul>                                                                                          |                                      | -        |
| TRG2_05<br>(Intruder sensor status)                              | Off/On         | <ul style="list-style-type: none"> <li>Intruder sensor detected intrusion: On</li> <li>Intruder sensor did not detect intrusion: Off</li> </ul>                                                  | intruder sensor                      | C        |
| TRG2_06<br>(Door latch switch (driver's door) status)            | Off/On         | <ul style="list-style-type: none"> <li>Driver's door open: On</li> <li>Driver's door closed: Off</li> </ul>                                                                                      | Door latch switch (driver's side)    | O        |
| TRG2_07<br>(Door latch switch (passenger's door) status)         | Off/On         | <ul style="list-style-type: none"> <li>Passenger's door open: On</li> <li>Passenger's door closed: Off</li> </ul>                                                                                | Door latch switch (passenger's door) | M        |
| TRG2_08*1<br>(Door latch switch (rear door (LH)) status)         | Off/On         | <ul style="list-style-type: none"> <li>Rear door (LH) open: On</li> <li>Rear door (LH) closed: Off</li> </ul>                                                                                    | Door latch switch (rear door (LH))   | P        |
| TRG2_09*1<br>(Door latch switch (rear door (RH)) status)         | Off/On         | <ul style="list-style-type: none"> <li>Rear door (RH) open: On</li> <li>Rear door (RH) closed: Off</li> </ul>                                                                                    | Door latch switch (rear door (RH))   | N        |
| TRG2_10<br>(Liftgate latch switch status)                        | Off/On         | <ul style="list-style-type: none"> <li>Liftgate open: On</li> <li>Liftgate closed: Off</li> </ul>                                                                                                | Liftgate latch switch                | R        |
| TRG2_11<br>(Bonnet latch switch status)                          | Off/On         | <ul style="list-style-type: none"> <li>Bonnet open: On</li> <li>Bonnet closed: Off</li> </ul>                                                                                                    | Bonnet latch switch                  | H        |
| TRG2_12<br>(Ignition key cylinder status)                        | Off/On         | <ul style="list-style-type: none"> <li>Key reminder switch or push switch off and ignition switch on: On</li> <li>Key reminder switch or push switch off and ignition switch off: Off</li> </ul> | Ignition key cylinder                | —        |
| TRG2_13<br>(Used key status)                                     | Off/On         | <b>Note</b> <ul style="list-style-type: none"> <li>Displayed but not used in inspection.</li> </ul>                                                                                              |                                      | -        |
| TRG2_ST_A<br>(Theft-deterrent system status)                     | Off/On         | <ul style="list-style-type: none"> <li>Theft-deterrent system in stand-by preparatory mode: On</li> <li>Theft-deterrent system initial mode: Off</li> </ul>                                      | Theft-deterrent control module       | —        |
| TRG2_ST_B<br>(Theft-deterrent system status)                     | Off/On         | <ul style="list-style-type: none"> <li>Theft-deterrent system in stand-by mode: On</li> <li>Theft-deterrent system stand-by preparatory mode: Off</li> </ul>                                     | Theft-deterrent control module       | —        |

## ON-BOARD DIAGNOSTIC [THEFT-DETERRENT SYSTEM]

| PID name<br>(definition)                                                         | Unit/Operation | Data contents                                                            | Inspection item(s) | Terminal |
|----------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------|--------------------|----------|
| VPWR<br>(Theft-<br>deterrent<br>control<br>module<br>power<br>supply<br>voltage) | V              | <ul style="list-style-type: none"><li>Continuous: Approx. 12 V</li></ul> | Battery            | W        |

\*1 : 5HB

09-02E ON-BOARD DIAGNOSTIC [AUDIO]

|                                                                              |          |                                                    |          |
|------------------------------------------------------------------------------|----------|----------------------------------------------------|----------|
| STARTING PROCEDURE FOR<br>ON-BOARD DIAGNOSTIC<br>TEST MODE [AUDIO] . . . . . | 09-02E-1 | DTC TABLE [AUDIO] . . . . .                        | 09-02E-3 |
| SUPPLIER IDENTIFICATION<br>PROCEDURE [AUDIO] . . . . .                       | 09-02E-1 | DIAGNOSTIC ASSIST FUNCTION<br>[AUDIO] . . . . .    | 09-02E-4 |
| Identification Using Label or Inscribed<br>Lettering . . . . .               | 09-02E-1 | LCD Inspection . . . . .                           | 09-02E-4 |
| Verify Using the Diagnostic Assist<br>Function . . . . .                     | 09-02E-2 | Switch Inspection . . . . .                        | 09-02E-5 |
| CLEARING DTC [AUDIO] . . . . .                                               | 09-02E-3 | Speaker Inspection . . . . .                       | 09-02E-5 |
|                                                                              |          | Radio Reception Condition<br>Inspection . . . . .  | 09-02E-5 |
|                                                                              |          | Center Panel Specification<br>Inspection . . . . . | 09-02E-6 |

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## ON-BOARD DIAGNOSTIC [AUDIO]

### STARTING PROCEDURE FOR ON-BOARD DIAGNOSTIC TEST MODE [AUDIO]

id0902f6358300

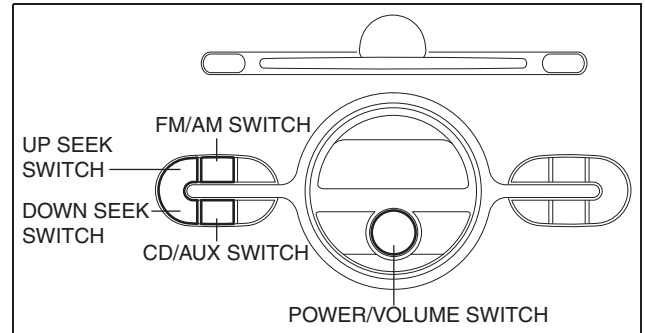
#### Note

- All DTCs displayed in the on-board diagnostic test mode should be entered in the Audio Repair Order Form.

1. Turn the ignition switch to the ACC or ON position.
2. Turn the center panel unit power to off.
3. While pressing the POWER/VOLUME switch, simultaneously press the FM/AM switch and the CD/AUX switch for **2 s or more**.

#### Note

- If several DTCs are in the memory, they can be displayed using the UP SEEK switch or DOWN SEEK switch.
4. To stop the on-board diagnostic test mode, turn the ignition switch to the LOCK position.



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### SUPPLIER IDENTIFICATION PROCEDURE [AUDIO]

id0902f6358400

#### Note

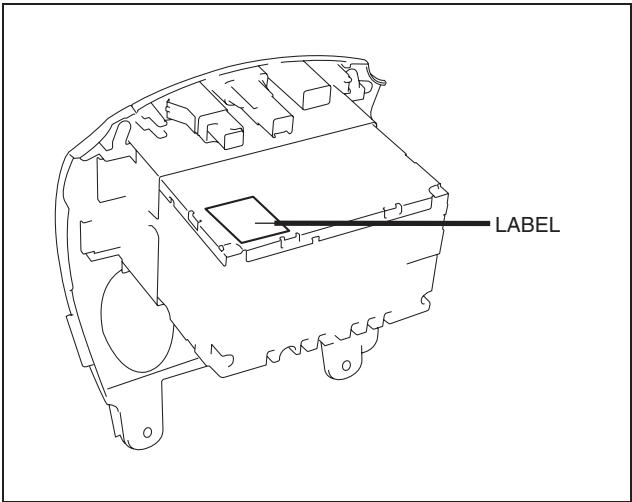
- When asking the supplier (service center) for repair or replacement, identify the supplier and fill in the Audio Repair Order Form using the following procedures.

#### Identification Using Label or Inscribed Lettering

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (5) Center panel unit (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)

ON-BOARD DIAGNOSTIC [AUDIO]

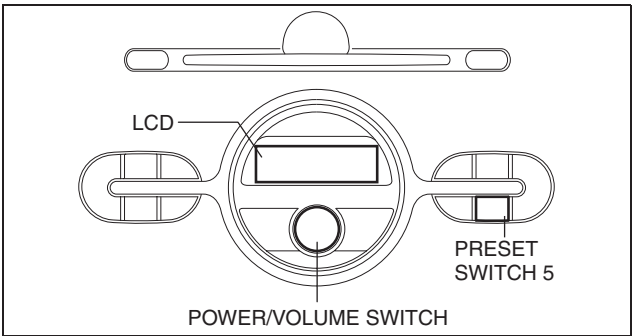
3. Verify the supplier indicated on the label attached on each unit.



am2zzw0000039

Verify Using the Diagnostic Assist Function

- 1. Turn the ignition switch to the ACC or ON position.
- 2. Turn the center panel unit power to on.
- 3. While pressing the POWER/VOLUME switch, simultaneously press the Preset switch 5 for **3 s or more**.



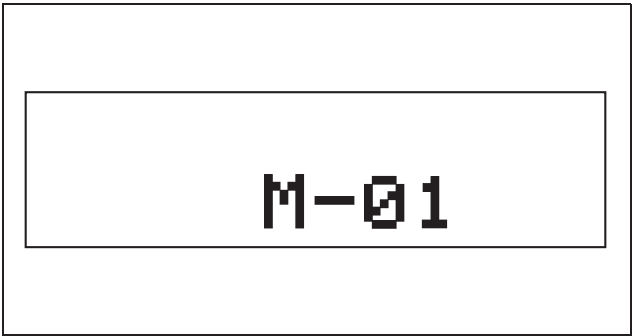
am2zzw00000376

4. Identify the supplier code by referring to the LCD.

| Supplier code | Supplier name   |
|---------------|-----------------|
| 01            | SANYO Automedia |
| 02            | Panasonic       |
| 03            | Clarion         |
| 04            | Pioneer         |

Note

- The supplier code can also be identified from the DTC displays screen.
5. Cancel the diagnostic assist function by either turning off the center panel unit power or by turning the ignition switch to the LOCK position.



am2zzw0000072



am2zzw0000072

## ON-BOARD DIAGNOSTIC [AUDIO]

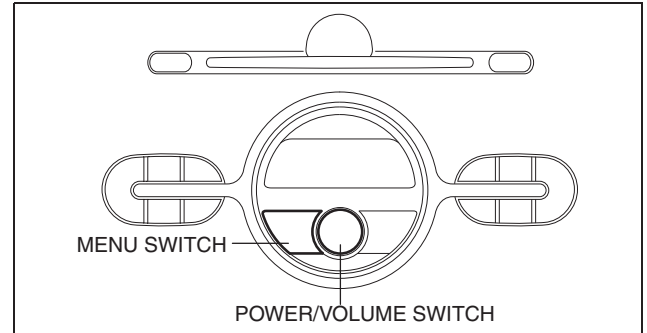
### CLEARING DTC [AUDIO]

id0902f6400300

#### Caution

- Before clearing the memory, be sure to enter all of the DTCs displayed in the on-board diagnostic test mode in the Audio Repair Order Form.

1. Launch the on-board diagnostic test mode. (See 09-02E-1 STARTING PROCEDURE FOR ON-BOARD DIAGNOSTIC TEST MODE [AUDIO].)
2. While pressing the POWER/VOLUME switch, simultaneously press the MENU switch for **2 s or more**.
3. To stop the on-board diagnostic test mode, turn the ignition switch to the LOCK position.



am2zzw0000376

### DTC TABLE [AUDIO]

id0902f6363000

| Screen display                                      |                                                                      |                                                                                                                                                                                                                                                                   |                                                                                                                                                                    |
|-----------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC<br>(When starting on-board diagnostic function) | Malfunction description                                              | Inferred cause/verified content                                                                                                                                                                                                                                   | Reference                                                                                                                                                          |
| 09:Er20                                             | Audio does not function                                              | Battery voltage low                                                                                                                                                                                                                                               | (See 09-03E-6 NO.2 NO POWER TO THE ENTIRE AUDIO SYSTEM [AUDIO].)                                                                                                   |
| 09:Er21                                             | Audio unclear or no audio from radio and CD                          | <ul style="list-style-type: none"> <li>• Verify the symptoms described by the customer (such as occurrence frequency and mode).</li> <li>• Short to ground in the wiring harness between the audio unit and speakers</li> <li>• Audio unit malfunction</li> </ul> | (See 09-03E-9 NO.5 SOUND BREAK-UP OR POOR SOUND QUALITY [AUDIO].)                                                                                                  |
| 09:Er22                                             | Radio not receiving signal                                           | <ul style="list-style-type: none"> <li>• Verify the sometimes described by the customer (such as time and place of occurrence, and radio frequency).</li> <li>• Audio unit malfunction</li> </ul>                                                                 | (See 09-03F-3 NO.1 NO RADIO RECEPTION (AM/FM)/NO OR LOW VOLUME [RADIO].)                                                                                           |
| 10:Er01                                             | MP3 applicable CD player cannot implement insert and eject commands. | Audio unit malfunction                                                                                                                                                                                                                                            | (See 09-03G-3 NO.1 CD PLAYER/CHANGER DOES NOT LOAD THE CD OR EJECTS THE CD IMMEDIATELY [CD].)<br>(See 09-03G-3 NO.2 CD PLAYER/CHANGER DOES NOT EJECT THE CD [CD].) |
| 10:Er02                                             | Cannot change tracks.                                                | Audio unit malfunction                                                                                                                                                                                                                                            | (See 09-03G-11 NO.11 TRACK CHANGE IS INOPERATIVE [CD].)                                                                                                            |
| 10:Er07                                             | CD cannot playback (cannot operate)                                  | <ul style="list-style-type: none"> <li>• CD incompatible (CD used by customer)</li> <li>• Recurs no matter the type of CD (no non-compatible CD)</li> </ul>                                                                                                       | (See 09-03G-4 NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND [CD].)                                                                                          |
| 10:Er10                                             | MP3 applicable CD player does not operate.                           | <ul style="list-style-type: none"> <li>• Malfunction of connectors between audio unit and MP3 applicable CD player.</li> <li>• Audio unit malfunction</li> </ul>                                                                                                  | (See 09-03G-4 NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND [CD].)                                                                                          |
| 21:Er17                                             | Operation differs from the selected switch                           | Verify the center panel and audio unit assembly.                                                                                                                                                                                                                  | (See 09-02E-4 DIAGNOSTIC ASSIST FUNCTION [AUDIO].)                                                                                                                 |
| 21:Er18                                             |                                                                      |                                                                                                                                                                                                                                                                   |                                                                                                                                                                    |

## ON-BOARD DIAGNOSTIC [AUDIO]

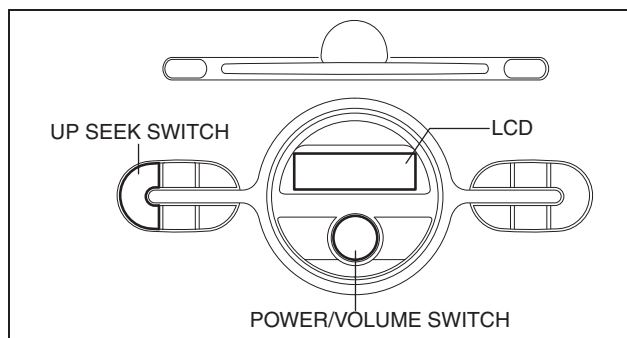
| Screen display                                      | Malfunction description                                                             | Inferred cause/verified content                                                                                                                                                                                            | Reference                                                                                                                                                          |
|-----------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC<br>(When starting on-board diagnostic function) |                                                                                     |                                                                                                                                                                                                                            |                                                                                                                                                                    |
| 21:Er19                                             | Communication error with center panel (audio switch system)                         | <ul style="list-style-type: none"> <li>Verify conditions such as the non-operation of all audio switches or the non-operation of any particular switch.</li> <li>Center panel (audio switch system) malfunction</li> </ul> | (See 09-03E-2 CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO].)                                                                                             |
| 22:Er01                                             | MP3 applicable CD changer cannot implement insert, eject, and disc change commands. | <ul style="list-style-type: none"> <li>Defective CD (curved, broken or foreign material stuck/attached, etc.)</li> <li>Audio unit malfunction</li> </ul>                                                                   | (See 09-03G-3 NO.1 CD PLAYER/CHANGER DOES NOT LOAD THE CD OR EJECTS THE CD IMMEDIATELY [CD].)<br>(See 09-03G-3 NO.2 CD PLAYER/CHANGER DOES NOT EJECT THE CD [CD].) |
| 22:Er02                                             | Cannot change tracks.                                                               | <ul style="list-style-type: none"> <li>Defective CD (curved, broken or foreign material stuck/attached, etc.)</li> <li>Audio unit malfunction</li> </ul>                                                                   | (See 09-03G-11 NO.11 TRACK CHANGE IS INOPERATIVE [CD].)                                                                                                            |
| 22:Er07                                             | CD cannot playback (cannot operate)                                                 | <ul style="list-style-type: none"> <li>CD incompatible (CD used by customer)</li> <li>Rekurs no matter the type of CD (no non-compatible CD)</li> </ul>                                                                    | (See 09-03G-4 NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND [CD].)                                                                                          |
| 22:Er10                                             | MP3 applicable CD changer does not operate.                                         | <ul style="list-style-type: none"> <li>Malfunction of connectors between audio unit and MP3 applicable CD changer.</li> <li>Audio unit malfunction</li> </ul>                                                              | (See 09-03G-4 NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND [CD].)                                                                                          |
| no Err                                              | —                                                                                   | DTC is not recorded.                                                                                                                                                                                                       | —                                                                                                                                                                  |

### DIAGNOSTIC ASSIST FUNCTION [AUDIO]

id0902f6361100

#### LCD Inspection

- Turn the ignition switch to the ACC or ON position.
- Turn the center panel unit power to on.
- While pressing the POWER/VOLUME switch, simultaneously press the UP SEEK switch for **0.2 s or more**.
- Inspect according to the following table:



am2zzw0000495

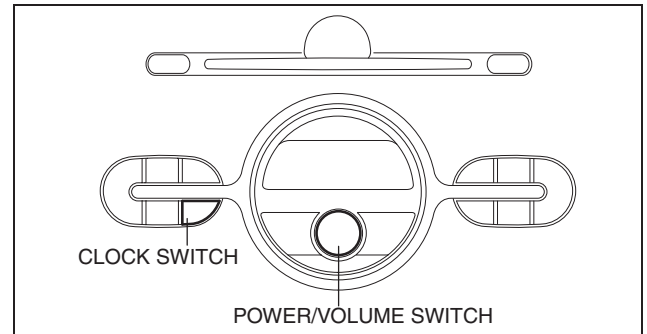
| Inspection                                                                                                                                                 | Display | Action |                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                            |         | Yes    | No                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>Launch the LCD inspection mode.</li> <li>The characters displayed on the LCD are not truncated or faint.</li> </ul> |         | Yes    | LCD is normal.<br><br>Replace the center panel.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.) |

- Cancel the diagnostic assist function by either turning off the center panel unit power or by turning the ignition switch to the LOCK position.

## ON-BOARD DIAGNOSTIC [AUDIO]

### Switch Inspection

1. Turn the ignition switch to the ACC or ON position.
2. Turn the center panel unit power to on.
3. While pressing the POWER/VOLUME switch, simultaneously press the CLOCK switch for **0.2 s or more**.
4. Inspect according to the following table:

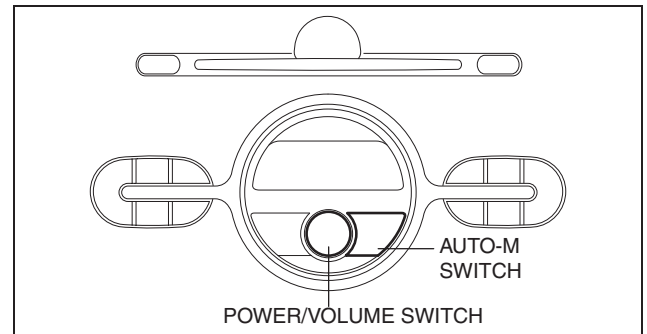


| Inspection                                                                                                                                                               | Display | Action |                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|----------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                          |         | Yes    | The switch is normal.                                                                                    |
| <ul style="list-style-type: none"> <li>• Launch the switch inspection mode.</li> <li>• Operate all of the switches (press).</li> <li>• Does the buzzer sound?</li> </ul> | —       | No     | Verify the switch.<br>(See 09-03E-2<br>CONFIRMATION STEP<br>1: AUDIO SWITCH<br>CONFIRMATION<br>[AUDIO].) |

5. Cancel the diagnostic assist function by either turning off the center panel unit power or by turning the ignition switch to the LOCK position.

### Speaker Inspection

1. Turn the ignition switch to the ACC or ON position.
2. Turn the center panel unit power to on.
3. While pressing the POWER/VOLUME switch, simultaneously press the AUTO-M switch for **0.2 s or more**.
4. Inspect according to the following table:



| Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                         | Display | Action |                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         | Yes    | The speakers and the wiring harness between the audio unit and speakers are normal.                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• Launch the speaker inspection mode.</li> <li>• Does each speaker output sound in the following order?:               <ol style="list-style-type: none"> <li>1. Front door speaker (LH) and tweeter (LH)</li> <li>2. Front door speaker (RH) and tweeter (RH)</li> <li>3. Rear door speaker (RH)/rear speaker (RH) (3HB)</li> <li>4. Rear door speaker (LH)/rear speaker (LH) (3HB)</li> </ol> </li> </ul> | —       | No     | <ul style="list-style-type: none"> <li>• If no sound is produced from all of the speakers.<br/>(See 09-03E-6 NO.3 NO SOUND FROM ALL SPEAKERS [AUDIO].)</li> <li>• If no sound is produced from some of the speakers.<br/>(See 09-03E-7 NO.4 NO SOUND FROM SOME SPEAKERS [AUDIO].)</li> </ul> |

5. Cancel the diagnostic assist function by either turning off the center panel unit power or by turning the ignition switch to the LOCK position.

### Radio Reception Condition Inspection

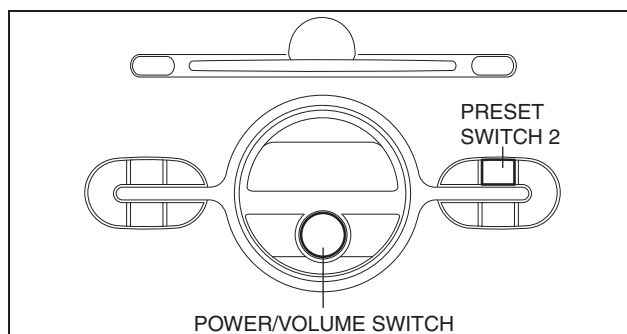
1. Turn the ignition switch to the ACC or ON position.
2. Turn the center panel unit power to on.
3. Tune in the radio.

## ON-BOARD DIAGNOSTIC [AUDIO]

4. While pressing the POWER/VOLUME switch, simultaneously press the Preset switch 2 for **0.2 s or more**.
5. Inspect according to the following table:

### Caution

- Even if the system is normal, radio reception may be difficult depending on where the system is inspected (indoors/outdoors, or conditions at the location). Before inspecting the system, verify that radio reception is adequate.
- When performing the inspection, select the best area for receiving radio frequencies.



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| Inspection                                           | Display (AM 522 kHz reception)            | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Start the radio reception condition inspection mode. | <div>LEV-9 522</div> <div>LEV-5 522</div> | Center roof antenna, antenna feeder and audio unit are normal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                      | <div>LEV-4 522</div> <div>LEV-3 522</div> | Change frequencies and re-perform the inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                      | <div>LEV-2 522</div> <div>LEV-0 522</div> | Inspect the center roof antenna and antenna feeder.<br>(See 09-20-15 CENTER ROOF ANTENNA INSPECTION.)<br>(See 09-20-19 ANTENNA FEEDER NO.1 INSPECTION.)<br>(See 09-20-21 ANTENNA FEEDER NO.2 INSPECTION.) <ul style="list-style-type: none"> <li>• If either the center roof antenna or the antenna feeder is not normal, replace the malfunctioning part.<br/>               (See 09-20-13 CENTER ROOF ANTENNA REMOVAL/INSTALLATION.)<br/>               (See 09-20-17 ANTENNA FEEDER NO.1 REMOVAL/INSTALLATION.)<br/>               (See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/INSTALLATION.)</li> <li>• If the center roof antenna and antenna feeder are normal, replace the audio unit.<br/>               (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)<br/>               (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.)</li> </ul> |
|                                                      |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

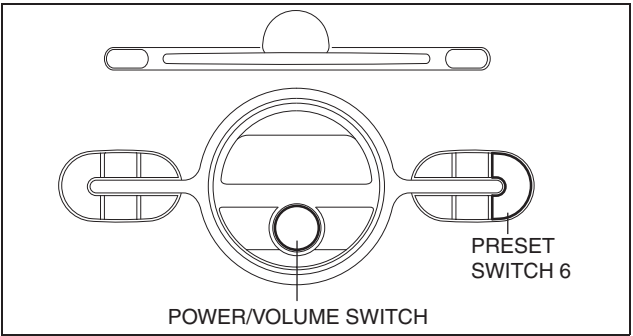
6. Cancel the diagnostic assist function by either turning off the center panel unit power or by turning the ignition switch to the LOCK position.

### Center Panel Specification Inspection

1. Turn the ignition switch to the ACC or ON position.
2. Turn the center panel unit power to on.

# ON-BOARD DIAGNOSTIC [AUDIO]

3. While pressing the POWER/VOLUME switch, simultaneously press the Preset switch 6 for **3 s or more**.
4. Inspect according to the following table:



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| Inspection                                                                                                                             | Display                                        | Action |                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                        |                                                | Yes    | The center panel is normal.                                                                                                                   |
| <ul style="list-style-type: none"><li>Launch the center panel destination mode.</li><li>Is there a match to the destination?</li></ul> | <div><div>IDCODE</div><div>P-00-00</div></div> | No     | Replace the center panel.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |

| ID | Specification | Code | Destination                                     |
|----|---------------|------|-------------------------------------------------|
| 00 | Mazda 2       | 00   | Europe                                          |
|    |               | 01   | Australia                                       |
|    |               | 02   | 4A region (With AM frequency pitch: 5KHz pitch) |
|    |               | 03   | 4A region (With AM frequency pitch: 9KHz pitch) |

5. Cancel the diagnostic assist function by either turning off the center panel unit power or by turning the ignition switch to the LOCK position.

## **09-02F ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]**

|                                        |           |  |
|----------------------------------------|-----------|--|
| <b>DTC INSPECTION</b>                  |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-1  |  |
| <b>CLEARING DTC</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-2  |  |
| <b>DTC TABLE</b>                       |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-2  |  |
| <b>DTC B1A84:41/U0300:00</b>           |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-3  |  |
| <b>DTC B1A84:51/U2100:00</b>           |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-4  |  |
| <b>DTC B1B71:14</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-5  |  |
| System Wiring Diagram .....            | 09-02F-5  |  |
| <b>DTC P0070:14</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-7  |  |
| System Wiring Diagram .....            | 09-02F-7  |  |
| <b>DTC P193B:14</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-9  |  |
| System Wiring Diagram .....            | 09-02F-9  |  |
| <b>DTC U0401:68</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-11 |  |
| <b>DTC U0401:92</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-11 |  |
| <b>DTC U0402:92</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-12 |  |
| <b>DTC U0415:92</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-12 |  |
| <b>DTC U0420:92</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-13 |  |
| <b>DTC U0452:68</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-13 |  |
| <b>DTC U0452:92</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-13 |  |
| <b>DTC U0515:68</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-14 |  |
| <b>DTC U3000:41</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-14 |  |
| <b>DTC U3003:16</b>                    |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-15 |  |
| System Wiring Diagram .....            | 09-02F-15 |  |
| Diagnostic Procedure .....             | 09-02F-16 |  |
| <b>PID/DATA MONITOR INSPECTION</b>     |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-17 |  |
| <b>PID/DATA MONITOR TABLE</b>          |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-17 |  |
| <b>ACTIVE COMMAND MODES INSPECTION</b> |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-18 |  |
| <b>ACTIVE COMMAND MODES TABLE</b>      |           |  |
| [INSTRUMENT CLUSTER] .....             | 09-02F-18 |  |

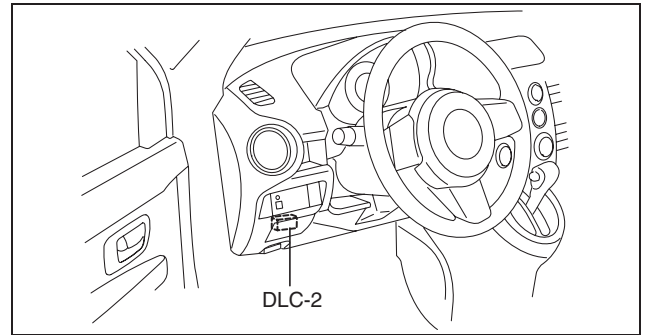
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## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### DTC INSPECTION [INSTRUMENT CLUSTER]

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "IC".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "IC".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the instrument cluster. (See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)



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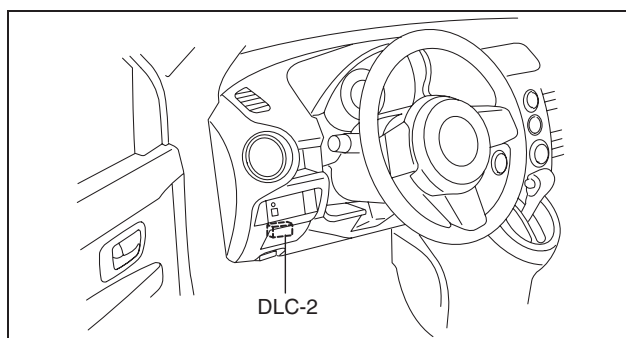
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## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### CLEARING DTC [INSTRUMENT CLUSTER]

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1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "IC".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "IC".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Turn the ignition switch to the LOCK position.
6. Turn the ignition switch to the ON position and wait for 5 s more.
7. Perform DTC inspection. (See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)
8. Verify that no DTCs are displayed.



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### DTC TABLE [INSTRUMENT CLUSTER]

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| DTC       | Malfunction location                                                                                                                                                   | Reference                                                                                               |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| B10D5:13  | <ul style="list-style-type: none"> <li>• Coil antenna malfunction</li> <li>• The PCM determined a malfunction in the coil antenna even though it is normal.</li> </ul> | (See 09-02C-7 SECURITY LIGHT: 12, DTC: B10D5:13/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)  |
| B10D7:05  | Key ID number program error                                                                                                                                            | (See 09-02C-8 SECURITY LIGHT: 13, DTC: B10D7:05/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)  |
| B10D7:51  | The instrument cluster has detected unprogrammed key ID number.                                                                                                        | (See 09-02C-12 SECURITY LIGHT: 15, DTC: B10D7:51/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
| B10D7:81  | The instrument cluster cannot read key ID number data normally.                                                                                                        | (See 09-02C-11 SECURITY LIGHT: 14, DTC: B10D7:81/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
| B10D7:94  | The key ID number data cannot be read.                                                                                                                                 | (See 09-02C-9 SECURITY LIGHT: 13, DTC: B10D7:94/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)  |
| B10D8:00  | Only one key ID number is programmed.                                                                                                                                  | (See 09-02C-14 SECURITY LIGHT: 21, DTC: B10D8:00/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
| B10D9:87  | No detected communication with the coil antenna.                                                                                                                       | (See 09-02C-5 SECURITY LIGHT: 11, DTC: B10D9:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)  |
| B10DA:51  | Communication error between the instrument cluster and the PCM (data transfer failure)                                                                                 | (See 09-02C-15 SECURITY LIGHT: 22, DTC: B10DA:51/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
| B10DA:62  | Communication error between the instrument cluster and the PCM (mismatched conditions)                                                                                 | (See 09-02C-16 SECURITY LIGHT: 23, DTC: B10DA:62/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
| B1A84:41  | Instrument cluster configuration data error                                                                                                                            | (See 09-02F-3 DTC B1A84:41/U0300:00 [INSTRUMENT CLUSTER].)                                              |
| B1A84:51  | Instrument cluster configuration not implemented                                                                                                                       | (See 09-02F-4 DTC B1A84:51/U2100:00 [INSTRUMENT CLUSTER].)                                              |
| B1B71:14* | Evaporator temperature sensor circuit malfunction                                                                                                                      | (See 09-02F-5 DTC B1B71:14 [INSTRUMENT CLUSTER].)                                                       |
| P0070:14  | Ambient temperature cannot be displayed on LCD of meter                                                                                                                | (See 09-02F-7 DTC P0070:14 [INSTRUMENT CLUSTER].)                                                       |
| P193B:14* | Accelerator pedal position (APP) sensor circuit malfunction                                                                                                            | (See 09-02F-9 DTC P193B:14 [INSTRUMENT CLUSTER].)                                                       |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

| DTC      | Malfunction location                                                                 | Reference                                                                                                                                |
|----------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| U0001:88 | Module communication error (HS-CAN)                                                  | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)                                                                       |
| U0100:00 | PCM communication error                                                              | (See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                                       |
| U0100:87 | Communication error between the instrument cluster and the PCM (no response)         | (See 09-02C-13 SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]).                                  |
| U0101:00 | TCM communication error                                                              | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
| U0121:00 | ABS HU/CM communication error (With ABS)<br>DSC HU/CM communication error (With DSC) |                                                                                                                                          |
| U0131:00 | EPS control module communication error                                               |                                                                                                                                          |
| U0140:00 | BCM communication error                                                              |                                                                                                                                          |
| U0151:00 | SAS control module communication error                                               |                                                                                                                                          |
| U0214:00 | Keyless control module communication error                                           |                                                                                                                                          |
| U0300:00 | Instrument cluster configuration data error                                          | (See 09-02F-3 DTC B1A84:41/U0300:00 [INSTRUMENT CLUSTER].)                                                                               |
| U0401:68 | Signal error from PCM                                                                | (See 09-02F-11 DTC U0401:68 [INSTRUMENT CLUSTER].)                                                                                       |
| U0401:92 | Signal error from PCM                                                                | (See 09-02F-11 DTC U0401:92 [INSTRUMENT CLUSTER].)                                                                                       |
| U0402:92 | Signal error from TCM                                                                | (See 09-02F-12 DTC U0402:92 [INSTRUMENT CLUSTER].)                                                                                       |
| U0415:92 | Signal error from ABS HU/CM (With ABS)<br>Signal error from DSC HU/CM (With DSC)     | (See 09-02F-12 DTC U0415:92 [INSTRUMENT CLUSTER].)                                                                                       |
| U0420:92 | Signal error from EPS                                                                | (See 09-02F-13 DTC U0420:92 [INSTRUMENT CLUSTER].)                                                                                       |
| U0452:68 | Signal error from SAS control module                                                 | (See 09-02F-13 DTC U0452:68 [INSTRUMENT CLUSTER].)                                                                                       |
| U0452:92 | Signal error from SAS control module                                                 | (See 09-02F-13 DTC U0452:92 [INSTRUMENT CLUSTER].)                                                                                       |
| U0515:68 | Signal error from keyless control module                                             | (See 09-02F-14 DTC U0515:68 [INSTRUMENT CLUSTER].)                                                                                       |
| U2100:00 | Instrument cluster configuration not implemented                                     | (See 09-02F-4 DTC B1A84:51/U2100:00 [INSTRUMENT CLUSTER].)                                                                               |
| U3000:41 | Instrument cluster internal malfunction                                              | (See 09-02F-14 DTC U3000:41 [INSTRUMENT CLUSTER].)                                                                                       |
| U3003:16 | Battery positive voltage is low                                                      | (See 09-02F-15 DTC U3003:16 [INSTRUMENT CLUSTER].)                                                                                       |

\* : MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)

### DTC B1A84:41/U0300:00 [INSTRUMENT CLUSTER]

id0902e8999900

|                                |                                                      |
|--------------------------------|------------------------------------------------------|
| <b>DTCs B1A84:41, U0300:00</b> | <b>Instrument cluster configuration error</b>        |
| <b>Detection Condition</b>     | Configuration error                                  |
| <b>Possible Causes</b>         | Configuration was not done correctly for some reason |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM INSTRUMENT CLUSTER CONFIGURATION</b> <ul style="list-style-type: none"> <li>Perform the instrument cluster configuration using the M-MDS.<br/>(See 09-22-7 INSTRUMENT CLUSTER CONFIGURATION.)</li> <li>Clear the DTC.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Are DTCs B1A84:41, U0300:00 displayed?</li> </ul> | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>Go to the next step. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>DTC troubleshooting completed.                                                                                      |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Are any other DTCs displayed?</li> </ul>                                                                                                                          | Yes<br>Perform the corresponding DTC inspection.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>DTC troubleshooting completed.                                                                                      |

### DTC B1A84:51/U2100:00 [INSTRUMENT CLUSTER]

id0902e8999800

|                                |                                                         |
|--------------------------------|---------------------------------------------------------|
| <b>DTCs B1A84:51, U2100:00</b> | <b>Instrument cluster configuration not implemented</b> |
| Detection Condition            | Configuration setting has not been performed            |
| Possible Causes                | Instrument cluster configuration not implemented        |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM INSTRUMENT CLUSTER CONFIGURATION</b> <ul style="list-style-type: none"> <li>Perform the instrument configuration using the M-MDS.<br/>(See 09-22-7 INSTRUMENT CLUSTER CONFIGURATION.)</li> <li>Clear the DTC.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Are DTCs B1A84:51, U2100:00 displayed?</li> </ul> | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>Go to the next step. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                                                      |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Are any other DTCs displayed?</li> </ul>                                                                                                                  | Yes<br>Perform the corresponding DTC inspection.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                                                      |

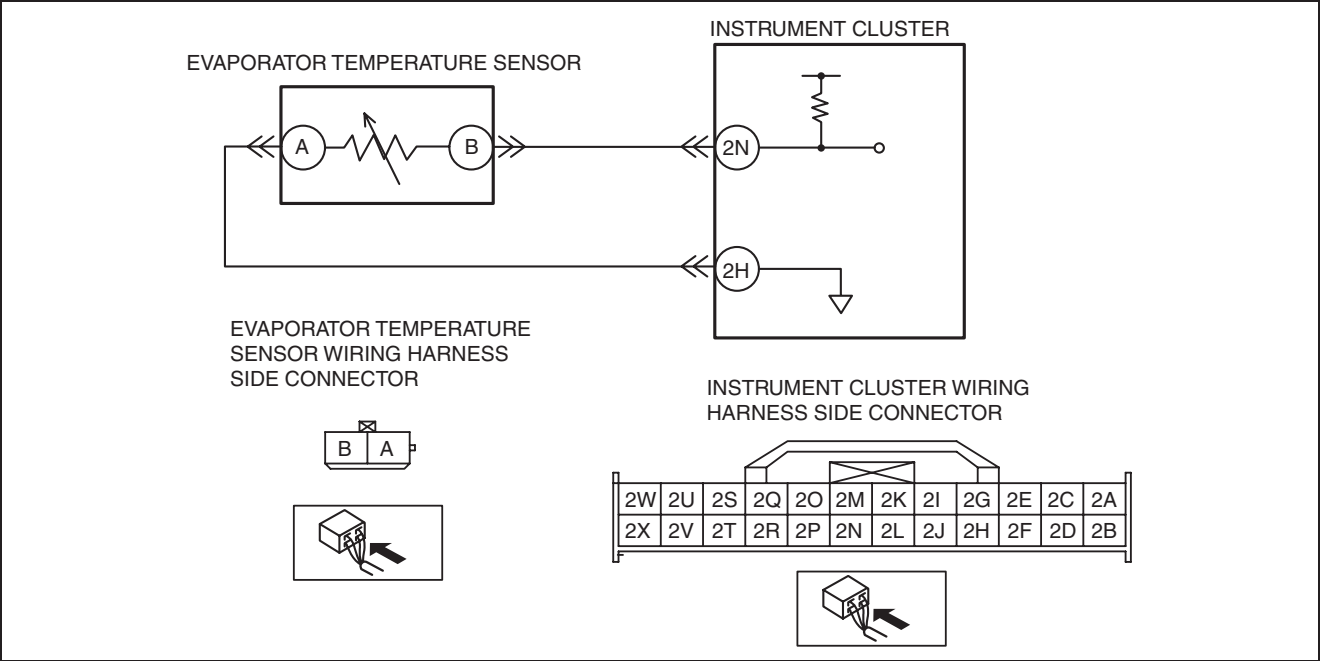
ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

DTC B1B71:14 [INSTRUMENT CLUSTER]

id0902e8998900

|                     |                                                                                                                                                                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC B1B71:14        | Evaporator temperature sensor circuit malfunction                                                                                                                                                                                                             |
| Detection Condition | Evaporator temperature sensor resistance value not input for a continuous 5 s                                                                                                                                                                                 |
| Possible Causes     | <ul style="list-style-type: none"><li>• Open or short to ground circuit in wiring harness between evaporator temperature sensor and instrument cluster</li><li>• Evaporator temperature sensor malfunction</li><li>• Instrument cluster malfunction</li></ul> |

System Wiring Diagram



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## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT EVAPORATOR TEMPERATURE SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the evaporator temperature sensor connector.<br/>(See 07-40A-28 EVAPORATOR TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)<br/>(See 07-40B-21 EVAPORATOR TEMPERATURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair/replace the connector or terminal.<br>After repair procedure, <b>go to Step 9.</b>                                                                                                                                                                                                |
| 2    | <b>INSPECT EVAPORATOR TEMPERATURE SENSOR</b> <ul style="list-style-type: none"> <li>Inspect the evaporator temperature sensor.<br/>(See 07-40A-28 EVAPORATOR TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].)<br/>(See 07-40B-21 EVAPORATOR TEMPERATURE SENSOR INSPECTION [MANUAL AIR CONDITIONER].)</li> <li>Is the evaporator temperature sensor normal?</li> </ul>                                                                                                                                                                                              | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Replace the evaporator temperature sensor.<br>(See 07-40A-28 EVAPORATOR TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)<br>(See 07-40B-21 EVAPORATOR TEMPERATURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)<br>After replacement, <b>go to Step 9.</b> |
| 3    | <b>INSPECT EVAPORATOR TEMPERATURE SENSOR FOR SHORT CIRCUIT TO GROUND</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness for continuity between evaporator temperature sensor connector terminal B and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to Step 7.                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                                                                     |
| 4    | <b>INSPECT EVAPORATOR TEMPERATURE SENSOR FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at evaporator temperature sensor connector terminal B.</li> <li>Is the voltage <b>5 V</b>?</li> </ul>                                                                                                                                                                                                                                                                                          | Yes<br>Go to Step 8.                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                                                                     |
| 5    | <b>INSPECT EVAPORATOR TEMPERATURE SENSOR FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Measure the voltage at instrument cluster terminal 2N.</li> <li>Is the voltage <b>5 V</b>?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to the next step.                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to Step 8.                                                                                                                                                                                                                                                                            |
| 6    | <b>INSPECT EVAPORATOR TEMPERATURE SENSOR FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect the wiring harness for continuity between evaporator temperature sensor connector terminal A and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                   | Yes<br><b>Go to Step 9.</b>                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                                                                     |
| 7    | <b>OPEN CIRCUIT IN EVAPORATOR TEMPERATURE SENSOR CIRCUIT</b> <ul style="list-style-type: none"> <li>Inspect for continuity between instrument cluster terminal 2H and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to the next step.                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                                                                     |
| 8    | <b>VERIFY INSTRUMENT CLUSTER CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the instrument cluster connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair/replace the connector or terminal.<br>After repair procedure, go to the next step.                                                                                                                                                                                                |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

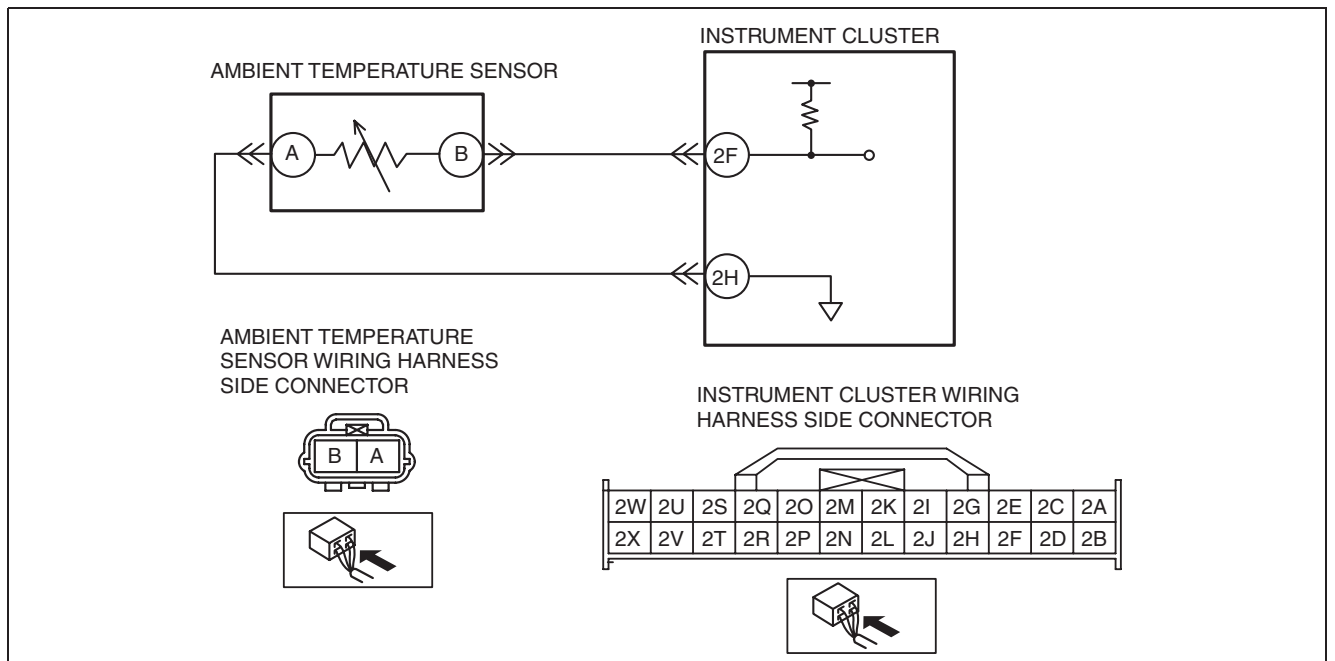
| Step | Inspection                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <b>VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Clear the DTC.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>VERIFY DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC B1B71:14 output?</li> </ul> | Yes<br>Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>If the malfunction does not recur, go to the next step.</li> <li>If the malfunction recurs, replace the instrument cluster.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                          |
| 10   | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify other DTC displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                        | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                |

### DTC P0070:14 [INSTRUMENT CLUSTER]

id0902e8999300

| DTC P0070:14        | Ambient temperature not displayed in LCD meter                                                                                                                                                                                              |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Detection Condition | Open or short circuit in wiring harness between ambient temperature sensor and instrument cluster                                                                                                                                           |
| Possible Causes     | <ul style="list-style-type: none"> <li>Open or short circuit in wiring harness between ambient temperature sensor and instrument cluster</li> <li>Ambient temperature sensor malfunction</li> <li>Instrument cluster malfunction</li> </ul> |

### System Wiring Diagram



am2zzw0000092

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT AMBIENT TEMPERATURE SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the ambient temperature sensor connector.</li> <li>(See 07-40A-26 AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Are the connector and terminals normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair/replace the connector or terminal.<br>After repair procedure, <b>go to Step 9.</b>                                                                                          |
| 2    | <b>INSPECT AMBIENT TEMPERATURE SENSOR</b> <ul style="list-style-type: none"> <li>Inspect the ambient temperature sensor.</li> <li>Is the ambient temperature sensor normal?</li> </ul>                                                                                                                                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Replace the ambient temperature sensor.<br>(See 07-40A-26 AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)<br>After replacement, <b>go to Step 9.</b> |
| 3    | <b>INSPECT AMBIENT TEMPERATURE SENSOR FOR SHORT CIRCUIT TO GROUND</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness for continuity between ambient temperature sensor connector terminal B and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                 | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to Step 7.                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                                                                               |
| 4    | <b>INSPECT AMBIENT TEMPERATURE SENSOR FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Measure the voltage at ambient temperature sensor connector terminal B.</li> <li>Is the voltage <b>5 V</b>?</li> </ul>                                                                                                                                                                                           | Yes<br>Go to Step 8.                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                                                                               |
| 5    | <b>INSPECT AMBIENT TEMPERATURE SENSOR FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Measure the voltage at instrument cluster terminal 2F.</li> <li>Is the voltage <b>5 V</b>?</li> </ul>                                                                                                                                                                                                                                                                  | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to the next step.                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to Step 8.                                                                                                                                                                      |
| 6    | <b>INSPECT AMBIENT TEMPERATURE SENSOR FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect the wiring harness for continuity between ambient temperature sensor connector terminal A and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                    | Yes<br><b>Go to Step 9.</b>                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                                                                               |
| 7    | <b>OPEN CIRCUIT IN AMBIENT TEMPERATURE SENSOR CIRCUIT</b> <ul style="list-style-type: none"> <li>Inspect for continuity between instrument cluster terminal 2H and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                 | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to the next step.                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                                                                               |
| 8    | <b>VERIFY INSTRUMENT CLUSTER CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the instrument cluster connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                | Yes<br>Go to the next step.                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair/replace the connector or terminal.<br>After repair procedure, go to the next step.                                                                                          |



## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

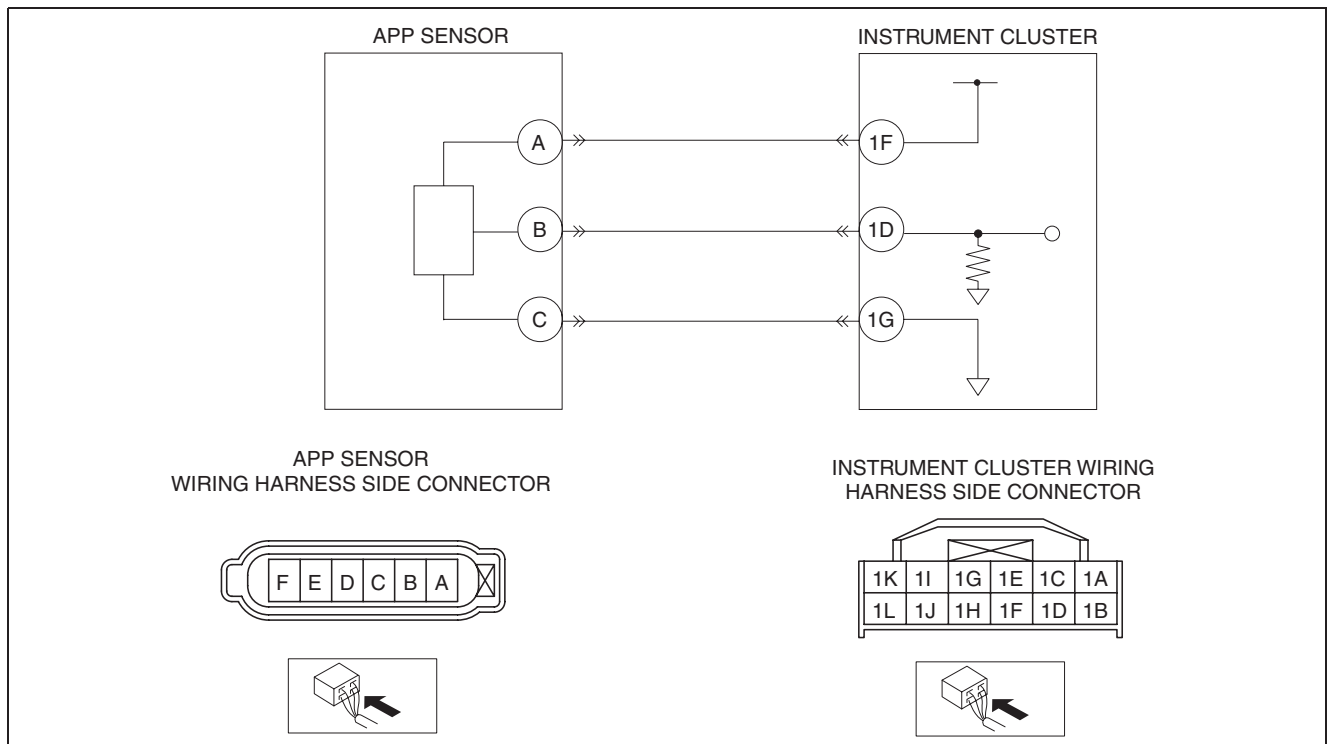
| Step | Inspection                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <b>VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Clear the DTC.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>VERIFY DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC P0070:14 output?</li> </ul> | Yes<br>Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>If the malfunction does not recur, go to the next step.</li> <li>If the malfunction recurs, replace the instrument cluster.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                          |
| 10   | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify other DTC displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                        | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                |

### DTC P193B:14 [INSTRUMENT CLUSTER]

id0902e8998700

| DTC P193B:14        | Accelerator pedal position (APP) sensor circuit malfunction                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Detection Condition | APP sensor resistance value not input for a continuous 5 s                                                                                                                                                            |
| Possible Causes     | <ul style="list-style-type: none"> <li>Open or short to ground circuit in wiring harness between APP sensor and instrument cluster</li> <li>APP sensor malfunction</li> <li>Instrument cluster malfunction</li> </ul> |

### System Wiring Diagram



am2zzw0000273

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action                                                                                                                                                                                                                                                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT APP SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the APP sensor connector.<br/>(See 01-13B-6 ACCELERATOR PEDAL REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br/>(See 01-13C-3 ACCELERATOR PEDAL REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Are the connector and terminals normal?</li> </ul>                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Repair/replace the connector or terminal.<br>After repair procedure, go to Step 6.                                                                                                                                                                                           |
| 2    | <b>INSPECT APP SENSOR CIRCUIT FOR SHORT CIRCUIT TO GROUND</b> <ul style="list-style-type: none"> <li>Inspect for continuity between the following circuits: <ul style="list-style-type: none"> <li>APP sensor terminal A (wiring harness-side)</li> <li>APP sensor terminal B (wiring harness-side)</li> </ul> </li> <li>Is there any continuity?</li> </ul>                                                                                                                                                            | Yes<br>Repair/replace the malfunctioning vehicle wiring harness.<br>After repair procedure, go to Step 6.                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Go to the next step.                                                                                                                                                                                                                                                         |
| 3    | <b>INSPECT APP SENSOR</b> <ul style="list-style-type: none"> <li>Inspect the APP sensor.<br/>(See 01-40B-27 ACCELERATOR PEDAL POSITION (APP) SENSOR INSPECTION [MZ-CD 1.4 DI Turbo].)<br/>(See 01-40C-24 ACCELERATOR PEDAL POSITION (APP) SENSOR INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>Is the APP sensor normal?</li> </ul>                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Replace the APP sensor.<br>(See 01-13B-6 ACCELERATOR PEDAL REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-13C-3 ACCELERATOR PEDAL REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>After replacement, go to Step 6.                                                        |
| 4    | <b>VERIFY INSTRUMENT CLUSTER CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the instrument cluster connector.</li> <li>Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>Are the connector and terminals normal?</li> </ul>                                                                                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Repair/replace the connector or terminal.<br>After repair procedure, go to Step 6.                                                                                                                                                                                           |
| 5    | <b>INSPECT APP SENSOR CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect for continuity between the following circuits: <ul style="list-style-type: none"> <li>APP sensor terminal A (wiring harness-side) and instrument cluster terminal 1F (wiring harness-side)</li> <li>APP sensor terminal B (wiring harness-side) and instrument cluster terminal 1D (wiring harness-side)</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Repair or replace the wiring harness for a possible open circuit, then go to the next step.                                                                                                                                                                                  |
| 6    | <b>VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN</b> <ul style="list-style-type: none"> <li>Reconnect the disconnected connectors.</li> <li>Clear the DTC.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>VERIFY DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC P193B:14 output?</li> </ul>                                                                                                                                                                                   | Yes<br>Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>If the malfunction does not recur, go to the next step.</li> <li>If the malfunction recurs, replace the instrument cluster.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Go to the next step.                                                                                                                                                                                                                                                         |
| 7    | <b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>Verify other DTC displayed.</li> <li>Are any other DTCs output?</li> </ul>                                                                                                                                                                                                                                                                                                                                                          | Yes<br>Perform the corresponding DTC inspection.                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                               |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### DTC U0401:68 [INSTRUMENT CLUSTER]

id0902e8988800

|                            |                                          |
|----------------------------|------------------------------------------|
| <b>DTC U0401:68</b>        | <b>Signal error from PCM</b>             |
| <b>Detection Condition</b> | Correct data cannot be received from PCM |
| <b>Possible Causes</b>     | PCM malfunction                          |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT FOR PCM MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the PCM DTC inspection using the M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)</li> <li>Is the DTC displayed again?</li> </ul> | Yes<br>Go to the applicable DTC inspection.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                                                                                 |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0401:68 displayed?</li> </ul>                                                                                                            | Yes<br>Replace the PCM.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                                                                                                                                                       |

### DTC U0401:92 [INSTRUMENT CLUSTER]

id0902e8988700

|                            |                            |
|----------------------------|----------------------------|
| <b>DTC U0401:92</b>        | <b>On request from PCM</b> |
| <b>Detection Condition</b> | On request error from PCM  |
| <b>Possible Causes</b>     | PCM malfunction            |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT FOR PCM MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the PCM DTC inspection using the M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)</li> <li>Is the DTC displayed again?</li> </ul> | Yes<br>Go to the applicable DTC inspection.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                                                                                 |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0401:92 displayed?</li> </ul>                                                                                                            | Yes<br>Replace the PCM.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                                                                                                                                                       |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### DTC U0402:92 [INSTRUMENT CLUSTER]

id0902e8988600

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>DTC U0402:92</b>        | <b>On request from TCM</b>                                             |
| <b>Detection Condition</b> | Illumination command signal from TCM continues for <b>20 s or more</b> |
| <b>Possible Causes</b>     | TCM malfunction                                                        |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                            | Action                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT FOR TCM MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the TCM DTC inspection using the M-MDS.<br/>(See 05-02B-3 ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [DJVA-EL].)</li> <li>Is the DTC displayed again?</li> </ul>    | Yes<br>Go to the applicable DTC inspection.<br>(See 05-02B-3 ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [DJVA-EL].) |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                    |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0402:92 displayed?</li> </ul> | Yes<br>Replace the TCM.<br>(See 05-19-28 TCM REMOVAL/INSTALLATION [DJVA-EL].)                                 |
|      |                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                          |

### DTC U0415:92 [INSTRUMENT CLUSTER]

id0902e8988400

#### Note

- If the ignition switch is turned off after reprogramming the PCM and then turned to the ON position within 30 s, the PCM reprogramming cannot be completed correctly and DTC U0415:92 is stored.

|                            |                                                                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DTC U0415:92</b>        | <b>On request from ABS HU/CM or DSC HU/CM</b>                                                                                                                                          |
| <b>Detection Condition</b> | On request malfunction from ABS HU/CM or DSC HU/CM                                                                                                                                     |
| <b>Possible Causes</b>     | <ul style="list-style-type: none"> <li>ABS HU/CM or DSC HU/CM malfunction</li> <li>The ignition switch is turned to the ON position within 30 s after the PCM reprogramming</li> </ul> |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                             | Action                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT ABS HU/CM OR DSC HU/CM FOR MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the ABS HU/CM or DSC HU/CM DTC inspection using the M-MDS.<br/>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br/>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)</li> <li>Is the DTC displayed again?</li> </ul> | Yes<br>Go to the applicable DTC inspection.<br>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                                                                         |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0415:92 displayed?</li> </ul>                                                                                  | Yes<br>Replace the ABS HU/CM or DSC HU/CM.<br>(See 04-13-3 ABS HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-13-6 ABS HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br>(See 04-15-5 DSC HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-15-9 DSC HU/CM REMOVAL/INSTALLATION [R.H.D.].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                               |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### DTC U0420:92 [INSTRUMENT CLUSTER]

id0902e8988300

|                            |                                                |
|----------------------------|------------------------------------------------|
| <b>DTC U0420:92</b>        | <b>On request from EPS control module</b>      |
| <b>Detection Condition</b> | On request malfunction from EPS control module |
| <b>Possible Causes</b>     | EPS control module malfunction                 |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                               | Action                                                                                                                                                                                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT EPS CONTROL MODULE FOR MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the EPS control module DTC inspection using the M-MDS. (See 06-02-2 ELECTRIC POWER STEERING (EPS) ON-BOARD DIAGNOSIS.)</li> <li>Is the DTC displayed again?</li> </ul> | Yes<br>Go to the applicable DTC inspection. (See 06-02-2 ELECTRIC POWER STEERING (EPS) ON-BOARD DIAGNOSIS.)                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                                                                            |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS. (See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0420:92 displayed?</li> </ul>                            | Yes<br>Replace the EPS control module. (See 06-13-4 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [L.H.D.].) (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].) |
|      |                                                                                                                                                                                                                                                                                                                                                                          | No<br>DTC troubleshooting completed.                                                                                                                                                  |

### DTC U0452:68 [INSTRUMENT CLUSTER]

id0902e8988100

|                            |                                                         |
|----------------------------|---------------------------------------------------------|
| <b>DTC U0452:68</b>        | <b>Signal error from SAS control module</b>             |
| <b>Detection Condition</b> | Correct data cannot be received from SAS control module |
| <b>Possible Causes</b>     | SAS control module malfunction                          |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                    | Action                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT FOR SAS CONTROL MODULE MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the DTC inspection for the SAS control module using the M-MDS. (See 08-02-6 DTC DISPLAY.)</li> <li>Is the DTC displayed again?</li> </ul>   | Yes<br>Go to the applicable DTC inspection. (See 08-02-7 DTC TABLE.)                           |
|      |                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                     |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS. (See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0452:68 displayed?</li> </ul> | Yes<br>Replace the SAS control module. (See 08-10-16 SAS CONTROL MODULE REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                               | No<br>DTC troubleshooting completed.                                                           |

### DTC U0452:92 [INSTRUMENT CLUSTER]

id0902e8988200

|                            |                                                |
|----------------------------|------------------------------------------------|
| <b>DTC U0452:92</b>        | <b>On request from SAS control module</b>      |
| <b>Detection Condition</b> | On request malfunction from SAS control module |
| <b>Possible Causes</b>     | SAS control module malfunction                 |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                    | Action                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT SAS CONTROL MODULE FOR MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the DTC inspection for the SAS control module using the M-MDS. (See 08-02-6 DTC DISPLAY.)</li> <li>Is the DTC displayed again?</li> </ul>   | Yes<br>Go to the applicable DTC inspection. (See 08-02-7 DTC TABLE.)                            |
|      |                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                      |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS. (See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0452:92 displayed?</li> </ul> | Yes<br>Replace the SAS control module. (See 08-10-16 SAS CONTROL MODULE REMOVAL/ INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                               | No<br>DTC troubleshooting completed.                                                            |

### DTC U0515:68 [INSTRUMENT CLUSTER]

id0902e8988000

|                            |                                                             |
|----------------------------|-------------------------------------------------------------|
| <b>DTC U0515:68</b>        | <b>Signal error from keyless control module</b>             |
| <b>Detection Condition</b> | Correct data cannot be received from keyless control module |
| <b>Possible Causes</b>     | Keyless control module malfunction                          |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>INSPECT FOR KEYLESS CONTROL MODULE MALFUNCTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Perform the keyless control module DTC inspection using the M-MDS. (See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the DTC displayed again?</li> </ul> | Yes<br>Go to the applicable DTC inspection. (See 09-02A-5 DTC TABLE [ADVANCED KEYLESS AND START SYSTEM].)                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Go to the next step.                                                                                                                  |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS. (See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS. (See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0515:68 displayed?</li> </ul>                                       | Yes<br>Replace the keyless control module. (See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                        |

### DTC U3000:41 [INSTRUMENT CLUSTER]

id0902e8999500

|                            |                                                |
|----------------------------|------------------------------------------------|
| <b>DTC U3000:41</b>        | <b>Instrument cluster internal malfunction</b> |
| <b>Detection Condition</b> | Malfunction in internal circuit detected       |
| <b>Possible Causes</b>     | Instrument cluster internal malfunction        |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

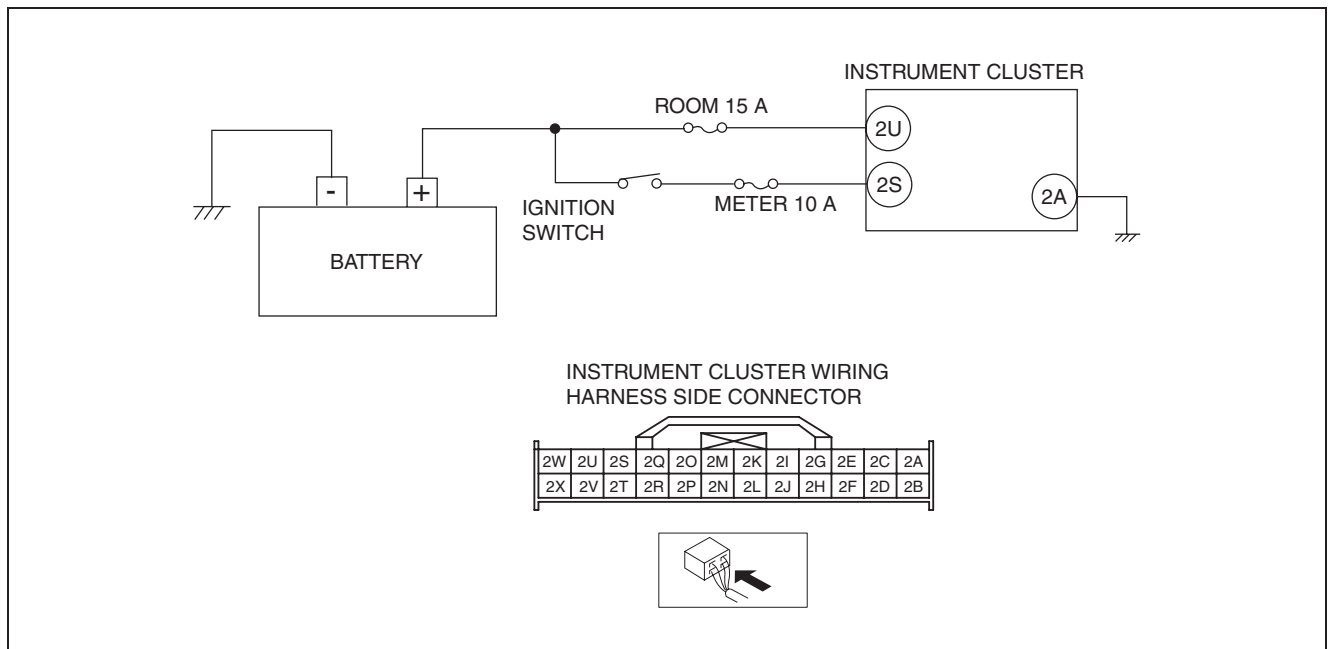
| Step | Inspection                                                                                                                                                                                                                                                                                                                     | Action                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY DTCs</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U0300:41 displayed?</li> </ul>                               | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>Go to the next step. |
|      |                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                      |
| 2    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Are any other DTCs displayed?</li> </ul> | Yes<br>Perform the corresponding DTC inspection.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                        |
|      |                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                                                      |

### DTC U3003:16 [INSTRUMENT CLUSTER]

id0902e8999400

| DTC U3003:16        | Battery positive voltage is low                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Detection Condition | Instrument cluster power supply voltage less than 10 V                                                                                                                                                                                                                                                                                                                                                                                                            |
| Possible Causes     | <ul style="list-style-type: none"> <li>Open circuit or short to ground in the wiring harness between the battery (+) terminal and instrument cluster terminal 2S or terminal 2U.</li> <li>Open circuit or short to the power supply in the wiring harness between the instrument cluster and body ground</li> <li>METER 10 A fuse malfunction</li> <li>ROOM 15 A fuse malfunction</li> <li>Battery malfunction</li> <li>Instrument cluster malfunction</li> </ul> |

### System Wiring Diagram



am2zzw0000225



## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>BATTERY INSPECTION</b> <ul style="list-style-type: none"> <li>Refer to the battery inspection and inspect the battery.<br/>(See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)<br/>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)<br/>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>Is the battery normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                            | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No     | Replace or charge the battery.<br>(See 01-17A-1 BATTERY REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17A-5 BATTERY RECHARGING [ZJ, ZY].)<br>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-17B-3 BATTERY RECHARGING [MZ-CD 1.4 DI Turbo].)<br>(See 01-17B-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-17C-3 BATTERY RECHARGING [MZ-CD 1.6 (Y6)].)<br>(See 01-17C-1 BATTERY REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) |
| 2    | <b>FUSE INSPECTION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Remove the METER 10 A fuse and ROOM 15 A fuse.</li> <li>Is the fuse normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No     | Replace the METER 10 A fuse or ROOM 15 A fuse.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3    | <b>INSPECT WIRING HARNESS BETWEEN BATTERY (+) TERMINAL AND INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Install the METER 10 A fuse and ROOM 15 A fuse.</li> <li>Remove the meter hood.<br/>(See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)</li> <li>Remove the instrument cluster.<br/>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)</li> <li>Disconnect the instrument cluster connector.</li> <li>Connect the negative battery cable.</li> <li>Measure the voltage between instrument cluster terminals 2S and 2U.</li> <li>Is the voltage between <b>9—15.9 V</b>?</li> </ul> | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No     | Repair the related wiring harness.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4    | <b>INSPECT WIRING HARNESS BETWEEN INSTRUMENT CLUSTER AND BODY GROUND</b> <ul style="list-style-type: none"> <li>Inspect the wiring harness between instrument cluster connector terminal 2A and body ground.                             <ul style="list-style-type: none"> <li>— Short to power supply</li> <li>— Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul>                                                                                                                                                                                                                                                                                                                       | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No     | Replace the wiring harness between the instrument cluster and body ground.                                                                                                                                                                                                                                                                                                                                                                                          |
| 5    | <b>PERFORM INSTRUMENT CLUSTER DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Connect the instrument cluster connector.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Perform the instrument cluster DTC inspection using the M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is DTC U3003:16 displayed?</li> </ul>                                                                                                                                                                                                      | Yes    | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No     | DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                                      |



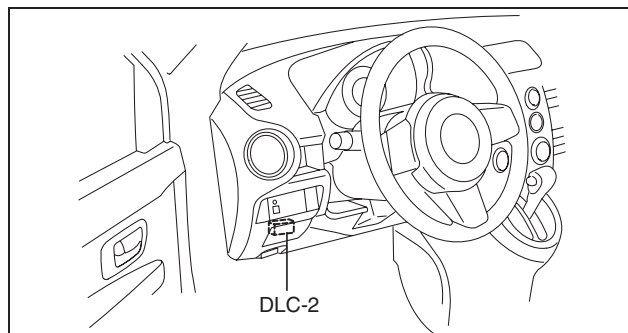
## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

| Step | Inspection                                                                                                                                                                                                                                                                                                                     | Action                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 6    | <b>VERIFY THAT NO OTHER DTCs ARE RECORDED</b> <ul style="list-style-type: none"> <li>Clear DTCs using the M-MDS.<br/>(See 09-02F-2 CLEARING DTC [INSTRUMENT CLUSTER].)</li> <li>Inspect the instrument cluster DTCs.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Are any other DTCs displayed?</li> </ul> | Yes<br>Perform the corresponding DTC inspection.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].) |
|      |                                                                                                                                                                                                                                                                                                                                | No<br>DTC troubleshooting completed.                                                               |

### PID/DATA MONITOR INSPECTION [INSTRUMENT CLUSTER]

id0902e8400500

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "DataLogger".
    2. Select "Modules".
    3. Select "IC".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "IC".
    3. Select "DataLogger".
3. Select the applicable PID from the PID table.
4. Verify the PID data according to the directions on the screen.



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#### Note

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

### PID/DATA MONITOR TABLE [INSTRUMENT CLUSTER]

id0902e8345900

| PID name (definition)                             | Unit/status | Data contents                                                                                                                                                                                                                       | Terminal |
|---------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| SPDMTR<br>(Speedometer)                           | KPH,MPH     | Vehicle driven: Displays vehicle speed                                                                                                                                                                                              | 2B, 2D   |
| TACHOMTR<br>(Tachometer)                          | RPM         | When the engine is running: Indicate the engine speed                                                                                                                                                                               | 2B, 2D   |
| NUMKEYS<br>(Number of key codes)                  | —           | Number of programmed key ID numbers: 0—8                                                                                                                                                                                            | —        |
| VPWR<br>(Instrument cluster power supply voltage) | V           | Indicate the battery voltage                                                                                                                                                                                                        | 2S       |
| ODO_CNT<br>(Odometer rolling count)               | m, ft       | Displays odometer data<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Distance is displayed within a range of 0 to 51 m repeatedly. Data is reset to 0 m by turning the ignition switch to the LOCK position.</li> </ul> | 2B, 2D   |
| FUEL_GAUGE<br>(Fuel gauge)                        | L           | Displays remaining fuel quantity                                                                                                                                                                                                    | 2R       |
| FUEL_INPUT<br>(Fuel gauge sender unit)            | ohm         | Resistance value of fuel gauge sender unit                                                                                                                                                                                          | 2R, 2T   |

## ON-BOARD DIAGNOSTIC [INSTRUMENT CLUSTER]

### ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER]

id0902e8465900

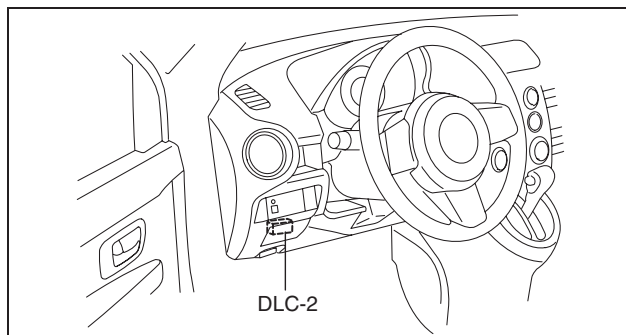
1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

- When using the IDS (laptop PC)
  1. Select "DataLogger".
  2. Select "Modules".
  3. Select "IC".
- When using the PDS (Pocket PC)
  1. Select "Module Tests".
  2. Select "IC".
  3. Select "DataLogger".

3. Select the active command modes from the PID table.

4. Perform the active command modes, inspect the operations for each parts.

- If the operation of output parts cannot be verified after the active command mode inspection is performed, this could indicate the possibility of an open or short circuit, sticking, or operation malfunction in the output parts.



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### ACTIVE COMMAND MODES TABLE [INSTRUMENT CLUSTER]

id0902e8466000

| Command name | Operation condition                                                                                                                                                                                     | Output part name                                       | Unit/Operation          |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| LCD_SEG      | On : LCD segment displayed                                                                                                                                                                              | LCD segment<br>(Instrument cluster)                    | On/Off                  |
| WL+IL        | On : Warning/indicator lights illuminate                                                                                                                                                                | Warning light, indicator light<br>(Instrument cluster) | On/Off                  |
| ALARM        | On : Warning alarm sounds                                                                                                                                                                               | Warning alarm<br>(Instrument cluster)                  | On/Off                  |
| SPDMTR       | Off: Speedometer gauge needle moves to 0 km/h {0 mph}<br>60 km/h: Speedometer gauge needle moves to approx. 63 km/h {39 mph}<br>120 km/h: Speedometer gauge needle moves to approx. 126 km/h {78.3 mph} | Speedometer<br>(Instrument cluster)                    | Off/60 km/h/120 km/h    |
| TACHOMTR     | Off: Tachometer gauge needle moves to 0 rpm<br>3,000 RPM: Tachometer gauge needle moves to approx. 3,100 rpm<br>6,000 RPM: Tachometer gauge needle moves to approx. 6,300 rpm                           | Tachometer<br>(Instrument cluster)                     | Off/3000RPM/<br>6000RPM |

## 09-02G ON-BOARD DIAGNOSTIC [BCM]

|                                   |           |                                          |           |
|-----------------------------------|-----------|------------------------------------------|-----------|
| <b>DTC INSPECTION [BCM]</b> ..... | 09-02G-2  | Malfunction location .....               | 09-02G-28 |
| <b>CLEARING DTC [BCM]</b> .....   | 09-02G-2  | Detection condition .....                | 09-02G-28 |
| <b>DTC TABLE [BCM]</b> .....      | 09-02G-3  | Possible causes .....                    | 09-02G-28 |
| <b>DTC B1B55:96 [BCM]</b> .....   | 09-02G-4  | System wiring diagram .....              | 09-02G-29 |
| Malfunction Location .....        | 09-02G-4  | Diagnostic procedure .....               | 09-02G-30 |
| Detection Condition .....         | 09-02G-4  | <b>DTC B1013:23 [BCM]</b> .....          | 09-02G-31 |
| Possible Causes .....             | 09-02G-4  | Malfunction Location .....               | 09-02G-31 |
| Diagnostic Procedure.....         | 09-02G-4  | Detection Condition.....                 | 09-02G-31 |
| <b>DTC B1C53:13 [BCM]</b> .....   | 09-02G-5  | Possible Causes .....                    | 09-02G-31 |
| Malfunction Location .....        | 09-02G-5  | System Wiring Diagram .....              | 09-02G-32 |
| Detection Condition .....         | 09-02G-5  | Diagnostic Procedure .....               | 09-02G-32 |
| Possible Causes .....             | 09-02G-5  | <b>DTC B1087:83/B1087:86/B1087:87/</b>   |           |
| System Wiring Diagram .....       | 09-02G-6  | <b>B1087:88 [BCM]</b> .....              | 09-02G-33 |
| Diagnostic Procedure.....         | 09-02G-7  | Malfunction Location.....                | 09-02G-33 |
| <b>DTC B1D06:11 [BCM]</b> .....   | 09-02G-8  | Detection Condition.....                 | 09-02G-33 |
| Malfunction Location .....        | 09-02G-8  | Possible Causes .....                    | 09-02G-33 |
| Detection Condition .....         | 09-02G-8  | System Wiring Diagram .....              | 09-02G-34 |
| Possible Causes .....             | 09-02G-8  | Diagnostic Procedure .....               | 09-02G-34 |
| System Wiring Diagram .....       | 09-02G-9  | <b>DTC B1172:92 [BCM]</b> .....          | 09-02G-36 |
| Diagnostic Procedure.....         | 09-02G-9  | Malfunction Location .....               | 09-02G-36 |
| <b>DTC B1D06:15 [BCM]</b> .....   | 09-02G-10 | Detection Condition.....                 | 09-02G-36 |
| Malfunction Location .....        | 09-02G-10 | Possible Causes .....                    | 09-02G-36 |
| Detection Condition .....         | 09-02G-10 | System Wiring Diagram .....              | 09-02G-36 |
| Possible Causes .....             | 09-02G-10 | Diagnostic Procedure .....               | 09-02G-36 |
| System Wiring Diagram .....       | 09-02G-11 | <b>DTC B1175:13 [BCM]</b> .....          | 09-02G-37 |
| Diagnostic Procedure.....         | 09-02G-12 | Malfunction Location .....               | 09-02G-37 |
| <b>DTC B1D07:11 [BCM]</b> .....   | 09-02G-14 | Detection Condition.....                 | 09-02G-37 |
| Malfunction Location .....        | 09-02G-14 | Possible Causes .....                    | 09-02G-37 |
| Detection Condition .....         | 09-02G-14 | System Wiring Diagram .....              | 09-02G-38 |
| Possible Causes .....             | 09-02G-14 | Diagnostic Procedure .....               | 09-02G-38 |
| System Wiring Diagram .....       | 09-02G-15 | <b>DTC B1176:13 [BCM]</b> .....          | 09-02G-39 |
| Diagnostic Procedure.....         | 09-02G-15 | Malfunction Location .....               | 09-02G-39 |
| <b>DTC B1D07:15 [BCM]</b> .....   | 09-02G-16 | Detection Condition.....                 | 09-02G-39 |
| Malfunction Location .....        | 09-02G-16 | Possible Causes .....                    | 09-02G-39 |
| Detection Condition .....         | 09-02G-16 | System Wiring Diagram .....              | 09-02G-40 |
| Possible Causes .....             | 09-02G-16 | Diagnostic Procedure .....               | 09-02G-40 |
| System Wiring Diagram .....       | 09-02G-17 | <b>DTC B1178:11 [BCM]</b> .....          | 09-02G-41 |
| Diagnostic Procedure.....         | 09-02G-18 | 3HB/5HB.....                             | 09-02G-41 |
| <b>DTC B1D13:12 [BCM]</b> .....   | 09-02G-20 | 4SD.....                                 | 09-02G-43 |
| Malfunction Location .....        | 09-02G-20 | <b>DTC U0028:81/U0028:83/U0028:87</b>    |           |
| Detection Condition .....         | 09-02G-20 | <b>[BCM]</b> .....                       | 09-02G-44 |
| Possible Causes .....             | 09-02G-20 | Malfunction Location .....               | 09-02G-44 |
| System Wiring Diagram .....       | 09-02G-20 | Detection Condition.....                 | 09-02G-45 |
| Diagnostic Procedure.....         | 09-02G-21 | Possible Causes .....                    | 09-02G-45 |
| <b>DTC B1D35:11 [BCM]</b> .....   | 09-02G-21 | System Wiring Diagram .....              | 09-02G-46 |
| Malfunction Location .....        | 09-02G-21 | Diagnostic Procedure .....               | 09-02G-46 |
| Detection Condition .....         | 09-02G-21 | <b>DTC U0415:68 [BCM]</b> .....          | 09-02G-49 |
| Possible Causes .....             | 09-02G-21 | Malfunction Location .....               | 09-02G-49 |
| System Wiring Diagram .....       | 09-02G-22 | Detection Condition.....                 | 09-02G-49 |
| Diagnostic Procedure.....         | 09-02G-22 | Possible Causes .....                    | 09-02G-49 |
| <b>DTC B1D36:92 [BCM]</b> .....   | 09-02G-23 | Diagnostic Procedure .....               | 09-02G-49 |
| Malfunction Location .....        | 09-02G-23 | <b>DTC U2100:00/U3000:44 [BCM]</b> ..... | 09-02G-50 |
| Detection Condition .....         | 09-02G-23 | Malfunction Location .....               | 09-02G-50 |
| Possible Causes .....             | 09-02G-23 | Detection Condition.....                 | 09-02G-50 |
| System Wiring Diagram .....       | 09-02G-23 | Possible Causes .....                    | 09-02G-50 |
| Diagnostic Procedure.....         | 09-02G-24 | Diagnostic Procedure .....               | 09-02G-50 |
| <b>DTC B10A6:92 [BCM]</b> .....   | 09-02G-25 | <b>DTC U3003:16/U3003:17 [BCM]</b> ..... | 09-02G-50 |
| Malfunction Location .....        | 09-02G-25 | Malfunction Location .....               | 09-02G-50 |
| Detection Condition .....         | 09-02G-25 | Detection Condition.....                 | 09-02G-50 |
| Possible Causes .....             | 09-02G-25 | Possible Causes .....                    | 09-02G-50 |
| System Wiring Diagram .....       | 09-02G-26 | System Wiring Diagram .....              | 09-02G-51 |
| Diagnostic Procedure.....         | 09-02G-27 | Diagnostic Procedure .....               | 09-02G-51 |
| <b>DTC B1008:11 [BCM]</b> .....   | 09-02G-28 |                                          |           |

PID/DATA MONITOR INSPECTION  
[BCM] ..... 09-02G-52  
PID/DATA MONITOR TABLE [BCM].... 09-02G-53

ACTIVE COMMAND MODES  
INSPECTION [BCM].....09-02G-54  
ACTIVE COMMAND MODES TABLE  
[BCM] .....09-02G-55

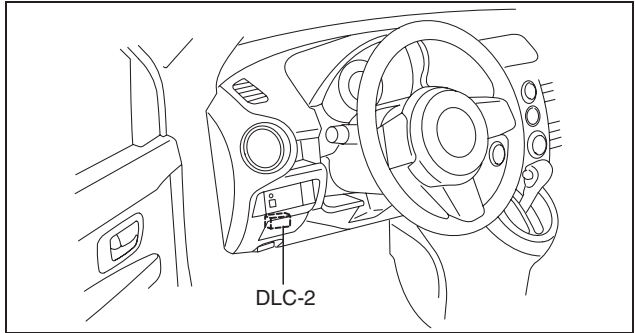
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## ON-BOARD DIAGNOSTIC [BCM]

### DTC INSPECTION [BCM]

id0902f5345400

1. Connect the M-MDS to the DLC-2.
2. Verify the following vehicle conditions:
  - Turn the ignition switch to the ON position.
  - All the switches are turned off (except the ignition switch).
  - All the doors, bonnet, liftgate (3HB/5HB)/trunk (4SD) are closed.
  - All the doors, liftgate (3HB/5HB)/trunk (4SD) are unlocked.
  - All the seat belts are unbuckled.
  - Parking brake lever is pulled.
3. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "BCM/GEM".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "BCM/GEM".
    3. Select "Self Test".
4. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection. (See **09-02G-3 DTC TABLE [BCM]**.)
5. After completion of repairs, clear all DTCs stored in the BCM. (See **09-02G-2 CLEARING DTC [BCM]**.)

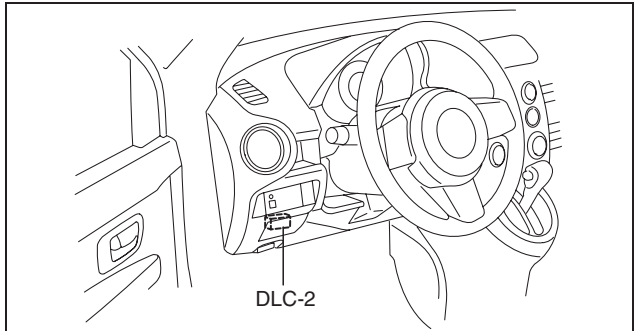


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### CLEARING DTC [BCM]

id0902f5400300

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Self Test".
    2. Select "Modules".
    3. Select "BCM/GEM".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "BCM/GEM".
    3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Turn the ignition switch to the LOCK position.
6. Turn the ignition switch to the ON position and wait for **5 s more**.
7. Perform DTC inspection. (See **09-02G-2 DTC INSPECTION [BCM]**.)
8. Verify that no DTCs are displayed.



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## ON-BOARD DIAGNOSTIC [BCM]

### DTC TABLE [BCM]

id0902f5347100

#### DTC table

| DTC No.  | Description                                                                                                                                                     | Detection condition                                                                                                                                                                                                                                             | Page                                                                                                                                     |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| B1B55:96 | Rain sensor internal circuit malfunction                                                                                                                        | Rain sensor malfunction                                                                                                                                                                                                                                         | (See 09-02G-4 DTC B1B55:96 [BCM].)                                                                                                       |
| B1C53:13 | Windshield wiper switch circuit malfunction                                                                                                                     | Windshield wiper switch INT circuit malfunction                                                                                                                                                                                                                 | (See 09-02G-5 DTC B1C53:13 [BCM].)                                                                                                       |
| B1D06:11 | Turn light (LH) circuit malfunction                                                                                                                             | Short to ground in wiring harness between turn light (LH) and BCM                                                                                                                                                                                               | (See 09-02G-8 DTC B1D06:11 [BCM].)                                                                                                       |
| B1D06:15 | Turn light (LH) circuit malfunction                                                                                                                             | Open circuit or short to power supply in wiring harness between turn light (LH) and BCM                                                                                                                                                                         | (See 09-02G-10 DTC B1D06:15 [BCM].)                                                                                                      |
| B1D07:11 | Turn light (RH) circuit malfunction                                                                                                                             | Short to ground in wiring harness between turn light (RH) and BCM                                                                                                                                                                                               | (See 09-02G-14 DTC B1D07:11 [BCM].)                                                                                                      |
| B1D07:15 | Turn light (RH) circuit malfunction                                                                                                                             | Open circuit or short to power supply in wiring harness between turn light (RH) and BCM                                                                                                                                                                         | (See 09-02G-16 DTC B1D07:15 [BCM].)                                                                                                      |
| B1D13:12 | Interior light circuit malfunction                                                                                                                              | Short to power supply in wiring harness between interior light and BCM                                                                                                                                                                                          | (See 09-02G-20 DTC B1D13:12 [BCM].)                                                                                                      |
| B1D35:11 | Hazard warning switch circuit malfunction                                                                                                                       | Short to ground in wiring harness between hazard warning switch and BCM                                                                                                                                                                                         | (See 09-02G-21 DTC B1D35:11 [BCM].)                                                                                                      |
| B1D36:92 | Turn switch circuit malfunction                                                                                                                                 | Short to ground in wiring harness between turn switch and BCM                                                                                                                                                                                                   | (See 09-02G-23 DTC B1D36:92 [BCM].)                                                                                                      |
| B10A6:92 | Light switch circuit malfunction                                                                                                                                | Short to ground in wiring harness between light switch and BCM                                                                                                                                                                                                  | (See 09-02G-25 DTC B10A6:92 [BCM].)                                                                                                      |
| B1008:11 | Windshield wiper switch circuit malfunction                                                                                                                     | Short to ground in wiring harness between windshield wiper and washer switch (windshield wiper INT) and BCM                                                                                                                                                     | (See 09-02G-28 DTC B1008:11 [BCM].)                                                                                                      |
| B1013:23 | Rear window defroster switch circuit malfunction                                                                                                                | Rear window defroster switch is in a pressed condition for <b>2 min or more</b> (rear defroster switch stuck).                                                                                                                                                  | (See 09-02G-31 DTC B1013:23 [BCM].)                                                                                                      |
| B1087:83 | Error signal from rain sensor                                                                                                                                   | Communication error between rain sensor and BCM                                                                                                                                                                                                                 | (See 09-02G-33 DTC B1087:83/B1087:86/B1087:87/B1087:88 [BCM].)                                                                           |
| B1087:86 | Communication error with rain sensor                                                                                                                            |                                                                                                                                                                                                                                                                 |                                                                                                                                          |
| B1087:87 | No response from rain sensor                                                                                                                                    |                                                                                                                                                                                                                                                                 |                                                                                                                                          |
| B1087:88 | Rain sensor BUS off                                                                                                                                             |                                                                                                                                                                                                                                                                 |                                                                                                                                          |
| B1172:92 | Door lock-link switch circuit malfunction                                                                                                                       | Lock/unlock signals are input simultaneously for <b>6 s or more</b> .                                                                                                                                                                                           | (See 09-02G-36 DTC B1172:92 [BCM].)                                                                                                      |
| B1175:13 | Front door latch switch (driver's side) circuit malfunction                                                                                                     | Open circuit in wiring harness between front door latch switch in front door latch and lock actuator (driver's side) and BCM                                                                                                                                    | (See 09-02G-37 DTC B1175:13 [BCM].)                                                                                                      |
| B1176:13 | Front door latch switch (passenger's side) circuit malfunction                                                                                                  | Open circuit in wiring harness between front door latch switch in front door latch and lock actuator (passenger's side) and BCM                                                                                                                                 | (See 09-02G-39 DTC B1176:13 [BCM].)                                                                                                      |
| B1178:11 | <ul style="list-style-type: none"> <li>Liftgate latch switch circuit malfunction (3HB/5HB)</li> <li>Trunk lid latch switch circuit malfunction (4SD)</li> </ul> | <ul style="list-style-type: none"> <li>Short to ground in wiring harness between liftgate latch switch in liftgate latch and lock actuator and BCM (3HB/5HB)</li> <li>Short to ground in wiring harness between trunk lid latch switch and BCM (4SD)</li> </ul> | (See 09-02G-41 DTC B1178:11 [BCM].)                                                                                                      |
| U0001:88 | Unit communication error                                                                                                                                        | BCM CAN system error                                                                                                                                                                                                                                            | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |



## ON-BOARD DIAGNOSTIC [BCM]

| DTC No.    | Description                                                                                                                                                                                                                                 | Detection condition                                                                                                                                                                                                                                               | Page                                                                                                                                     |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| U0028:81   | <ul style="list-style-type: none"> <li>Communication error with keyless control module (vehicles with advanced keyless and start system)</li> <li>Communication error with keyless receiver (vehicles with keyless entry system)</li> </ul> | <ul style="list-style-type: none"> <li>Communication error between keyless control module and BCM (vehicles with advanced keyless and start system)</li> <li>Communication error between keyless receiver and BCM (vehicles with keyless entry system)</li> </ul> | (See 09-02G-44 DTC U0028:81/U0028:83/U0028:87 [BCM].)                                                                                    |
| U0028:83   | <ul style="list-style-type: none"> <li>Error signal from keyless control module (vehicles with advanced keyless and start system)</li> <li>Error signal from keyless receiver (vehicles with keyless entry system)</li> </ul>               |                                                                                                                                                                                                                                                                   |                                                                                                                                          |
| U0028:87   | <ul style="list-style-type: none"> <li>No response from keyless control module (vehicles with advanced keyless and start system)</li> <li>No response from keyless receiver (vehicles with keyless entry system)</li> </ul>                 |                                                                                                                                                                                                                                                                   |                                                                                                                                          |
| U0100:00   | Communication error with PCM                                                                                                                                                                                                                | Communication error between PCM and BCM                                                                                                                                                                                                                           | (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)<br>(See 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
| U0101:00*1 | Communication error with TCM                                                                                                                                                                                                                | Communication error between TCM and BCM                                                                                                                                                                                                                           |                                                                                                                                          |
| U0121:00   | <ul style="list-style-type: none"> <li>Communication error with ABS HU/CM (with ABS)</li> <li>Communication error with DSC HU/CM (with DSC)</li> </ul>                                                                                      | <ul style="list-style-type: none"> <li>Communication error between ABS HU/CM and BCM (with ABS)</li> <li>Communication error between DSC HU/CM and BCM (with DSC)</li> </ul>                                                                                      |                                                                                                                                          |
| U0415:68   | <ul style="list-style-type: none"> <li>Error signal from ABS HU/CM (with ABS)</li> <li>Error signal from DSC HU/CM (with DSC)</li> </ul>                                                                                                    | <ul style="list-style-type: none"> <li>Correct data cannot be received from ABS HU/CM (with ABS).</li> <li>Correct data cannot be received from DSC HU/CM (with DSC).</li> </ul>                                                                                  | (See 09-02G-49 DTC U0415:68 [BCM].)                                                                                                      |
| U2100:00   | BCM configuration not set                                                                                                                                                                                                                   | BCM configuration setting not done correctly.                                                                                                                                                                                                                     | (See 09-02G-50 DTC U2100:00/U3000:44 [BCM].)                                                                                             |
| U3000:44   | BCM configuration setting invalid                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                   |                                                                                                                                          |
| U3003:16   | BCM power supply voltage low ( <b>less than 10 V</b> )                                                                                                                                                                                      | BCM power supply voltage <b>less than 10 V</b>                                                                                                                                                                                                                    | (See 09-02G-50 DTC U3003:16/U3003:17 [BCM].)                                                                                             |
| U3003:17   | BCM power supply voltage high ( <b>16 V or more</b> )                                                                                                                                                                                       | BCM power supply voltage <b>16 V or more</b>                                                                                                                                                                                                                      |                                                                                                                                          |

\*1 : ATX

### DTC B1B55:96 [BCM]

id0902f5389000

#### Malfunction Location

- Rain sensor internal circuit malfunction

#### Detection Condition

- Rain sensor malfunction

#### Possible Causes

- Rain sensor connector or terminals malfunction
- Rain sensor malfunction
- BCM malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                            | Action                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b>                                                                                                                                                                                                                                                                                         |                                                                         |
|      | <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch to AUTO.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1B55:96 displayed?</li> </ul> | Yes<br>Go to the next step.<br><br>No<br>DTC troubleshooting completed. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 2    | <b>VERIFY RAIN SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Disconnect the rain sensor connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                              | Yes<br>Go to the next step.                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair or replace the connector, then go to the final step.                                              |
| 3    | <b>VERIFY RAIN SENSOR CONDITION</b> <ul style="list-style-type: none"> <li>• Reconnect all disconnected connectors.</li> <li>• Reconnect the negative battery cable.</li> <li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>• Turn the windshield wiper switch to AUTO.</li> <li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>• Is the DTC B1B55:96 displayed?</li> </ul>     | Yes<br>Replace the rain sensor, then go to the final step.<br>(See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>DTC troubleshooting completed.                                                                           |
| 4    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>• Reconnect all disconnected connectors.</li> <li>• Reconnect the negative battery cable.</li> <li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>• Turn the windshield wiper switch to AUTO.</li> <li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>• Is the DTC B1B55:96 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>DTC troubleshooting completed.                                                                           |

### DTC B1C53:13 [BCM]

id0902f5389100

#### Malfunction Location

- Windshield wiper switch circuit malfunction

#### Detection Condition

- Windshield wiper switch INT circuit malfunction

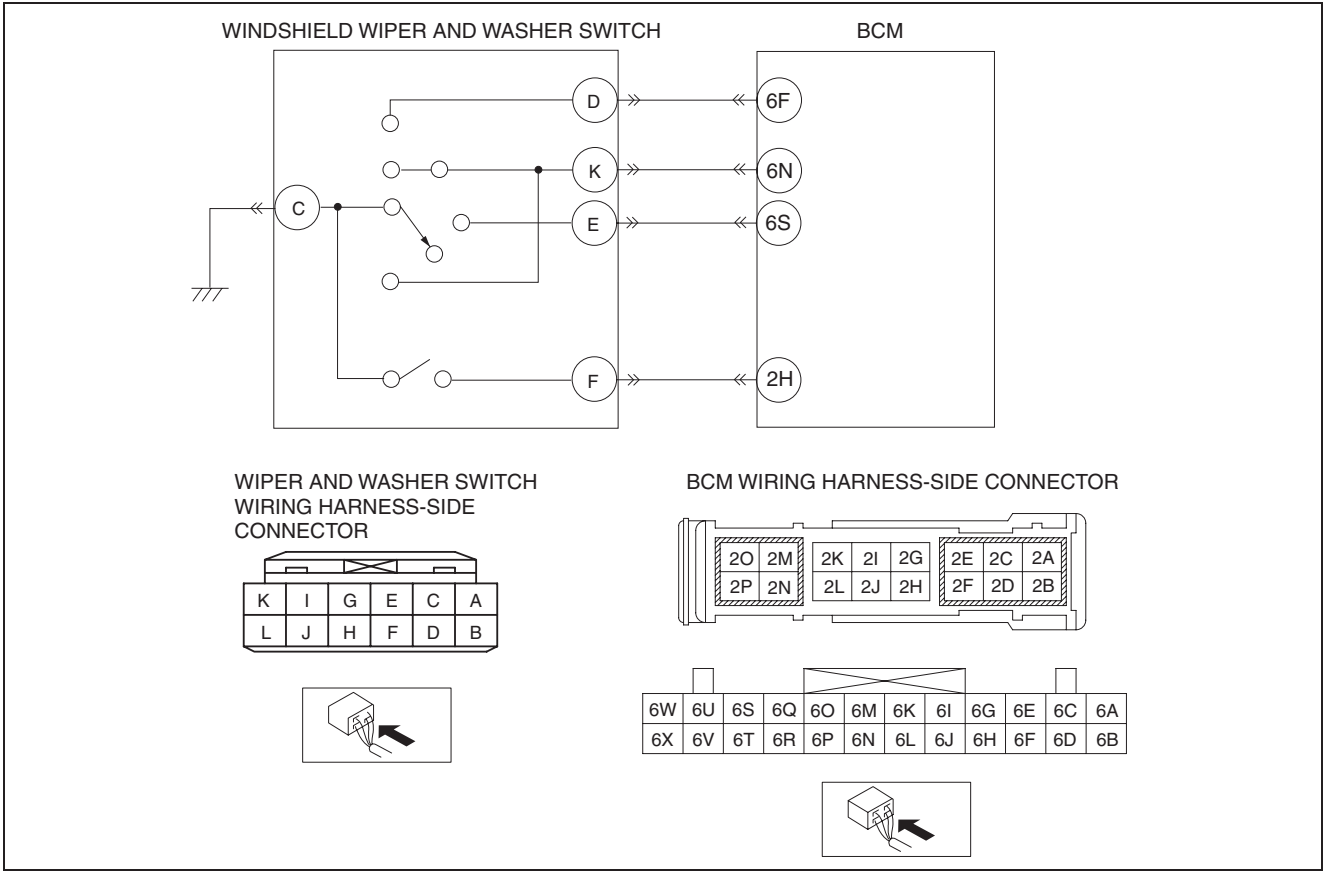
#### Possible Causes

- Wiper and washer switch connector or terminals malfunction
- BCM connector or terminals malfunction
- Open circuit in wiring harness between windshield wiper and washer switch terminal E and BCM terminal 6S (vehicles with wiper and washer switch on left side)
- Open circuit in wiring harness between windshield wiper and washer switch terminal I and BCM terminal 6S (vehicles with wiper and washer switch on right side)
- Windshield wiper and washer switch malfunction
- BCM malfunction



# ON-BOARD DIAGNOSTIC [BCM]

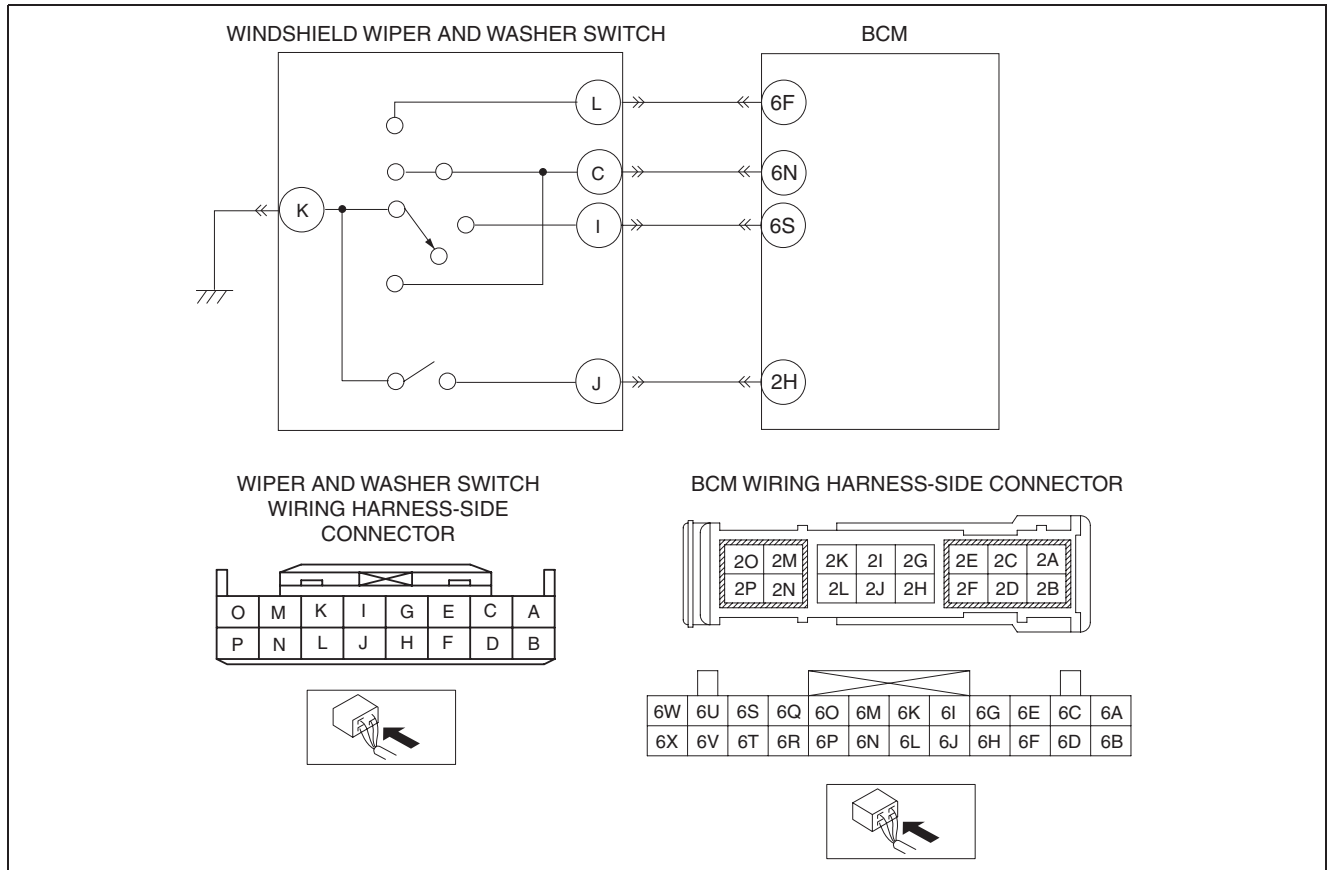
## System Wiring Diagram Vehicles with wiper and washer switch on left side



am2zzw0000505

## ON-BOARD DIAGNOSTIC [BCM]

### Vehicles with wiper and washer switch on right side



am2zzw0000505

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1C53:13 displayed?</li> </ul>                                                                                            | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                              |
| 2    | <b>VERIFY WIPER AND WASHER SWITCH CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the wiper and washer switch connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step. |
| 3    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                 | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY BETWEEN WINDSHIELD WIPER AND WASHER SWITCH AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Wiper and washer switch and BCM connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>Between wiper and washer switch terminal E and BCM terminal 6S (vehicles with wiper and washer switch on left side)</li> <li>Between wiper and washer switch terminal I and BCM terminal 6S (vehicles with wiper and washer switch on right side)</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the related wiring harness, then go to the final step.                                                        |
| 5    | <b>VERIFY WINDSHIELD WIPER AND WASHER SWITCH CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the windshield wiper and washer switch.<br/>(See 09-19-25 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.)</li> <li>Is the windshield wiper and washer switch normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Replace the wiper and washer switch, then go to the final step.<br>(See 09-19-24 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.) |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1C53:13 displayed?</li> </ul>                                                                                                                                                                    | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>DTC troubleshooting completed.                                                                                                  |

### DTC B1D06:11 [BCM]

id0902f5389200

#### Malfunction Location

- Turn light (LH) circuit malfunction

#### Detection Condition

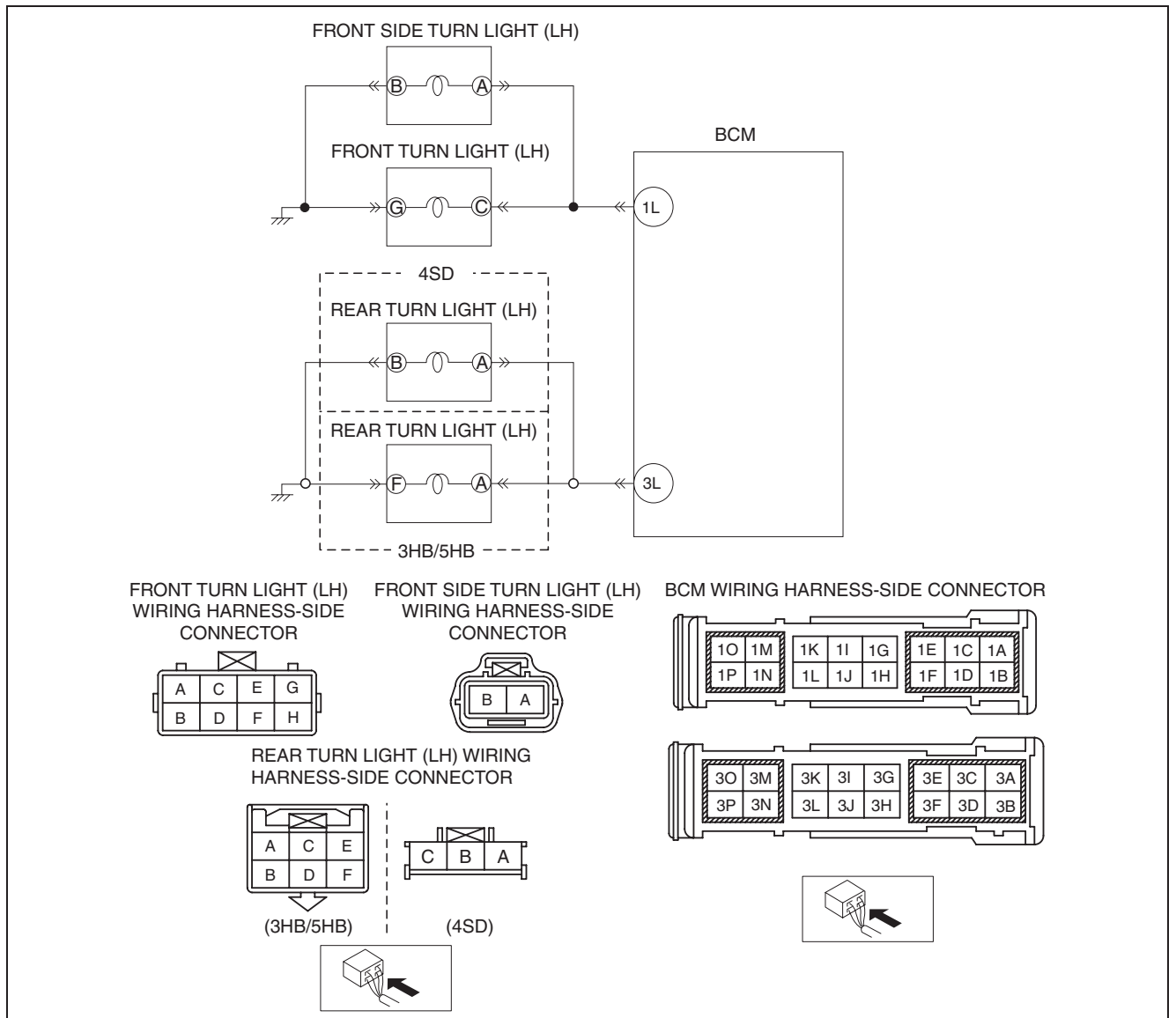
- Short to ground in wiring harness between turn light (LH) and BCM

#### Possible Causes

- Front turn light (LH) connector or terminals malfunction
- Front side turn light (LH) connector or terminals malfunction
- Rear turn light (LH) connector or terminals malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between front turn light (LH) terminal C and BCM terminal 1L
- Short to ground in wiring harness between front side turn light (LH) terminal A and BCM terminal 1L
- Short to ground in wiring harness between rear turn light (LH) terminal A and BCM terminal 3L
- BCM malfunction

# ON-BOARD DIAGNOSTIC [BCM]

## System Wiring Diagram



am2zzw0000505

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D06:11 displayed?</li> </ul>                                                                                                   | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                              |
| 2    | <b>VERIFY FRONT TURN LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front turn light (LH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair or replace the connector, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 3    | <b>VERIFY FRONT SIDE TURN LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the front side turn light (LH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the connector, then go to the final step.                        |
| 4    | <b>VERIFY REAR TURN LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the rear turn light (LH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the connector, then go to the final step.                        |
| 5    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the connector, then go to the final step.                        |
| 6    | <b>VERIFY FOR SHORT TO GROUND IN WIRING HARNESS BETWEEN FRONT TURN LIGHT (LH), FRONT SIDE TURN LIGHT (LH), REAR TURN LIGHT (LH) AND BCM</b> <ul style="list-style-type: none"> <li>Front turn light (LH), front side turn light (LH), rear turn light (LH) and BCM connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— BCM terminal 1L</li> <li>— BCM terminal 3L</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Go to the next step.                                                               |
| 7    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D06:11 displayed?</li> </ul>                                                                                                    | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                     |

### DTC B1D06:15 [BCM]

id0902f5389300

#### Malfunction Location

- Turn light (LH) circuit malfunction

#### Detection Condition

- Open circuit or short to power supply in wiring harness between turn light (LH) and BCM

#### Possible Causes

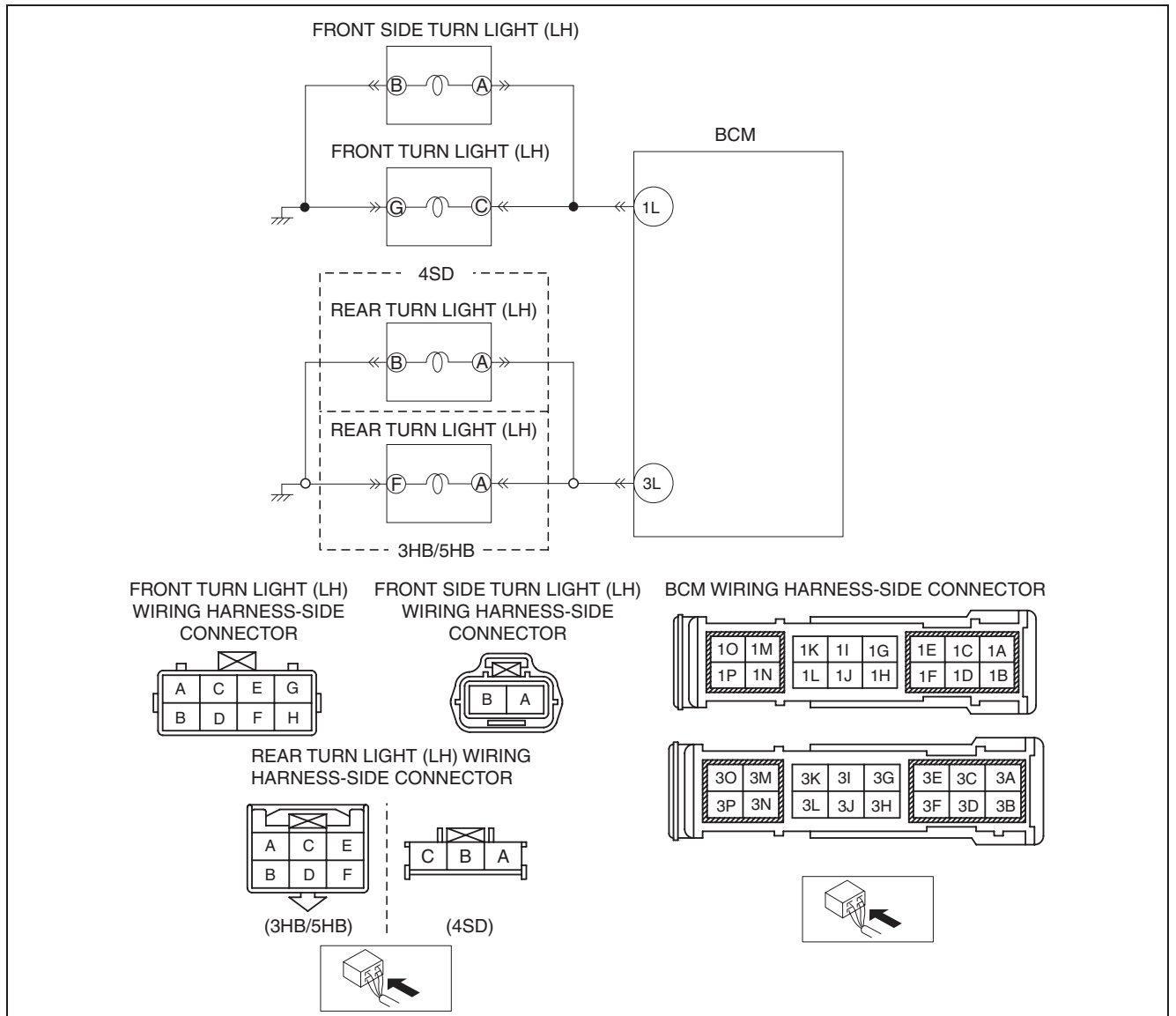
- Turn light malfunction
- Front turn light (LH) connector or terminals malfunction
- Open circuit in wiring harness between front turn light (LH) terminal G and body ground
- Front side turn light (LH) connector or terminals malfunction
- Open circuit in wiring harness between front side turn light (LH) terminal B and body ground

## 09-02G-10

## ON-BOARD DIAGNOSTIC [BCM]

- Rear turn light (LH) connector or terminals malfunction
- Open circuit in wiring harness between rear turn light (LH) terminal F and body ground (3HB/5HB)
- Open circuit in wiring harness between rear turn light (LH) terminal B and body ground (4SD)
- BCM connector or terminals malfunction
- Short to power supply in wiring harness between front turn light (LH) terminal C and BCM terminal 1L
- Short to power supply in wiring harness between front side turn light (LH) terminal A and BCM terminal 1L
- Short to power supply in wiring harness between rear turn light (LH) terminal A and BCM terminal 3L
- Open circuit in wiring harness between front turn light (LH) terminal C and BCM terminal 1L
- Open circuit in wiring harness between front side turn light (LH) terminal A and BCM terminal 1L
- Open circuit in wiring harness between rear turn light (LH) terminal A and BCM terminal 3L
- BCM malfunction

### System Wiring Diagram



am2zzw0000505

## ON-BOARD DIAGNOSTIC [BCM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D06:15 displayed?</li> </ul>                                                                                                                                                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                                                                                                                               |
| 2    | <b>PERFORM INSPECTION OF FRONT TURN LIGHT (LH), FRONT SIDE TURN LIGHT (LH), AND REAR TURN LIGHT (LH)</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Remove the bulb.<br/>(See 09-18-16 FRONT TURN LIGHT BULB REMOVAL/INSTALLATION.)<br/>(See 09-18-23 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)<br/>(See 09-18-25 REAR COMBINATION LIGHT BULB REMOVAL/INSTALLATION.)</li> <li>Inspect the front turn light (LH), front side turn light (LH), rear turn light (LH).</li> <li>Are the bulbs normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Replace the bulb, then go to the final step.<br>(See 09-18-16 FRONT TURN LIGHT BULB REMOVAL/INSTALLATION.)<br>(See 09-18-23 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)<br>(See 09-18-25 REAR COMBINATION LIGHT BULB REMOVAL/INSTALLATION.) |
| 3    | <b>VERIFY FRONT TURN LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the front turn light (LH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                  |
| 4    | <b>INSPECT WIRING HARNESS BETWEEN FRONT TURN LIGHT (LH) AND BODY GROUND FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front turn light (LH) connector is disconnected.</li> <li>Inspect for continuity between front turn light (LH) terminal G (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                                                                                                     |
| 5    | <b>VERIFY FRONT SIDE TURN LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the front side turn light (LH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                  |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN FRONT SIDE TURN LIGHT (LH) AND BODY GROUND FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front turn light (LH) and front side turn light (LH) connectors are disconnected.</li> <li>Inspect for continuity between front side turn light (LH) terminal B (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                                                                                                     |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 7    | <b>VERIFY REAR TURN LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the rear turn light (LH) connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step.               |
| 8    | <b>INSPECT WIRING HARNESS BETWEEN REAR TURN LIGHT (LH) AND BODY GROUND FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>• Front turn light (LH), front side turn light (LH), and rear turn light (LH) connectors are disconnected.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— Rear turn light (LH) terminal F (3HB/5HB)</li> <li>— Rear turn light (LH) terminal B (4SD)</li> </ul> </li> <li>• Is there continuity?</li> </ul>                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the related wiring harness, then go to the final step.  |
| 9    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the BCM connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes<br>Go to the next step.                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step.               |
| 10   | <b>INSPECT WIRING HARNESS BETWEEN FRONT TURN LIGHT (LH), FRONT SIDE TURN LIGHT (LH), REAR TURN LIGHT (LH) AND BCM FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Front turn light (LH), front side turn light (LH), rear turn light (LH), and BCM connectors are disconnected.</li> <li>• Reconnect the negative battery cable.</li> <li>• Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— BCM terminal 1L</li> <li>— BCM terminal 3L</li> </ul> </li> <li>• Is there any voltage?</li> </ul>                                                                                                                                                                      | Yes<br>Repair or replace the related wiring harness, then go to the final step. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Go to the next step.                                                      |
| 11   | <b>INSPECT WIRING HARNESS BETWEEN FRONT TURN LIGHT (LH), FRONT SIDE TURN LIGHT (LH), REAR TURN LIGHT (LH) AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>• Front turn light (LH), front side turn light (LH), rear turn light (LH), and BCM connectors are disconnected.</li> <li>• Disconnect the negative battery cable.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Between front turn light (LH) terminal C and BCM terminal 1L</li> <li>— Between front side turn light (LH) terminal A and BCM terminal 1L</li> <li>— Between rear turn light (LH) terminal A and BCM terminal 3L</li> </ul> </li> <li>• Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the related wiring harness, then go to the final step.  |



## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                           |     | Action                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------|
| 12   | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"><li>Reconnect all disconnected connectors.</li><li>Reconnect the negative battery cable.</li><li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li><li>Turn the turn switch on.</li><li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li><li>Is the DTC B1D06:15 displayed?</li></ul> | Yes | Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                      | No  | DTC troubleshooting completed.                                                    |

### DTC B1D07:11 [BCM]

id0902f5389400

#### Malfunction Location

- Turn light (RH) circuit malfunction

#### Detection Condition

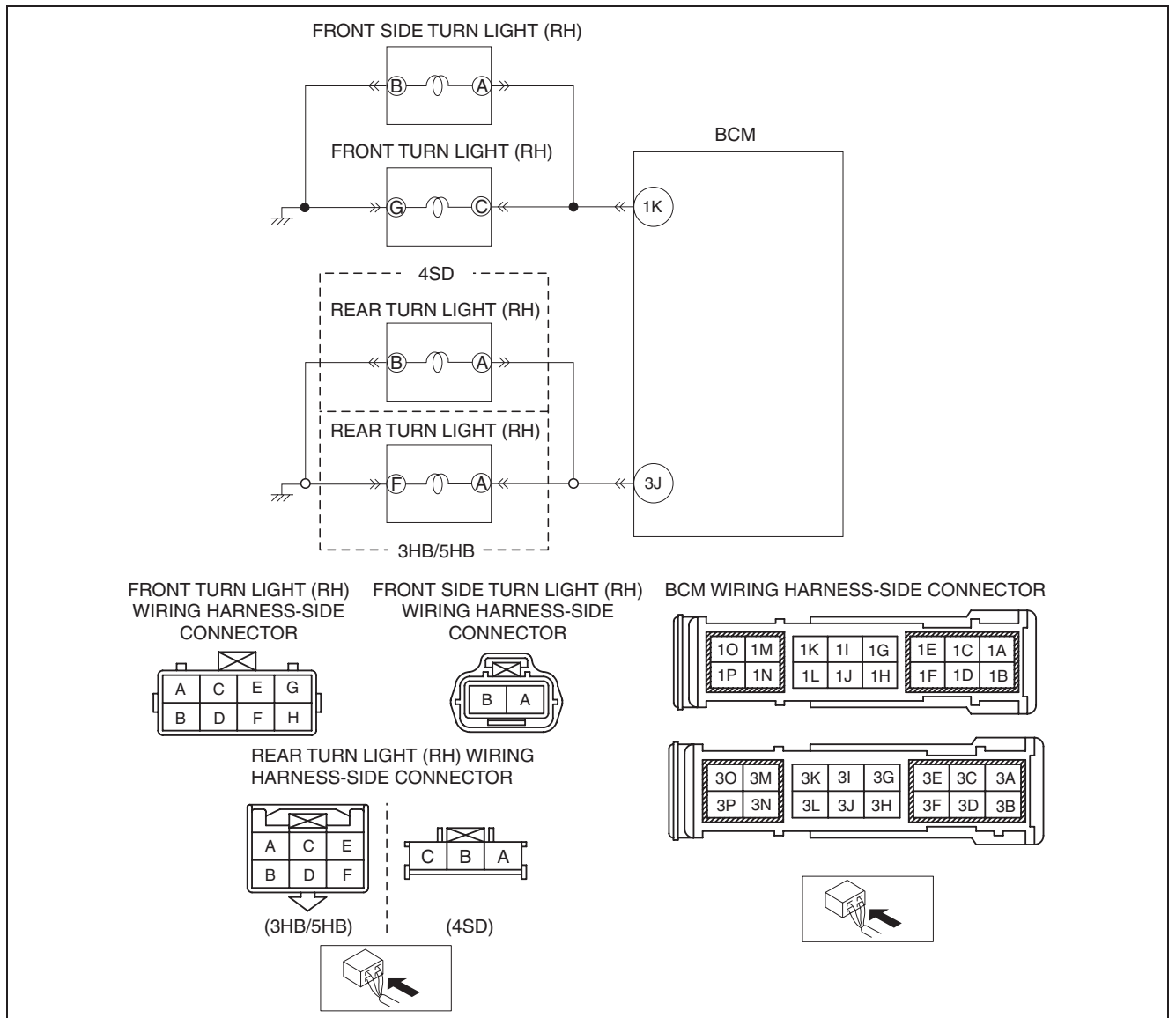
- Short to ground in wiring harness between turn light (RH) and BCM

#### Possible Causes

- Front turn light (RH) connector or terminals malfunction
- Front side turn light (RH) connector or terminals malfunction
- Rear turn light (RH) connector or terminals malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between front turn light (RH) terminal C and BCM terminal 1K
- Short to ground in wiring harness between front side turn light (RH) terminal A and BCM terminal 1K
- Short to ground in wiring harness between rear turn light (RH) terminal A and BCM terminal 3J
- BCM malfunction

# ON-BOARD DIAGNOSTIC [BCM]

## System Wiring Diagram



am2zzw0000505

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D07:11 displayed?</li> </ul>                                                                                                   | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                              |
| 2    | <b>VERIFY FRONT TURN LIGHT (RH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front turn light (RH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair or replace the connector, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action |                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|
| 3    | <b>VERIFY FRONT SIDE TURN LIGHT (RH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the front side turn light (RH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                         | Yes    | Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Repair or replace the connector, then go to the final step.                       |
| 4    | <b>VERIFY REAR TURN LIGHT (RH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the rear turn light (RH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                     | Yes    | Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Repair or replace the connector, then go to the final step.                       |
| 5    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                       | Yes    | Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Repair or replace the connector, then go to the final step.                       |
| 6    | <b>VERIFY FOR SHORT TO GROUND IN WIRING HARNESS BETWEEN FRONT TURN LIGHT (RH), FRONT SIDE TURN LIGHT (RH), REAR TURN LIGHT (RH) AND BCM</b> <ul style="list-style-type: none"> <li>Front turn light (RH), front side turn light (RH), rear turn light (RH) and BCM connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— BCM terminal 1K</li> <li>— BCM terminal 3J</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes    | Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | Go to the next step.                                                              |
| 7    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D07:11 displayed?</li> </ul>                                                                                                    | Yes    | Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No     | DTC troubleshooting completed.                                                    |

### DTC B1D07:15 [BCM]

id0902f5389500

#### Malfunction Location

- Turn light (RH) circuit malfunction

#### Detection Condition

- Open circuit or short to power supply in wiring harness between turn light (RH) and BCM

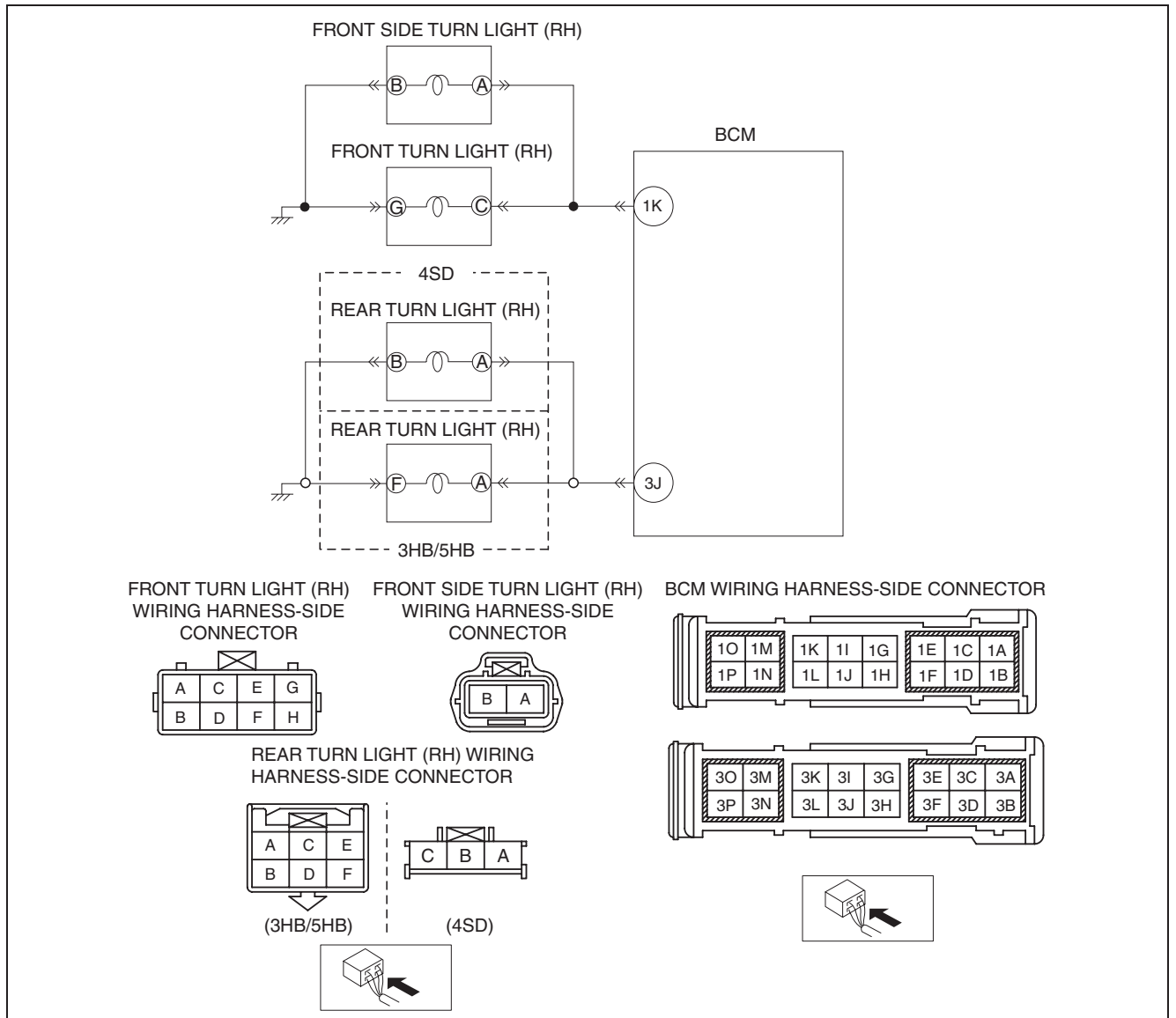
#### Possible Causes

- Turn light malfunction
- Front turn light (RH) connector or terminals malfunction
- Open circuit in wiring harness between front turn light (RH) terminal G and body ground
- Front side turn light (RH) connector or terminals malfunction

## ON-BOARD DIAGNOSTIC [BCM]

- Open circuit in wiring harness between front side turn light (RH) terminal B and body ground
- Rear turn light (RH) connector or terminals malfunction
- Open circuit in wiring harness between rear turn light (RH) terminal F and body ground (3HB/5HB)
- Open circuit in wiring harness between rear turn light (RH) terminal B and body ground (4SD)
- BCM connector or terminals malfunction
- Short to power supply in wiring harness between front turn light (RH) terminal C and BCM terminal 1K
- Short to power supply in wiring harness between front side turn light (RH) terminal A and BCM terminal 1K
- Short to power supply in wiring harness between rear turn light (RH) terminal A and BCM terminal 3J
- Open circuit in wiring harness between front turn light (RH) terminal C and BCM terminal 1K
- Open circuit in wiring harness between front side turn light (RH) terminal A and BCM terminal 1K
- Open circuit in wiring harness between rear turn light (RH) terminal A and BCM terminal 3J
- BCM malfunction

### System Wiring Diagram



am2zzw0000505

## ON-BOARD DIAGNOSTIC [BCM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                 | Action                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b><br><ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D07:15 displayed?</li> </ul>                                                      | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>DTC troubleshooting completed.                                                                                                                                                                                                               |
| 2    | <b>PERFORM INSPECTION OF FRONT TURN LIGHT (RH), FRONT SIDE TURN LIGHT (RH), AND REAR TURN LIGHT (RH)</b><br><ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect the front turn light (RH), front side turn light (RH), rear turn light (RH).</li> <li>Are the bulbs normal?</li> </ul>  | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Replace the bulb, then go to the final step.<br>(See 09-18-16 FRONT TURN LIGHT BULB REMOVAL/INSTALLATION.)<br>(See 09-18-23 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)<br>(See 09-18-25 REAR COMBINATION LIGHT BULB REMOVAL/INSTALLATION.) |
| 3    | <b>VERIFY FRONT TURN LIGHT (RH) CONNECTOR CONDITION</b><br><ul style="list-style-type: none"> <li>Disconnect the front turn light (RH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                           | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                  |
| 4    | <b>INSPECT WIRING HARNESS BETWEEN FRONT TURN LIGHT (RH) AND BODY GROUND FOR OPEN CIRCUIT</b><br><ul style="list-style-type: none"> <li>Front turn light (RH) connector is disconnected.</li> <li>Inspect for continuity between front turn light (RH) terminal G (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                           | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                                                                                                     |
| 5    | <b>VERIFY FRONT SIDE TURN LIGHT (RH) CONNECTOR CONDITION</b><br><ul style="list-style-type: none"> <li>Disconnect the front side turn light (RH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                 | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                  |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN FRONT SIDE TURN LIGHT (RH) AND BODY GROUND FOR OPEN CIRCUIT</b><br><ul style="list-style-type: none"> <li>Front turn light (RH) and front side turn light (RH) connectors are disconnected.</li> <li>Inspect for continuity between front side turn light (RH) terminal B (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                                                                                                     |
| 7    | <b>VERIFY REAR TURN LIGHT (RH) CONNECTOR CONDITION</b><br><ul style="list-style-type: none"> <li>Disconnect the rear turn light (RH) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                  |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 8    | <b>INSPECT WIRING HARNESS BETWEEN REAR TURN LIGHT (RH) AND BODY GROUND FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front turn light (RH), front side turn light (RH), and rear turn light (RH) connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— Rear turn light (RH) terminal F (3HB/5HB)</li> <li>— Rear turn light (RH) terminal B (4SD)</li> </ul> </li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair or replace the related wiring harness, then go to the final step.           |
| 9    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair or replace the connector, then go to the final step.                        |
| 10   | <b>INSPECT WIRING HARNESS BETWEEN FRONT TURN LIGHT (RH), FRONT SIDE TURN LIGHT (RH), REAR TURN LIGHT (RH) AND BCM FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Front turn light (RH), front side turn light (RH), rear turn light (RH), and BCM connectors are disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— BCM terminal 1K</li> <li>— BCM terminal 3J</li> </ul> </li> <li>Is there any voltage?</li> </ul>                                                                                                                                                                      | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Go to the next step.                                                               |
| 11   | <b>INSPECT WIRING HARNESS BETWEEN FRONT TURN LIGHT (RH), FRONT SIDE TURN LIGHT (RH), REAR TURN LIGHT (RH) AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front turn light (RH), front side turn light (RH), rear turn light (RH), and BCM connectors are disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Between front turn light (RH) terminal C and BCM terminal 1K</li> <li>— Between front side turn light (RH) terminal A and BCM terminal 1K</li> <li>— Between rear turn light (RH) terminal A and BCM terminal 3J</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair or replace the related wiring harness, then go to the final step.           |
| 12   | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D07:15 displayed?</li> </ul>                                                                                                                                                                                                                                                                                                       | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                     |

## ON-BOARD DIAGNOSTIC [BCM]

### DTC B1D13:12 [BCM]

id0902f5389600

#### Malfunction Location

- Interior light circuit malfunction

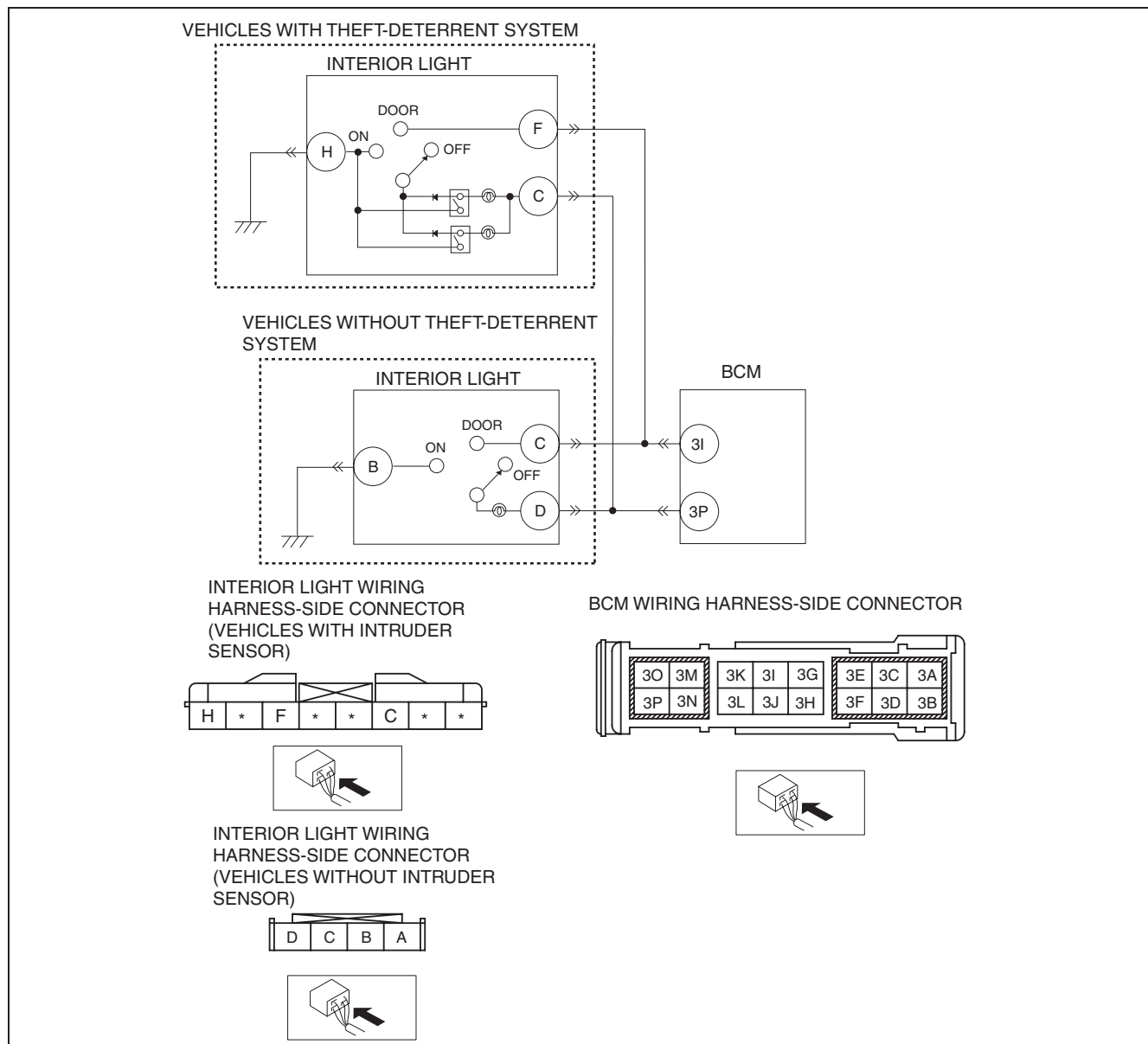
#### Detection Condition

- Short to power supply in wiring harness between interior light and BCM

#### Possible Causes

- Interior light connector or terminals malfunction
- BCM connector or terminals malfunction
- Short to power supply in wiring harness between interior light terminal F and BCM terminal 3I (vehicles with theft-deterrent system)
- Short to power supply in wiring harness between interior light terminal C and BCM terminal 3I (vehicles without theft-deterrent system)
- Interior light malfunction
- BCM malfunction

#### System Wiring Diagram



am2zzw0000227

## ON-BOARD DIAGNOSTIC [BCM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                            |     | Action                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the interior light switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D13:12 displayed?</li> </ul>                                                                                                          | Yes | Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | DTC troubleshooting completed.                                                                                |
| 2    | <b>VERIFY INTERIOR LIGHT CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the interior light connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                               | Yes | Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Repair or replace the connector, then go to the final step.                                                   |
| 3    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                             | Yes | Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Repair or replace the related wiring harness, then go to the final step.                                      |
| 4    | <b>VERIFY WIRING HARNESS BETWEEN INTERIOR LIGHT AND BCM FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Interior light and BCM connectors are disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the BCM terminal 3I (wiring harness-side).</li> <li>Is there any voltage?</li> </ul>                                                                                                  | Yes | Repair or replace the related wiring harness, then go to the final step.                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                          |
| 5    | <b>VERIFY INTERIOR LIGHT CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the interior light.<br/>(See 09-18-44 INTERIOR LIGHT INSPECTION.)</li> <li>Is the interior light normal?</li> </ul>                                                                                                                                                                                                                                             | Yes | Go to the next step.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Replace the interior light, then go to the final step.<br>(See 09-18-43 INTERIOR LIGHT REMOVAL/INSTALLATION.) |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the interior light switch on.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D13:12 displayed?</li> </ul> | Yes | Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | DTC troubleshooting completed.                                                                                |

### DTC B1D35:11 [BCM]

id0902f5389700

#### Malfunction Location

- Hazard warning switch circuit malfunction

#### Detection Condition

- Short to ground in wiring harness between hazard warning switch and BCM

#### Possible Causes

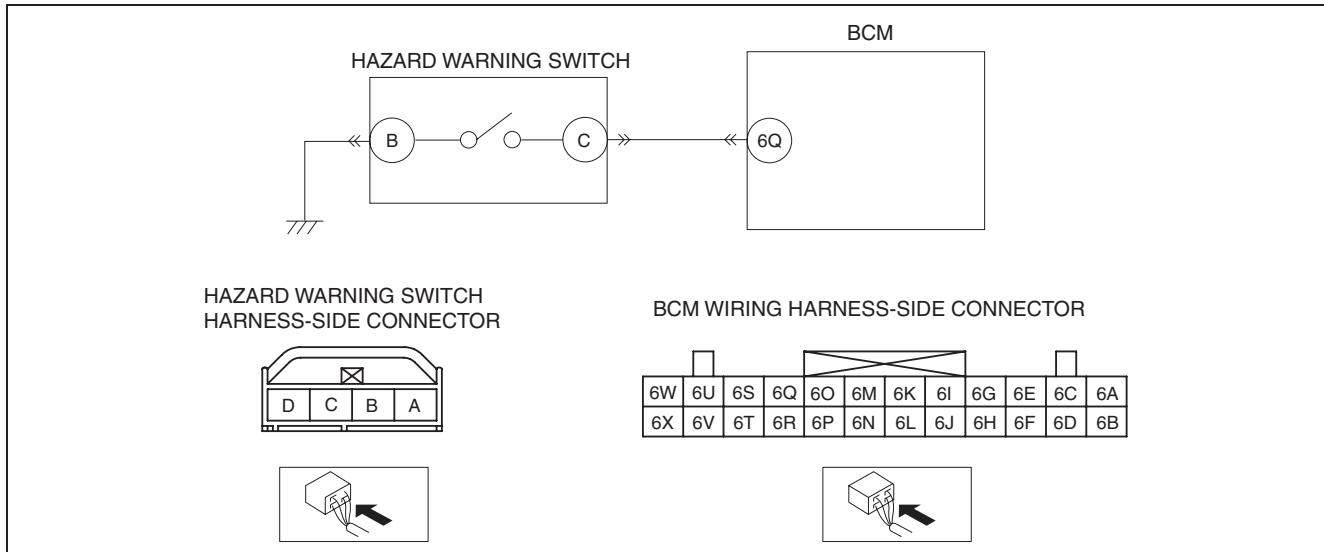
- DTC inspection is performed with hazard warning switch on.
- Hazard warning switch connector or terminals malfunction
- Hazard warning switch malfunction
- BCM connector or terminals malfunction



## ON-BOARD DIAGNOSTIC [BCM]

- Short to ground in wiring harness between hazard warning switch terminal C and BCM terminal 6Q
- BCM malfunction

### System Wiring Diagram



am2zzw0000227

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>• Turn the hazard warning switch off.</li> <li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>• Is the DTC B1D35:11 displayed?</li> </ul>                                                                                           | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed.                                                                                              |
| 2    | <b>VERIFY HAZARD WARNING SWITCH CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Disconnect the hazard warning switch connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the connector, then go to the final step.                                                                 |
| 3    | <b>VERIFY HAZARD WARNING SWITCH CONDITION</b> <ul style="list-style-type: none"> <li>• Inspect the hazard warning switch.<br/>(See 09-18-41 HAZARD WARNING SWITCH INSPECTION.)</li> <li>• Is the hazard warning switch normal?</li> </ul>                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Replace the hazard warning switch, then go to the final step.<br>(See 09-18-40 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.) |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the BCM connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                 | Yes<br>Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the connector, then go to the final step.                                                                 |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                             | Action                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY WIRING HARNESS BETWEEN HAZARD WARNING SWITCH AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Hazard warning switch and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 6Q (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                       | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                               |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the hazard warning switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D35:11 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>DTC troubleshooting completed.                                                     |

### DTC B1D36:92 [BCM]

id0902f5389800

#### Malfunction Location

- Turn switch circuit malfunction

#### Detection Condition

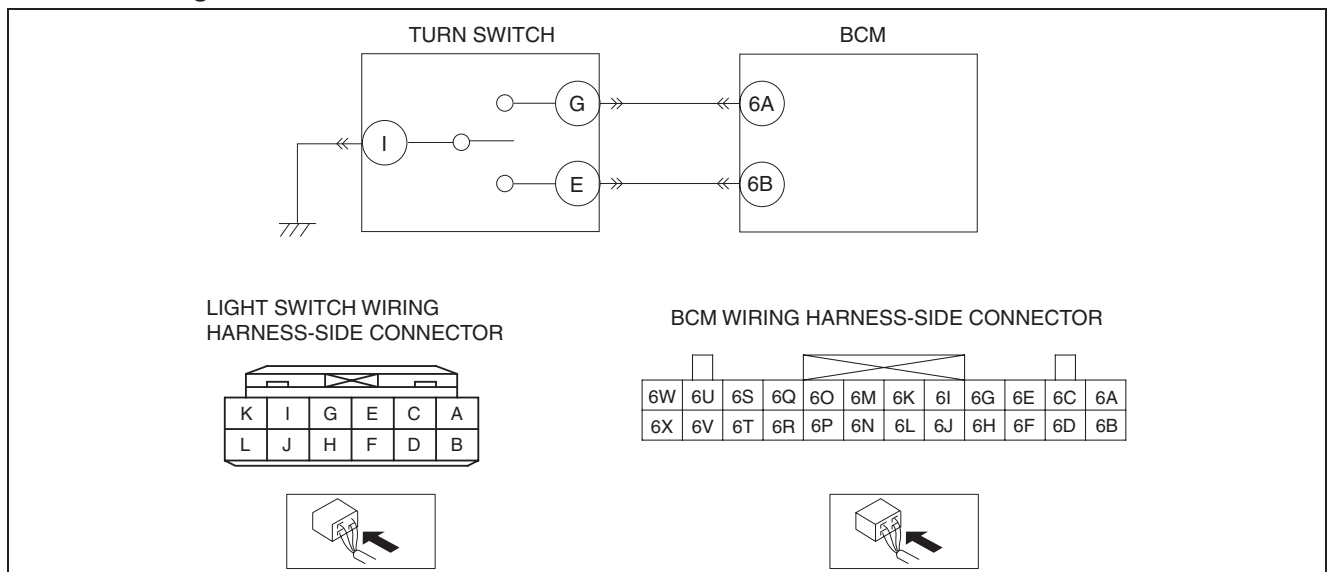
- Short to ground in wiring harness between turn switch and BCM

#### Possible Causes

- Light switch connector or terminals malfunction
- Turn switch malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between light switch terminal G and BCM terminal 6A
- Short to ground in wiring harness between light switch terminal E and BCM terminal 6B (vehicles with light switch on left side)
- Short to ground in wiring harness between light switch terminal I and BCM terminal 6B (vehicles with light switch on right side)
- BCM malfunction

#### System Wiring Diagram

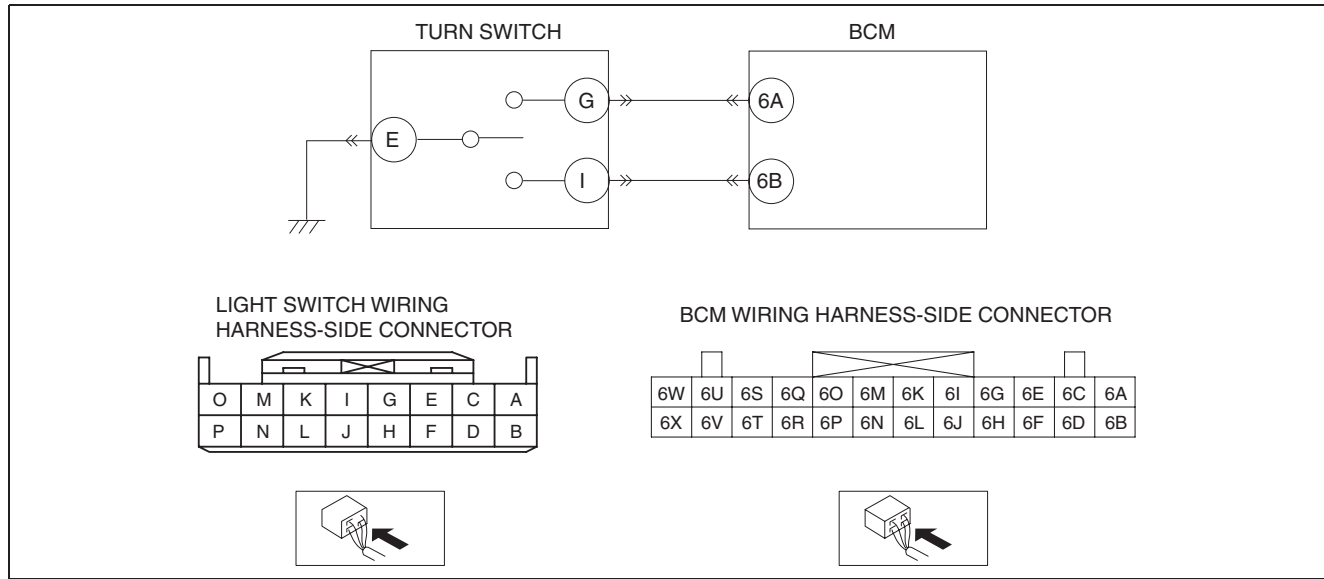
##### Vehicles with light switch on left side



am2zzw0000466

## ON-BOARD DIAGNOSTIC [BCM]

### Vehicles with light switch on right side



am2zzw0000505

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D36:92 displayed?</li> </ul>                                                                                 | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                             |
| 2    | <b>VERIFY LIGHT SWITCH CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the light switch connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                |
| 3    | <b>VERIFY TURN SWITCH CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the turn switch.<br/>(See 09-18-35 LIGHT SWITCH INSPECTION.)</li> <li>Is the turn switch normal?</li> </ul>                                                                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Replace the light switch, then go to the final step.<br>(See 09-18-35 LIGHT SWITCH REMOVAL/ INSTALLATION.) |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                           | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY WIRING HARNESS BETWEEN LIGHT SWITCH AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Light switch and BCM connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— BCM terminal 6A</li> <li>— BCM terminal 6B</li> </ul> </li> <li>Is there continuity?</li> </ul>                       | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Go to the next step.                                                               |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the turn switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1D36:92 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>DTC troubleshooting completed.                                                     |

### DTC B10A6:92 [BCM]

id0902f5389900

#### Malfunction Location

- Light switch circuit malfunction

#### Detection Condition

- Short to ground in wiring harness between light switch and BCM

#### Possible Causes

##### Vehicles with light switch on left side

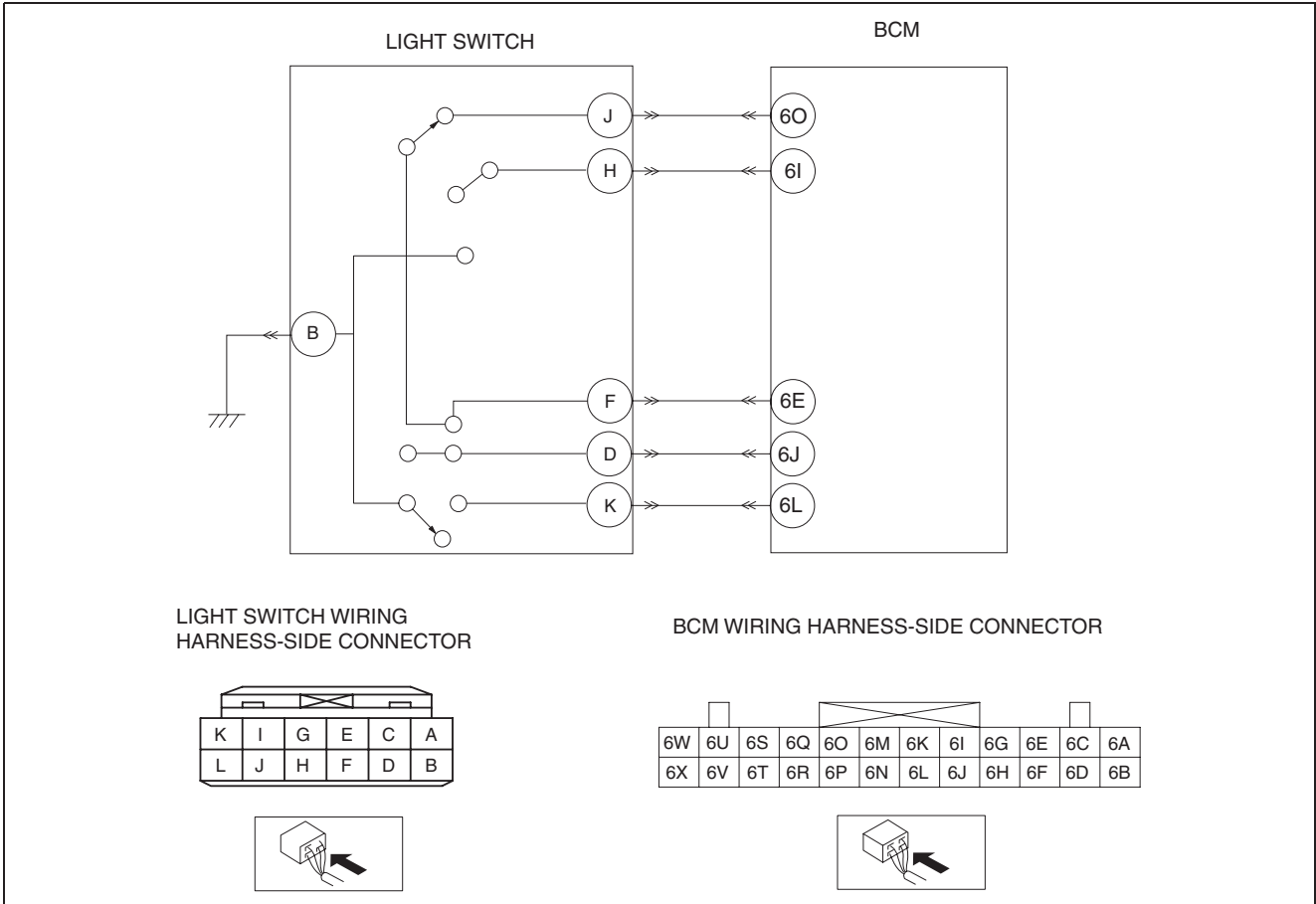
- Light switch connector or terminals malfunction
- Light switch malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between light switch terminal J and BCM terminal 6O
- Short to ground in wiring harness between light switch terminal D and BCM terminal 6J
- Short to ground in wiring harness between light switch terminal K and BCM terminal 6L
- BCM malfunction

##### Vehicles with light switch on right side

- Light switch connector or terminals malfunction
- Light switch malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between light switch terminal F and BCM terminal 6O
- Short to ground in wiring harness between light switch terminal L and BCM terminal 6J
- Short to ground in wiring harness between light switch terminal C and BCM terminal 6L
- BCM malfunction

ON-BOARD DIAGNOSTIC [BCM]

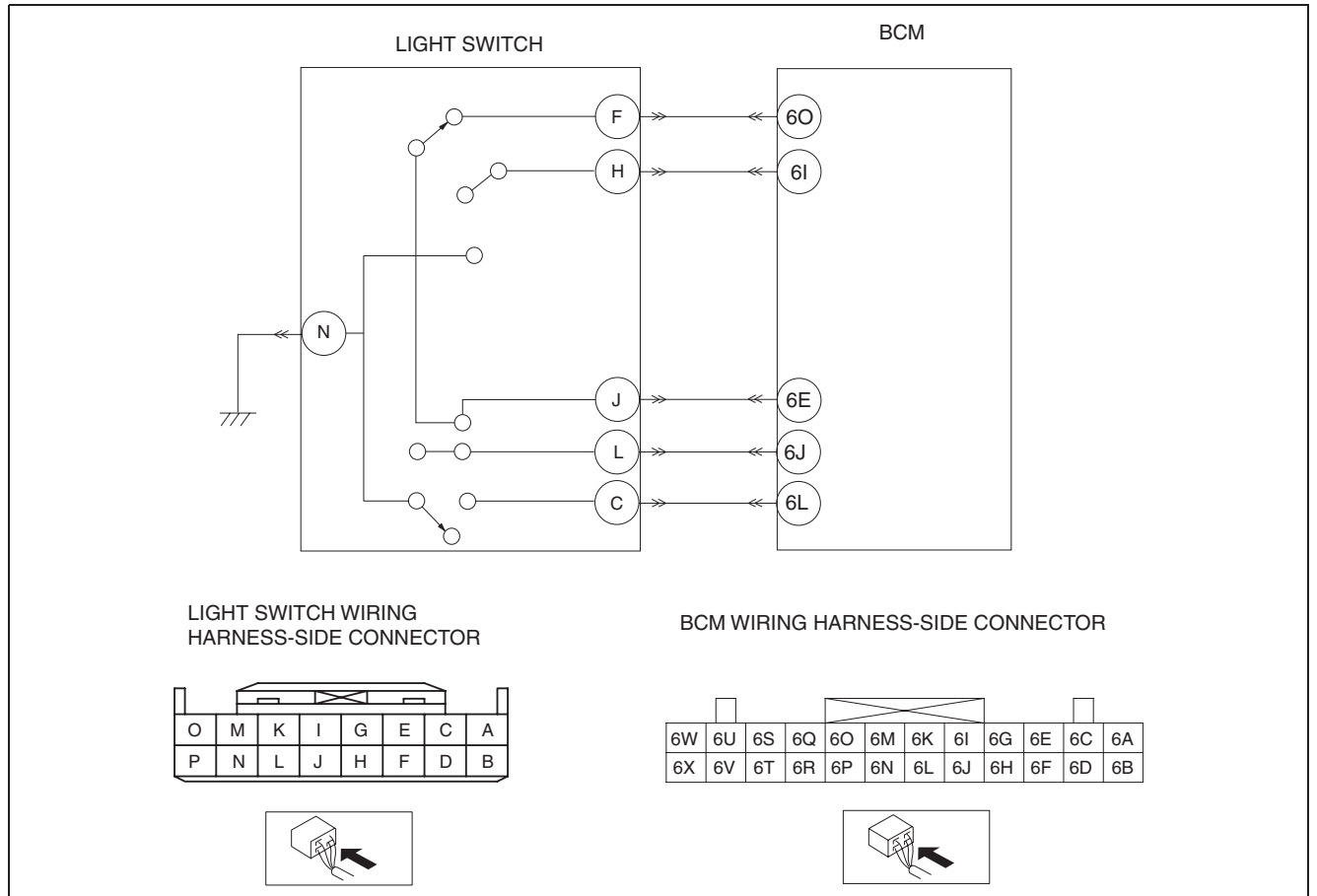
System Wiring Diagram  
Vehicles with light switch on left side



am2zzw0000466

## ON-BOARD DIAGNOSTIC [BCM]

### Vehicles with light switch on right side



am2zzw0000230

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the light switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B10A6:92 displayed?</li> </ul>                                                                                | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                             |
| 2    | <b>VERIFY LIGHT SWITCH CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the light switch connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                |
| 3    | <b>VERIFY LIGHT SWITCH CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the light switch.<br/>(See 09-18-35 LIGHT SWITCH INSPECTION.)</li> <li>Is the light switch normal?</li> </ul>                                                                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Replace the light switch, then go to the final step.<br>(See 09-18-35 LIGHT SWITCH REMOVAL/ INSTALLATION.) |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                         | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Repair or replace the connector, then go to the final step.                        |
| 5    | <b>VERIFY WIRING HARNESS BETWEEN LIGHT SWITCH AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Light switch and BCM connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— BCM terminal 6O</li> <li>— BCM terminal 6J</li> <li>— BCM terminal 6L</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Go to the next step.                                                               |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the light switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B10A6:92 displayed?</li> </ul>     | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed.                                                     |

### DTC B1008:11 [BCM]

id0902f5340000

#### Malfunction location

- Windshield wiper switch circuit malfunction

#### Detection condition

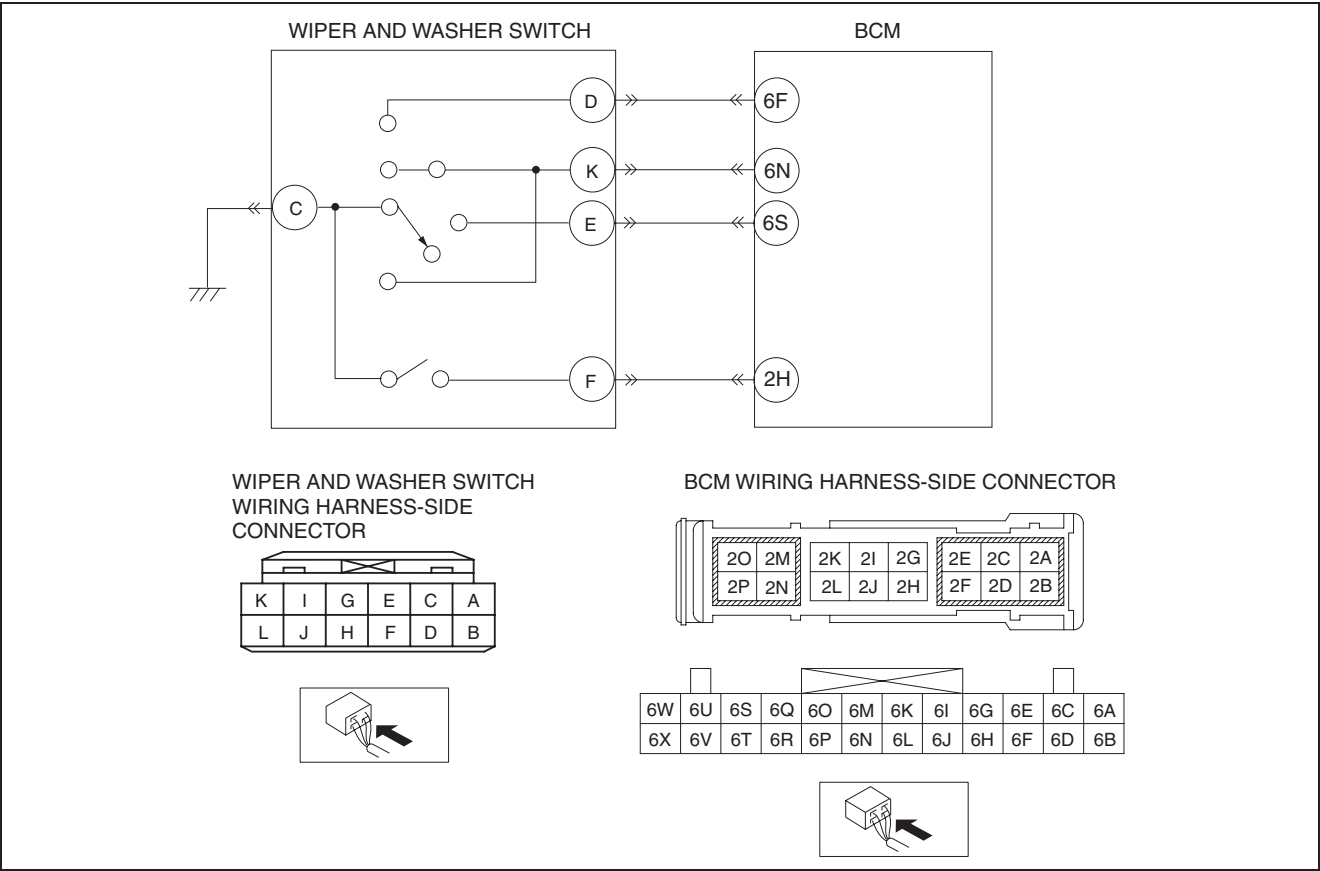
- Short to ground in wiring harness between windshield wiper and washer switch (windshield wiper INT) and BCM

#### Possible causes

- DTC inspection is performed with windshield wiper switch on.
- Wiper and washer switch connector or terminals malfunction
- Windshield wiper switch malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between wiper and washer switch terminal E and BCM terminal 6S (vehicles with wiper and washer switch on left side)
- Short to ground in wiring harness between wiper and washer switch terminal I and BCM terminal 6S (vehicles with wiper and washer switch on right side)
- BCM malfunction

ON-BOARD DIAGNOSTIC [BCM]

System wiring diagram  
Vehicles with wiper and washer switch on left side

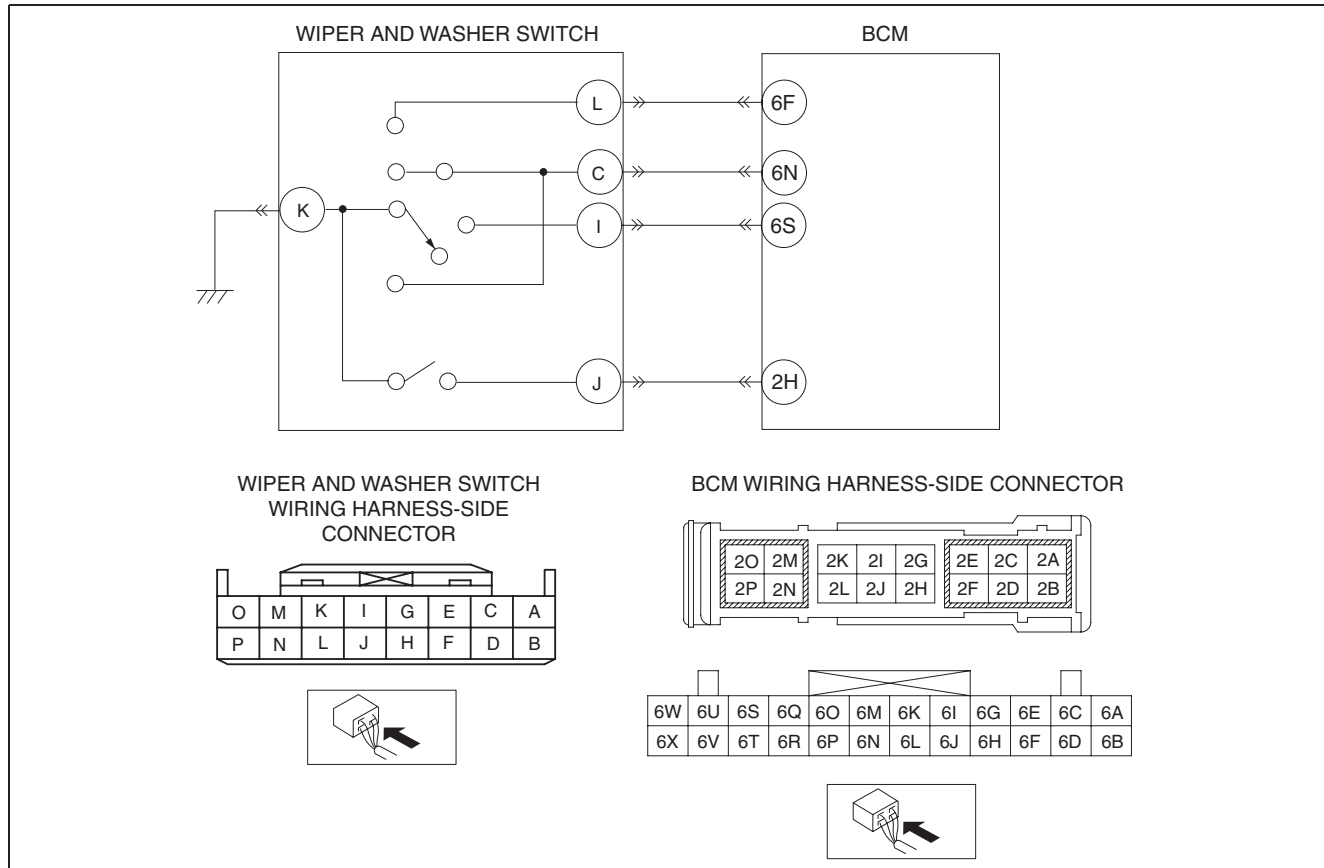


am2zzw0000229



## ON-BOARD DIAGNOSTIC [BCM]

### Vehicles with wiper and washer switch on right side



am2zzw0000466

### Diagnostic procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1008:11 displayed?</li> </ul>                                                                                           | Yes<br>Go to the next step.                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                                                                                  |
| 2    | <b>VERIFY WIPER AND WASHER SWITCH CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the wiper and washer switch connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step.                                                                     |
| 3    | <b>VERIFY WINDSHIELD WIPER SWITCH CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the windshield wiper switch.<br/>(See 09-19-25 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.)</li> <li>Is the windshield wiper switch normal?</li> </ul>                                                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Replace the wiper and washer switch, then go to the final step.<br>(See 09-19-24 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.) |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                | Yes<br>Go to the next step.                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Repair or replace the connector, then go to the final step.                        |
| 5    | <b>VERIFY WIRING HARNESS BETWEEN WINDSHIELD WIPER AND WASHER SWITCH AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Wiper and washer switch and BCM connectors are disconnected.</li> <li>Inspect for continuity between the BCM terminal 6S (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                      | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                               |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1008:11 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>DTC troubleshooting completed.                                                     |

### DTC B1013:23 [BCM]

id0902f5340100

#### Malfunction Location

- Rear window defroster switch circuit malfunction

#### Detection Condition

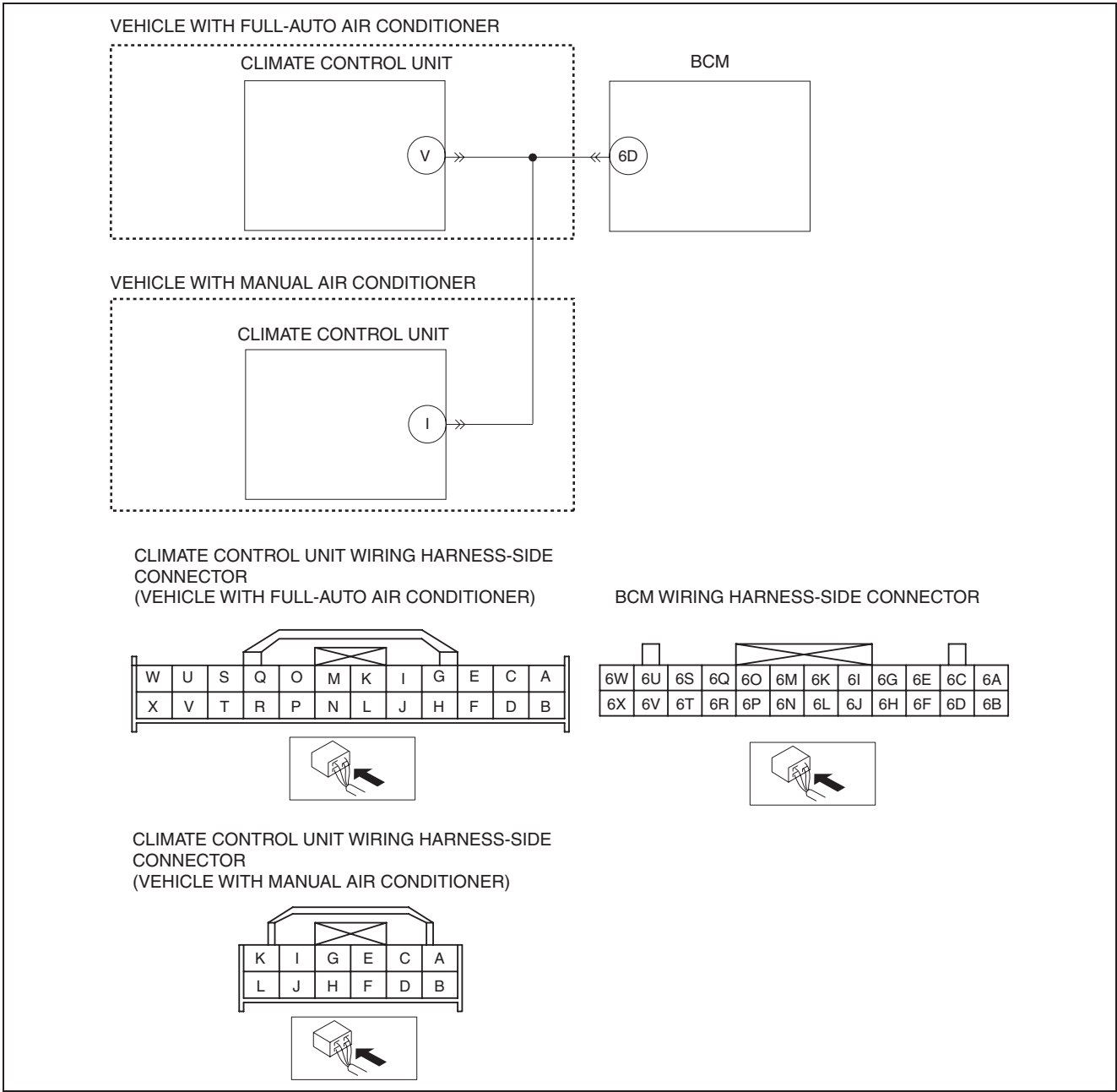
- Rear window defroster switch is in a pressed condition for **2 min or more** (rear defroster switch stuck).

#### Possible Causes

- Climate control unit connector or terminals malfunction
- BCM connector or terminals malfunction
- Short to ground in the wiring harness between climate control unit terminal V and BCM terminal 6D (vehicles with full-auto air conditioner)
- Short to ground in wiring harness between climate control unit terminal I and BCM terminal 6D (vehicles with manual air conditioner)
- Climate control unit malfunction
- BCM malfunction

# ON-BOARD DIAGNOSTIC [BCM]

## System Wiring Diagram



am2zzw0000229

## Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                      | Action                               |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"><li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li><li>Turn the rear window defroster switch off.</li><li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li><li>Is the DTC B1013:23 displayed?</li></ul> | Yes<br>Go to the next step.          |
|      |                                                                                                                                                                                                                                                                                                                                                 | No<br>DTC troubleshooting completed. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>VERIFY CLIMATE CONTROL UNIT CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the climate control unit connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                           | Yes<br>Go to the next step.                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                   |
| 3    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                   |
| 4    | <b>VERIFY WIRING HARNESS BETWEEN CLIMATE CONTROL UNIT AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Climate control unit and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 6D (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                | Yes<br>Repair or replace the related wiring harness, then go to the final step.                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                                                                          |
| 5    | <b>VERIFY CLIMATE CONTROL UNIT CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the climate control unit.<br/>(See 07-40A-33 CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER].)<br/>(See 07-40B-30 CLIMATE CONTROL UNIT INSPECTION [MANUAL AIR CONDITIONER].)</li> <li>Is the climate control unit normal?</li> </ul>                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Replace the climate control unit, then go to the final step.<br>(See 07-40A-32 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)<br>(See 07-40B-24 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].) |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the rear window defroster switch off.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1013:23 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                |

### DTC B1087:83/B1087:86/B1087:87/B1087:88 [BCM]

id0902f5340200

#### Malfunction Location

- DTC B1087:83: Error signal from rain sensor
- DTC B1087:86: Communication error with rain sensor
- DTC B1087:87: No response from rain sensor
- DTC B1087:88: Rain sensor BUS off

#### Detection Condition

- Communication error between rain sensor and BCM

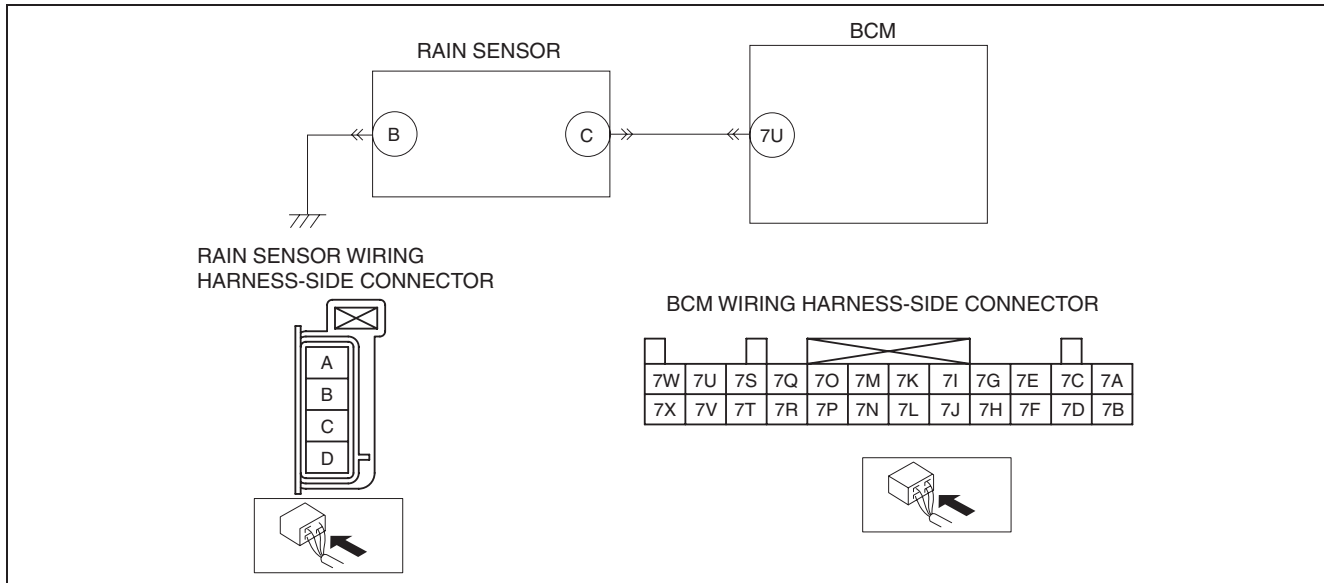
#### Possible Causes

- Rain sensor connector or terminals malfunction
- Open circuit in wiring harness between rain sensor terminal B and body ground
- BCM connector or terminals malfunction
- Short to ground in wiring harness between rain sensor terminal C and BCM terminal 7U
- Short to power supply in wiring harness between rain sensor terminal C and BCM terminal 7U

## ON-BOARD DIAGNOSTIC [BCM]

- Open circuit in wiring harness between rain sensor terminal C and BCM terminal 7U
- Rain sensor malfunction
- BCM malfunction

### System Wiring Diagram



### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>• Turn the windshield wiper switch to AUTO.</li> <li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>• Is the DTC B1087:83, B1087:86, B1087:87, or B1087:88 displayed?</li> </ul>                                | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>DTC troubleshooting completed.                                           |
| 2    | <b>VERIFY RAIN SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Disconnect the rain sensor connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the connector, then go to the final step.              |
| 3    | <b>VERIFY RAIN SENSOR GROUND CIRCUIT CONDITION</b> <ul style="list-style-type: none"> <li>• Rain sensor connector is disconnected.</li> <li>• Inspect for continuity between rain sensor terminal B (wiring harness-side) and body ground.</li> <li>• Is there continuity?</li> </ul>                                                                                                                                       | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the related wiring harness, then go to the final step. |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the BCM connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                             | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the connector, then go to the final step.              |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY WIRING HARNESS BETWEEN RAIN SENSOR AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Rain sensor and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 7U (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                  | Yes Repair or replace the related wiring harness, then go to the final step.                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No Go to the next step.                                                                                     |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN RAIN SENSOR AND BCM FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Rain sensor and BCM connectors are disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the BCM terminal 7U (wiring harness-side).</li> <li>Is there any voltage?</li> </ul>                                                                                                                                                | Yes Repair or replace the related wiring harness, then go to the final step.                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No Go to the next step.                                                                                     |
| 7    | <b>VERIFY BETWEEN RAIN SENSOR AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Rain sensor and BCM connectors are disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between rain sensor terminal C (wiring harness-side) and BCM terminal 7U (wiring harness-side).</li> <li>Is there continuity?</li> </ul>                                                                                                                   | Yes Go to the next step.                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No Repair or replace the related wiring harness, then go to the final step.                                 |
| 8    | <b>VERIFY RAIN SENSOR CONDITION</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch to AUTO.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1087:83, B1087:86, B1087:87, or B1087:88 displayed?</li> </ul>     | Yes Replace the rain sensor, then go to the final step.<br>(See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No DTC troubleshooting completed.                                                                           |
| 9    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Turn the windshield wiper switch to AUTO.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1087:83, B1087:86, B1087:87, or B1087:88 displayed?</li> </ul> | Yes Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No DTC troubleshooting completed.                                                                           |

## ON-BOARD DIAGNOSTIC [BCM]

### DTC B1172:92 [BCM]

id0902f5340600

#### Malfunction Location

- Door lock-link switch circuit malfunction

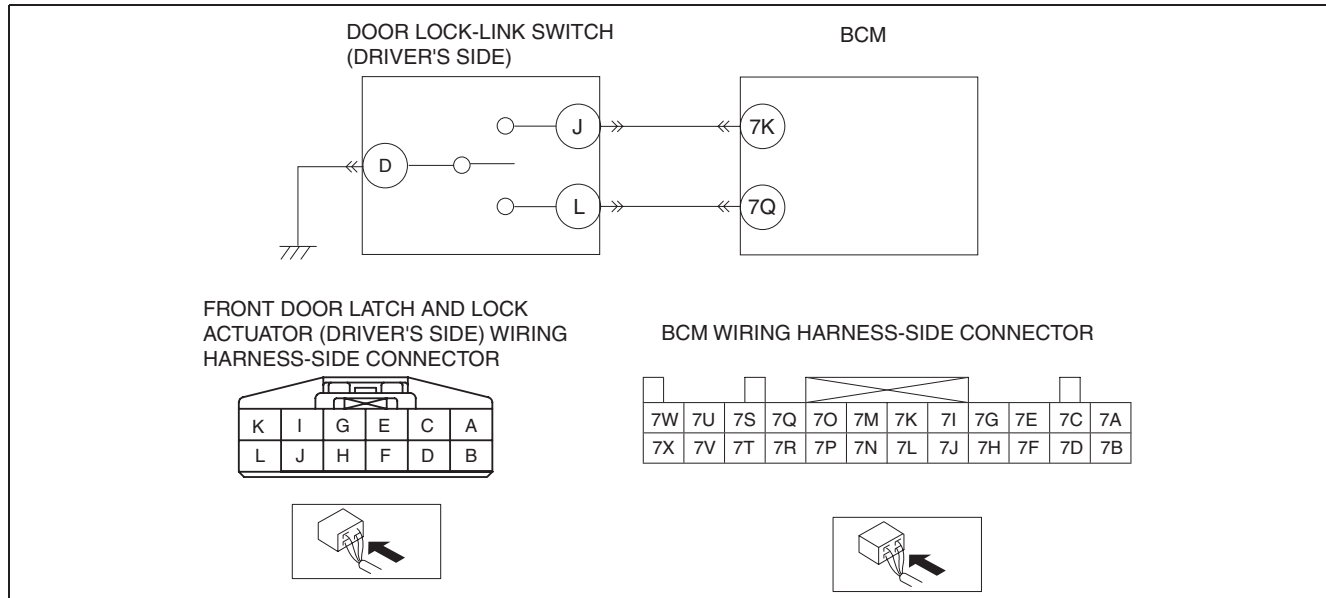
#### Detection Condition

- Lock/unlock signals are input simultaneously for **6 s or more**.

#### Possible Causes

- Front door latch and lock actuator (driver's side) connector or terminals malfunction
- Door lock-link switch (driver's side) malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between front door latch and lock actuator (driver's side) terminal J and BCM terminal 7K
- Short to ground in wiring harness between front door latch and lock actuator (driver's side) terminal L and BCM terminal 7Q
- Short circuit in lock signal and unlock signal wiring harnesses of front door latch and lock actuator
- BCM malfunction

#### System Wiring Diagram



am2zzw0000504

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"><li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li><li>Perform locking and unlocking operation.</li><li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li><li>Is the DTC B1172:92 displayed?</li></ul>                                                                                                                                             | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                              |
| 2    | <b>VERIFY FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER'S SIDE) CONNECTOR CONDITION</b> <ul style="list-style-type: none"><li>Turn the ignition switch to the LOCK position.</li><li>Disconnect the negative battery cable.</li><li>Disconnect the front door latch and lock actuator (driver's side) connector.</li><li>Inspect the connection condition and wiring harness.</li><li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li></ul> | Yes<br>Go to the next step.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <b>VERIFY DOOR LOCK-LINK SWITCH (DRIVER'S SIDE) CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the door lock-link switch (driver's side).<br/>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)</li> <li>Is the door lock-link switch (driver's side) normal?</li> </ul>                                                                                                                                                                                                                 | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the front door latch and lock actuator (driver's side), then go to the final step.<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair or replace the connector, then go to the final step.                                                                                                           |
| 5    | <b>VERIFY FOR SHORT TO GROUND IN WIRING HARNESS BETWEEN FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER'S SIDE) AND BCM</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver's side) and BCM connectors are disconnected.</li> <li>Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— BCM terminal 7K</li> <li>— BCM terminal 7Q</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Repair or replace the related wiring harness, then go to the final step.                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                  |
| 6    | <b>VERIFY FOR SHORT CIRCUIT IN LOCK AND UNLOCK SIGNAL WIRING HARNESSES</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver's side) and BCM connectors are disconnected.</li> <li>Inspect for continuity between front door latch and lock actuator (driver's side) terminals J and L (wiring harness-side).</li> <li>Is there continuity?</li> </ul>                                                                                                                | Yes<br>Repair or replace the related wiring harness, then go to the final step.                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                  |
| 7    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Perform locking and unlocking operation.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1172:92 displayed?</li> </ul>                                           | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                                                                                        |

### DTC B1175:13 [BCM]

id0902f5340700

#### Malfunction Location

- Front door latch switch (driver's side) circuit malfunction

#### Detection Condition

- Open circuit in wiring harness between front door latch switch in front door latch and lock actuator (driver's side) and BCM

#### Possible Causes

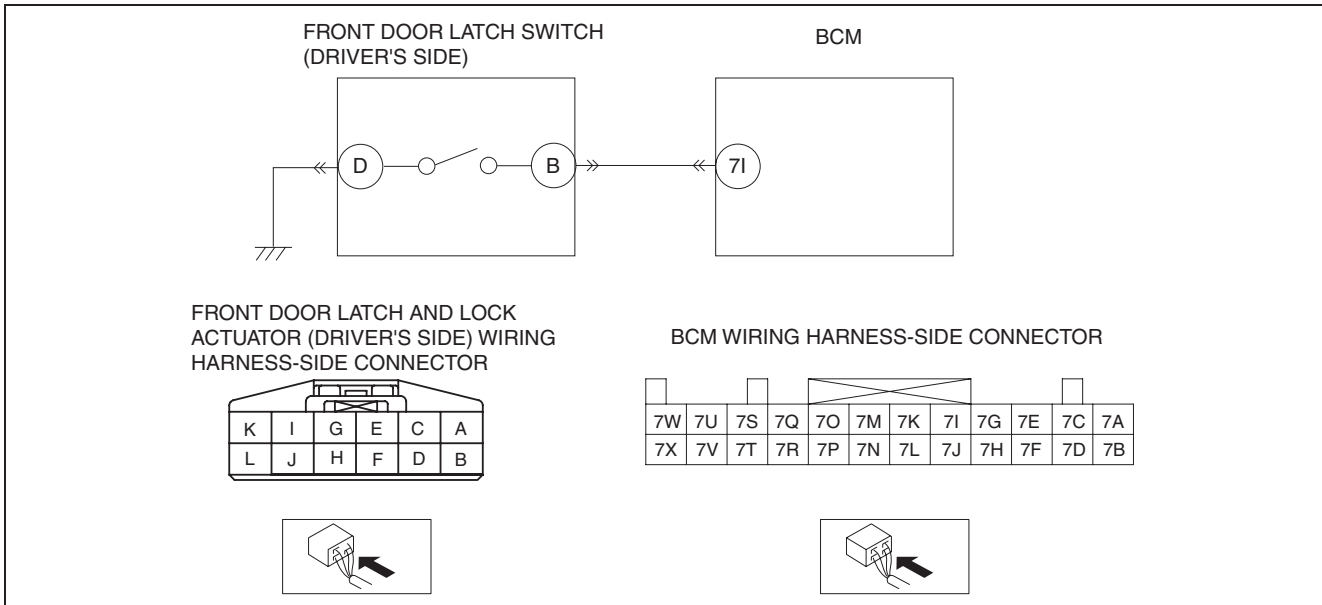
- DTC inspection is performed with front door latch switch (driver's side) on.
- Front door latch and lock actuator (driver's side) connector or terminals malfunction
- Open circuit in wiring harness between front door latch and lock actuator (driver's side) terminal D and body ground
- Front door latch switch (driver's side) malfunction
- BCM connector or terminals malfunction



## ON-BOARD DIAGNOSTIC [BCM]

- Open circuit in wiring harness between front door latch and lock actuator (driver's side) terminal B and BCM terminal 7I
- BCM malfunction

### System Wiring Diagram



am2zzw0000504

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>• Close the front driver's door (front door latch switch on).</li> <li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>• Is the DTC B1175:13 displayed?</li> </ul>                                                                                                                             | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>DTC troubleshooting completed.                                           |
| 2    | <b>VERIFY FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER'S SIDE) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the negative battery cable.</li> <li>• Disconnect the front door latch and lock actuator (driver's side) connector.</li> <li>• Inspect the connection condition and wiring harness.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the connector, then go to the final step.              |
| 3    | <b>VERIFY FRONT DOOR LATCH SWITCH (DRIVER'S SIDE) GROUND CIRCUIT CONDITION</b> <ul style="list-style-type: none"> <li>• Front door latch and lock actuator (driver's side) connector is disconnected.</li> <li>• Inspect for continuity between front door latch and lock actuator (driver's side) terminal D (wiring harness-side) and body ground.</li> <li>• Is there continuity?</li> </ul>                                                                                                           | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Repair or replace the related wiring harness, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY FRONT DOOR LATCH SWITCH (DRIVER'S SIDE) CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the front door latch switch (driver's side).<br/>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.)</li> <li>Is the front door latch switch (driver's side) normal?</li> </ul>                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Replace the front door latch and lock actuator (driver's side), then go to the final step.<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
| 5    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the connector, then go to the final step.                                                                                                           |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER'S SIDE) AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (driver's side) and BCM connectors are disconnected.</li> <li>Inspect for continuity between front door latch and lock actuator (driver's side) terminal B (wiring harness-side) and BCM terminal 7I (wiring harness-side).</li> <li>Is there continuity?</li> </ul>               | Yes<br>Go to the next step.                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                              |
| 7    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the front driver's door (front door latch switch on).</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1175:13 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>DTC troubleshooting completed.                                                                                                                                        |

### DTC B1176:13 [BCM]

id0902f5340800

#### Malfunction Location

- Front door latch switch (passenger's side) circuit malfunction

#### Detection Condition

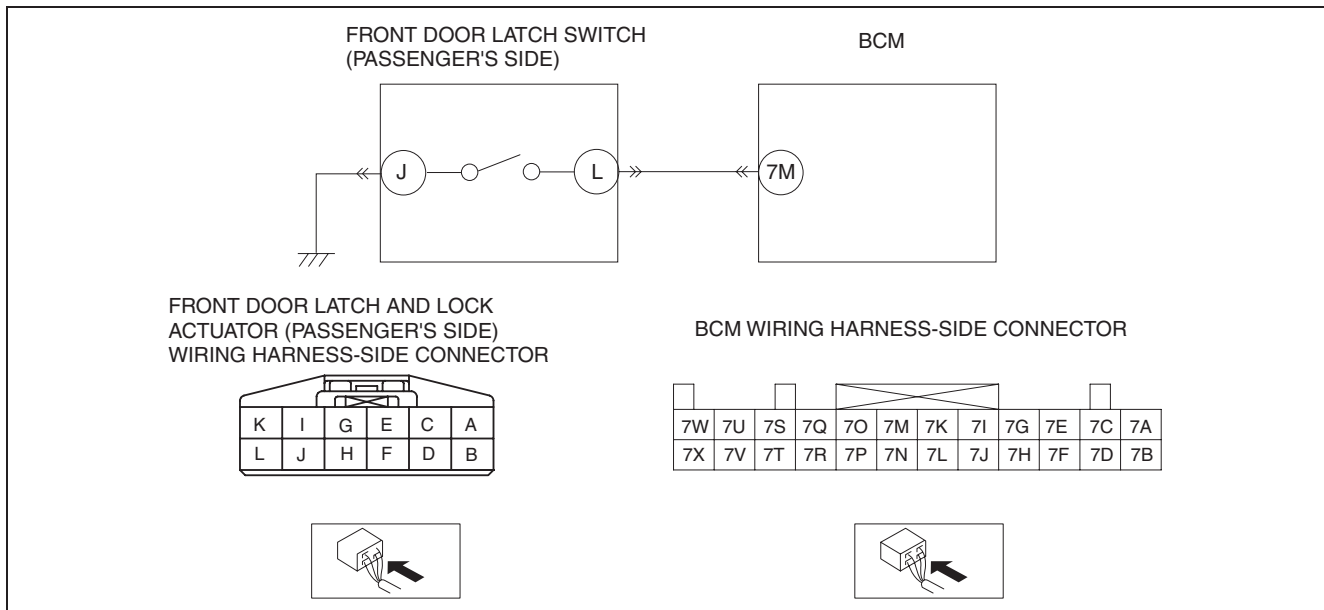
- Open circuit in wiring harness between front door latch switch in front door latch and lock actuator (passenger's side) and BCM

#### Possible Causes

- DTC inspection is performed with front door latch switch (passenger's side) on.
- Front door latch and lock actuator (passenger's side) connector or terminals malfunction
- Open circuit in wiring harness between front door latch and lock actuator (passenger's side) terminal J and body ground
- Front door latch switch (passenger's side) malfunction
- BCM connector or terminals malfunction
- Open circuit in wiring harness between front door latch and lock actuator (passenger's side) terminal L and BCM terminal 7M
- BCM malfunction

## ON-BOARD DIAGNOSTIC [BCM]

### System Wiring Diagram



am2zzw0000504

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the front passenger's door (front door latch switch on).</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1176:13 displayed?</li> </ul>                                                                                                                              | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                           |
| 2    | <b>VERIFY FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER'S SIDE) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the front door latch and lock actuator (passenger's side) connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair or replace the connector, then go to the final step.              |
| 3    | <b>VERIFY FRONT DOOR LATCH SWITCH (PASSENGER'S SIDE) GROUND CIRCUIT CONDITION</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger's side) connector is disconnected.</li> <li>Inspect for continuity between front door latch and lock actuator (passenger's side) terminal J (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                    | Yes<br>Go to the next step.                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair or replace the related wiring harness, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY FRONT DOOR LATCH SWITCH (PASSENGER'S SIDE) CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the front door latch switch (passenger's side).<br/>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.)</li> <li>Is the front door latch switch (passenger's side) normal?</li> </ul>                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Replace the front door latch and lock actuator (passenger's side), then go to the final step.<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
| 5    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                        | Yes<br>Go to the next step.                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Repair or replace the connector, then go to the final step.                                                                                                              |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER'S SIDE) AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Front door latch and lock actuator (passenger's side) and BCM connectors are disconnected.</li> <li>Inspect for continuity between front door latch and lock actuator (passenger's side) terminal L (wiring harness-side) and BCM terminal 7M (wiring harness-side).</li> <li>Is there continuity?</li> </ul>         | Yes<br>Go to the next step.                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                                 |
| 7    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the front passenger's door (front door latch switch on).</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1176:13 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>DTC troubleshooting completed.                                                                                                                                           |

### DTC B1178:11 [BCM]

id0902f5340900

### 3HB/5HB

#### Malfunction Location

- Liftgate latch switch circuit malfunction

#### Detection Condition

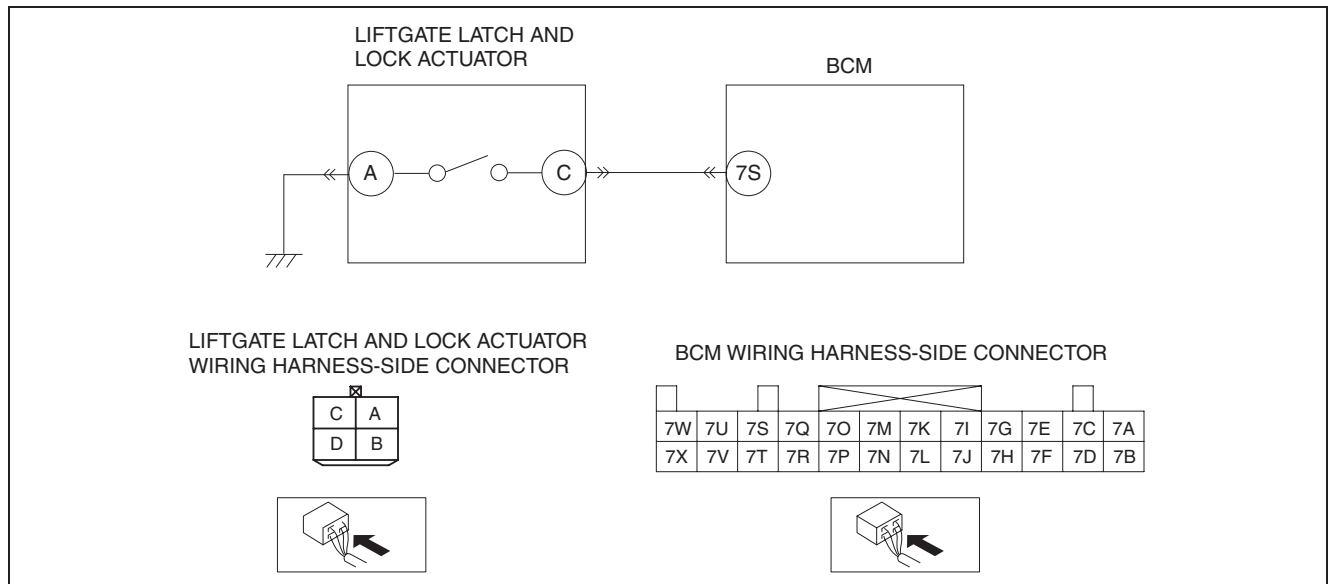
- Short to ground in wiring harness between liftgate latch switch in liftgate latch and lock actuator and BCM

#### Possible Causes

- DTC inspection is performed with liftgate latch switch on.
- Liftgate latch and lock actuator connector or terminals malfunction
- Liftgate latch switch malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between liftgate latch and lock actuator terminal C and BCM terminal 7S
- BCM malfunction

## ON-BOARD DIAGNOSTIC [BCM]

### System Wiring Diagram



am2zzw0000230

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the liftgate (liftgate latch switch off).</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1178:11 displayed?</li> </ul>                                                                                                   | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>DTC troubleshooting completed.                                                                                                                    |
| 2    | <b>VERIFY LIFTGATE LATCH AND LOCK ACTUATOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the liftgate latch and lock actuator connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the connector, then go to the final step.                                                                                       |
| 3    | <b>VERIFY LIFTGATE LATCH SWITCH CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the liftgate latch switch.<br/>(See 09-14-90 LIFTGATE LATCH SWITCH INSPECTION.)</li> <li>Is the liftgate latch switch normal?</li> </ul>                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Replace the liftgate latch and lock actuator, then go to the final step.<br>(See 09-14-88 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the connector, then go to the final step.                                                                                       |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 5    | <b>VERIFY WIRING HARNESS BETWEEN LIFTGATE LATCH AND LOCK ACTUATOR AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Liftgate latch and lock actuator and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 7S (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                             | Yes<br>Repair or replace the related wiring harness, then go to the final step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Go to the next step.                                                               |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the liftgate. (Liftgate latch switch off)</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1178:11 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>DTC troubleshooting completed.                                                     |

### 4SD

#### Malfunction Location

- Trunk lid latch switch circuit malfunction

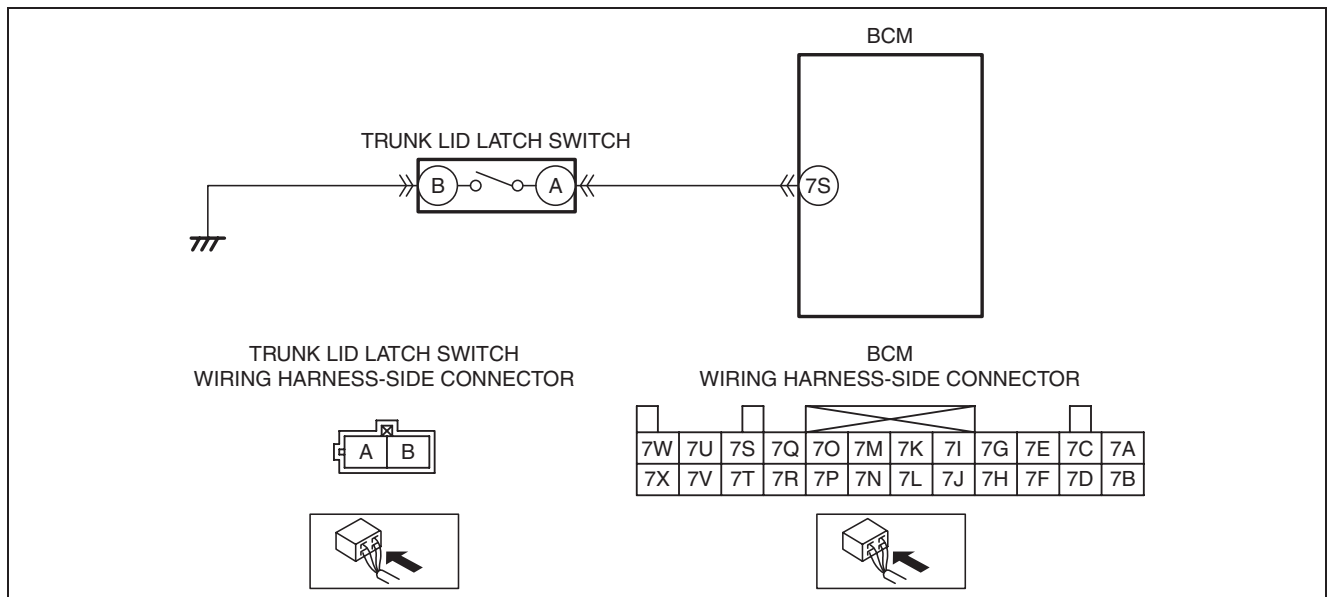
#### Detection Condition

- Short to ground in wiring harness between trunk lid latch switch and BCM

#### Possible Causes

- DTC inspection is performed with trunk lid latch switch on.
- Trunk lid latch switch connector or terminals malfunction
- Trunk lid latch switch malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between trunk lid latch switch terminal A and BCM terminal 7S
- BCM malfunction

#### System Wiring Diagram



am2zzw0000505

## ON-BOARD DIAGNOSTIC [BCM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b><br><ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the trunk (trunk lid latch switch off).</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1178:11 displayed?</li> </ul>                                                                                                          | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                              |
| 2    | <b>VERIFY TRUNK LID LATCH SWITCH CONNECTOR CONDITION</b><br><ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the trunk lid latch switch connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                          | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                                                 |
| 3    | <b>VERIFY TRUNK LID LATCH SWITCH CONDITION</b><br><ul style="list-style-type: none"> <li>Inspect the trunk lid latch switch.<br/>(See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR INSPECTION.)</li> <li>Is the trunk lid latch switch normal?</li> </ul>                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Replace the trunk lid latch switch, then go to the final step.<br>(See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR REMOVAL/INSTALLATION.) |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b><br><ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                        | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Repair or replace the connector, then go to the final step.                                                                                 |
| 5    | <b>VERIFY WIRING HARNESS BETWEEN TRUNK LID LATCH SWITCH AND BCM FOR SHORT TO GROUND</b><br><ul style="list-style-type: none"> <li>Trunk lid latch switch and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 7S (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                               | Yes<br>Repair or replace the related wiring harness, then go to the final step.                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Go to the next step.                                                                                                                        |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b><br><ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Close the trunk (trunk lid latch switch off).</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC B1178:11 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                              |

### DTC U0028:81/U0028:83/U0028:87 [BCM]

id0902f5341100

#### Malfunction Location

##### Vehicles with advanced keyless and start system

- DTC U0028:81: Communication error with keyless control module
- DTC U0028:83: Error signal from keyless control module
- DTC U0028:87: No response from keyless control module

##### Vehicles with keyless entry system

- DTC U0028:81: Communication error with keyless receiver
- DTC U0028:83: Error signal from keyless receiver

## ON-BOARD DIAGNOSTIC [BCM]

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- DTC U0028:87: No response from keyless receiver

### Detection Condition

#### Vehicles with advanced keyless and start system

- Communication error between keyless control module and BCM

#### Vehicles with keyless entry system

- Communication error between keyless receiver and BCM

### Possible Causes

#### Vehicles with advanced keyless and start system

- Keyless control module connector or terminals malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between keyless control module terminal 2F and BCM terminal 6W
- Short to power supply in wiring harness between keyless control module terminal 2F and BCM terminal 6W
- Open circuit in wiring harness between keyless control module terminal 2F and BCM terminal 6W
- Keyless control module malfunction
- BCM malfunction

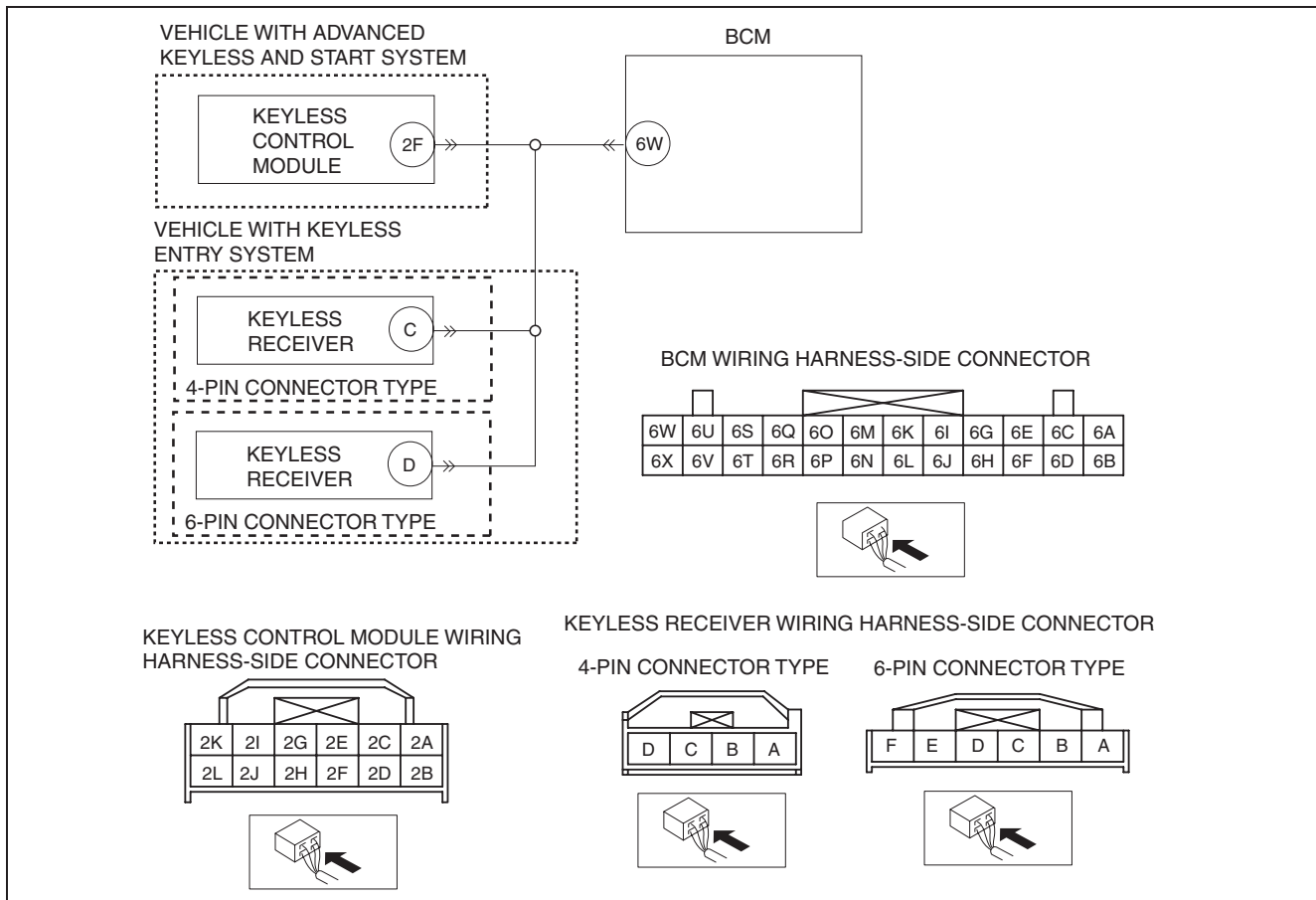
#### Vehicles with keyless entry system

- Keyless receiver connector or terminals malfunction
- Keyless receiver malfunction
- BCM connector or terminals malfunction
- Short to ground in wiring harness between keyless receiver (4-pin connector type) terminal C and BCM terminal 6W
- Short to ground in wiring harness between keyless receiver (6-pin connector type) terminal D and BCM terminal 6W
- Short to power supply in wiring harness between keyless receiver (4-pin connector type) terminal C and BCM terminal 6W
- Short to power supply in wiring harness between keyless receiver (6-pin connector type) terminal D and BCM terminal 6W
- Open circuit in wiring harness between keyless receiver (4-pin connector type) terminal C and BCM terminal 6W
- Open circuit in wiring harness between keyless receiver (6-pin connector type) terminal D and BCM terminal 6W
- BCM malfunction



## ON-BOARD DIAGNOSTIC [BCM]

### System Wiring Diagram



am2zzw0000505

### Diagnostic Procedure

#### Vehicles with advanced keyless and start system

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                     | Action                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b>                                                                                                                                                                                                                                                                                                                                                  | Yes                                                         |
|      | <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Lock and unlock the doors using the transmitter.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0028:81, U0028:83, or U0028:87 displayed?</li> </ul>                            | Go to the next step.                                        |
| 2    | <b>VERIFY KEYLESS CONTROL MODULE CONNECTOR CONDITION</b>                                                                                                                                                                                                                                                                                                                       | Yes                                                         |
|      | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless control module connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul> | Go to the next step.                                        |
| 3    | <b>VERIFY BCM CONNECTOR CONDITION</b>                                                                                                                                                                                                                                                                                                                                          | Yes                                                         |
|      | <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                            | Go to the next step.                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                | No                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                | Repair or replace the connector, then go to the final step. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action                                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY WIRING HARNESS BETWEEN KEYLESS CONTROL MODULE AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Keyless control module and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 6W (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                         | Yes<br>Repair or replace the related wiring harness, then go to the final step.                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                              |
| 5    | <b>VERIFY WIRING HARNESS BETWEEN KEYLESS CONTROL MODULE AND BCM FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Keyless control module and BCM connectors are disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the BCM terminal 6W (wiring harness-side).</li> <li>Is there any voltage?</li> </ul>                                                                                                                       | Yes<br>Repair or replace the related wiring harness, then go to the final step.                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                              |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN KEYLESS CONTROL MODULE AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless control module and BCM connectors are disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between keyless control module terminal 2F (wiring harness-side) and BCM terminal 6W (wiring harness-side).</li> <li>Is there continuity?</li> </ul>                                                               | Yes<br>Go to the next step.                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the related wiring harness, then go to the final step.                                                                                          |
| 7    | <b>VERIFY KEYLESS CONTROL MODULE CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the keyless control module.<br/>(See 09-14-99 KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless control module normal?</li> </ul>                                                                                                                                                                                                              | Yes<br>Go to the next step.                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Replace the keyless control module, then go to the final step.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].) |
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Lock and unlock the doors using the transmitter.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0028:81, U0028:83, or U0028:87 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>DTC troubleshooting completed.                                                                                                                                    |

### Vehicles with keyless entry system

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                        | Action                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Lock and unlock the doors using the transmitter.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0028:81, U0028:83, or U0028:87 displayed?</li> </ul> | Yes<br>Go to the next step.          |
|      |                                                                                                                                                                                                                                                                                                                                                                                   | No<br>DTC troubleshooting completed. |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action |                                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>VERIFY KEYLESS RECEIVER CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless receiver connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                | Yes    | Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Repair or replace the connector, then go to the final step.                                                                                |
| 3    | <b>VERIFY KEYLESS RECEIVER CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the keyless receiver.<br/>(See 09-14-110 KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM].)</li> <li>Is the keyless receiver normal?</li> </ul>                                                                                                                                                                                                                                                  | Yes    | Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Replace the keyless receiver, then go to the final step.<br>(See 09-14-109 KEYLESS RECEIVER REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].) |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                  | Yes    | Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Repair or replace the connector, then go to the final step.                                                                                |
| 5    | <b>VERIFY WIRING HARNESS BETWEEN KEYLESS RECEIVER AND BCM FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Keyless receiver and BCM connectors are disconnected.</li> <li>Inspect for continuity between BCM terminal 6W (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                     | Yes    | Repair or replace the related wiring harness, then go to the final step.                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Go to the next step.                                                                                                                       |
| 6    | <b>VERIFY WIRING HARNESS BETWEEN KEYLESS RECEIVER AND BCM FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Keyless receiver and BCM connectors are disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the BCM terminal 6W (wiring harness-side).</li> <li>Is there any voltage?</li> </ul>                                                                                                                                   | Yes    | Repair or replace the related wiring harness, then go to the final step.                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Go to the next step.                                                                                                                       |
| 7    | <b>VERIFY BETWEEN KEYLESS RECEIVER AND BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Keyless receiver and BCM connectors are disconnected.</li> <li>Disconnect the negative battery cable.</li> <li>Inspect for continuity between keyless receiver (4-pin connector type) terminal C (wiring harness-side)/keyless receiver (6-pin connector type) terminal D (wiring harness-side) and BCM terminal 6W (wiring harness-side).</li> <li>Is there continuity?</li> </ul> | Yes    | Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No     | Repair or replace the related wiring harness, then go to the final step.                                                                   |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 8    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Lock and unlock the doors using the transmitter.</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0028:81, U0028:83, or U0028:87 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>DTC troubleshooting completed.                                                     |

### DTC U0415:68 [BCM]

id0902f5331100

#### Malfunction Location

- Error signal from ABS HU/CM (with ABS)
- Error signal from DSC HU/CM (with DSC)

#### Detection Condition

- Correct data cannot be received from ABS HU/CM (with ABS).
- Correct data cannot be received from DSC HU/CM (with DSC).

#### Possible Causes

- ABS HU/CM malfunction (with ABS)
- DSC HU/CM malfunction (with DSC)
- BCM malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                          | Action                                                                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0415:68 displayed?</li> </ul>                                                                    | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                          |
| 2    | <b>VERIFY ABS HU/CM OR DSC HU/CM DTCs</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect the ABS HU/CM or DSC HU/CM DTCs using the M-MDS.<br/>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br/>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)</li> <li>Are any DTCs displayed?</li> </ul> | Yes<br>Go to the applicable DTC inspection.<br>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)<br>After completing the DTC troubleshooting, go to the final step.                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No<br>Go to the next step.                                                                                                                                                                                                                                                                                    |
| 3    | <b>VERIFY ABS HU/CM OR DSC HU/CM</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0415:68 displayed?</li> </ul>                                                              | Yes<br>Replace the ABS HU/CM or DSC HU/CM, then go to the final step.<br>(See 04-13-3 ABS HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-13-6 ABS HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br>(See 04-15-5 DSC HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-15-9 DSC HU/CM REMOVAL/INSTALLATION [R.H.D.].) |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                          |
| 4    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Clear the DTCs using the M-MDS<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U0415:68 displayed?</li> </ul>                                                           | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                          |

## ON-BOARD DIAGNOSTIC [BCM]

### DTC U2100:00/U3000:44 [BCM]

id0902f5342200

#### Malfunction Location

- DTC U2100:00: BCM configuration not set
- DTC U3000:44: BCM configuration setting invalid

#### Detection Condition

##### Warning

- **Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.**

- BCM configuration setting not done correctly.

#### Possible Causes

- BCM configuration not implemented.
- BCM configuration setting invalid
- BCM malfunction

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                             |     | Action                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM DTC INSPECTION</b> <ul style="list-style-type: none"><li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li><li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li><li>• Is the DTC U2100:00 or U3000:44 displayed?</li></ul>                                                                                                                         | Yes | Go to the next step.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No  | DTC troubleshooting completed.                                                                                             |
| 2    | <b>PERFORM BCM CONFIGURATION</b> <ul style="list-style-type: none"><li>• Perform the BCM configuration using the M-MDS.<br/>(See 09-40-16 BODY CONTROL MODULE (BCM) CONFIGURATION.)</li><li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li><li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li><li>• Is the DTC U2100:00 or U3000:44 displayed?</li></ul> | Yes | Perform the BCM configuration again, then go to the final step.<br>(See 09-40-16 BODY CONTROL MODULE (BCM) CONFIGURATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No  | DTC troubleshooting completed.                                                                                             |
| 3    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"><li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li><li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li><li>• Is the DTC U2100:00 or U3000:44 displayed?</li></ul>                                                                                                               | Yes | Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No  | DTC troubleshooting completed.                                                                                             |

### DTC U3003:16/U3003:17 [BCM]

id0902f5310100

#### Malfunction Location

- DTC U3003:16: BCM power supply voltage low (**less than 10 V**)
- DTC U3003:17: BCM power supply voltage high (**16 V or more**)

#### Detection Condition

- DTC U3003:16: BCM power supply voltage **less than 10 V**
- DTC U3003:17: BCM power supply voltage **16 V or more**

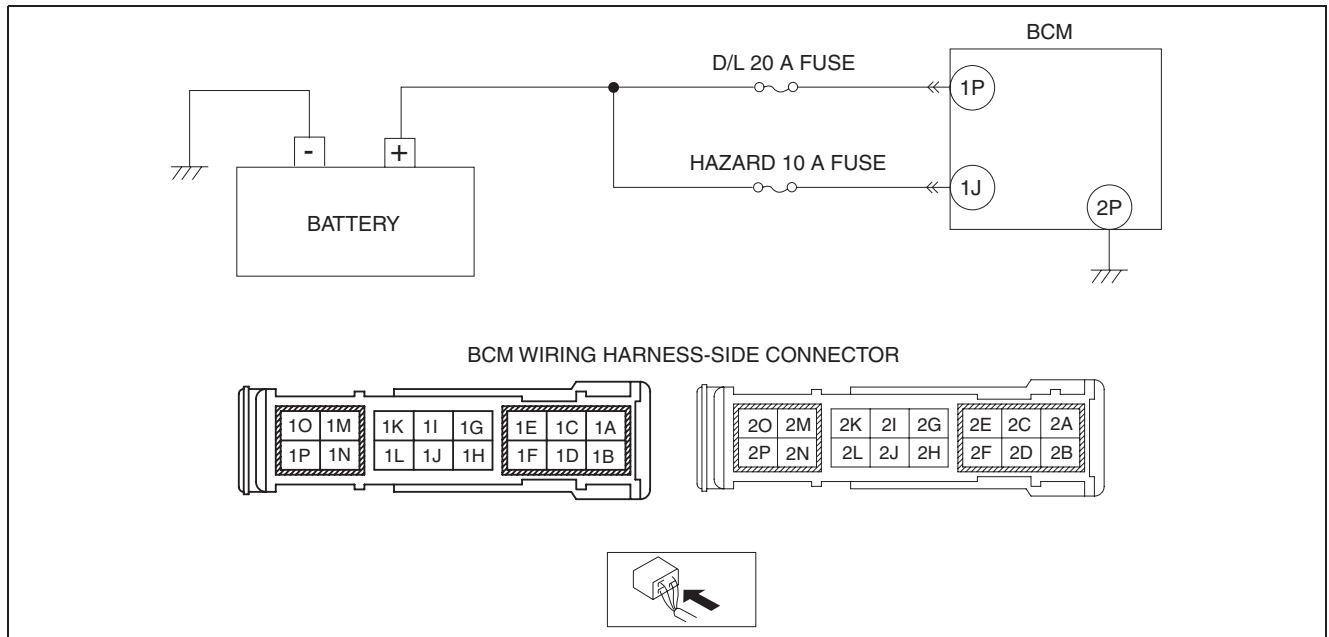
#### Possible Causes

- Battery malfunction

## ON-BOARD DIAGNOSTIC [BCM]

- Generator system malfunction
- BCM connector or terminals malfunction
- Short to ground or open circuit in wiring harness between battery and BCM
  - Short to ground in wiring harness between positive battery terminal and BCM terminal 1P
  - Short to ground in wiring harness between positive battery terminal and BCM terminal 1J
  - D/L 20 A fuse malfunction
  - HAZARD 10 A fuse malfunction
  - Open circuit in wiring harness between positive battery terminal and BCM terminal 1P
  - Open circuit in wiring harness between positive battery terminal and BCM terminal 1J
- BCM malfunction

### System Wiring Diagram



am2zzw0000229

### Diagnostic Procedure

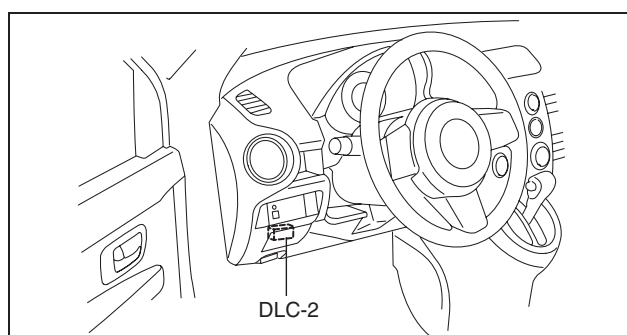
| Step | Inspection                                                                                                                                                                                                                                                                                                         | Action |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | <b>PERFORM DTC INSPECTION</b>                                                                                                                                                                                                                                                                                      | Yes    |
|      | <ul style="list-style-type: none"> <li>• Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>• Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>• Is the DTC U3003:16 or U3003:17 displayed?</li> </ul>                               | No     |
| 2    | <b>BATTERY INSPECTION</b>                                                                                                                                                                                                                                                                                          | Yes    |
|      | <ul style="list-style-type: none"> <li>• Refer to the battery inspection and inspect the battery.<br/>(See 01-17A-4 BATTERY INSPECTION [ZJ, ZY].)<br/>(See 01-17B-2 BATTERY INSPECTION [MZ-CD 1.4 DI Turbo].)<br/>(See 01-17C-2 BATTERY INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>• Is the battery normal?</li> </ul> | No     |

## ON-BOARD DIAGNOSTIC [BCM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <b>GENERATOR INSPECTION</b> <ul style="list-style-type: none"> <li>Inspect the generator.<br/>(See 01-17A-7 GENERATOR INSPECTION [ZJ, ZY].)<br/>(See 01-17B-4 GENERATOR INSPECTION [MZ-CD 1.4 DI Turbo].)<br/>(See 01-17C-5 GENERATOR INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>Is the generator normal?</li> </ul>                                                                                                      | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the generator, then go to the final step.<br>(See 01-17A-6 GENERATOR REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-17B-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-17C-4 GENERATOR REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)                                                                                                                                                                                               |
| 4    | <b>VERIFY BCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the BCM connector.</li> <li>Inspect the connection condition and wiring harness.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                     | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Repair or replace the connector, then go to the final step.                                                                                                                                                                                                                                                                                                                                                                                          |
| 5    | <b>VERIFY WIRING HARNESS BETWEEN POSITIVE BATTERY TERMINAL AND BCM FOR SHORT TO GROUND OR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>BCM connector is disconnected.</li> <li>Reconnect the negative battery cable.</li> <li>Measure the voltage at the following terminals (wiring harness-side):<br/>— BCM terminal 1P<br/>— BCM terminal 1J</li> <li>Is the voltage <b>B+</b>?</li> </ul>              | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Inspect the D/L 20 A fuse and HAZARD 10 A fuse. <ul style="list-style-type: none"> <li>If the fuse is melt:<br/>— Repair or replace the wiring harness for a possible short to ground.<br/>— Replace the malfunctioning fuse.</li> <li>If the fuse is deterioration:<br/>— Replace the malfunctioning fuse.</li> <li>If the fuse is normal:<br/>— Repair or replace the wiring harness for a possible open circuit.</li> </ul> Go to the final step. |
| 6    | <b>VERIFY TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Reconnect the negative battery cable.</li> <li>Clear the DTCs using the M-MDS.<br/>(See 09-02G-2 CLEARING DTC [BCM].)</li> <li>Perform the BCM DTC inspection using the M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)</li> <li>Is the DTC U3003:16 or U3003:17 displayed?</li> </ul> | Yes<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>DTC troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                       |

### PID/DATA MONITOR INSPECTION [BCM]

- Connect the M-MDS to the DLC-2.
- After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    - Select "DataLogger".
    - Select "Modules".
    - Select "BCM/GEM".
  - When using the PDS (Pocket PC)
    - Select "Module Tests".
    - Select "BCM/GEM".
    - Select "DataLogger".
- Select the applicable PID from the PID table.
- Verify the PID data according to the directions on the screen.



id0902f5960600

am2zzw0000251

#### Note

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output device is not within the specification, it is necessary to inspect the monitored value of input device corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output device individually.



## ON-BOARD DIAGNOSTIC [BCM]

**PID/DATA MONITOR TABLE [BCM]**

id0902f5960700

| PID/DATA monitor item | Unit/Condition | Operation condition                                                                                                                                                                                          | Inspection item (s)                                 | BCM terminal |
|-----------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------|
| AUTO_L_SW             | Off/On         | <ul style="list-style-type: none"> <li>Light switch at AUTO position: On</li> <li>Light switch at position except AUTO: Off</li> </ul>                                                                       | Light switch                                        | 6E           |
| BRK_FLUID             | Normal/Low     | <ul style="list-style-type: none"> <li>Brake fluid level above MIN: Normal</li> <li>Brake fluid level less than MIN: Low</li> </ul>                                                                          | Brake fluid level sensor switch                     | 4A           |
| DRSW_D                | Close/Open     | <ul style="list-style-type: none"> <li>Driver's door opened: Open</li> <li>Driver's door closed: Close</li> </ul>                                                                                            | Door latch switch (driver's side)                   | 7I           |
| DRSW_P                | Close/Open     | <ul style="list-style-type: none"> <li>Passenger's door opened: Open</li> <li>Passenger's door closed: Close</li> </ul>                                                                                      | Door latch switch (passenger's side)                | 7M           |
| DRSW_RR               | Close/Open     | <ul style="list-style-type: none"> <li>Rear door (RH) opened: Open</li> <li>Rear door (RH) closed: Close</li> </ul>                                                                                          | Door latch switch (rear door (RH))                  | 7O           |
| DRSW_LR               | Close/Open     | <ul style="list-style-type: none"> <li>Rear door (LH) opened: Open</li> <li>Rear door (LH) closed: Close</li> </ul>                                                                                          | Door latch switch (rear door (LH))                  | 7G           |
| D_LLSW_LOCK           | Off/Lock       | <ul style="list-style-type: none"> <li>Driver's door lock knob locked: Lock</li> <li>Driver's door lock knob unlocked: Off</li> </ul>                                                                        | Door lock-link switch                               | 7Q           |
| D_LLSW_UNLOCK         | Off/Unlock     | <ul style="list-style-type: none"> <li>Driver's door lock knob unlocked: Unlock</li> <li>Driver's door lock knob locked: Off</li> </ul>                                                                      | Door lock-link switch                               | 7K           |
| DR_LOCK_ACT           | Off/Lock       | <ul style="list-style-type: none"> <li>Driver's door lock knob locked: Lock</li> <li>Driver's door lock knob unlocked: Off</li> </ul>                                                                        | Door lock actuator                                  | 3M           |
| DR_UNLK_ACT           | Off/Unlock     | <ul style="list-style-type: none"> <li>Driver's door lock knob unlocked: Unlock</li> <li>Driver's door lock knob locked: Off</li> </ul>                                                                      | Door lock actuator                                  | 3O           |
| FOG_F_RLY             | Off/On         | <ul style="list-style-type: none"> <li>Light switch at FRONT FOG position, lights on condition: On</li> <li>Light switch not at FRONT FOG position: Off</li> </ul>                                           | Front fog light relay                               | 4I           |
| FOG_R_RLY             | Off/On         | <ul style="list-style-type: none"> <li>Light switch at REAR FOG position, lights on condition: On</li> <li>Light switch not at REAR FOG position: Off</li> </ul>                                             | Rear fog light relay                                | 4E           |
| FOG_F_SW              | Off/On         | <ul style="list-style-type: none"> <li>Front fog light switch in on position: On</li> <li>Front fog light switch in off position: Off</li> </ul>                                                             | Light switch                                        | 6K           |
| FOG_R_SW              | Off/On         | <ul style="list-style-type: none"> <li>Rear fog light switch in on position: On</li> <li>Rear fog light switch in off position: Off</li> </ul>                                                               | Light switch                                        | 6M           |
| HAZARD                | Off/On         | <ul style="list-style-type: none"> <li>Hazard warning switch in on position: On</li> <li>Hazard warning switch in off position: Off</li> </ul>                                                               | Hazard warning switch                               | 6Q           |
| H/L_HI_SW             | Off/On         | <ul style="list-style-type: none"> <li>Light switch at HI: On</li> <li>Light switch not at HI: Off</li> </ul>                                                                                                | Light switch                                        | 6I           |
| H/L_LO_SW             | Off/On         | <ul style="list-style-type: none"> <li>Light switch at LO: On</li> <li>Light switch not at LO: Off</li> </ul>                                                                                                | Light switch                                        | 6O           |
| H/L_LO_RLY            | Off/On         | <ul style="list-style-type: none"> <li>Headlights on: On</li> <li>Headlights off: Off</li> </ul>                                                                                                             | Headlight low relay                                 | 4M           |
| IG_KEY_IN             | Key-Out/Key-In | <ul style="list-style-type: none"> <li>Key inserted into key cylinder: Key-In</li> <li>Except above: Key-Out</li> </ul>                                                                                      | Key reminder switch                                 | 6R           |
| KEY_LOCK_SW           | Off/On         | <ul style="list-style-type: none"> <li>Door key cylinder at LOCK: On</li> <li>Door key cylinder not at LOCK: Off</li> </ul>                                                                                  | Door key cylinder switch                            | 7C           |
| OIL_PRS_SW            | Off/On         | <ul style="list-style-type: none"> <li>Engine running: On</li> <li>Engine stopped: Off</li> </ul>                                                                                                            | Oil pressure switch                                 | 4B           |
| PWR_IG1               | Off/On         | <ul style="list-style-type: none"> <li>Ignition switch at ON: On</li> <li>Ignition switch is off: Off</li> </ul>                                                                                             | Ignition switch                                     | 2G           |
| RAIN_SSR              | Off/On         | <ul style="list-style-type: none"> <li>Intermittent operation control signal from rain sensor sent: On</li> <li>Any control signal such as stop, low or high operation from rain sensor sent: Off</li> </ul> | Rain sensor                                         | 7U           |
| ROOM_LMP              | %              | <ul style="list-style-type: none"> <li>Door opened: 100 %</li> <li>Door closed: 0 %</li> </ul>                                                                                                               | Interior light                                      | 2O           |
| R_DEF                 | Off/On         | <ul style="list-style-type: none"> <li>Rear window defroster operating: On</li> <li>Rear window defroster not operating: Off</li> </ul>                                                                      | Filament                                            | 3B           |
| R_DEF_SW              | Off/On         | <ul style="list-style-type: none"> <li>Rear window defroster switch pressed: On</li> <li>Rear window defroster switch not pressed: Off</li> </ul>                                                            | Climate control unit (rear window defroster switch) | 6D           |

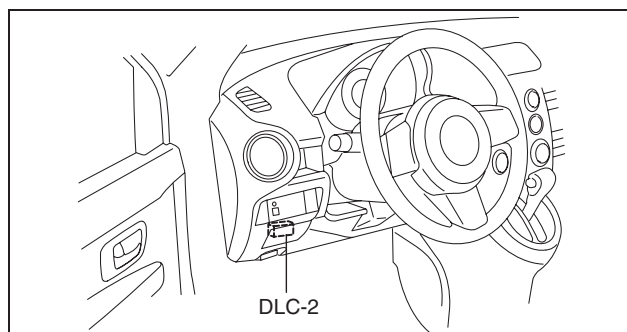


## ON-BOARD DIAGNOSTIC [BCM]

| PID/DATA monitor item | Unit/Condition | Operation condition                                                                                                                                             | Inspection item (s)                                    | BCM terminal |
|-----------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------|
| R_DEF_IND             | Off/On         | <ul style="list-style-type: none"> <li>Rear window defroster indicator illuminated: On</li> <li>Rear window defroster indicator not illuminated: Off</li> </ul> | Climate control unit (rear window defroster indicator) | 6G           |
| TNS_SW                | Off/On         | <ul style="list-style-type: none"> <li>Light switch at TNS position: On</li> <li>Light switch not at TNS position: Off</li> </ul>                               | Light switch                                           | 6J           |
| TURN_L_L              | Off/On         | <ul style="list-style-type: none"> <li>Turn light (LH) flashing: On</li> <li>Turn light (LH) off: Off</li> </ul>                                                | Turn light                                             | 1L, 3L       |
| TURN_L_R              | Off/On         | <ul style="list-style-type: none"> <li>Turn light (RH) flashing: On</li> <li>Turn light (RH) off: Off</li> </ul>                                                | Turn light                                             | 1K, 3J       |
| TURN_SW_L             | Off/On         | <ul style="list-style-type: none"> <li>Turn switch at left position: On</li> <li>Turn switch in off position: Off</li> </ul>                                    | Turn switch (light switch)                             | 6B           |
| TURN_SW_R             | Off/On         | <ul style="list-style-type: none"> <li>Turn switch at right position: On</li> <li>Turn switch in off position: Off</li> </ul>                                   | Turn switch (light switch)                             | 6A           |
| TR/LG_SW              | Close/Open     | <ul style="list-style-type: none"> <li>Liftgate opened: Open</li> <li>Liftgate closed: Close</li> </ul>                                                         | Liftgate latch and lock actuator                       | 6U           |
| VSPD                  | KPH            | <ul style="list-style-type: none"> <li>Vehicle driven: Displays vehicle speed</li> <li>Vehicle stopped: 0 km/h (mph)</li> </ul>                                 | -                                                      | -            |
| WASHER_F              | Off/On         | <ul style="list-style-type: none"> <li>Windshield washer switch on: On</li> <li>Windshield washer switch off: Off</li> </ul>                                    | Washer switch                                          | 2H           |
| WASHER_R              | Off/On         | <ul style="list-style-type: none"> <li>Rear washer switch on: On</li> <li>Rear washer switch off: Off</li> </ul>                                                | Washer switch                                          | 2L           |
| WIP_F_INT             | Off/On         | <ul style="list-style-type: none"> <li>Windshield wiper switch at INT position: On</li> <li>Windshield wiper switch not at INT position: Off</li> </ul>         | Windshield wiper switch                                | 6S           |
| WIP_F_HI              | Off/On         | <ul style="list-style-type: none"> <li>Windshield wiper switch at HI position: On</li> <li>Windshield wiper switch not at HI position: Off</li> </ul>           | Windshield wiper switch                                | 6F           |
| WIP_F_LO              | Off/On         | <ul style="list-style-type: none"> <li>Windshield wiper switch at LO position: On</li> <li>Windshield wiper switch not at LO position: Off</li> </ul>           | Windshield wiper switch                                | 6N           |
| WIP_R_ON              | Off/On         | <ul style="list-style-type: none"> <li>Rear wiper switch at ON: On</li> <li>Rear wiper switch at OFF: Off</li> </ul>                                            | Windshield wiper switch                                | 6C           |
| WPRLY_F_HI            | Off/On         | <ul style="list-style-type: none"> <li>Windshield wiper operating at HI: On</li> <li>Windshield wiper operating in position except HI: Off</li> </ul>           | Front wiper motor                                      | 1A           |
| WPRLY_F_LO            | Off/On         | <ul style="list-style-type: none"> <li>Windshield wiper operating at LO: On</li> <li>Windshield wiper operating in position except LO: Off</li> </ul>           | Front wiper motor                                      | 1B           |
| WPRLY_R               | Off/On         | <ul style="list-style-type: none"> <li>Rear wiper operating: On</li> <li>Rear wiper not operating: Off</li> </ul>                                               | Rear wiper motor                                       | 3D           |

### ACTIVE COMMAND MODES INSPECTION [BCM]

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "DataLogger".
    2. Select "Modules".
    3. Select "BCM/GEM".
  - When using the PDS (Pocket PC)
    1. Select "Module Tests".
    2. Select "BCM/GEM".
    3. Select "DataLogger".
3. Select the active command modes from the PID table.
4. Perform the active command modes, inspect the operations for each parts.



id0902f5960800

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- If the operation of output device cannot be verified after the active command mode inspection is performed, this could indicate the possibility of an open or short circuit, sticking, or operation malfunction in the output device.

## ON-BOARD DIAGNOSTIC [BCM]

ACTIVE COMMAND MODES TABLE [BCM]

id0902f5960900

| Command name     | Operation condition                  | Unit/Operation | Output part name         | Terminal |
|------------------|--------------------------------------|----------------|--------------------------|----------|
| WPRLY_F_HI*<br>1 | On : Windshield wiper (HI) operation | Off/On         | Windshield wiper motor   | 1E       |
| WPRLY_F_LO       | On : Windshield wiper (LO) operation | Off/On         | Windshield wiper motor   | 1D       |
| WPRLY_R          | On : Rear wiper operation            | Off/On         | Rear wiper motor         | 3E       |
| TURN_L_R         | On : Turn light (RH) flashes         | Off/On         | Turn light (RH)          | 1H,3G    |
| TURN_L_L         | On : Turn light (LH) flashes         | Off/On         | Turn light (LH)          | 1I,3H    |
| H/L_LO_RLY       | On : Headlights (LO) on              | Off/On         | Headlight low-beam relay | 4B       |
| FOG_F_RLY        | On : Front fog lights on             | Off/On         | Front fog light relay    | 4D       |
| FOG_R_RLY        | On : Rear fog lights on              | Off/On         | Rear fog light relay     | 4D       |

\*1 : With "WPRLY\_F\_LO" On

## 09-02I ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

|                                                                                                 |           |
|-------------------------------------------------------------------------------------------------|-----------|
| <b>FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]</b> .....                                 | 09-02I-1  |
| Troubleshooting Procedure .....                                                                 | 09-02I-2  |
| <b>DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]</b> .....                                | 09-02I-3  |
| <b>DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]</b> ..... | 09-02I-7  |
| Diagnostic Table for Determining Malfunctioning Part .....                                      | 09-02I-7  |
| A.....                                                                                          | 09-02I-9  |
| B.....                                                                                          | 09-02I-9  |
| C .....                                                                                         | 09-02I-10 |
| D .....                                                                                         | 09-02I-11 |
| E.....                                                                                          | 09-02I-12 |
| F.....                                                                                          | 09-02I-13 |
| G .....                                                                                         | 09-02I-14 |
| H .....                                                                                         | 09-02I-15 |
| I.....                                                                                          | 09-02I-16 |
| J .....                                                                                         | 09-02I-17 |
| K .....                                                                                         | 09-02I-18 |
| L .....                                                                                         | 09-02I-19 |
| <b>M-MDS AND VEHICLE NOT COMMUNICATING [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]</b> .....      | 09-02I-20 |
| Detection Condition.....                                                                        | 09-02I-20 |
| Possible Causes .....                                                                           | 09-02I-20 |
| Wiring Diagram .....                                                                            | 09-02I-21 |
| Diagnostic Procedure .....                                                                      | 09-02I-21 |
| <b>DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]</b> .....         | 09-02I-24 |
| Diagnostic procedure .....                                                                      | 09-02I-25 |

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## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

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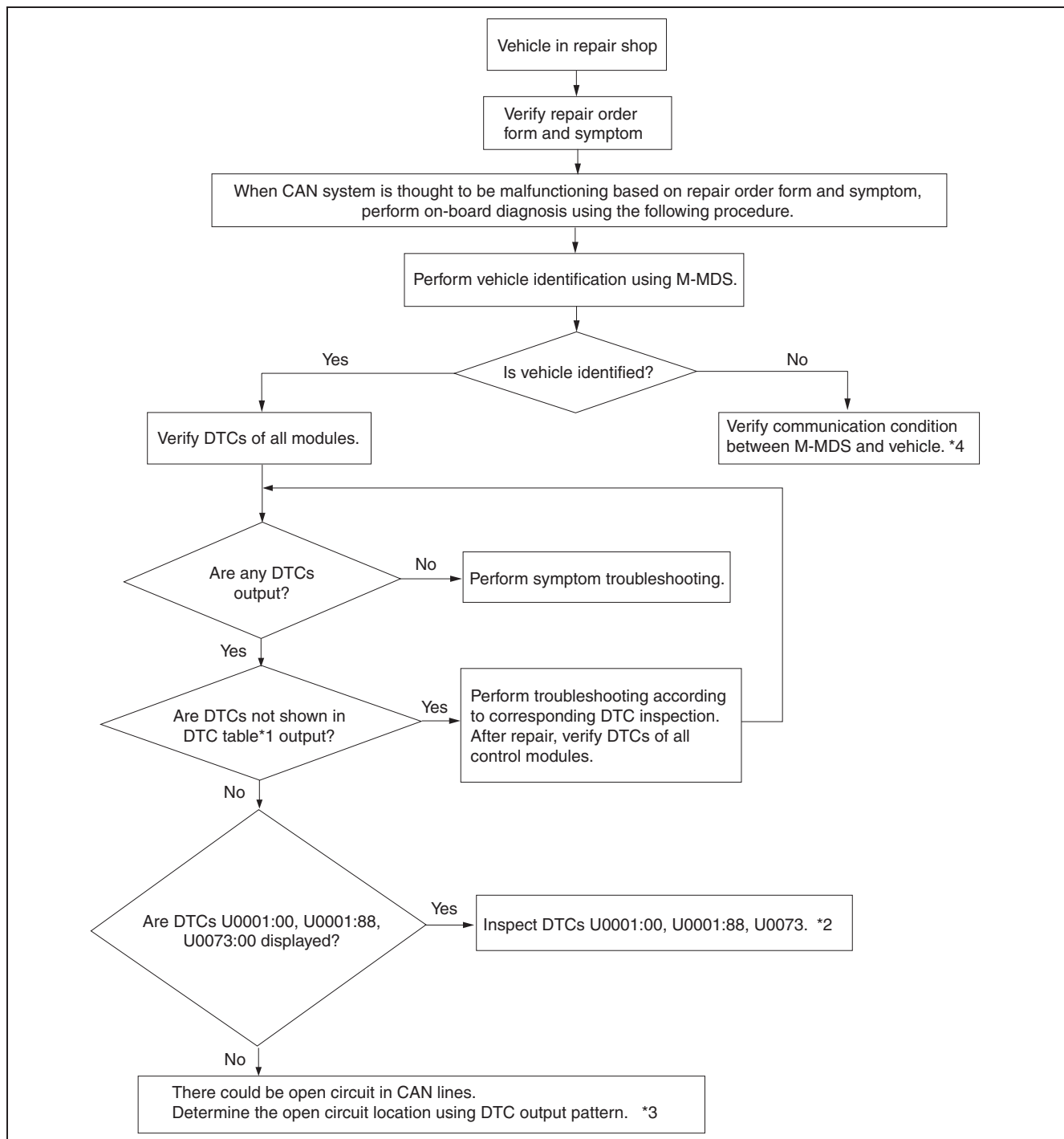
### FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

id0902j4845700

- If the CAN system is considered to be the cause of the malfunction based on the repair order form and the malfunctioning symptom, follow the **09-02I-2** Troubleshooting Procedure.
- DTCs are also output due to a control module or sensor malfunction, or incorrect power supply. Verify the output DTCs and first inspect the DTCs not shown in **09-02I-3** DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].
- If there is an open circuit in the communication lines, it is possible that signal error DTCs may be output in addition to communication error DTCs. Perform **09-02I-7** DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)], **09-02I-7** DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)] if the communication error and signal error DTCs are output simultaneously.

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

## Troubleshooting Procedure



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\*1 : 09-02I-3 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

\*2 : 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

\*3 : 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

\*4 : 09-02I-20 M-MDS AND VEHICLE NOT COMMUNICATING [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

id0902j4845800

## HS-CAN

| DTC output module        | DTC                    | Malfunction location                                                                                                                                                                                                                      | Reference for inspection procedure                                                                 |
|--------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| PCM (ZJ, ZY)             | U0073:00 <sup>*1</sup> | CAN system communication error                                                                                                                                                                                                            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                          | U0101:00               | Communication error to TCM                                                                                                                                                                                                                | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                          | U0121:00               | <ul style="list-style-type: none"> <li>Communication error to ABS HU/CM (with ABS)</li> <li>Communication error to DSC HU/CM (with DSC)</li> </ul>                                                                                        |                                                                                                    |
|                          | U0140:00               | Communication error to BCM                                                                                                                                                                                                                |                                                                                                    |
|                          | U0151:00               | Communication error to SAS control module                                                                                                                                                                                                 |                                                                                                    |
|                          | U0155:00               | Communication error to instrument cluster                                                                                                                                                                                                 |                                                                                                    |
| PCM (MZ-CD 1.4 DI Turbo) | U0073:00 <sup>*1</sup> | CAN system communication error                                                                                                                                                                                                            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                          | U0121:00               | <ul style="list-style-type: none"> <li>Communication error to ABS HU/CM (with ABS)</li> <li>Communication error to DSC HU/CM (with DSC)</li> </ul>                                                                                        | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                          | U0140:00               | Communication error to BCM                                                                                                                                                                                                                |                                                                                                    |
|                          | U0155                  | Communication error to instrument cluster                                                                                                                                                                                                 |                                                                                                    |
|                          | U0416                  | Communication error to EPS control module                                                                                                                                                                                                 |                                                                                                    |
|                          | U0423                  | Abnormal message from instrument cluster                                                                                                                                                                                                  |                                                                                                    |
| PCM (MZ-CD 1.6 (Y6))     | U0001:00 <sup>*1</sup> | CAN system communication error                                                                                                                                                                                                            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                          | U0073:00 <sup>*1</sup> | CAN system communication error                                                                                                                                                                                                            |                                                                                                    |
|                          | U0121:00               | <ul style="list-style-type: none"> <li>Communication error to ABS HU/CM (with ABS)</li> <li>Communication error to DSC HU/CM (with DSC)</li> </ul>                                                                                        | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                          | U0122:86               |                                                                                                                                                                                                                                           |                                                                                                    |
|                          | U0122:87               |                                                                                                                                                                                                                                           |                                                                                                    |
|                          | U0155:00               |                                                                                                                                                                                                                                           |                                                                                                    |
|                          | U0167:00               | Communication error to instrument cluster                                                                                                                                                                                                 |                                                                                                    |
|                          | U0300:87               | <ul style="list-style-type: none"> <li>Communication error to keyless control module (vehicles with advanced keyless and start system)</li> <li>Communication error to instrument cluster (vehicles with keyless entry system)</li> </ul> |                                                                                                    |
| ABS HU/CM <sup>*2</sup>  | U0001:88 <sup>*1</sup> | CAN system communication error                                                                                                                                                                                                            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                          | U0100:00               | Communication error to PCM                                                                                                                                                                                                                | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                          | U0155:00               | Communication error to instrument cluster                                                                                                                                                                                                 |                                                                                                    |
|                          | U2101:00               | Abnormal message from instrument cluster                                                                                                                                                                                                  |                                                                                                    |

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| DTC output module                    | DTC                    | Malfunction location                                                                                                                               | Reference for inspection procedure                                                                 |
|--------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| DSC HU/CM <sup>*3</sup>              | U0001:88 <sup>*1</sup> | CAN system communication error                                                                                                                     | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                      | U0100:00               | Communication error to PCM                                                                                                                         | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                      | U0126:00               | Communication error to EPS control module                                                                                                          |                                                                                                    |
|                                      | U0155:00               | Communication error to instrument cluster                                                                                                          |                                                                                                    |
|                                      | U0401:68 <sup>*1</sup> | Signal error from PCM                                                                                                                              | (See 04-02B-28 DTC U0401:68 [DYNAMIC STABILITY CONTROL (DSC)].)                                    |
|                                      | U2101:00               | Abnormal message from instrument cluster                                                                                                           | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
| BCM                                  | U0001:88 <sup>*1</sup> | CAN system communication error                                                                                                                     | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                      | U0100:00               | Communication error to PCM                                                                                                                         | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                      | U0101:00               | Communication error to TCM                                                                                                                         |                                                                                                    |
|                                      | U0121:00               | <ul style="list-style-type: none"> <li>Communication error to ABS HU/CM (with ABS)</li> <li>Communication error to DSC HU/CM (with DSC)</li> </ul> |                                                                                                    |
|                                      | U0415:68 <sup>*1</sup> | <ul style="list-style-type: none"> <li>Signal error from ABS HU/CM (with ABS)</li> <li>Signal error from DSC HU/CM (with DSC)</li> </ul>           | (See 09-02G-49 DTC U0415:68 [BCM].)                                                                |
| TCM <sup>*4</sup>                    | U0073:00 <sup>*1</sup> | CAN system communication error                                                                                                                     | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                      | U0100:00               | Communication error to PCM                                                                                                                         | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                      | U0121:00               | <ul style="list-style-type: none"> <li>Communication error to ABS HU/CM (with ABS)</li> <li>Communication error to DSC HU/CM (with DSC)</li> </ul> |                                                                                                    |
| Keyless control module <sup>*5</sup> | U0001:88 <sup>*1</sup> | CAN system communication error                                                                                                                     | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                      | U0028:87               | Communication error to BCM                                                                                                                         | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                      | U0100:00               | Communication error to PCM                                                                                                                         |                                                                                                    |
|                                      | U0401:68 <sup>*1</sup> | Signal error from PCM                                                                                                                              | (See 09-02A-34 DTC U0401:68 [ADVANCED KEYLESS AND START SYSTEM].)                                  |

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| DTC output module                            | DTC                    | Malfunction location                      | Reference for inspection procedure                                                                 |
|----------------------------------------------|------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------|
| SAS control module                           | U0001:88* <sup>1</sup> | CAN system communication error            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                              | U0155:00               | Communication error to instrument cluster | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
| EPS control module                           | U0001:88* <sup>1</sup> | CAN system communication error            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                              | U0100:00               | Communication error to PCM                | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                              | U0401:00* <sup>1</sup> | Signal error from PCM                     | (See 06-02-9 DTC U0401:00.)                                                                        |
| Theft-deterrent control module* <sup>6</sup> | U0001:88* <sup>1</sup> | CAN system communication error            | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)        |
|                                              | U0100:00               | Communication error to PCM                | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |
|                                              | U0140:00               | Communication error to BCM                | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].) |



## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| DTC output module  | DTC                    | Malfunction location                                                                                                                               | Reference for inspection procedure                                                                                                                                                                                              |
|--------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Instrument cluster | U0001:88 <sup>*1</sup> | CAN system communication error                                                                                                                     | (See 09-02I-24 DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                                                                                                     |
|                    | U0100:00               | Communication error to PCM                                                                                                                         | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                                                                                              |
|                    | U0100:87 <sup>*1</sup> | Communication error to PCM (no response)                                                                                                           | (See 09-02B-16 SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].)<br>(See 09-02C-13 SECURITY LIGHT: 16, DTC: U0100:87/P1260:00 [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) |
|                    | U0101:00               | Communication error to TCM                                                                                                                         | (See 09-02I-7 DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)                                                                                                                              |
|                    | U0121:00               | <ul style="list-style-type: none"> <li>Communication error to ABS HU/CM (with ABS)</li> <li>Communication error to DSC HU/CM (with DSC)</li> </ul> |                                                                                                                                                                                                                                 |
|                    | U0131:00               | Communication error to EPS control module                                                                                                          |                                                                                                                                                                                                                                 |
|                    | U0140:00               | Communication error to BCM                                                                                                                         |                                                                                                                                                                                                                                 |
|                    | U0151:00               | Communication error to SAS control module                                                                                                          |                                                                                                                                                                                                                                 |
|                    | U0214:00               | Communication error to keyless control module                                                                                                      |                                                                                                                                                                                                                                 |
|                    | U0401:68 <sup>*1</sup> | Signal error from PCM                                                                                                                              | (See 09-02F-11 DTC U0401:68 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0401:92 <sup>*1</sup> | Signal error from PCM                                                                                                                              | (See 09-02F-11 DTC U0401:92 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0402:92 <sup>*1</sup> | Signal error from TCM                                                                                                                              | (See 09-02F-12 DTC U0402:92 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0415:92 <sup>*1</sup> | <ul style="list-style-type: none"> <li>Signal error from ABS HU/CM (with ABS)</li> <li>Signal error from DSC HU/CM (with DSC)</li> </ul>           | (See 09-02F-12 DTC U0415:92 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0420:92 <sup>*1</sup> | Signal error from EPS control module                                                                                                               | (See 09-02F-13 DTC U0420:92 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0452:68 <sup>*1</sup> | Signal error from SAS control module                                                                                                               | (See 09-02F-13 DTC U0452:68 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0452:92 <sup>*1</sup> | Signal error from SAS control module                                                                                                               | (See 09-02F-13 DTC U0452:92 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |
|                    | U0515:68 <sup>*1</sup> | Signal error from keyless control module                                                                                                           | (See 09-02F-14 DTC U0515:68 [INSTRUMENT CLUSTER].)                                                                                                                                                                              |

\*1 : If only the target DTCs are displayed, perform the corresponding DTC inspection without determining the open circuit location.

\*2 : With ABS

\*3 : With DSC

\*4 : CVT

\*5 : With advanced keyless entry and start system

\*6 : With theft-deterrent system

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

## DETERMINING MALFUNCTIONING PART (HS-CAN) [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

id0902j4846700

### Caution

- If the malfunctioning part is detected in the communication line, before disconnecting the related connector for inspection, press the connector in the connection direction to verify that there is no looseness or disconnection.
- When disconnecting the connector, verify that there is no damage, deformation, or corrosion of the connector terminals.

1. Verify the CAN system-related module DTCs and the failed module using the (M-MDS).
2. Look for a DTC display pattern and failed module display pattern in tandem which match.

### Note

- A hyphen “-” in the DTC output pattern table indicates that the DTC may be displayed depending on the malfunction detection conditions. If only an “×” is indicated, it means the DTC will not be displayed.
  - If any of the following DTCs is displayed alone, perform the applicable DTC inspection. (See 09-02I-3 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].)
    - DSC HU/CM: U0401:68
    - BCM: U0415:68
    - Keyless control module: U0401:68
    - EPS control module: U0401:00
    - Instrument cluster: U0100:87, U0401:68, U0401:92, U0402:92, U0415:92, U0420:92, U0452:68, U0452:92, U0515:68
3. Refer to the matching tandem diagnostic results (A to L) and inspect the possible cause and inspection item.
  4. Perform the DTC inspection after the repair procedure.
    - If any DTC is displayed, return to 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)].

### Diagnostic Table for Determining Malfunctioning Part

Cross (×): Displayed  
Hyphen (-): May or may not be displayed

| M-MDS display                 |          | DTC display pattern |   |  |   |  |                 |  |   |   |  |  |                 |
|-------------------------------|----------|---------------------|---|--|---|--|-----------------|--|---|---|--|--|-----------------|
| DTC output module             | DTC      |                     |   |  |   |  |                 |  |   |   |  |  |                 |
| PCM (PCM)* <sup>1</sup>       | U0101:00 |                     |   |  | × |  |                 |  |   |   |  |  |                 |
|                               | U0121:00 |                     | × |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0140:00 |                     |   |  |   |  | ×               |  |   |   |  |  |                 |
|                               | U0151:00 |                     |   |  |   |  |                 |  | × |   |  |  |                 |
|                               | U0155:00 |                     |   |  |   |  |                 |  |   |   |  |  | ×               |
| PCM (PCM)* <sup>2</sup>       | U0121:00 |                     | × |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0140:00 |                     |   |  |   |  | ×               |  |   |   |  |  |                 |
|                               | U0155    |                     |   |  |   |  |                 |  |   |   |  |  | ×               |
|                               | U0416    |                     |   |  |   |  |                 |  |   | × |  |  |                 |
|                               | U0423    |                     |   |  |   |  |                 |  |   |   |  |  | -               |
| PCM (PCM)* <sup>3</sup>       | U0121:00 |                     | × |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0122:86 |                     | × |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0122:87 |                     | × |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0155:00 |                     | × |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0167:00 |                     |   |  |   |  |                 |  |   |   |  |  | ×               |
|                               | U0300:87 |                     |   |  |   |  | × <sup>*7</sup> |  |   |   |  |  | × <sup>*8</sup> |
| ABS (ABS HU/CM)* <sup>4</sup> | U0100:00 | ×                   |   |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0155:00 |                     |   |  |   |  |                 |  |   |   |  |  | ×               |
|                               | U2101:00 |                     |   |  |   |  |                 |  |   |   |  |  | -               |
| ABS (DSC HU/CM)* <sup>5</sup> | U0100:00 | ×                   |   |  |   |  |                 |  |   |   |  |  |                 |
|                               | U0126:00 |                     |   |  |   |  |                 |  |   | × |  |  |                 |
|                               | U0155:00 |                     |   |  |   |  |                 |  |   |   |  |  | ×               |
|                               | U0401:68 | -                   |   |  |   |  |                 |  |   |   |  |  |                 |
|                               | U2101:00 |                     |   |  |   |  |                 |  |   |   |  |  | -               |

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| M-MDS display                                      |          | DTC display pattern    |            |             |             |             |             |             |             |             |             |             |             |
|----------------------------------------------------|----------|------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| DTC output module                                  | DTC      |                        |            |             |             |             |             |             |             |             |             |             |             |
| BCM/GEM (BCM)                                      | U0100:00 | ×                      |            | ×           |             |             |             |             |             |             |             |             |             |
|                                                    | U0101:00 |                        |            |             | ×           |             |             |             |             |             |             |             |             |
|                                                    | U0121:00 |                        | ×          | ×           |             |             |             |             |             |             |             |             |             |
|                                                    | U0415:68 |                        | -          | -           |             |             |             |             |             |             |             |             |             |
| TCM (TCM)* <sup>6</sup>                            | U0100:00 | ×                      |            | ×           |             |             |             |             |             |             |             |             |             |
|                                                    | U0121:00 |                        | ×          | ×           |             |             |             |             |             |             |             |             |             |
| RKE (Keyless control module)* <sup>7</sup>         | U0028:87 |                        |            |             |             |             | ×           |             |             |             |             |             |             |
|                                                    | U0100:00 | ×                      |            | ×           |             |             |             |             |             |             |             |             |             |
|                                                    | U0401:68 | -                      |            | -           |             |             |             |             |             |             |             |             |             |
| RCM (SAS control module)                           | U0155:00 |                        |            |             |             |             |             |             |             |             |             |             | ×           |
| EPS (EPS control module)                           | U0100:00 | ×                      |            | ×           |             |             |             | ×           |             | ×           |             |             |             |
|                                                    | U0401:00 | -                      |            | -           |             |             |             | -           |             | -           |             |             |             |
| VSM* <sup>9</sup> (Theft-deterrent control module) | U0100:00 | ×                      |            | ×           |             |             |             | ×           |             | ×           |             |             |             |
|                                                    | U0140:00 |                        |            |             |             |             | ×           | ×           |             | ×           |             |             |             |
| IC (Instrument cluster)                            | U0100:00 | ×                      |            | ×           |             |             |             | ×           |             | ×           |             |             |             |
|                                                    | U0100:87 | -                      |            | -           |             |             |             | -           |             | -           |             |             |             |
|                                                    | U0101:00 |                        |            |             | ×           |             |             | ×           |             | ×           |             |             |             |
|                                                    | U0121:00 |                        | ×          | ×           |             |             |             | ×           |             | ×           |             |             |             |
|                                                    | U0131:00 |                        |            |             |             |             |             |             |             |             | ×           |             |             |
|                                                    | U0140:00 |                        |            |             |             |             | ×           | ×           |             | ×           |             |             |             |
|                                                    | U0151:00 |                        |            |             |             |             |             |             | ×           | ×           |             |             |             |
|                                                    | U0214:00 |                        |            |             |             | ×           |             | ×           |             | ×           |             |             |             |
|                                                    | U0401:68 | -                      |            | -           |             |             |             |             |             |             |             |             |             |
|                                                    | U0401:92 | -                      |            | -           |             |             |             | -           |             | -           |             |             |             |
|                                                    | U0402:92 |                        |            |             | -           |             |             | -           |             | -           |             |             |             |
|                                                    | U0415:92 |                        | -          | -           |             |             |             | -           |             | -           |             |             |             |
|                                                    | U0420:92 |                        |            |             |             |             |             |             |             |             | -           |             |             |
|                                                    | U0452:68 |                        |            |             |             |             |             |             | -           | -           |             |             |             |
|                                                    | U0452:92 |                        |            |             |             |             |             |             | -           | -           |             |             |             |
|                                                    | U0515:68 |                        |            |             |             | -           |             | -           |             | -           |             |             |             |
| M-MDS display module                               |          | “Fail” display pattern |            |             |             |             |             |             |             |             |             |             |             |
| PCM                                                |          | ×                      |            | ×           |             |             |             | ×           |             | ×           |             |             |             |
| ABS                                                |          |                        | ×          | ×           |             |             |             | ×           |             | ×           |             |             |             |
| BCM/GEM                                            |          |                        |            |             |             |             | ×           | ×           |             | ×           |             |             |             |
| TCM* <sup>6</sup>                                  |          |                        |            |             | ×           |             |             | ×           |             | ×           |             |             |             |
| RKE* <sup>7</sup>                                  |          |                        |            |             |             | ×           |             | ×           |             | ×           |             |             |             |
| RCM                                                |          |                        |            |             |             |             |             |             | ×           | ×           |             |             |             |
| EPS                                                |          |                        |            |             |             |             |             |             |             |             | ×           |             |             |
| VSM* <sup>9</sup>                                  |          |                        |            |             |             |             |             |             |             |             |             | ×           |             |
| IC                                                 |          |                        |            |             |             |             |             |             |             |             |             |             | ×           |
| Item                                               |          | Diagnostic result      |            |             |             |             |             |             |             |             |             |             |             |
| Possible cause and inspection item                 |          | A                      | B          | C           | D           | E           | F           | G           | H           | I           | J           | K           | L           |
| Reference page                                     |          | 09-02I-9 A             | 09-02I-9 B | 09-02I-10 C | 09-02I-11 D | 09-02I-12 E | 09-02I-13 F | 09-02I-14 G | 09-02I-15 H | 09-02I-16 I | 09-02I-17 J | 09-02I-18 K | 09-02I-19 L |

\*1 : ZJ, ZY

\*2 : MZ-CD 1.4 DI Turbo

\*3 : MZ-CD 1.6 (Y6)

\*4 : With ABS

\*5 : With DSC

\*6 : CVT

\*7 : With advanced keyless entry and start system

\*8 : With keyless entry system

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

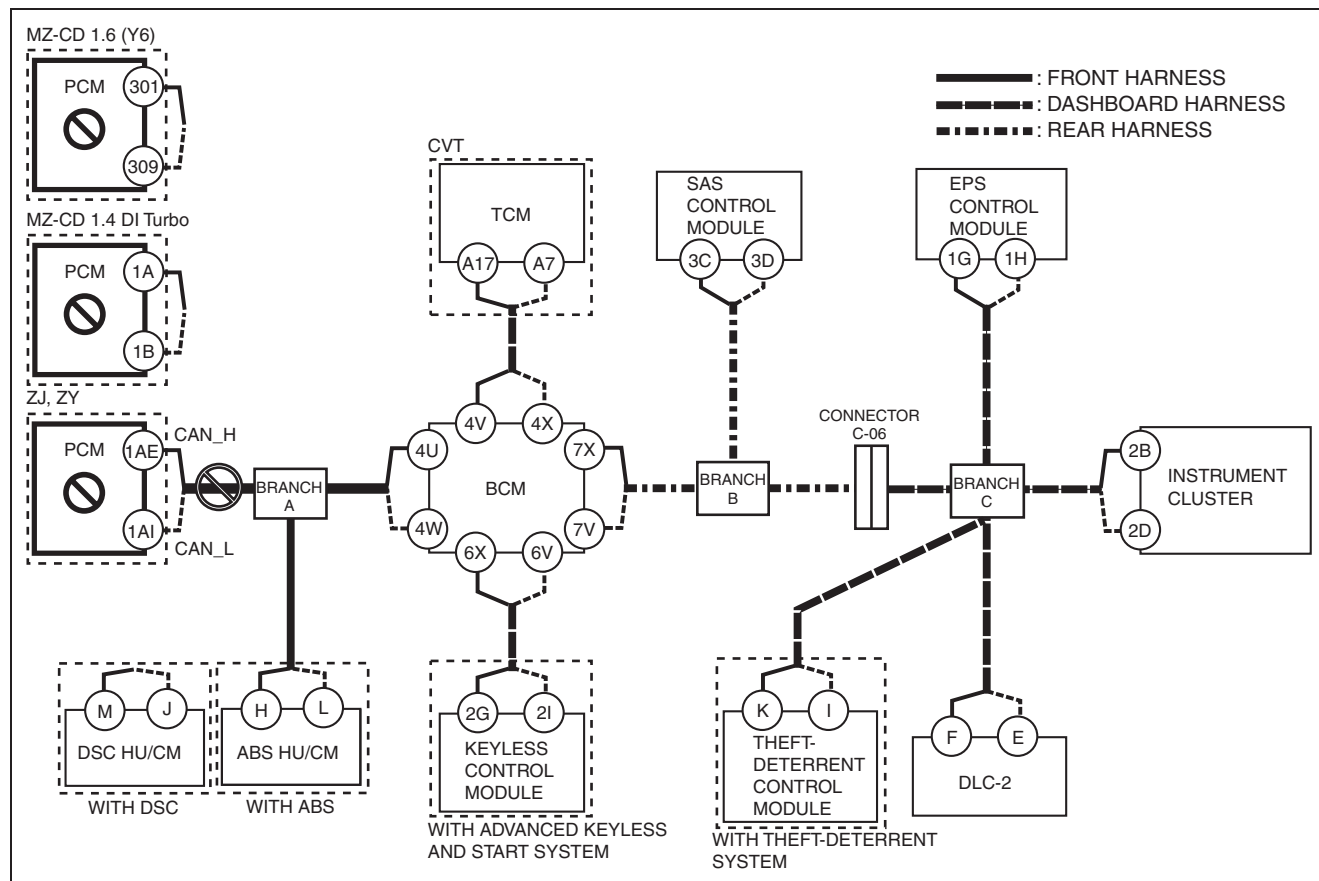
\*9 : Theft-deterrent system

## A

### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between PCM and branch A
- PCM malfunction

### System wiring diagram



am2zzw0000467

### Inspection item

#### ZJ, ZY

- PCM connector
- Wiring harness between PCM terminal 1AE and branch A
- Wiring harness between PCM terminal 1AI and branch A
- PCM

#### MZ-CD 1.4 DI Turbo

- PCM connector
- Wiring harness between PCM terminal 1A and branch A
- Wiring harness between PCM terminal 1B and branch A
- PCM

#### MZ-CD 1.6 (Y6)

- PCM connector
- Wiring harness between PCM terminal 301 and branch A
- Wiring harness between PCM terminal 309 and branch A
- PCM

## B

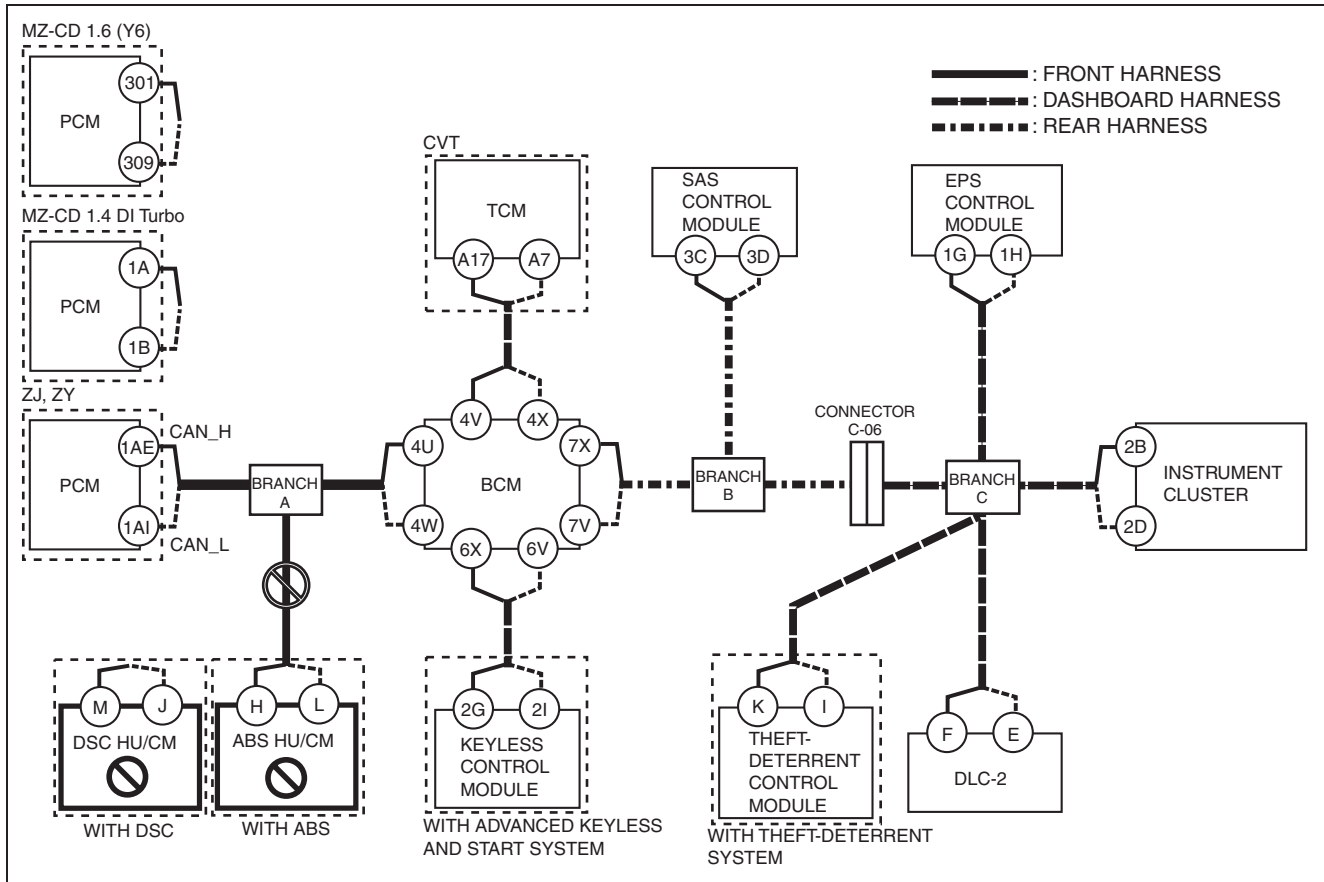
### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between ABS HU/CM and branch A
- Open circuit in wiring harness between DSC HU/CM and branch A
- ABS HU/CM malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

- DSC HU/CM malfunction

### System wiring diagram



am2zzw0000467

### Inspection item

- ABS HU/CM connector
- DSC HU/CM connector
- Wiring harness between ABS HU/CM terminal H and branch A
- Wiring harness between ABS HU/CM terminal L and branch A
- Wiring harness between DSC HU/CM terminal M and branch A
- Wiring harness between DSC HU/CM terminal J and branch A
- ABS HU/CM
- DSC HU/CM

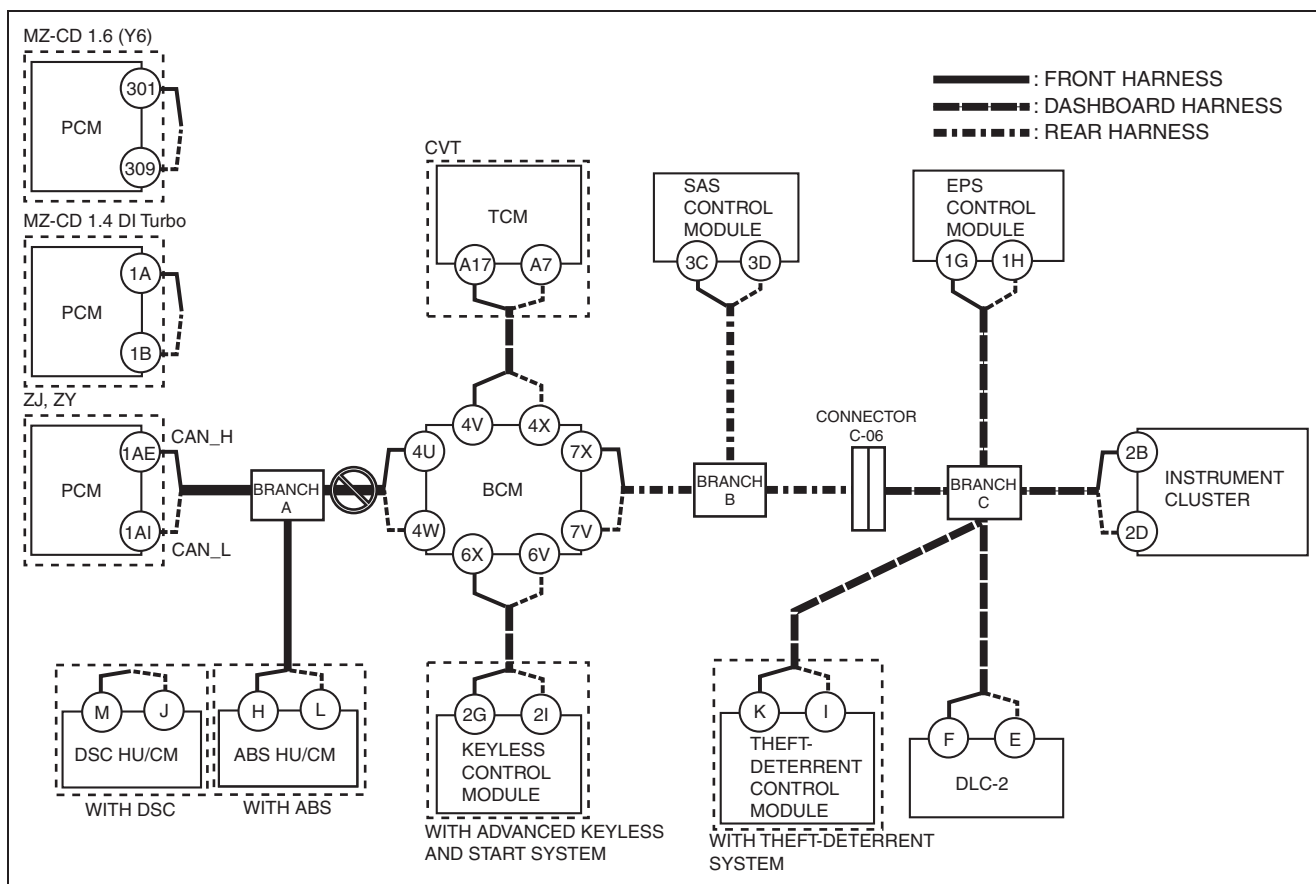
### C

#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between BCM and branch A

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000467

### Inspection item

- BCM connector
- Wiring harness between BCM terminal 4U and branch A
- Wiring harness between BCM terminal 4W and branch A

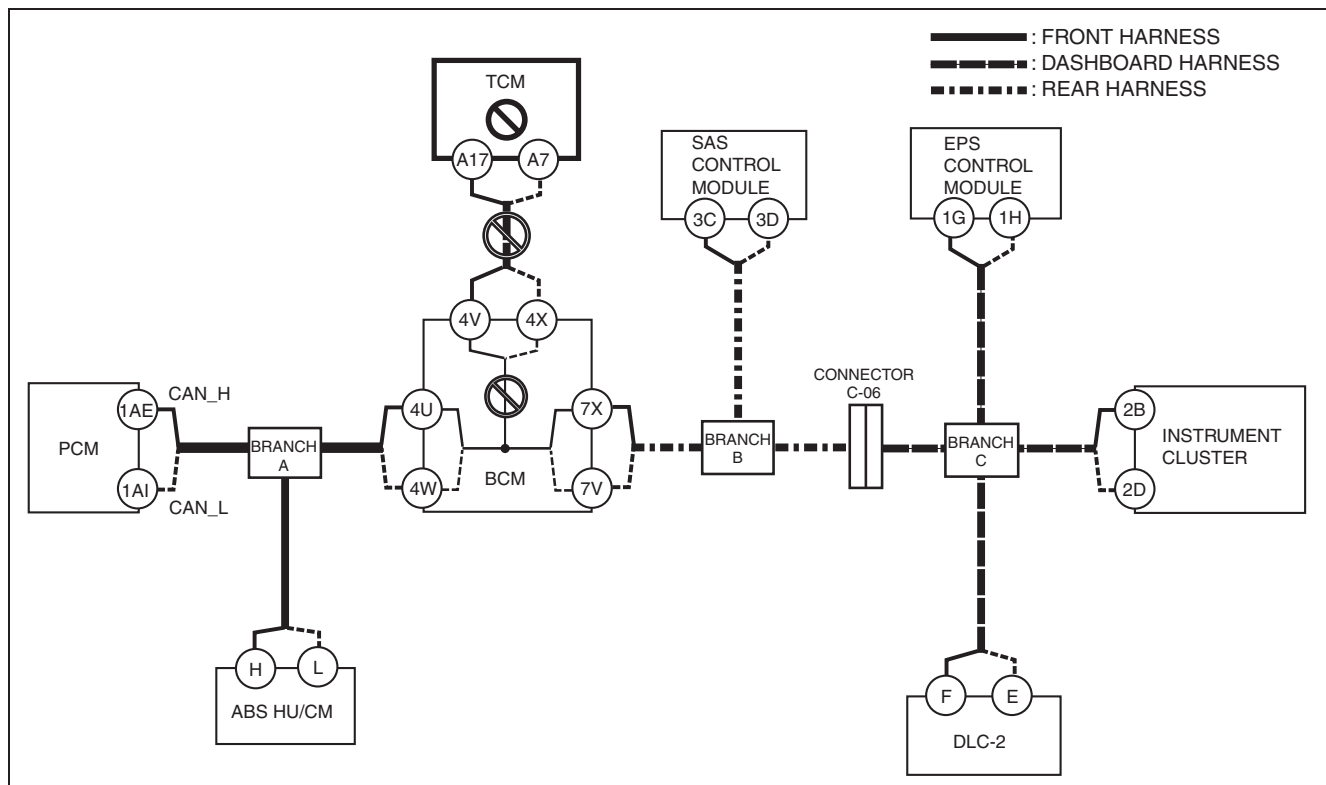
### D

#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness BCM and TCM
- TCM malfunction
- BCM malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



### Inspection item

- TCM connector
- BCM connector
- Wiring harness between TCM terminal A17 and BCM terminal 4V
- Wiring harness between TCM terminal A7 and BCM terminal 4X
- TCM
- BCM

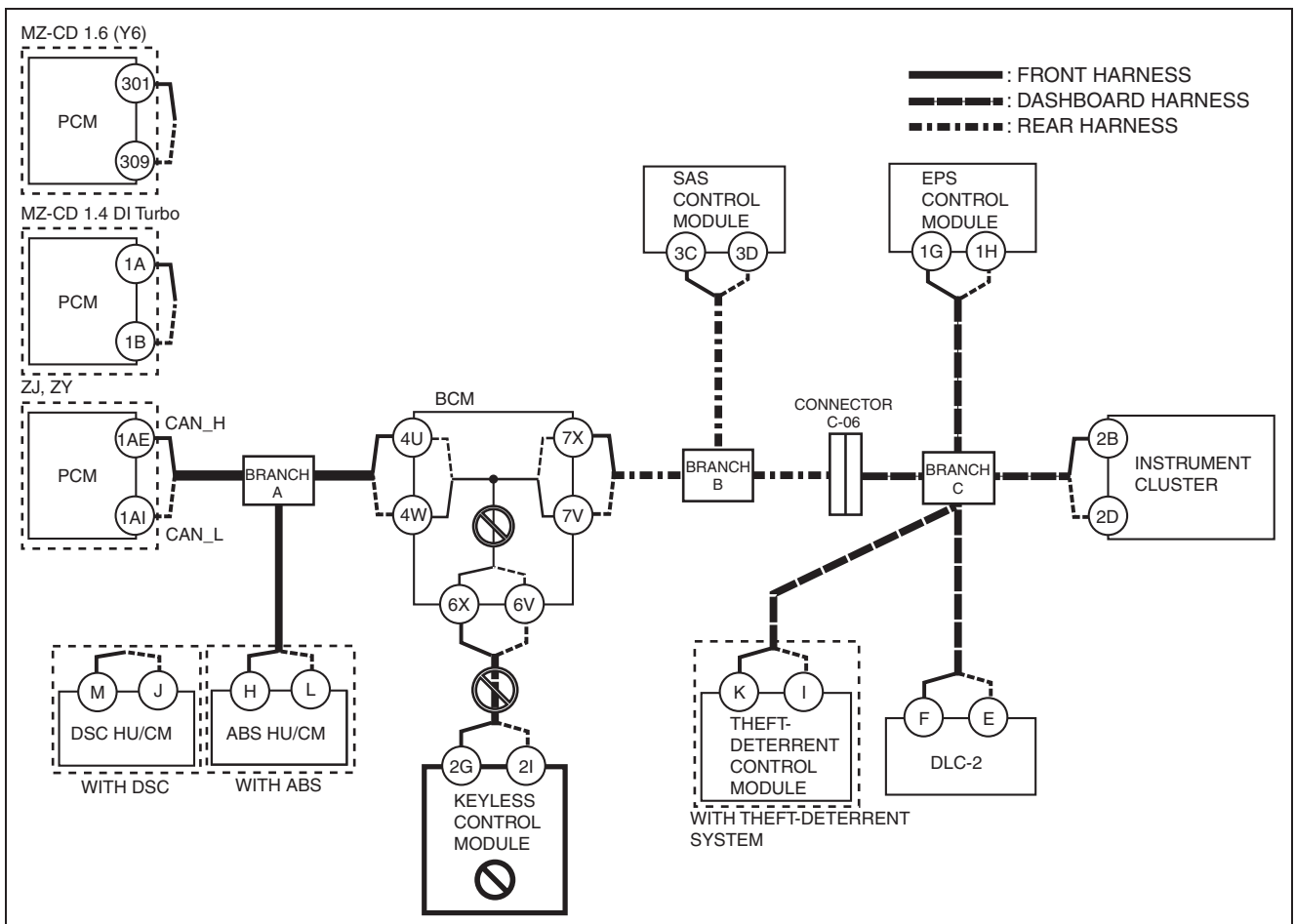
### E

#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness keyless control module and BCM
- Keyless control module malfunction.
- BCM malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000467

### Inspection item

- Keyless control module connector
- BCM connector
- Wiring harness between keyless control module terminal 2G and BCM terminal 6X
- Wiring harness between keyless control module terminal 2I and BCM terminal 6V
- Keyless control module
- BCM

### F

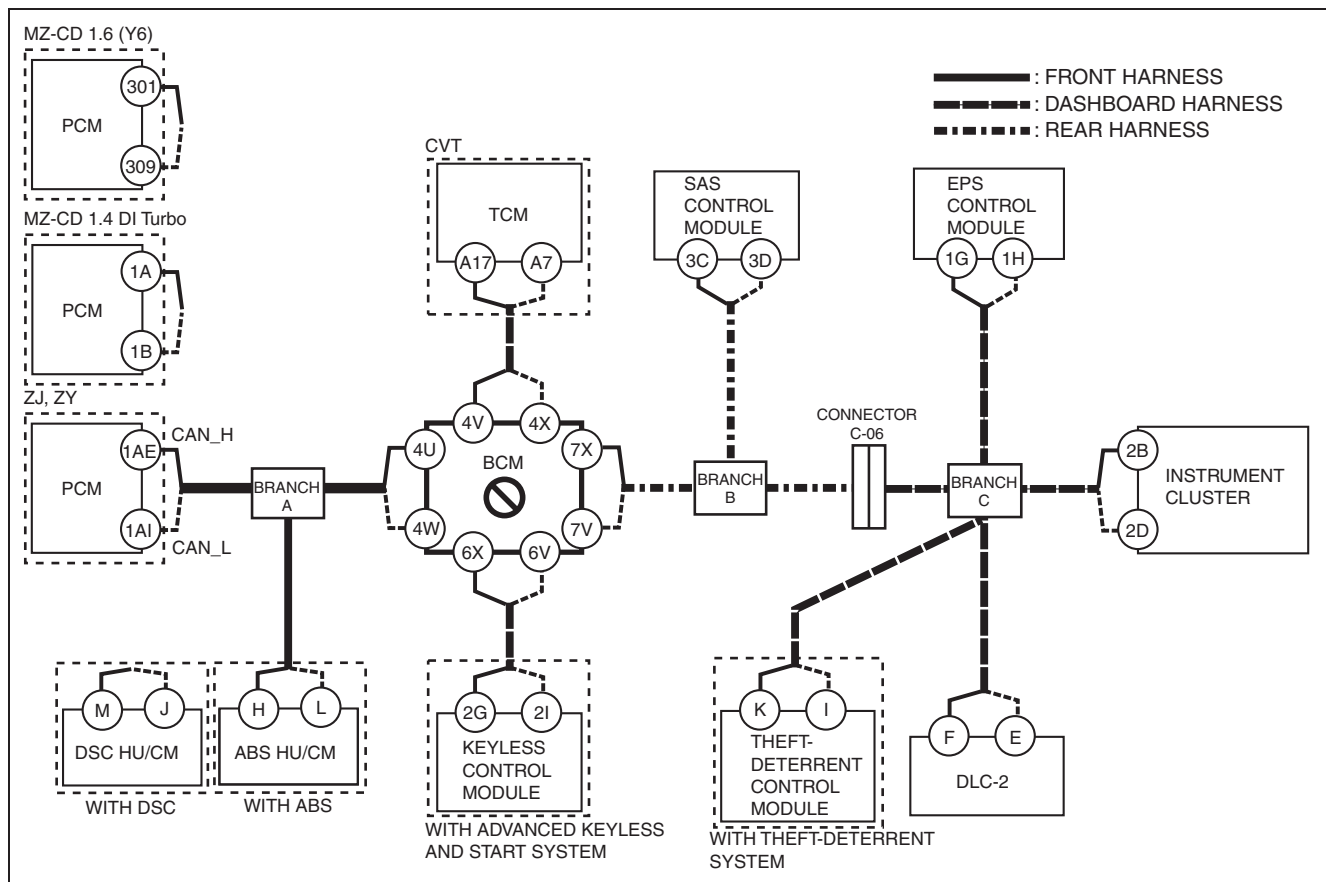
#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- BCM malfunction



## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000467

### Inspection item

- BCM

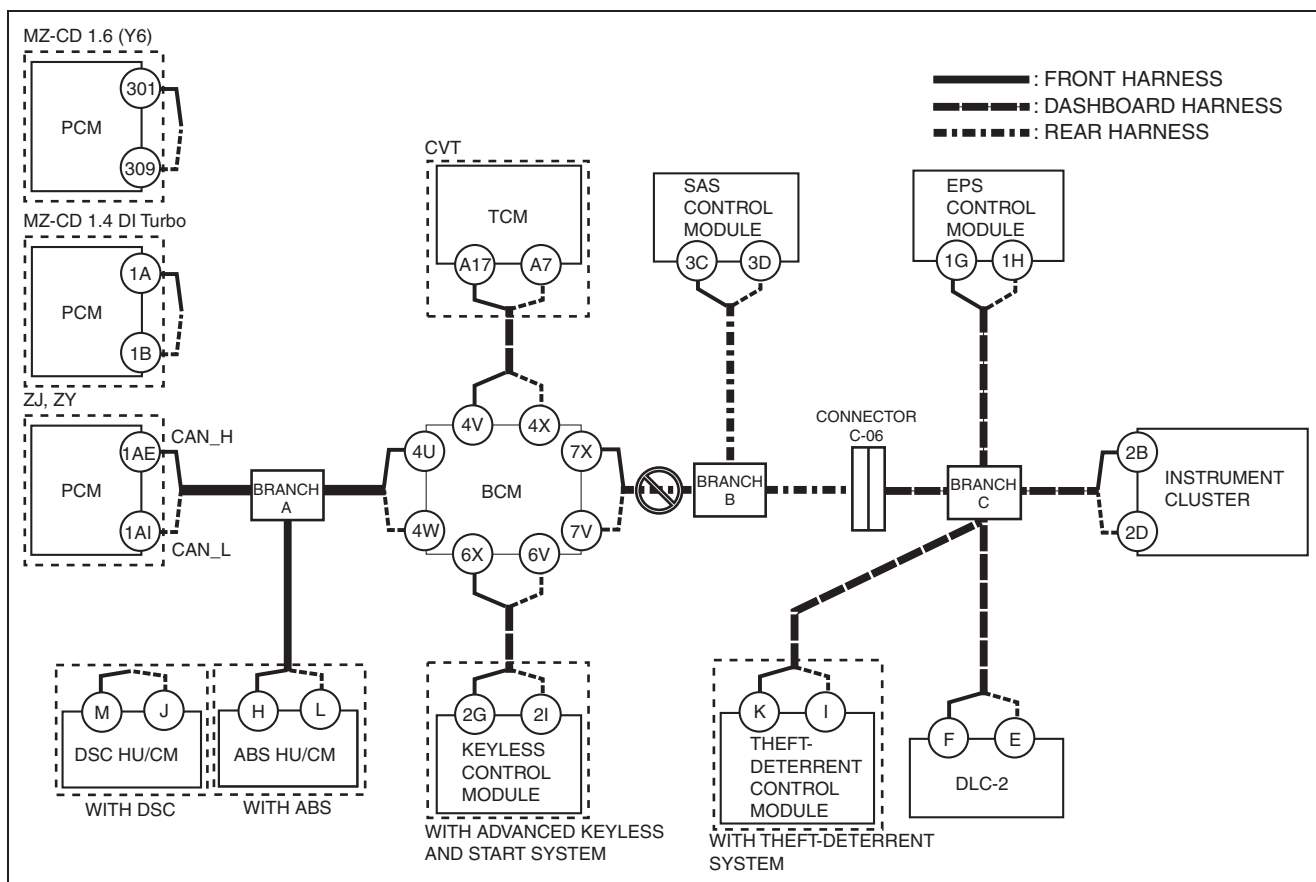
### G

### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness BCM and branch B

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

## System wiring diagram



am2zzw0000467

## Inspection item

- BCM connector
- Wiring harness between BCM terminal 7X and branch B
- Wiring harness between BCM terminal 7V and branch B

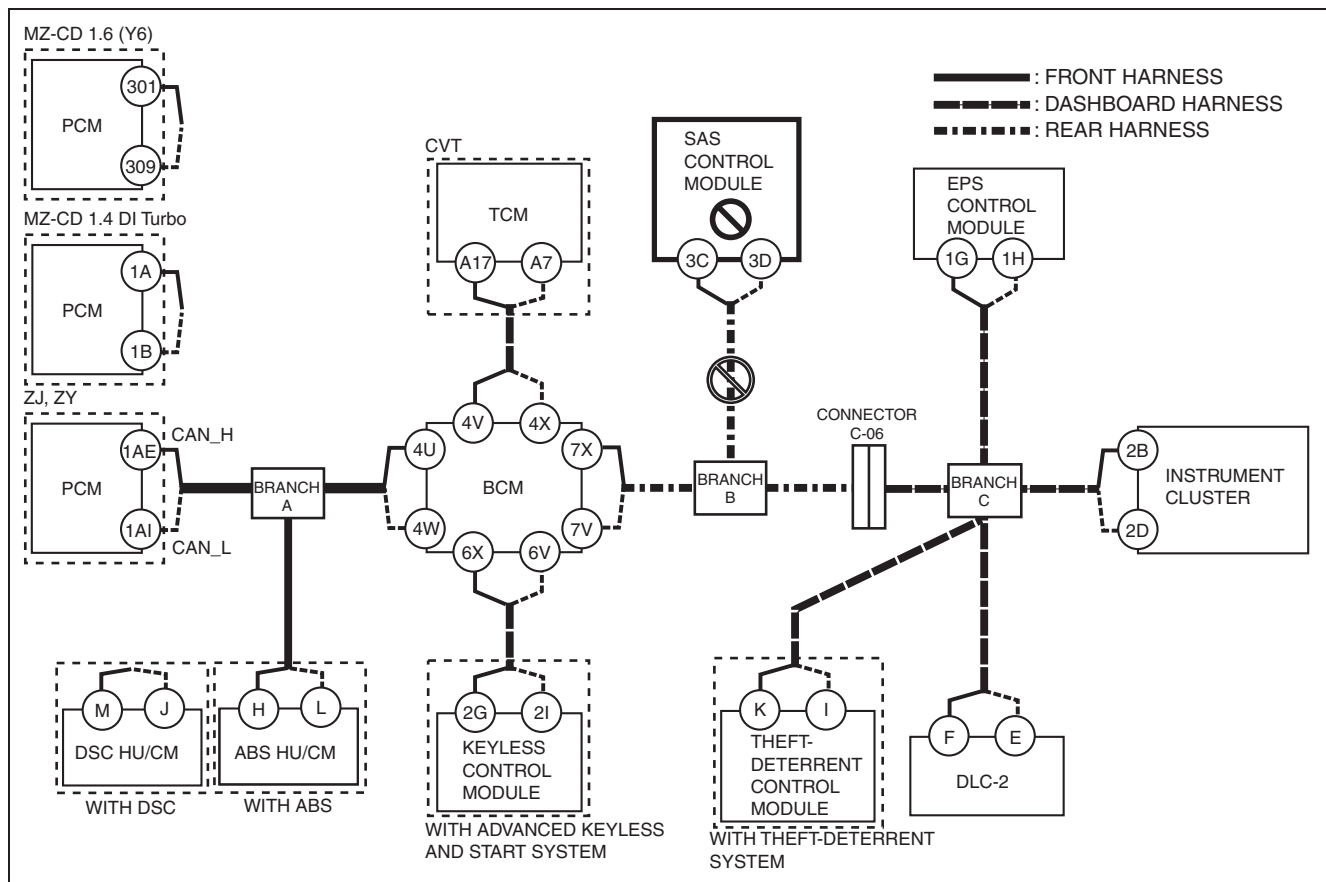
## H

### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness SAS control module and branch B
- SAS control module malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000467

### Inspection item

- SAS control module connector
- Wiring harness between SAS control module terminal 3C and branch B
- Wiring harness between SAS control module terminal 3D and branch B
- SAS control module

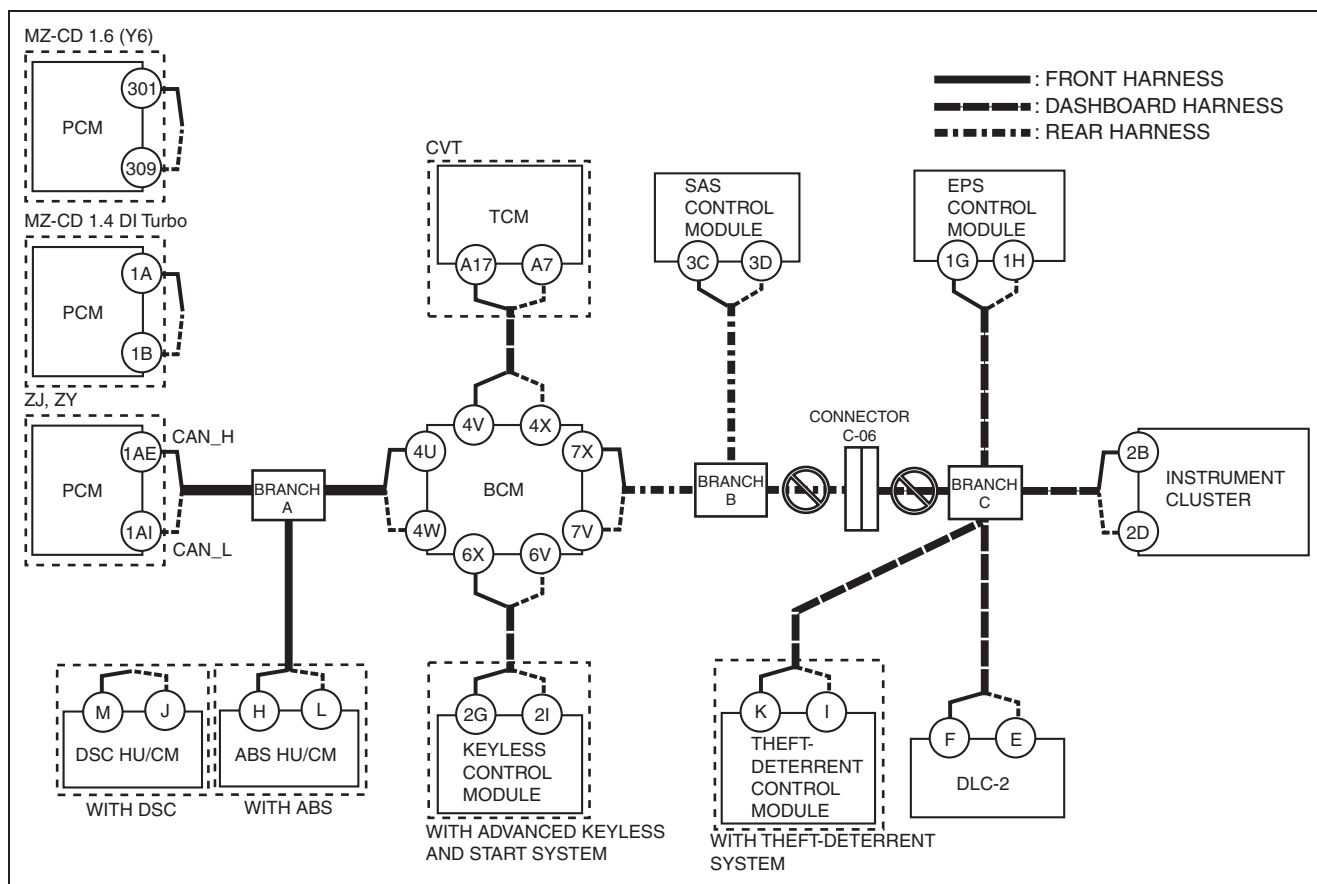
### I

### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness branch B and connector C-06
- Open circuit in wiring harness connector C-06 and branch C
- Connector C-06 malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000467

### Inspection item

- Connector C-06
- Wiring harness between branch B and connector C-06
- Wiring harness between connector C-06 and branch C

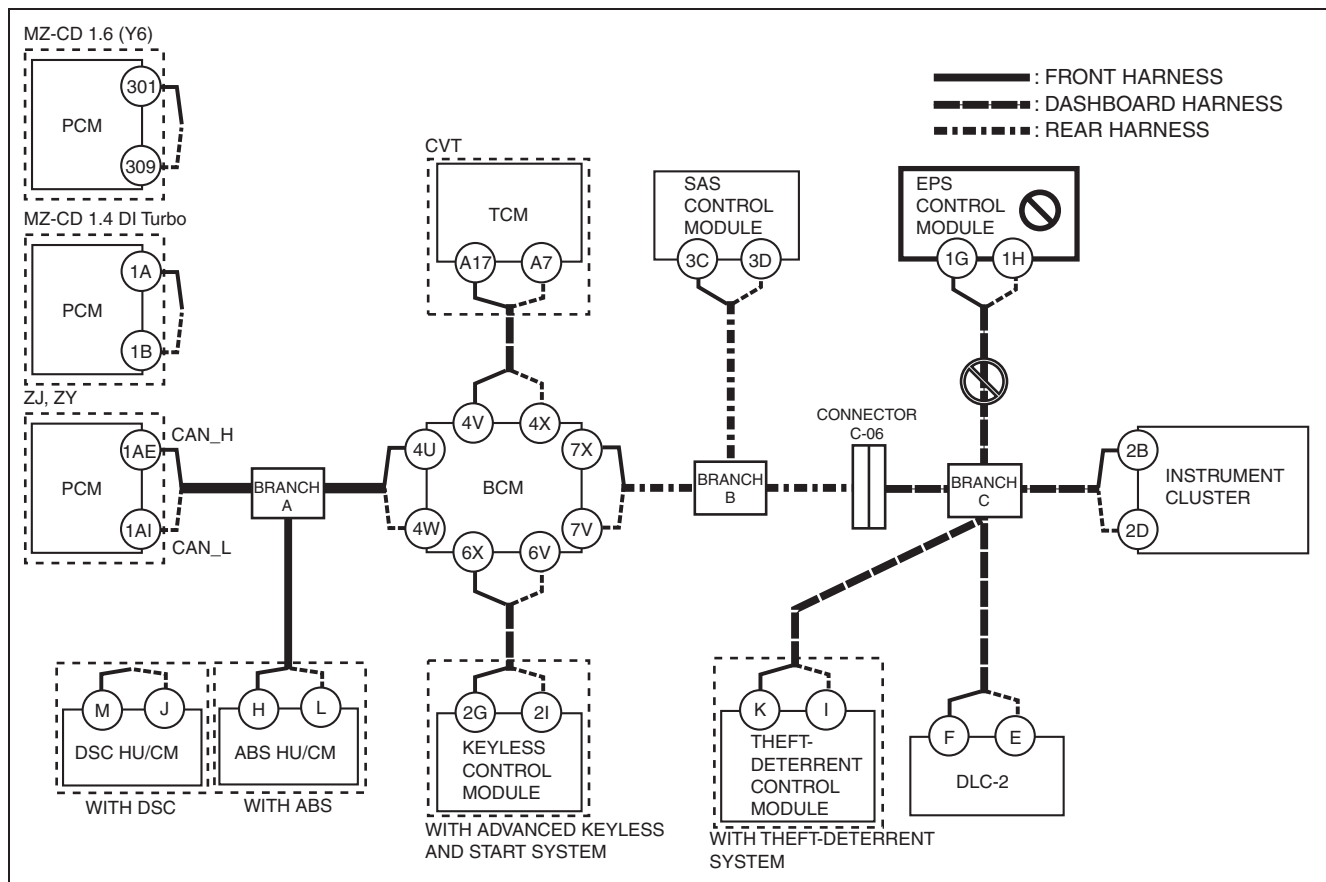
### J

#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between EPS control module and branch C
- EPS control module malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000467

### Inspection item

- EPS control module connector
- Wiring harness between EPS control module terminal 1G and branch C
- Wiring harness between EPS control module terminal 1H and branch C
- EPS control module

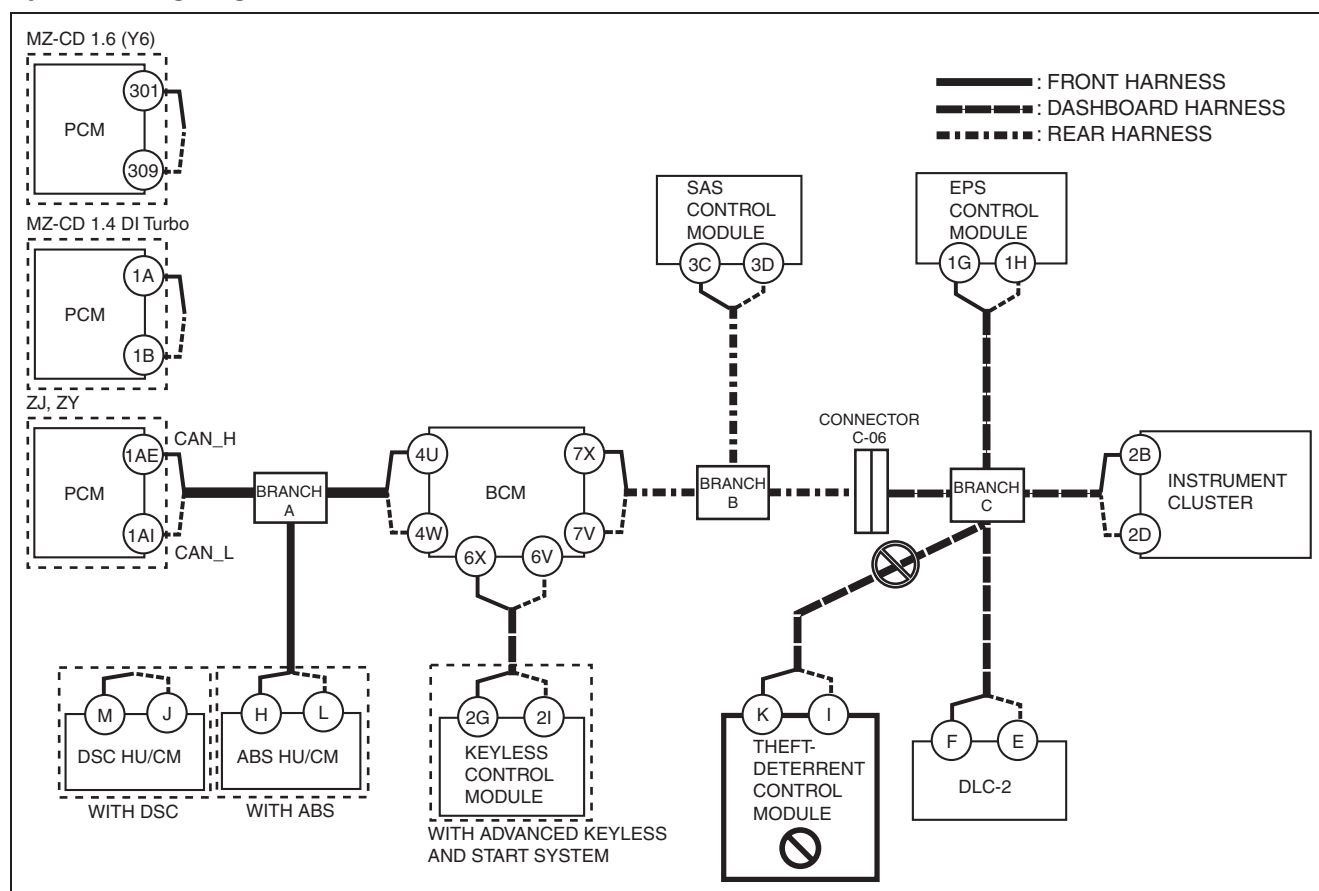
### K

#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between Theft-deterrent control module and branch C
- Theft-deterrent control module malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000468

### Inspection item

- Theft-deterrent control module connector
- Wiring harness between theft-deterrent control module terminal K and branch C
- Wiring harness between theft-deterrent control module terminal I and branch C
- Theft-deterrent control module

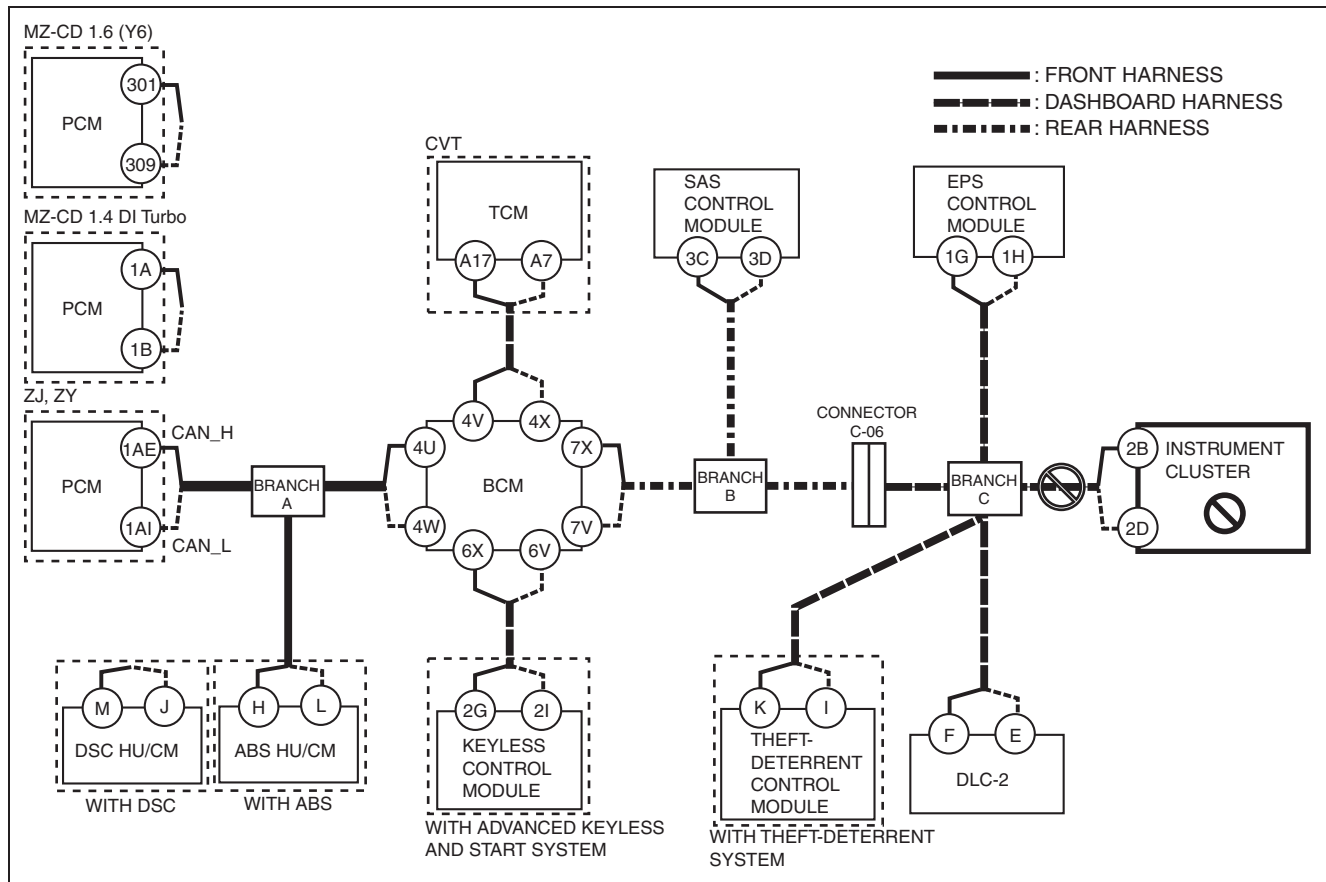
### L

#### Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness instrument cluster and branch C
- Instrument cluster malfunction

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

### System wiring diagram



am2zzw0000468

### Inspection item

- Instrument cluster connector
- Wiring harness between instrument cluster terminal 2B and branch C
- Wiring harness between instrument cluster terminal 2D and branch C
- Instrument cluster

### M-MDS AND VEHICLE NOT COMMUNICATING [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

id0902j4037400

#### Caution

- Perform the following on-board diagnosis according to 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)] troubleshooting procedure.

### Detection Condition

- Possible causes of communication errors between the M-MDS and vehicle include communication circuit interruption due to an open circuit in the CAN communication wiring harness, or poor contact of connector terminals, or a BUS OFF condition due to a short circuit in the CAN communication wiring harness.

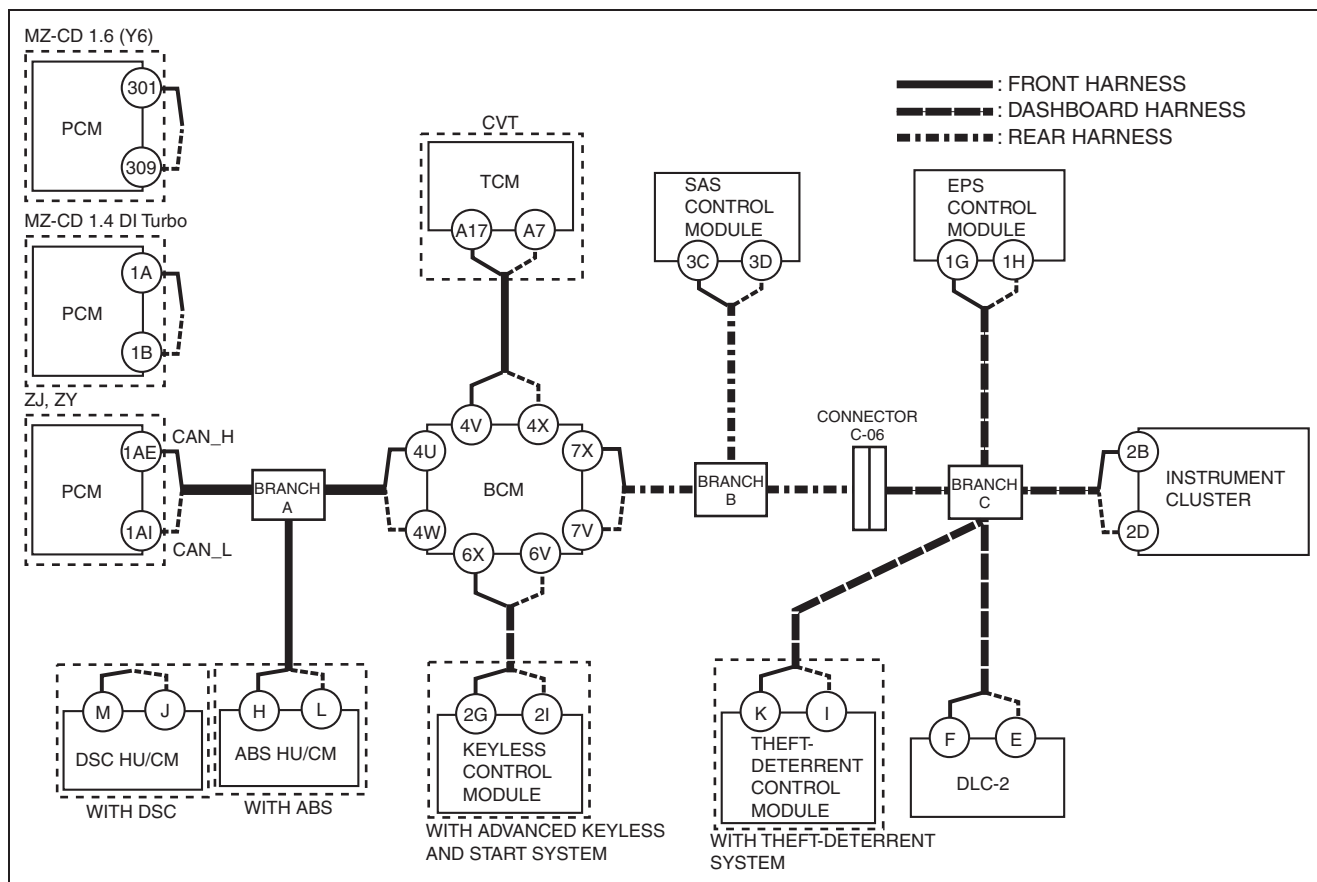
### Possible Causes

- Open circuit in wiring harness between PCM and DLC-2
- Open circuit in BCM CAN line
- Improper insertion, connector terminal damage, deformation, corrosion, or disconnection of PCM, BCM, or connector C-06
- Short circuit in wiring harness between CAN system-related module CAN\_L and CAN\_H lines
- Short circuit to power supply in wiring harness between CAN system-related module
- Short circuit to ground in wiring harness between CAN system-related module
- Short circuit to power supply in CAN system-related module internal CAN lines
- Short circuit to ground in CAN system-related module internal CAN lines
- Damage, deformation, corrosion, or disconnection of DLC-2
- PCM power supply is not normal
- PCM ground is not normal
- PCM internal resistance is not normal

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

- CAN system-related module malfunction

## Wiring Diagram



am2zzw0000466

## Diagnostic Procedure

### Caution

- When disconnecting the connector, verify that there is no looseness, damage, deformation, corrosion, or poor connection of the connector terminals.

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                   | Action                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFICATION BEFORE SERVICING</b> <ul style="list-style-type: none"> <li>• Is there communication between the M-MDS and vehicle?</li> </ul>                                                                                                                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Go back to FOREWORD [MULTIPLEX COMMUNICATION SYSTEM. (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].)] |
| 2    | <b>VERIFY THAT M-MDS AND DLC-2 ARE CONNECTED</b> <ul style="list-style-type: none"> <li>• Verify the connection condition between the M-MDS and DLC-2.</li> <li>• Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                    | Yes<br>Go to the next step.                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Correct the connection condition, then <b>go to Step 13.</b>                                                             |
| 3    | <b>VERIFY PCM POWER SUPPLY CONDITION</b> <ul style="list-style-type: none"> <li>• Refer to the PCM terminal voltage table and inspect the terminal voltage and fuse condition. (See 01-40C-9 PCM INSPECTION [MZ-CD 1.6 (Y6)].)</li> <li>• (See 01-40B-9 PCM INSPECTION [MZ-CD 1.4 DI Turbo].)</li> <li>• (See 01-40A-9 PCM INSPECTION [ZJ, ZY].)</li> <li>• Is the power supply condition normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                              | No<br>Repair or replace the fuse or wiring harness, then <b>go to Step 13.</b>                                                 |



## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>VERIFY PCM BODY GROUND CONDITION</b> <ul style="list-style-type: none"> <li>Inspect the PCM body ground wiring harness and ground point.</li> <li>Are the ground and ground point normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair or replace the wiring harness, then <b>go to Step 13.</b>                                                                                                                                                              |
| 5    | <b>INSPECT PCM CONNECTOR TERMINAL</b> <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the PCM connector.</li> <li>Are the PCM connector terminal normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Repair the connector terminal if necessary, then <b>go to Step 13.</b>                                                                                                                                                        |
| 6    | <b>INSPECT PCM</b> <ul style="list-style-type: none"> <li>Measure the resistance between the following PCM connector terminals:<br/> <b>ZJ, ZY</b> <ul style="list-style-type: none"> <li>Between terminal 1AE and terminal 1AI (part side)</li> </ul> <b>MZ-CD 1.4 DI Turbo</b> <ul style="list-style-type: none"> <li>Between terminal 1A and terminal 1B (part side)</li> </ul> <b>MZ-CD 1.6 (Y6)</b> <ul style="list-style-type: none"> <li>Between terminal 301 and terminal 309 (part side)</li> </ul> </li> <li>Is the resistance 118—130 ohms?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Replace the PCM, then go to the next step.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) |
| 7    | <b>VERIFY THAT THERE IS NO OPEN CIRCUIT IN CAN COMMUNICATION WIRING HARNESS</b><br><b>Caution</b> <ul style="list-style-type: none"> <li><b>When inspecting the DLC-2, touch it with a paper clip or similar thin pin without directly inserting a tester into the terminals.</b></li> <li>Verify the continuity between the following terminals:<br/> <b>ZJ, ZY</b> <ul style="list-style-type: none"> <li>Between PCM terminal 1AE and BCM terminal 4U</li> <li>Between PCM terminal 1AI and BCM terminal 4W</li> <li>Between DLC-2 terminal F and BCM terminal 7X</li> <li>Between DLC-2 terminal E and BCM terminal 7V</li> </ul> <b>MZ-CD 1.4 DI Turbo</b> <ul style="list-style-type: none"> <li>Between PCM terminal 1A and BCM terminal 4U</li> <li>Between PCM terminal 1B and BCM terminal 4W</li> <li>Between DLC-2 terminal F and BCM terminal 7X</li> <li>Between DLC-2 terminal E and BCM terminal 7V</li> </ul> <b>MZ-CD 1.6 (Y6)</b> <ul style="list-style-type: none"> <li>Between PCM terminal 301 and BCM terminal 4U</li> <li>Between PCM terminal 309 and BCM terminal 4W</li> <li>Between DLC-2 terminal F and BCM terminal 7X</li> <li>Between DLC-2 terminal E and BCM terminal 7V</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>There is an open circuit in the CAN communication wiring harness. Repair or replace it, then <b>go to Step 13.</b>                                                                                                            |

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                           |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <b>INSPECT CAN COMMUNICATION WIRING HARNESS IN BCM FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Verify the continuity between the following terminals: <ul style="list-style-type: none"> <li>Between BCM terminal 7X and BCM terminal 4U</li> <li>Between BCM terminal 7V and BCM terminal 4W</li> </ul> </li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Replace the BCM which has an open circuit in the CAN communication wiring harness in the BCM, then <b>go to Step 13</b> .<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.) |
| 9    | <b>VERIFY THAT THERE IS NO SHORT CIRCUIT IN CAN COMMUNICATION WIRING HARNESS</b> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li>When inspecting the DLC-2, touch it with a paper clip or similar thin pin without directly inserting a tester into the terminals.</li> <li>Measure the resistance between the terminals. <ul style="list-style-type: none"> <li>Between DLC-2 terminal F and DLC-2 terminal E</li> </ul> </li> <li>Is the resistance 60 ohms or less?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes<br>There is an open circuit in the CAN communication wiring harness. Repair or replace it, then <b>go to Step 13</b> .                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                       |
| 10   | <b>VERIFY NO SHORT CIRCUIT TO GROUND IN CAN COMMUNICATION WIRING HARNESS</b> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li>When inspecting the DLC-2, touch it with a paper clip or similar thin pin without directly inserting a tester into the terminals.</li> <li>Verify the continuity between the following terminals: <ul style="list-style-type: none"> <li>Between DLC-2 terminal F and ground</li> <li>Between DLC-2 terminal E and ground</li> </ul> </li> </ul> <b>ZJ, ZY</b> <ul style="list-style-type: none"> <li>Between PCM terminal 1AE and ground</li> <li>Between PCM terminal 1AI and ground</li> </ul> <b>MZ-CD 1.4 DI Turbo</b> <ul style="list-style-type: none"> <li>Between PCM terminal 1A and ground</li> <li>Between PCM terminal 1B and ground</li> </ul> <b>MZ-CD 1.6 (Y6)</b> <ul style="list-style-type: none"> <li>Between PCM terminal 301 and ground</li> <li>Between PCM terminal 309 and ground</li> </ul> <li>Is there continuity?</li> | Yes<br>There is a short circuit to ground in the CAN communication wiring harness. Repair or replace it, then <b>go to Step 13</b> .                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                                                       |

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Action                                                                                                                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | <b>VERIFY NO SHORT CIRCUIT TO POWER SUPPLY SYSTEM IN CAN COMMUNICATION WIRING HARNESS</b><br><b>Caution</b> <ul style="list-style-type: none"> <li>When inspecting the DLC-2, touch it with a paper clip or similar thin pin without directly inserting a tester into the terminals.</li> </ul> <ul style="list-style-type: none"> <li>Verify the continuity between the following terminals: <ul style="list-style-type: none"> <li>Between DLC-2 terminal F and DLC-2 terminal A</li> <li>Between DLC-2 terminal E and DLC-2 terminal A</li> </ul> </li> </ul> <b>ZJ, ZY</b> <ul style="list-style-type: none"> <li>Between PCM terminal 1AE and PCM terminal 1BC</li> <li>Between PCM terminal 1AI and PCM terminal 1BC</li> </ul> <b>MZ-CD 1.4 DI Turbo</b> <ul style="list-style-type: none"> <li>Between PCM terminal 1A and PCM terminal 2Y</li> <li>Between PCM terminal 1B and PCM terminal 2Y</li> </ul> <b>MZ-CD 1.6 (Y6)</b> <ul style="list-style-type: none"> <li>Between PCM terminal 301 and PCM terminal 331</li> <li>Between PCM terminal 309 and PCM terminal 331</li> </ul> <ul style="list-style-type: none"> <li>Is there continuity?</li> </ul> | Yes<br>There is a short circuit to the power supply system in the CAN communication wiring harness. Repair or replace it, then go to Step 13.                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                          |
| 12   | <b>INSPECT CAN-RELATED MODULES OTHER THAN PCM and BCM</b> <ul style="list-style-type: none"> <li>Remove only one of the CAN-related modules other than those related to the PCM and BCM.</li> <li>Connect the negative battery cable.</li> <li>Connect the M-MDS to the DLC-2.</li> <li>Does the M-MDS recognize the vehicle?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes<br>Replace the removed module.                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Inspect all of the CAN-related modules other than those related to the PCM and BCM using the same procedure. After inspecting all of the modules, go to the next step.                                                        |
| 13   | <b>PERFORM VEHICLE IDENTIFICATION</b> <ul style="list-style-type: none"> <li>Connect the M-MDS to the DLC-2.</li> <li>Does the M-MDS recognize the vehicle?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes<br>DTC troubleshooting completed.                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Replace the PCM, then go to the next step.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) |
| 14   | <b>PERFORM VEHICLE IDENTIFICATION</b> <ul style="list-style-type: none"> <li>Connect the M-MDS to the DLC-2.</li> <li>Does the M-MDS recognize the vehicle?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes<br>DTC troubleshooting completed.                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Replace the BCM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                                                             |

### DTC U0001:00, U0001:88, U0073:00 [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

id0902j4001200

|                     |          |                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DTC                 | U0001:00 | CAN system communication error                                                                                                                                                                                                                                                                                                                        |
|                     | U0001:88 | CAN system communication error                                                                                                                                                                                                                                                                                                                        |
|                     | U0073:00 | CAN system communication error                                                                                                                                                                                                                                                                                                                        |
| DETECTION CONDITION |          | <b>Warning</b> <ul style="list-style-type: none"> <li>Perform the following on-board diagnosis according to 09-02I-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)] troubleshooting procedure.</li> </ul> <ul style="list-style-type: none"> <li>CAN system-related harness malfunction</li> <li>CAN system-related module malfunction</li> </ul> |

# ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|                | U0001:00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CAN system communication error |
| DTC            | U0001:88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CAN system communication error |
|                | U0073:00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CAN system communication error |
| POSSIBLE CAUSE | <ul style="list-style-type: none"><li>• Open or short circuit in wiring harness</li><li>• Malfunction of connectors between PCM, DSC HU/CM (with DSC), ABS HU/CM (with ABS), BCM, keyless control module, TCM, SAS control module, EPS control module, theft-deterrent control module and instrument cluster</li><li>• PCM malfunction</li><li>• DSC HU/CM malfunction (with DSC)</li><li>• ABS HU/CM malfunction (with ABS)</li><li>• BCM malfunction</li><li>• Keyless control module malfunction</li><li>• TCM malfunction</li><li>• SAS control module malfunction</li><li>• Theft-deterrent control module malfunction</li><li>• EPS control module malfunction</li><li>• Instrument cluster malfunction</li></ul> |                                |
|                | <p>— : CAN_H<br/>= : CAN_L</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                |

## Diagnostic procedure

### Caution

- When disconnecting the connector, verify that there is no looseness, damage, deformation, corrosion, or poor connection of the connector terminals.

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | <b>VERIFICATION BEFORE SERVICING</b> <ul style="list-style-type: none"> <li>Are any DTCs, except the following, displayed? <ul style="list-style-type: none"> <li>— U0001:00</li> <li>— U0001:88</li> <li>— U0073:00</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 2    | <b>INSPECTION OF CONTROL MODULE CONNECTOR OUTPUTTING DTCs</b> <ul style="list-style-type: none"> <li>Inspect the terminal condition of the control module connector outputting DTCs and the mid-connector.</li> <li>Are the connector terminals normal without damage, deformation, corrosion, or disconnection?</li> </ul>                                                                                                                                                                                                                                                                                                                                                      | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 3    | <b>INSPECTION OF POWER SUPPLY OF CONTROL MODULE OUTPUTTING DTCs</b> <ul style="list-style-type: none"> <li>Refer to the terminal voltage table of the control module outputting DTCs or use the PID/data monitoring function to inspect the terminal voltage and fuse condition.</li> <li>Is the power supply voltage normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                         | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 4    | <b>INSPECTION OF BODY GROUND CONDITION OF CONTROL MODULE OUTPUTTING DTCs</b> <ul style="list-style-type: none"> <li>Inspect the body ground wires and ground point of the control module outputting DTCs.</li> <li>Are the ground and ground point normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                            | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 5    | <b>CAN SYSTEM RELATED WIRING HARNESS INSPECTION</b> <ul style="list-style-type: none"> <li>CAN system related wiring harness inspection: <ul style="list-style-type: none"> <li>— Short to ground</li> <li>— Short to power supply</li> <li>— Short between twisted pair wiring harness</li> <li>— Open circuit</li> </ul> </li> <li>Is the wiring harness normal?</li> </ul>                                                                                                                                                                                                                                                                                                    | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 6    | <b>INSPECT PCM</b> <ul style="list-style-type: none"> <li>Disconnect the PCM connector.</li> <li>Measure the resistance between the following PCM connector terminals: <ul style="list-style-type: none"> <li><b>ZJ, ZY</b> <ul style="list-style-type: none"> <li>— Between terminal 1AE and terminal 1AI (part side)</li> </ul> </li> <li><b>MZ-CD 1.4 DI Turbo</b> <ul style="list-style-type: none"> <li>— Between terminal 1A and terminal 1B (part side)</li> </ul> </li> <li><b>MZ-CD 1.6 (Y6)</b> <ul style="list-style-type: none"> <li>— Between terminal 301 and terminal 309 (part side)</li> </ul> </li> </ul> </li> <li>Is the resistance 118—130 ohms?</li> </ul> | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 7    | <b>INSPECT INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>Disconnect the instrument cluster connector.</li> <li>Measure the resistance between the following instrument cluster connector terminals: <ul style="list-style-type: none"> <li>— Between terminal 2B and terminal 2D (part side)</li> </ul> </li> <li>Is the resistance 118—130 ohms?</li> </ul>                                                                                                                                                                                                                                                                                                     | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |
| 8    | <b>CAN RELATED MODULE VERIFICATION</b> <ul style="list-style-type: none"> <li>Remove only one of the CAN-related modules.</li> <li>Clear DTCs using the M-MDS.</li> <li>Inspect the DTCs of all modules using the M-MDS.</li> <li>Are DTCs U0001:00, U0001:88, U0073:00 displayed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                    | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No     |

## ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM (R.H.D.)]

| Step | Inspection                                                                                                                                                  |     | Action                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | AFTER REPAIR VERIFICATION<br>• Connect all of the modules.<br>• Clear DTCs using the M-MDS.<br>• Inspect the DTCs using the M-MDS.<br>• Are DTCs displayed? | Yes | Perform the CAN system on-board diagnosis again according to the troubleshooting procedure (See 09-02H-1 FOREWORD [MULTIPLEX COMMUNICATION SYSTEM (L.H.D.)].) |
|      |                                                                                                                                                             | No  | DTC troubleshooting completed.                                                                                                                                |

## 09-03A SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### POWER WINDOW SYSTEM

#### WIRING DIAGRAM

[POWER WINDOW SYSTEM]..... 09-03A-2

### FOREWORD

[POWER WINDOW SYSTEM]..... 09-03A-3

Troubleshooting Procedure ..... 09-03A-3

#### POWER WINDOW SYSTEM

INITIAL SETTING ..... 09-03A-3

### SYMPTOM TROUBLESHOOTING CHART

[POWER WINDOW SYSTEM]..... 09-03A-4

### POWER WINDOW SYSTEM

#### TROUBLESHOOTING QUESTIONNAIRE

[POWER WINDOW SYSTEM]..... 09-03A-5

### POWER WINDOW SYSTEM PRELIMINARY

#### INSPECTION

[POWER WINDOW SYSTEM]..... 09-03A-6

Manual Open/close Function

Inspection..... 09-03A-6

Auto Open/close Function

(Driver's Side) Inspection..... 09-03A-6

IG-OFF Timer Function Inspection ... 09-03A-6

Auto Reverse Pinch Protection

Function Inspection ..... 09-03A-7

Two-step Down Function

Inspection..... 09-03A-7

### No.1 THE AUTO OPEN/CLOSE

#### FUNCTION ON THE DRIVER'S SIDE

#### POWER WINDOW IS INOPERATIVE

[POWER WINDOW SYSTEM]..... 09-03A-8

### No.2 THE DRIVER'S SIDE POWER

#### WINDOW IS INOPERATIVE

[POWER WINDOW SYSTEM] .....09-03A-9

### No.3 ALL POWER WINDOWS

#### OTHER THAN DRIVER'S SIDE

#### DO NOT OPERATE USING

#### THE POWER WINDOW SUBSWITCH

[POWER WINDOW SYSTEM] .....09-03A-11

### No.4 ALL POWER WINDOWS

#### OTHER THAN DRIVER'S SIDE

#### DO NOT OPERATE USING

#### THE POWER WINDOW MAIN SWITCH

[POWER WINDOW SYSTEM] .....09-03A-11

### No.5 ALL POWER WINDOWS ARE

#### INOPERATIVE

[POWER WINDOW SYSTEM] .....09-03A-11

### No.6 DOOR GLASS REVERSES

#### EVEN THOUGH THE GLASS

#### DOES NOT ENCOUNTER

#### A FOREIGN OBJECT WHILE IT IS

#### MOVING UP IN AUTOMATIC MODE

[POWER WINDOW SYSTEM] .....09-03A-13

### No.7 ABNORMAL NOISE WHILE

#### THE DOOR GLASS IS OPENING

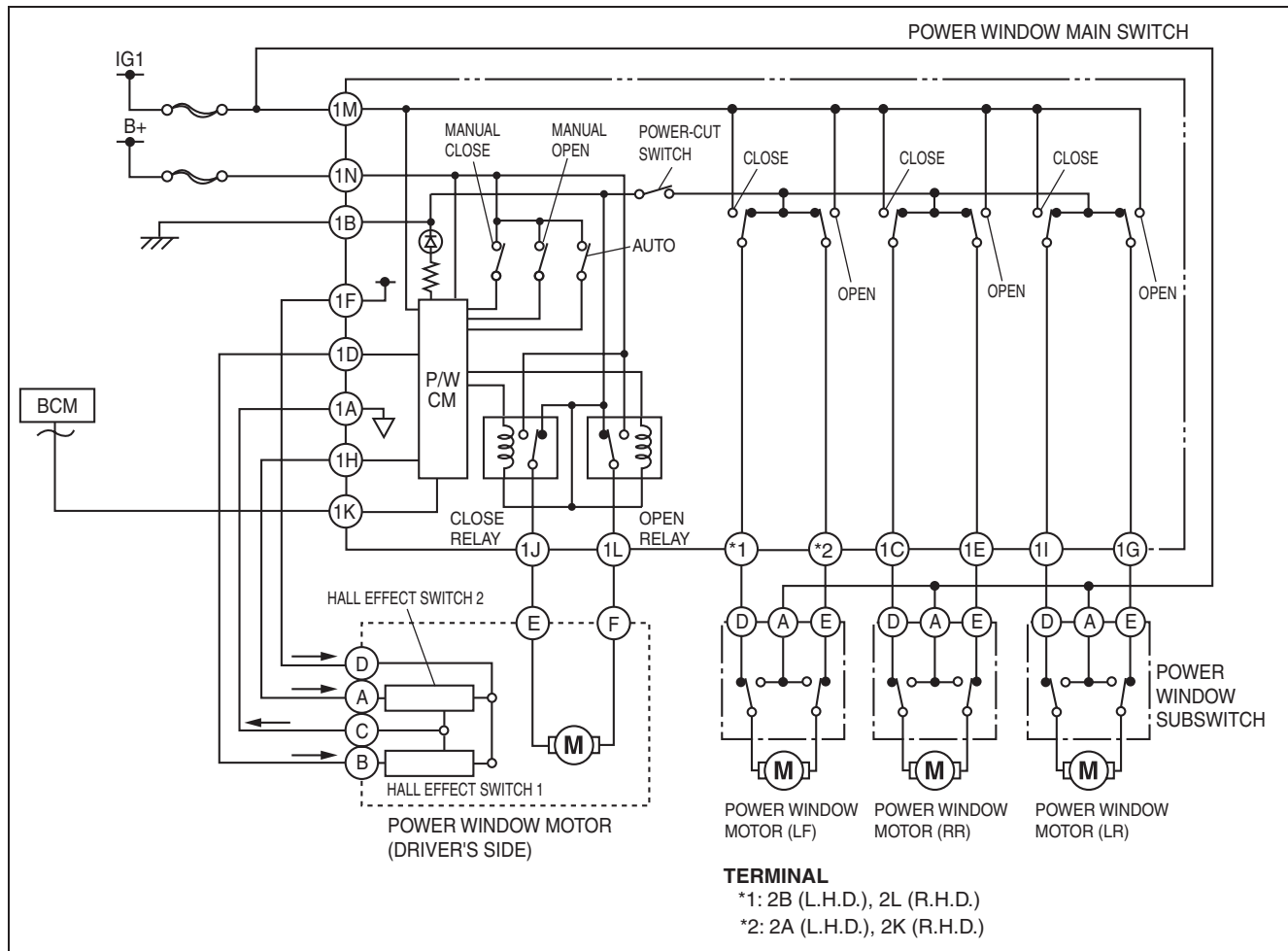
#### OR CLOSING

[POWER WINDOW SYSTEM] .....09-03A-15

# SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

## POWER WINDOW SYSTEM WIRING DIAGRAM [POWER WINDOW SYSTEM]

id0903a0805200



am2zzw0000383

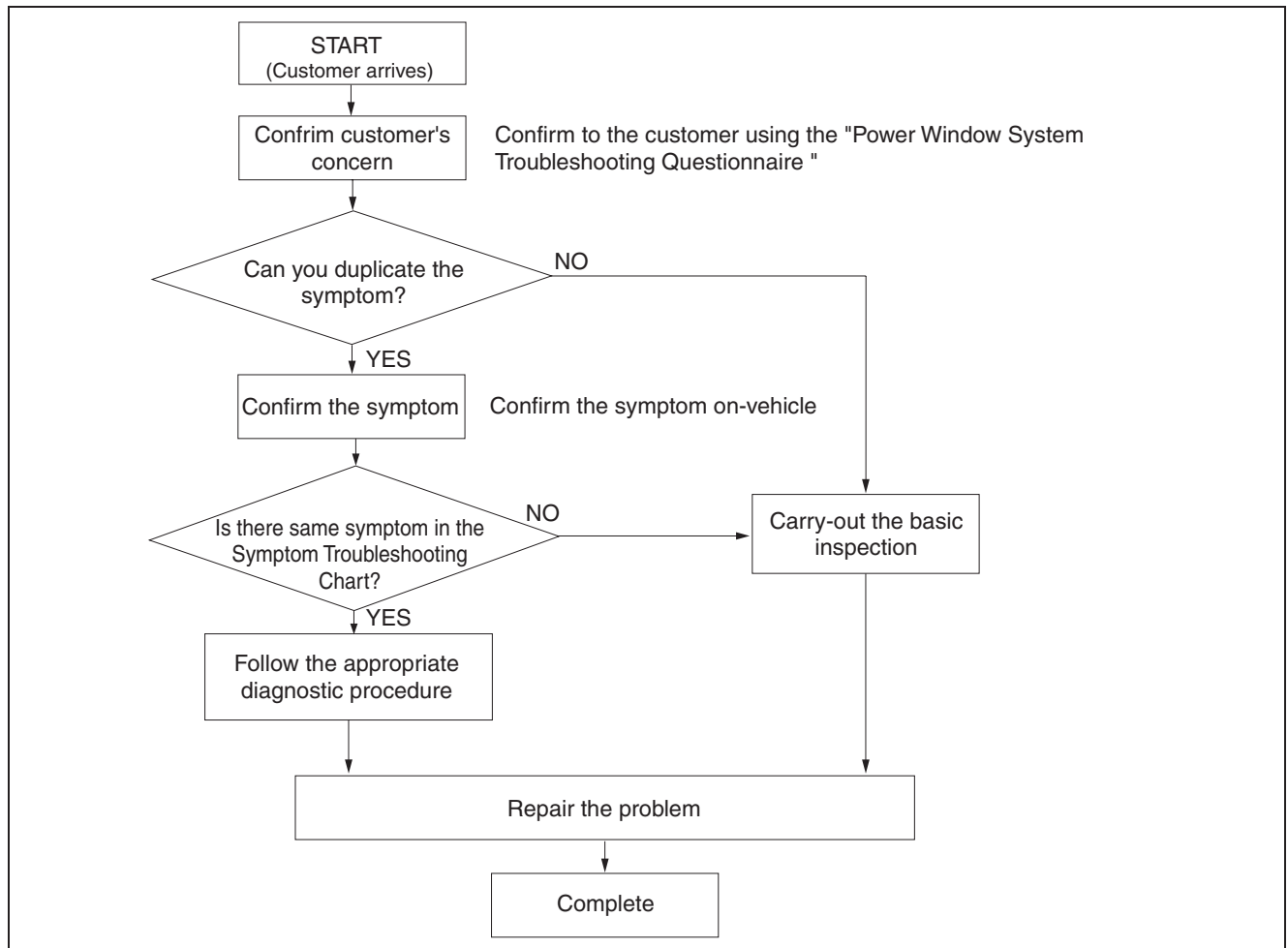


# SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

## FOREWORD [POWER WINDOW SYSTEM]

id0903a0805400

### Troubleshooting Procedure



am2zzw0000021

- Slightly shake the wiring harness and connectors while performing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions.

#### Caution

- If any of the following conditions continues indefinitely, the power window motor will heat up causing the protection circuit (integrated in power window motor) to operate. If this occurs, the operation of the power window motor protection circuit temporarily disables the power windows.
  - Continuous up and down operation of the power window.
  - Continuously pulling up the power window switch while the window glass is fully closed.
  - Continuously pressing the power window switch while the window glass fully opened.
- A malfunction in the power window system will be determined and the system will shift to malfunction mode if the power windows are operated up or down using the power window switch while the power window protection circuit is operating.
- While the power window system is in malfunction mode, but they do not operate using the auto open/close function.
- The power window system reverts to normal operation after performing the Power Window system initialization procedure.

#### Note

- If the following operations have been performed, initial setting is reset, and auto up/down and two-step down operation are disabled. Therefore, performing initial setting is necessary.
  - Negative battery cable disconnected
  - Power window main switch connector disconnected
  - Power window system power supply fuse removed

## POWER WINDOW SYSTEM INITIAL SETTING

- Refer to 09-12-27 POWER WINDOW SYSTEM INITIALIZATION PROCEDURE.

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### SYMPTOM TROUBLESHOOTING CHART [POWER WINDOW SYSTEM]

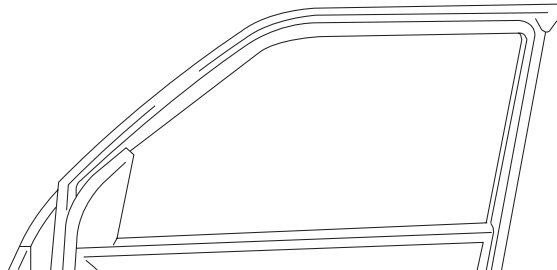
id0903a0805600

| No. | Malfunction symptom                                                                                                                                               |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | <b>09-03A-8</b> No.1 THE AUTO OPEN/CLOSE FUNCTION ON THE DRIVER'S SIDE POWER WINDOW IS INOPERATIVE [POWER WINDOW SYSTEM]                                          |
| 2   | <b>09-03A-9</b> No.2 THE DRIVER'S SIDE POWER WINDOW IS INOPERATIVE [POWER WINDOW SYSTEM]                                                                          |
| 3   | <b>09-03A-11</b> No.3 ALL POWER WINDOWS OTHER THAN DRIVER'S SIDE DO NOT OPERATE USING THE POWER WINDOW SUBSWITCH [POWER WINDOW SYSTEM]                            |
| 4   | <b>09-03A-11</b> No.4 ALL POWER WINDOWS OTHER THAN DRIVER'S SIDE DO NOT OPERATE USING THE POWER WINDOW MAIN SWITCH [POWER WINDOW SYSTEM]                          |
| 5   | <b>09-03A-11</b> No.5 ALL POWER WINDOWS ARE INOPERATIVE [POWER WINDOW SYSTEM]                                                                                     |
| 6   | <b>09-03A-13</b> No.6 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE [POWER WINDOW SYSTEM] |
| 7   | <b>09-03A-15</b> No.7 ABNORMAL NOISE WHILE THE DOOR GLASS IS OPENING OR CLOSING [POWER WINDOW SYSTEM]                                                             |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### POWER WINDOW SYSTEM TROUBLESHOOTING QUESTIONNAIRE [POWER WINDOW SYSTEM]

id0903a0835500

|                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                 |                     |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------|
| Date :                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                 |                     |                                                                                         |
| When did the malfunction first occur ?                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                 |                     |                                                                                         |
| Weather conditions                                                                                                                                                                                                                                                                                                | <input type="checkbox"/> Fair weather <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> Other (       )                                      | Outside temperature | Approx.    °F                                                                           |
| Driving conditons                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> Driving <input type="checkbox"/> Stopped (Engine is : <input type="checkbox"/> Running <input type="checkbox"/> Stopped)                                                               |                     |                                                                                         |
| Duplicate symtom?                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> YES <input type="checkbox"/> NO                                                                                                                                                        | Frequency           | <input type="checkbox"/> Always <input type="checkbox"/> Sometimes (       times/month) |
| Road conditions                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> City <input type="checkbox"/> Outer city <input type="checkbox"/> Freeway <input type="checkbox"/> Other (       ) / <input type="checkbox"/> Paved <input type="checkbox"/> Dirt road |                     |                                                                                         |
| *Follow the appropriate diagnostic procedures shown below or perform the basic troubleshooting flow.                                                                                                                                                                                                              |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.1) The auto open/close function on the driver's side power window inoperative.                                                                                                                                                                                                       |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.2) The driver's side power window is inoperative.                                                                                                                                                                                                                                    |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.3) All power windows other than driver's side do not operate using the power window subswitch.                                                                                                                                                                                       |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.4) All power windows other than driver's side do not operate using the power window main switch.                                                                                                                                                                                     |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.5) All power windows are inoperative.                                                                                                                                                                                                                                                |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.6) Door glass reverses even though the glass does not encounter a foreign object while it is moving up in automatic mode.                                                                                                                                                            |                                                                                                                                                                                                                 |                     |                                                                                         |
| Please clarify the position where the driver side front door glass opens automatically. <input type="checkbox"/> Completely closed position<br><input type="checkbox"/> Approx. (    )mm lower than completely closed position <input type="checkbox"/> Approx. (    )mm upper than the completely open position. |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> (No.7) Abnormal noise while the door glass is opening or closing.                                                                                                                                                                                                                        |                                                                                                                                                                                                                 |                     |                                                                                         |
| <input type="checkbox"/> Other (Describe the symptom below if the symptom does not appear in the above list.)                                                                                                                                                                                                     |                                                                                                                                                                                                                 |                     |                                                                                         |
|                                                                                                                                                                                                                               |                                                                                                                                                                                                                 |                     |                                                                                         |
| Please describe the conditions when the malfunction occurs.<br>(Example) : When the outer mirrors are operated                                                                                                                                                                                                    |                                                                                                                                                                                                                 |                     |                                                                                         |
| Please describe the conditions under which the system returns to normal operation after malfunctioning.<br>(Example) : The ignition switch is turned to the ON position after inserting the ignition key into the key cylinder                                                                                    |                                                                                                                                                                                                                 |                     |                                                                                         |
|                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                 |                     |                                                                                         |

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## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### POWER WINDOW SYSTEM PRELIMINARY INSPECTION [POWER WINDOW SYSTEM]

id0903a0831700

#### Manual Open/close Function Inspection

| STEP | INSPECTION                                                                                                                                                                                                                                              | ACTION                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Operate the power window using the manual open/close function on the power window main switch.</li> <li>Does the power window operate properly?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                         | No <ul style="list-style-type: none"> <li>Inspect the power window main switch and the wiring harness.</li> <li>Repair or replace malfunctioning parts.</li> </ul> |
| 2    | <ul style="list-style-type: none"> <li>Set the power cut switch to the UNLOCK position.</li> <li>Operate the power window using the power window subswitch.</li> <li>Does the power window operate properly?</li> </ul>                                 | Yes<br>Go to the next step.                                                                                                                                        |
|      |                                                                                                                                                                                                                                                         | No <ul style="list-style-type: none"> <li>Inspect the power window subswitch and the wiring harness.</li> <li>Repair or replace malfunctioning parts.</li> </ul>   |
| 3    | <ul style="list-style-type: none"> <li>Set the power cut switch to the LOCK position.</li> <li>Operate all power windows other than the driver side.</li> <li>Does the power window operate properly?</li> </ul>                                        | Yes <ul style="list-style-type: none"> <li>Inspect the power cut switch and the wiring harness.</li> <li>Replace the power window main switch.</li> </ul>          |
|      |                                                                                                                                                                                                                                                         | No <ul style="list-style-type: none"> <li>Manual open/close function is normal.</li> <li>Perform the auto open/close function inspection.</li> </ul>               |

#### Auto Open/close Function (Driver's Side) Inspection

| STEP | INSPECTION                                                                                                                                                                                                                                              | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Operate the power window using the auto open / close function on the power window main switch.</li> <li>Does the power window operate properly?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                         | No <p><b>If the power window automatically opens during the closing operation:</b></p> <ul style="list-style-type: none"> <li><b>Go to 09-03A-13</b> No.6 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE [POWER WINDOW SYSTEM].</li> </ul> <p><b>Others:</b></p> <ul style="list-style-type: none"> <li><b>Go to 09-03A-8</b> No.1 THE AUTO OPEN/CLOSE FUNCTION ON THE DRIVER'S SIDE POWER WINDOW IS INOPERATIVE [POWER WINDOW SYSTEM].</li> </ul> |
| 2    | <ul style="list-style-type: none"> <li>Operate the power window main switch to the close position while the power window is opening.</li> <li>Does the power window operation stop?</li> </ul>                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                         | No <ul style="list-style-type: none"> <li>Replace the power window main switch (power window control unit is malfunctioning.)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                  |
| 3    | <ul style="list-style-type: none"> <li>Operate the power window main switch to the open position while the power window is closing.</li> <li>Does the power window operation stop?</li> </ul>                                                           | Yes <ul style="list-style-type: none"> <li>Auto open/close function is normal.</li> <li>Perform the IG-OFF timer function inspection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                         | No <ul style="list-style-type: none"> <li>Replace the power window main switch (power window control unit is malfunctioning.)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                  |

#### IG-OFF Timer Function Inspection

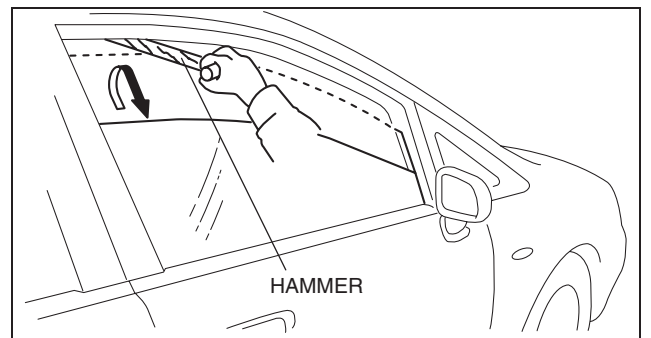
| STEP | INSPECTION                                                                                                                                                                                                                                                                                       | ACTION                                                                                                                                                                                                                                                                                                                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Close all doors.</li> <li>Turn the ignition switch from the ON to the LOCK position.</li> <li>Operate the power window main switch within 43 s after turning the ignition switch to the LOCK position.</li> <li>Does the power window operate?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>Inspect the door switches and related wiring harness.</li> <li>If above parts are okay, replace the power window main switch, then go to the next step.</li> <li>If above parts are incorrect repair or replace malfunction part (s), then go to the next step.</li> </ul>  |
| 2    | <ul style="list-style-type: none"> <li>Open any door.</li> <li>Turn the ignition switch from the ON to the LOCK position.</li> <li>Operate the power window main switch within 43 s after turning the ignition switch to the LOCK position.</li> <li>Does the power window operate?</li> </ul>   | Yes <ul style="list-style-type: none"> <li>Inspect the door switches and related wiring harness.</li> <li>If above parts are okay, replace the power window main switch, then go to the next step.</li> <li>If above parts are incorrect repair or replace malfunction part (s), then go to the next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul>                                                                                                                                                                                                                                             |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                       | ACTION                                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <ul style="list-style-type: none"> <li>Close all doors.</li> <li>Turn the ignition switch from the ON to the LOCK position.</li> <li>Operate the power window main switch within 60 s after turning the ignition switch to the LOCK position.</li> <li>Does the power window operate?</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the power window main switch (power window control unit is malfunctioning.)</li> </ul>                               |
|      |                                                                                                                                                                                                                                                                                                  | No <ul style="list-style-type: none"> <li>IG-OFF timer function operation is normal.</li> <li>Perform the auto reverse pinch protection function inspection.</li> </ul> |

### Auto Reverse Pinch Protection Function Inspection

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                         | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Fully open the driver's side power window.</li> <li>Set the hammer (thickness: 10 mm or more) as shown below. Then, close the power window.</li> <li>Verify that the power window opens 200 mm after contacting the hammer and the operation stops.</li> <li>Does auto reverse pinch protection function operate properly?</li> </ul> | Yes <ul style="list-style-type: none"> <li>Auto reverse pinch protection function is normal.</li> <li>Perform the two-step down function inspection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 2    | <ul style="list-style-type: none"> <li>Does power window open before contacting the hammer?</li> </ul>                                                                                                                                                                                                                                                                                                                             | Yes <ul style="list-style-type: none"> <li><b>Go to 09-03A-13 No.6 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE [POWER WINDOW SYSTEM].</b></li> </ul>                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No <ul style="list-style-type: none"> <li>Initialize the power window main switch.</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Before initializing the power window main switch, cut off the power supply to the power window main switch for 60 s. Then, reconnect it again after 60 s:               <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Disconnect the power window main switch connector.</li> <li>Remove the fuse for the power window system.</li> </ul> </li> </ul> |



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### Two-step Down Function Inspection

**Note**

- Before inspecting the two-step down function, make sure that the two-step down function is turned on. (if the two-step down function is turned off, the power window does not stop once.)
- The two-step down position is adjustable within **20—100 mm {0.79—3.9 in}**.
- The two-step down function does not operate while the IG-OFF timer function is activated.

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Turn on the two-step down function, if it is turned off.</li> <li>Fully close the driver's side power window.</li> <li>Open the power window using the manual open/close function on the power window main switch.</li> <li>Verify that the power window stops <b>30 mm</b> lower than the fully closed position for 1 s.</li> <li>Does power window operate properly?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>While the auto open/close function is activated, the two-step down function does not operate.</li> </ul> | Yes<br>Two-step down function is normal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No <ul style="list-style-type: none"> <li>Verify that the auto open/close function operates properly.</li> </ul> <p><b>If the auto open/close function operates properly:</b></p> <ul style="list-style-type: none"> <li>Verify that the two-step down function is turned on.</li> </ul> <p><b>If the auto open/close function does not operate properly:</b></p> <ul style="list-style-type: none"> <li>Replace the power window main switch (power window control unit is malfunctioning.)<br/>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)</li> </ul> |

### No.1 THE AUTO OPEN/CLOSE FUNCTION ON THE DRIVER'S SIDE POWER WINDOW IS INOPERATIVE [POWER WINDOW SYSTEM]

id0903a0831000

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                     | <b>The auto open/close function on the driver's side power window is inoperative</b>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>Power window system in fail-safe function (Power window motor heat protection circuit is operating)</li> <li>No power supply to power window main switch</li> <li>Power window main switch malfunction (power window control unit malfunction, auto switch malfunction)</li> <li>Power window motor malfunction (Sensor inside motor malfunction)</li> <li>Malfunction in wiring harness between power window motor (sensor) and power window main switch</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                             | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position for 3 min.</li> <li>Turn the ignition switch to ON position.</li> <li>Initialize the power window system.</li> <li>Operate the auto open/close function.</li> <li>Does the power window operate properly?</li> </ul>                                                                                                                              | Yes<br>System is normal.<br>The power window system auto open/close function does not operate temporarily for any of the following reasons: <ul style="list-style-type: none"> <li>The power window switch is operated while the power window motor protection circuit (integrated in power window motor) is operating.</li> <li>The power window main switch power supply is cut off by disconnection of the negative battery cable or removing the fuse.</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2    | <ul style="list-style-type: none"> <li>Turn the ignition switch to ON position.</li> <li>Inspect the two-step down operation.<br/>(See 09-03A-6 POWER WINDOW SYSTEM PRELIMINARY INSPECTION [POWER WINDOW SYSTEM].)</li> <li>Does the two-step down function operate properly?</li> </ul>                                                                                                                                               | Yes<br>Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3    | <ul style="list-style-type: none"> <li>Does the sensor built into the power window motor send pulse signals while the power window motor is operating?</li> <li>Inspect the voltage at the following power window motor terminals:               <ul style="list-style-type: none"> <li>B (sensor 1 signal)</li> <li>A (sensor 2 signal)</li> </ul> </li> <li>Is the voltage <b>approx. 6 V</b>?</li> </ul>                            | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Replace the power window motor.<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                                      |
| 4    | <ul style="list-style-type: none"> <li>Does the sensor built into the power window motor send pulse signals while the power window motor is operating?</li> <li>Inspect the voltage at the following power window main switch (14-pin connector) terminals:               <ul style="list-style-type: none"> <li>1D (sensor 1 signal)</li> <li>1H (sensor 2 signal)</li> </ul> </li> <li>Is the voltage <b>approx. 6 V</b>?</li> </ul> | Yes<br>Replace the power main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Inspect for an open or short circuit in wiring between the power window motor (sensor) and the power window main switch.<br>Inspect the connection of the power window motor and power window main switch connectors.<br>(damaged/pulled-out pins, corrosion)<br>Repair or replace necessary.                                                                                                                                                                   |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### No.2 THE DRIVER'S SIDE POWER WINDOW IS INOPERATIVE [POWER WINDOW SYSTEM]

id0903a0831100

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2</b>                  | <b>The driver's side power window is inoperative.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>POSSIBLE<br/>CAUSE</b> | <ul style="list-style-type: none"><li>• Power supply circuit or ground circuit malfunction<ul style="list-style-type: none"><li>— Burnt fuse (B+)</li><li>— Open or short circuit in wiring harness between fuse (B+) and power window main switch</li><li>— Open or short circuit in wiring harness between power window main switch and power window motor</li><li>— Open or short circuit in wiring harness between power window main switch and ground</li></ul></li><li>• Power window main switch malfunction</li><li>• Power window motor malfunction</li><li>• Power window regulator malfunction</li></ul> |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | ACTION                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Does the LED on the power window main switch illuminate?</li> </ul>                                                                                                                                                                                                                                                                                  | Yes | Go to Step 6.                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                      |
| 2    | <ul style="list-style-type: none"> <li>Operate all power windows other than the driver's side window using the power window main switch.</li> <li>Does the power window operate properly?</li> </ul>                                                                                                                                                                                                                                              | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Inspect for an open or short circuit in the following wiring harnesses. Inspect the connector connections (damage/pulled-out pins, corrosion): <ul style="list-style-type: none"> <li>P/W 30 A fuse—Power window main switch terminal 1M</li> <li>Power window main switch terminal 1B—ground.</li> </ul> Repair or replace if necessary. |
| 3    | <ul style="list-style-type: none"> <li>Is the P/W 20 A fuse normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    | Yes | Go to Step 5.                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Inspect the following: <ul style="list-style-type: none"> <li>Short circuit in B+ power supply wiring harness</li> <li>Short circuit in power window motor</li> </ul> Repair or replace if necessary.<br>Replace with the appropriate standard fuse.<br>Then, go to the next step.                                                        |
| 4    | <ul style="list-style-type: none"> <li>Initialize the power window system.</li> <li>Operate the power window system.</li> <li>Do the power windows operate properly?</li> </ul>                                                                                                                                                                                                                                                                   | Yes | Troubleshooting is completed.                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Re-confirm the symptom and go to Step 1.                                                                                                                                                                                                                                                                                                  |
| 5    | <ul style="list-style-type: none"> <li>Measure the voltage at the power window main switch terminal 1N.</li> <li>Is the voltage B+?</li> </ul>                                                                                                                                                                                                                                                                                                    | Yes | Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Inspect for an open or short circuit in the power window main switch wiring harness (battery power supply).<br>Inspect the power window main switch connector connection. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary.                                                                                          |
| 6    | <ul style="list-style-type: none"> <li>Measure the voltage at the power window main switch. (power window motor output terminal) while operating the power window using the power window main switch.</li> <li>Is the voltage B+?<br/>(Open: terminal 1L/ close: terminal 1J)</li> </ul>                                                                                                                                                          | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                    |
| 7    | <ul style="list-style-type: none"> <li>Measure the voltage at the power window motor. (battery power supply terminal) while operating the power window using the power window motor.</li> <li>Is the voltage B+?<br/>(Open: terminal F/ close: terminal E)</li> </ul>                                                                                                                                                                             | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Inspect for an open or short circuit in the wiring harness between the power window main switch and the power window motor.<br>Inspect the power window main switch and power window motor connector connections. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary.                                                  |
| 8    | <ul style="list-style-type: none"> <li>Operate the driver's side power window using the power window main switch.</li> <li>Does the power window motor operate (rotate)?<br/><b>Caution</b> <ul style="list-style-type: none"> <li>If the power window motor temperature is high, the motor may not rotate due to the motor internal bimetal function. Leave it untouched for about 3 min to cool it down, then reinspect.</li> </ul> </li> </ul> | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Replace the power window motor.<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                |
| 9    | <ul style="list-style-type: none"> <li>Remove the door glass from the carrier plate.</li> <li>Make sure that the door glass moves smoothly using your hand.</li> <li>Does the door glass move smoothly?</li> </ul>                                                                                                                                                                                                                                | Yes | Replace the power window regulator.<br>(See 09-12-12 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)<br>(See 09-12-15 REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No  | Inspect for a bent regulator guide or other possible malfunction. If normal, replace the door glass run-channel.                                                                                                                                                                                                                          |



## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### No.3 ALL POWER WINDOWS OTHER THAN DRIVER'S SIDE DO NOT OPERATE USING THE POWER WINDOW SUBSWITCH [POWER WINDOW SYSTEM]

id0903a0831200

|                       |                                                                                                                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3</b>              | <b>All power windows other than driver's side do not operate using the power window subswitch.</b>                                                                                               |
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>• Open or short circuit in power window subswitch wiring harness (battery power supply circuit).</li> <li>• Power window subswitch malfunction</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                          | ACTION                                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>• Turn the ignition switch to the ON position.</li> <li>• Set the power cut-switch to the UNLOCK position.</li> <li>• Measure the voltage at the power window subswitch terminal A.</li> <li>• Is the voltage B+?</li> </ul> | Yes                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                     | Replace the power window subswitch.<br>(See 09-12-24 POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                     | No                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                     | Inspect for an open or short circuit in the wiring harness between the power window main switch and the power window subswitch.<br>Inspect the power window subswitch connector connection. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary. |

### No.4 ALL POWER WINDOWS OTHER THAN DRIVER'S SIDE DO NOT OPERATE USING THE POWER WINDOW MAIN SWITCH [POWER WINDOW SYSTEM]

id0903a0831300

|                       |                                                                                                                                                                                                               |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4</b>              | <b>All power windows other than driver's side do not operate using the power window main switch</b>                                                                                                           |
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>• Open or short circuit in wiring harness between ignition switch (IG1) and power window main switch (IG1).</li> <li>• Power window main switch malfunction</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                  | ACTION                                                                                                                                                                                                                                           |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>• Turn the ignition switch to the ON position.</li> <li>• Set the power cut-switch to the UNLOCK position.</li> <li>• Operate all power windows other than the driver's side using the power window main switch.</li> <li>• Do any power windows operate?</li> </ul> | Yes                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                             | Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                             | Inspect for an open or short circuit in the power window main switch wiring harness (battery power supply).<br>Inspect the power window main switch connector connection. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary. |

### No.5 ALL POWER WINDOWS ARE INOPERATIVE [POWER WINDOW SYSTEM]

id0903a0831400

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5</b>              | <b>All power windows are inoperative.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>• Power supply circuit or ground circuit malfunction                             <ul style="list-style-type: none"> <li>— Burnt fuse (B+)</li> <li>— Open or short circuit in wiring harness between ignition switch (IG1) and power window main switch</li> <li>— Open or short circuit in wiring harness between power window main switch and power window subswitch</li> <li>— Open or short circuit in wiring harness between power window main switch and power window motor</li> <li>— Open or short circuit in wiring harness between power window main switch and ground</li> </ul> </li> <li>• Power window main switch malfunction (power cut-off switch malfunction, switch malfunction)</li> <li>• Power window subswitch malfunction</li> <li>• Power window motor malfunction</li> <li>• Power window regulator malfunction</li> </ul> |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                         |     | ACTION                                                                                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Set the power cut-off switch to the UNLOCK position.</li> <li>Inspect the power window system operation again.</li> <li>Does the system operate properly?</li> </ul>                                                                                                                                                                  | Yes | System is now normal. (power cut-off switch is not set properly.)                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Go to the next step.                                                                                                                                                                                                                                                       |
| 2    | <ul style="list-style-type: none"> <li>Operate all power windows other than driver's side window using the power window main switch.</li> <li>Does any power window operate?</li> </ul>                                                                                                                                                                                                                                            | Yes | Go to Step 6.                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Go to the next step.                                                                                                                                                                                                                                                       |
| 3    | <ul style="list-style-type: none"> <li>Operate the driver's side power window using the power window main switch.</li> <li>Does the power window operate?</li> </ul>                                                                                                                                                                                                                                                               | Yes | Go to the next step.                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Inspect for an open circuit in the wiring harness between the power window main switch and the body ground. Inspect the power window main switch connector connection. (damage/pulled-out pins, corrosion) Repair or replace if necessary.                                 |
| 4    | <ul style="list-style-type: none"> <li>Is the P/W 30 A fuse normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                     | Yes | Replace with the appropriate standard fuse. If the fuse is melted, inspect the wiring harness for a short to ground. Repair or replace the wiring harness, then replace the fuse.                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Go to the next step.                                                                                                                                                                                                                                                       |
| 5    | <ul style="list-style-type: none"> <li>Measure the voltage at the power window main switch terminal 1M.</li> <li>Is the voltage B+?</li> </ul>                                                                                                                                                                                                                                                                                     | Yes | Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Inspect for an open or short circuit in the power window main switch wiring harness (battery power supply). Inspect the power window main switch connector connection. (damage/pulled-out pins, corrosion) Repair or replace if necessary.                                 |
| 6    | <ul style="list-style-type: none"> <li>Identify the inoperative power window.</li> <li>Measure the voltage at the suspect power window motor (battery power supply) while operating the power window motor using the suspect power window subswitch.</li> <li>Is the voltage B+?<br/>(Open: terminal F/ close: terminal E)</li> </ul>                                                                                              | Yes | Go to the next step.                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Go to Step 9.                                                                                                                                                                                                                                                              |
| 7    | <ul style="list-style-type: none"> <li>Operate the power window using the power window subswitch.</li> <li>Does the power window motor operate (rotate)?<br/><b>Caution</b> <ul style="list-style-type: none"> <li>If the power window motor temperature is high, the motor may not rotate due to the motor internal bimetal function. Leave it untouched for about 3 min. to cool it down, then reinspect.</li> </ul> </li> </ul> | Yes | Go to the next step.                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Replace the power window motor.<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)                                                                                                                                                                                 |
| 8    | <ul style="list-style-type: none"> <li>Remove the door glass from the carrier plate.</li> <li>Make sure that the door glass moves smoothly using your hand.</li> <li>Does the door glass move smoothly?</li> </ul>                                                                                                                                                                                                                 | Yes | Replace the power window regulator guide.                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Inspect for a bent regulator guide or other possible malfunction. If normal, replace the glass run channel.                                                                                                                                                                |
| 9    | <ul style="list-style-type: none"> <li>Measure the voltage at the power window subswitch (power window motor output) while operating the power window subswitch.</li> <li>Is the voltage B+?<br/>(Open: terminal E/ close: terminal D)</li> </ul>                                                                                                                                                                                  | Yes | Inspect for an open or short circuit in the wiring harness between the power window subswitch and power window motor. Inspect the power window subswitch and power window motor connector connections. (damage/pulled-out pins, corrosion) Repair or replace if necessary. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                    | No  | Go to the next step.                                                                                                                                                                                                                                                       |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                  | ACTION                                                                                                                                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10   | <b>Note</b> <ul style="list-style-type: none"> <li>Do not operate the power window subswitch during the following inspection.</li> <li>Inspect the continuity between power window subswitch terminal D (vehicle harness-side) and ground.</li> <li>Is there continuity?</li> </ul>                         | Yes<br>Go to the next step.                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                             | No<br>Inspect for an open or short circuit in the power window subswitch wiring harness.<br>Inspect the power window subswitch connector connection. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary.<br>Then go to Step 12.                                     |
| 11   | <b>Note</b> <ul style="list-style-type: none"> <li>Do not operate the power window subswitch during the following inspection.</li> <li>Inspect the continuity between power window subswitch terminal E and ground.</li> <li>Is there continuity?</li> </ul>                                                | Yes<br>Replace the power window subswitch.<br>(See 09-12-24 POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                             | No<br>Inspect for an open or short circuit in the power window subswitch wiring harness.<br>Inspect the power window subswitch connector connection. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary.<br>Then go to Step 12.                                     |
| 12   | <b>Note</b> <ul style="list-style-type: none"> <li>Do not operate the power window main switch during the following inspection.</li> <li>Inspect the continuity between power window main switch terminal (up-side 2B (L.H.D.), 2L (R.H.D.), 1C, 1I) and ground.</li> <li>Is there continuity?</li> </ul>   | Yes<br>Go to the next step.                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                             | No<br>Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                           |
| 13   | <b>Note</b> <ul style="list-style-type: none"> <li>Do not operate the power window main switch during the following inspection.</li> <li>Inspect the continuity between power window main switch terminal (down-side 2A (L.H.D.), 2K (R.H.D.), 1E, 1G) and ground.</li> <li>Is there continuity?</li> </ul> | Yes<br>Inspect for an open or short circuit in the wiring harness between the power window main switch and power window subswitch.<br>Inspect the power window main switch and subswitch connector connections. (damage/pulled-out pins, corrosion)<br>Repair or replace if necessary. |
|      |                                                                                                                                                                                                                                                                                                             | No<br>Replace the power window main switch.<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                           |

### No.6 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE [POWER WINDOW SYSTEM]

id0903a0831500

#### Note

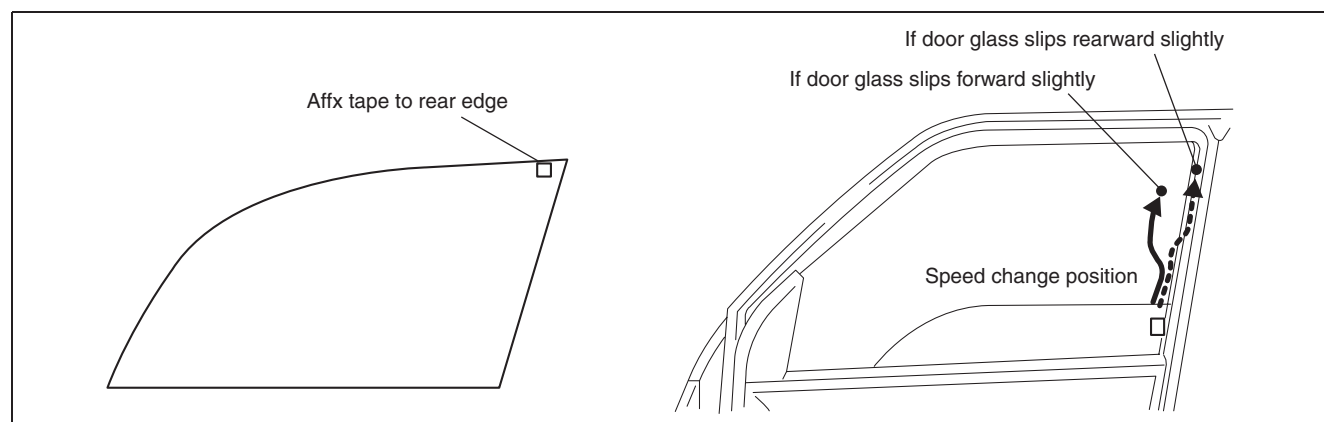
- Perform the following inspection for the power window system component parts of windows where the door glass reverses even though the glass does not encounter a foreign object while it is moving up in automatic mode.

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6                     | <b>Door glass reverses even though the glass does not encounter a foreign object while it is moving up in automatic mode.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>Extreme change in the sliding resistance of the glass while the door glass is closing. <ul style="list-style-type: none"> <li>Improper installation of the acrylic door visor.</li> <li>Power window motor malfunction.</li> <li>Object caught between the glass run channel and the door glass.</li> <li>Insufficient tightening of the door glass to the carrier plate.</li> <li>Glass run channel malfunction.</li> <li>Glass guide related malfunction.</li> </ul> </li> </ul> <b>Note</b> <ul style="list-style-type: none"> <li>The auto-reverse pinch protection function is a mechanism that automatically reverses (opens) the door glass while it is closing when the power window main switch detects the signal from the power window motor indicating that an object is obstructing the door glass movement.</li> <li>The auto-reverse pinch protection function may operate if the sliding resistance of the door glass increases causing the closing speed to decrease.</li> <li>If the door glass closing speed has changed, concentrate the inspection on the following locations: (Slip occurrence) <ul style="list-style-type: none"> <li>If the door glass is slipping forward, inspect the front side of the glass guide or glass run channel.</li> <li>If the door glass is slipping rearward, inspect the rear side of the glass guide or glass run channel.</li> </ul> </li> </ul> |

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                 | ACTION                                                                                                                                                                                                                                                                                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect malfunction symptom.</li> <li>Does the malfunction symptom occur only under the following special conditions?:                             <ul style="list-style-type: none"> <li>— Driving over railroad tracks.</li> <li>— Driving on bumpy roads.</li> <li>— Opening/closing the door.</li> </ul> </li> </ul>                            | Yes<br>The system is normal.<br>(Explain to the customer that this does not indicate a malfunction because the system is designed to reverse the door glass while it is closing if it receives vibration when the vehicle is crossing railroad tracks, driving on a bumpy road, or when the door is opened/closed.)                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                        |
| 2    | <ul style="list-style-type: none"> <li>Inspect acrylic door visor installation condition.</li> <li>Is the acrylic door visor normal?</li> </ul>                                                                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Install the side visor properly, then go to the next step.                                                                                                                                                                                                                                                                                                                                  |
| 3    | <ul style="list-style-type: none"> <li>Inspect door glass closing speed.</li> <li>Affix tape to the rear edge of the door glass as shown in the figure for placing marks. (to facilitate seeing the door glass movement)</li> <li>Start the engine and idle it (to ensure a stabilized operational voltage).</li> <li>Does the door glass hesitate only once while its closing?</li> </ul> | Yes<br>Mark the point where the door glass closing speed changed, then go to Step 5.                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                        |
| 4    | <ul style="list-style-type: none"> <li>Reinspect door glass closing speed.</li> <li>Does the door glass hesitate periodically while it is closing?</li> </ul>                                                                                                                                                                                                                              | Yes<br>Replace the power window motor, then go to Step 8.<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to Step 8.                                                                                                                                                                                                                                                                                                                                                                               |
| 5    | <ul style="list-style-type: none"> <li>Inspect glass run channel and door glass sliding surface.</li> <li>Is there an object caught between the glass run channel and the door glass, or is there roughness on the sliding surface (rubber surface)?</li> </ul>                                                                                                                            | Yes<br><b>Object is caught between glass run channel and door glass:</b> <ul style="list-style-type: none"> <li>Remove the object.</li> </ul> <b>Roughness on the sliding surface (rubber surface):</b> <ul style="list-style-type: none"> <li>Replace the glass run channel.</li> </ul> After performing one of the above actions, reinspect. If the malfunction is not corrected, go to Step 3. |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                        |
| 6    | <ul style="list-style-type: none"> <li>Inspect tightening of door glass to carrier plate.</li> <li>Is it normal?</li> </ul>                                                                                                                                                                                                                                                                | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>After tightening correctly, reinspect. If the malfunction is not corrected, go to Step 3.                                                                                                                                                                                                                                                                                                   |
| 7    | <ul style="list-style-type: none"> <li>Inspect condition of glass run channel and door glass.</li> <li>Is it normal?</li> </ul>                                                                                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Assemble the glass run channel and door glass securely, and reinspect. If the malfunction is not corrected, go to Step 3.                                                                                                                                                                                                                                                                   |
| 8    | <ul style="list-style-type: none"> <li>Inspect door glass closing speed.</li> <li>Does the door glass hesitate at any location?</li> </ul>                                                                                                                                                                                                                                                 | Yes<br>Repeat the inspection from Step 3.                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                  |



am2zzw0000022

## SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEM]

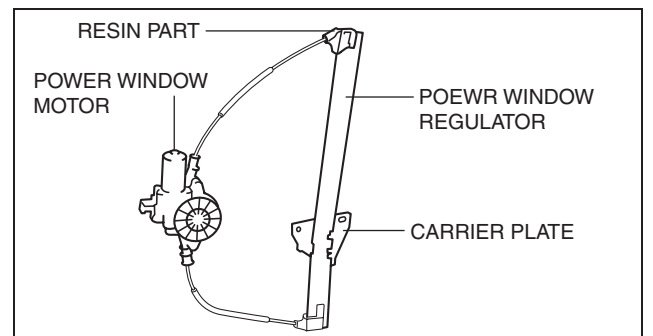
### No.7 ABNORMAL NOISE WHILE THE DOOR GLASS IS OPENING OR CLOSING [POWER WINDOW SYSTEM]

id0903a0831600

| 7                     | Abnormal noise while the door glass is opening or closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>Installation screw is loose between the door glass and carrier plate.</li> <li>Deformity in the power window regulator plastic part due to use.               <ul style="list-style-type: none"> <li>Scratching, wear marks to the power window regulator resin part due to twisting of the cable.</li> <li>Gear deformity in the power window motor.</li> </ul> </li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Identify the location of the noise using a stethoscope or similar device.</li> </ul> |

#### Diagnostic procedure

| Noise type                                     | Time of occurrence            | Possible cause                                                                                                                                                                                                                                                   | Location of noise                                | Action                                                                                                                                                                      |
|------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clanking noise                                 | Door glass begins to move     | Insufficiently tightened installation screw between the door glass and carrier plate.                                                                                                                                                                            | Between door glass lower edge and carrier plate. | Securely tighten the installation screw.                                                                                                                                    |
| Groaning noise<br>(Sound increases due to use) | While door glass is operating | Vibration caused by wear on the resin part from cable twisting due to use of the power window regulator.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Noise does not occur if a roller is equipped to power window regulator resin part.</li> </ul> | Power window regulator                           | Replace the power window regulator<br>(See 09-12-12 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)<br>(See 09-12-15 REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION.) |
| Whining noise                                  |                               | Gear inside power window motor is deformed due to use.                                                                                                                                                                                                           | Gear in power window motor                       | Replace the power window motor<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)                                                                                   |
| Clicking noise<br>(Periodic noise)             |                               |                                                                                                                                                                                                                                                                  |                                                  |                                                                                                                                                                             |



am2zzw0000087

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## **SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]**

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### **09-03B SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]**

|                                                                                                                                       |                 |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>SYMPTOM TROUBLESHOOTING CHART</b><br><b>[ADVANCED KEYLESS AND</b><br><b>START SYSTEM] . . . . .</b>                                | <b>09-03B-1</b> |
| <b>KEYLESS ENTRY SYSTEM</b><br><b>WIRING DIAGRAM [ADVANCED</b><br><b>KEYLESS AND START SYSTEM] . . . .</b>                            | <b>09-03B-2</b> |
| <b>TROUBLESHOOTING INDEX</b><br><b>[ADVANCED KEYLESS AND</b><br><b>START SYSTEM] . . . . .</b>                                        | <b>09-03B-3</b> |
| <b>KEYLESS ENTRY SYSTEM ON-BOARD</b><br><b>DIAGNOSIS [ADVANCED KEYLESS</b><br><b>AND START SYSTEM] . . . . .</b>                      | <b>09-03B-3</b> |
| <b>NO.1 DOOR CANNOT BE</b><br><b>LOCKED/UNLOCKED BY</b><br><b>TRANSMITTER [ADVANCED KEYLESS</b><br><b>AND START SYSTEM] . . . . .</b> | <b>09-03B-3</b> |

|                                                                                                                           |                 |
|---------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Diagnostic Procedure . . . . .</b>                                                                                     | <b>09-03B-4</b> |
| <b>NO.2 FLASHING KEYLESS INDICATOR</b><br><b>LIGHT [ADVANCED KEYLESS AND</b><br><b>START SYSTEM] . . . . .</b>            | <b>09-03B-6</b> |
| <b>Diagnostic Procedure . . . . .</b>                                                                                     | <b>09-03B-6</b> |
| <b>NO.3 ADVANCED KEYLESS ENTRY</b><br><b>FUNCTION INOPERATIVE [ADVANCED</b><br><b>KEYLESS AND START SYSTEM] . . . . .</b> | <b>09-03B-6</b> |
| <b>Diagnostic Procedure . . . . .</b>                                                                                     | <b>09-03B-6</b> |
| <b>NO.4 ADVANCED KEYLESS START</b><br><b>FUNCTION INOPERATIVE [ADVANCED</b><br><b>KEYLESS AND START SYSTEM] . . . . .</b> | <b>09-03B-9</b> |
| <b>Diagnostic Procedure . . . . .</b>                                                                                     | <b>09-03B-9</b> |

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## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

### SYMPTOM TROUBLESHOOTING CHART [ADVANCED KEYLESS AND START SYSTEM]

id0903d1814300

| No. | Troubleshooting item                          | Page                                                                                                |
|-----|-----------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1   | Door cannot be locked/unlocked by transmitter | See 09-03B-3 NO.1 DOOR CANNOT BE LOCKED/UNLOCKED BY TRANSMITTER [ADVANCED KEYLESS AND START SYSTEM] |
| 2   | Flashing keyless indicator light              | See 09-03B-6 NO.2 FLASHING KEYLESS INDICATOR LIGHT [ADVANCED KEYLESS AND START SYSTEM]              |
| 3   | Advanced keyless entry function inoperative   | See 09-03B-6 NO.3 ADVANCED KEYLESS ENTRY FUNCTION INOPERATIVE [ADVANCED KEYLESS AND START SYSTEM]   |
| 4   | Advanced keyless start function inoperative   | See 09-03B-9 NO.4 ADVANCED KEYLESS START FUNCTION INOPERATIVE [ADVANCED KEYLESS AND START SYSTEM]   |

## KEYLESS ENTRY SYSTEM WIRING DIAGRAM [ADVANCED KEYLESS AND START SYSTEM]

The diagram illustrates the wiring for the Keyless Control Module (KCM) and its associated components. The KCM is connected to the following components:

- Power and Ground:**
  - B+:** Connected to terminal 1E.
  - IG1:** Connected to terminal 2C.
  - ACC:** Connected to terminal 2A.
  - Ground:** Connected to terminal 3N.
- Keyless Receiver:**
  - Terminal 1D is connected to the receiver's output.
  - Terminal 2H is connected to the receiver's ground.
- Door Lock Link Switch:**
  - Terminal 3P is connected to the switch's output.
- Keyless Buzzer:**
  - Terminal 3K is connected to the buzzer's output.
- BCM (Body Control Module):**
  - Terminal 3G is connected to the BCM's output.
  - Terminal 2F is connected to the BCM's output.
- PCM (Powertrain Control Module):**
  - Terminal 2G is connected to the PCM's output.
  - Terminal 2I is connected to the PCM's output.
- Instrument Cluster:**
  - Terminal 2G is connected to the CAN-H line.
  - Terminal 2I is connected to the CAN-L line.
  - Terminal 2J is connected to the KEYLESS INDICATOR LIGHT (GREEN).
  - Terminal 2K is connected to the KEYLESS WARNING LIGHT (RED).
  - Terminal 2L is connected to the ALARM.
  - Terminal 2M is connected to the SECURITY LIGHT.
- Request Switches:**
  - Terminal 3U is connected to the REQUEST SWITCH (EXTERIOR, RF).
  - Terminal 3O is connected to the REQUEST SWITCH (EXTERIOR, RF).
  - Terminal 3AD is connected to the REQUEST SWITCH (EXTERIOR, RF).
  - Terminal 3X is connected to the REQUEST SWITCH (EXTERIOR, LF).
  - Terminal 3F is connected to the REQUEST SWITCH (EXTERIOR, LF).
  - Terminal 3AB is connected to the REQUEST SWITCH (EXTERIOR, LF).
- Keyless Antennas:**
  - Terminal 3R is connected to the KEYLESS ANTENNA (INTERIOR, FRONT).
  - Terminal 3AA is connected to the KEYLESS ANTENNA (INTERIOR, FRONT).
  - Terminal 3I is connected to the KEYLESS ANTENNA (INTERIOR, REAR).
  - Terminal 3Z is connected to the KEYLESS ANTENNA (INTERIOR, REAR).
  - Terminal 3C is connected to the KEYLESS ANTENNA (EXTERIOR, REAR).
  - Terminal 3AC is connected to the KEYLESS ANTENNA (EXTERIOR, REAR).
  - Terminal 3L is connected to the KEYLESS ANTENNA (INTERIOR, CENTER).
  - Terminal 3Y is connected to the KEYLESS ANTENNA (INTERIOR, CENTER).
- Other Components:**
  - STEERING LOCK UNIT:** Connected to terminals 3V, 3W, and 2L.
  - LIFTGATE OPENER SWITCH (3HB, 5HB) / TRUNK LID OPENER SWITCH (4SD):** Connected to terminals 3G and 2F.
  - THEFT-DETERRENT CONTROL MODULE:** Connected to terminals 3G and 2F.
  - COIL ANTENNA:** Connected to terminals 2D, 2B, and 3N.

**09-03B-2**



## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

### TROUBLESHOOTING INDEX [ADVANCED KEYLESS AND START SYSTEM]

id0903d1801000

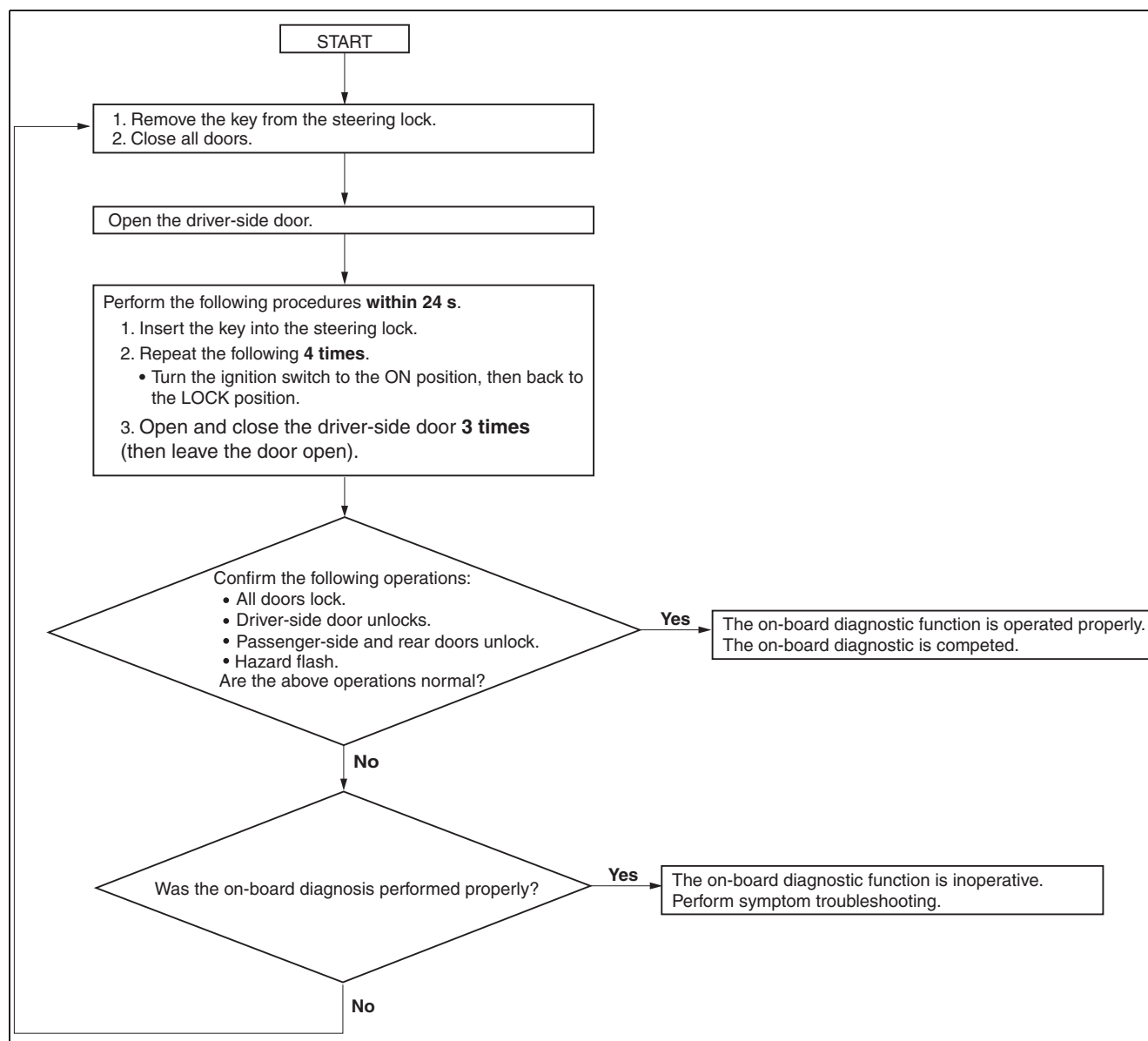
- Refer to the general information and check the basic troubleshooting procedure.
- The advanced keyless and start system is controlled by the Keyless control module.
- The phrase “All doors” includes the liftgate (3HB, 5HB)/trunk lid (4SD).

### KEYLESS ENTRY SYSTEM ON-BOARD DIAGNOSIS [ADVANCED KEYLESS AND START SYSTEM]

id0903d1800400

#### Note

- “All doors” includes the liftgate (3HB, 5HB)/trunk lid (4SD).



am2zzw0000215

### NO.1 DOOR CANNOT BE LOCKED/UNLOCKED BY TRANSMITTER [ADVANCED KEYLESS AND START SYSTEM]

id0903d1900300

| 1              | Door cannot be locked/unlocked by transmitter                                                                                                                                                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible Cause | <ul style="list-style-type: none"><li>• Transmitter (advanced key) malfunction (battery or other parts)</li><li>• Keyless control module malfunction</li><li>• Keyless receiver malfunction</li><li>• Customer's mis-operation or misunderstanding</li><li>• Effect of non-standard equipment (any control unit with built-in micro computer such as radio set, mobile telephone, and TV)</li></ul> |

## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                            | Action |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | <ul style="list-style-type: none"> <li>Does the operation indicator light illuminate when the transmitter (advanced key) is operated?</li> </ul>                                                                                                                                                                                                                                                      | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 2    | <ul style="list-style-type: none"> <li>Did the customer operate the transmitter (advanced key) within the operation range (2.5 m {8.2 ft} from the vehicle)?</li> </ul>                                                                                                                                                                                                                               | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 3    | <ul style="list-style-type: none"> <li>Did the customer operate at a place where extrinsic noise is received such as a TV tower, electric power station, or a broadcast station.</li> </ul>                                                                                                                                                                                                           | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 4    | <ul style="list-style-type: none"> <li>Did the customer operate the transmitter (advanced key) with all the following conditions met? <ul style="list-style-type: none"> <li>— All doors are closed.</li> <li>— The auxiliary key is not inserted in the ignition key cylinder.</li> <li>— The start knob is in the LOCK position.</li> <li>— The start knob is being pressed.</li> </ul> </li> </ul> | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 5    | <ul style="list-style-type: none"> <li>Did the malfunction occur after any non-standard equipment (any control unit with built-in micro computer such as radio set, mobile telephone, and TV) was installed?</li> </ul>                                                                                                                                                                               | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 6    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Was the malfunction corrected when the connector of the equipment was disconnected?</li> </ul>                                                                                                                                                         | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 7    | <ul style="list-style-type: none"> <li>Connect the negative battery cable.</li> <li>Is lock/unlock possible only near the keyless receivers when the transmitter (advanced key) is operated?</li> </ul>                                                                                                                                                                                               | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 8    | <ul style="list-style-type: none"> <li>Verify the advanced keyless and start system operation using another normal battery.</li> <li>Does the advanced keyless and start system operate normally?</li> </ul>                                                                                                                                                                                          | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 9    | <ul style="list-style-type: none"> <li>Visually inspect the transmitter (advanced key) battery.</li> <li>Are the following correct? <ul style="list-style-type: none"> <li>— Battery direction (polarity)</li> <li>— Battery type (CR2025)</li> </ul> </li> </ul>                                                                                                                                     | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 10   | <ul style="list-style-type: none"> <li>Visually inspect the transmitter (advanced key) battery. (See 09-14-122 ADVANCED KEY BATTERY REPLACEMENT [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>— Is there any rust on the battery terminals (+), (-)?</li> <li>— Is there any poor contact between the battery terminals and the battery when the battery is inserted?</li> </ul>                     | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 11   | <ul style="list-style-type: none"> <li>Inspect the battery.</li> <li>Is it normal?</li> </ul>                                                                                                                                                                                                                                                                                                         | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 12   | <ul style="list-style-type: none"> <li>Verify the advanced keyless and start system operation using another normal battery.</li> <li>Does the advanced keyless and start system operate normally?</li> </ul>                                                                                                                                                                                          | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |
| 13   | <ul style="list-style-type: none"> <li>Inspect the keyless receiver installation condition.</li> <li>Is the bracket installed securely?</li> </ul>                                                                                                                                                                                                                                                    | Yes    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     |

## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14   | <ul style="list-style-type: none"> <li>Inspect the keyless receiver.<br/>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless receiver power supply voltage normal?<br/>— Power supply (+B) (terminal D)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Inspect for a burnt fuse (ROOM 15 A)<br>Inspect the power supply system wiring harness for an open or short circuit.                                                                                                                                     |
| 15   | <ul style="list-style-type: none"> <li>Inspect the keyless receiver.</li> <li>Is the keyless receiver grounded normally?<br/>— Power supply (0 V) (terminal B)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Inspect the ground system wiring harness for an open circuit.<br>Inspect the ground tightening screw and nut for looseness.                                                                                                                              |
| 16   | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless receiver connector (4-pin) and the keyless control module connector (12-pin).</li> <li>Inspect the wiring harness between the following terminals for an open or short circuit.<br/>— Terminal C (4-pin) to terminal 2H (12-pin)</li> <li>Is the wiring harness normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Repair or replace the wiring harness between the keyless receiver connector and keyless control module connector, then go to the next step.                                                                                                              |
| 17   | <ul style="list-style-type: none"> <li>Are the following keyless control module power supply voltages normal?<br/>— Power supply (IG1) (Terminal 2C)<br/>— Power supply (+B) (Terminals 1D and 1E)<br/>— Power supply (ACC) (Terminal 2A)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Inspect for a burnt fuse (ENG10 A, ROOM15 A, P/W 20 A, MIRROR 7.5 A).<br>Inspect the power supply system wiring harness for an open or short circuit, repair or replace if necessary, then go to the next step.                                          |
| 18   | <ul style="list-style-type: none"> <li>Is the following keyless control module ground voltage normal?<br/>— 0 V (Terminal 3N)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Inspect the ground system wiring harness for an open circuit, then go to the next step.                                                                                                                                                                  |
| 19   | <ul style="list-style-type: none"> <li>Inspect the following keyless control module (12-pin, 30-pin) signal voltages with the auxiliary key not in the ignition key cylinder, and the start knob in the LOCK position and not being pressed.<br/>— Keyless switch: <b>10 V or less</b> (Terminal 3W)<br/>— Start knob (push switch): <b>1.0 V or less</b> (Terminal 3V)<br/>— Power supply (ACC): <b>1.0 V or less</b> (Terminal 2A)<br/>— Power supply (IG1): <b>1.0 V or less</b> (Terminal 2C)</li> <li>Are the signal voltages normal?</li> </ul>                                                                                                                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Inspect the keyless switch.<br>Inspect the keyless switch system wiring harness for an open or short circuit, then go to the next step.                                                                                                                  |
| 20   | <ul style="list-style-type: none"> <li>Are the following BCM terminal voltages normal?<br/>(See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)<br/>— When the front door (RH) is open: Wave pattern (Terminal 7I)<br/>— When the front door (RH) is closed: <b>1.0 V or less</b> (Terminal 7I)<br/>— When the front door (LH) is open: Wave pattern (Terminal 7M)<br/>— When the front door (LH) is closed: <b>1.0 V or less</b> (Terminal 7M)<br/>— When the rear door (RH) is open: Wave pattern (Terminal 7O)<br/>— When the rear door (RH) is closed: <b>1.0 V or less</b> (Terminal 7O)<br/>— When the rear door (LH) is open: Wave pattern (Terminal 7G)<br/>— When the rear door (LH) is closed: <b>1.0 V or less</b> (Terminal 7G)<br/>— When the liftgate is open: <b>1.0 V or less</b> (Terminal 7S)<br/>— When the liftgate is closed: B+ (Terminal 7S)</li> </ul> | Yes<br>Inspect the wiring harness between BCM terminal 6W and keyless control module terminal 2F.<br>If there is any open or short circuit, repair or replace the malfunctioning part.<br>If there is no malfunction, go to the next step.                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Inspect the door latch switch.<br>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)<br>(See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)<br>Inspect the door latch switch system wiring harness for an open or short circuit, then go to the next step. |

## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21   | <ul style="list-style-type: none"> <li>Is the signal voltage transmitted from the BCM to the door lock actuator normal?</li> <li>Does BCM terminal voltage change as follows when locking/unlocking using the transmitter (advanced key)?               <ul style="list-style-type: none"> <li>Unlocking: <b>B+</b> (Terminal 3O)</li> <li>Locking (Vehicles with double locking system): <b>1.0 V or less</b>→<b>B+</b>→<b>1.0 V or less</b> (Terminal 3E)</li> <li>Locking (Vehicles without double locking system): <b>B+</b> (Terminal 3M)</li> </ul> </li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Inspect the wiring harness between the BCM and the door lock actuator for an open or short circuit. Inspect the door lock actuator, then go to Step 23. (See 09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.) |
| 22   | <ul style="list-style-type: none"> <li>Replace the keyless receiver.</li> <li>Does the advanced keyless and start system operate normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes<br>Troubleshooting completed.                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the BCM, then go to the next step. (See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                                                    |
| 23   | <ul style="list-style-type: none"> <li>Does the advanced keyless and start system operate normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes<br>Troubleshooting completed.                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Verify the malfunction, then go to Step 1 if it recurs.                                                                                                                                                     |

### NO.2 FLASHING KEYLESS INDICATOR LIGHT [ADVANCED KEYLESS AND START SYSTEM]

id0903d1892600

|                |                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------|
| <b>2</b>       | <b>Flashing keyless indicator light</b>                                                          |
| Possible Cause | <ul style="list-style-type: none"> <li>Transmitter (advanced key) battery voltage low</li> </ul> |

#### Diagnostic Procedure

| Step | Action                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Replace the transmitter (advanced key) battery.<br>(See 09-14-122 ADVANCED KEY BATTERY REPLACEMENT [ADVANCED KEYLESS AND START SYSTEM].) |

### NO.3 ADVANCED KEYLESS ENTRY FUNCTION INOPERATIVE [ADVANCED KEYLESS AND START SYSTEM]

id0903d1801400

|                |                                                                                                                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3</b>       | <b>Advanced keyless entry function inoperative</b>                                                                                                                                                                                                |
| Possible Cause | <ul style="list-style-type: none"> <li>Transmitter (advanced key) malfunction</li> <li>Keyless control module malfunction</li> <li>Keyless receiver malfunction</li> <li>Keyless antenna malfunction</li> <li>Customer's mis-operation</li> </ul> |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                  | Action                                                                                                                           |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect for any advanced keyless system-related DTCs.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Are any DTCs displayed?</li> </ul>                                                                                                             | Yes<br>Perform the corresponding DTC troubleshooting.                                                                            |
|      |                                                                                                                                                                                                                                                                                                                             | No<br>Go to the next step.                                                                                                       |
| 2    | <ul style="list-style-type: none"> <li>Verify the operation method for the request switch and the liftgate (3HB,5HB)/ trunk lid (4SD) opener switch.</li> <li>Was the operation performed using any front door switch (driver's side/passenger's side) or the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch?</li> </ul> | Yes<br>Go to the next step.                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                             | No<br>Verify the advanced keyless system operation by pressing each switch. If the system does not operate, go to the next step. |

## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Action                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <ul style="list-style-type: none"> <li>Verify the advanced keyless system operation by operating each request switch and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch with all the following conditions met. <ul style="list-style-type: none"> <li>— The advanced key is outside of the cabin.</li> <li>— All doors and trunk lid (4SD) are closed.</li> <li>— The auxiliary key is not inserted in the ignition key cylinder.</li> <li>— The start knob is in the LOCK position, and not pressed.</li> <li>— The advanced key is within the reception area (<b>80 cm {31 in} radius</b>) from near the driver's door, front passenger's door, and the liftgate (3HB,5HB)/trunk lid (4SD).</li> </ul> </li> <li>Does the advanced keyless entry operate normally?</li> </ul> | Yes<br>System is normal. (Explain the customer about the keyless entry system.)                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                           |
| 4    | <ul style="list-style-type: none"> <li>Inspect the signal voltages at the following keyless control module connector (30-pin) when the request switches and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch are pressed. <ul style="list-style-type: none"> <li><b>12 V→1.0 V or less</b> <ul style="list-style-type: none"> <li>— Request switch (RF) (Terminal 3U)</li> <li>— Request switch (LF) (Terminal 3X)</li> </ul> </li> <li><b>5 V→3.0 V or less</b> <ul style="list-style-type: none"> <li>— Liftgate (3HB, 5HB)/trunk lid (4SD) opener switch (Terminal 3G)</li> </ul> </li> </ul> </li> <li>Are the signal voltages normal?</li> </ul>                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Inspect the applicable wiring harness between the request switch and the keyless control module for an open or short circuit, then go to the next step.                                                                                                                                                                                                                                                        |
| 5    | <ul style="list-style-type: none"> <li>Inspect the following keyless control connector signal voltages with the auxiliary key not in the ignition switch key cylinder, and the start knob in the LOCK position and not being pressed. <ul style="list-style-type: none"> <li>— Keyless switch: <b>1.0 V or less</b> (Terminal 3W)</li> <li>— Start knob (push switch): <b>1.0 V or less</b> (Terminal 3V)</li> <li>— Power supply (ACC): <b>1.0 V or less</b> (Terminal 2A)</li> <li>— Power supply (IG1): <b>1.0 V or less</b> (Terminal 2C)</li> </ul> </li> <li>Are the signal voltages normal?</li> </ul>                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Inspect the applicable wiring harness between the switch and the keyless control module, repair if necessary, then go to the next step.                                                                                                                                                                                                                                                                        |
| 6    | <ul style="list-style-type: none"> <li>Perform the advanced keyless and start system DTC inspection with all the following condition met. <ul style="list-style-type: none"> <li>— The start knob is not in the LOCK position.</li> <li>— The start knob is not pressed.</li> <li>— All doors and trunk lid (4SD) are closed.</li> <li>— The auxiliary key is not inserted in the ignition key cylinder.</li> </ul> </li> <li>Perform DTC inspection.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Are any DTCs displayed?</li> </ul>                                                                                                                                                                                                               | Yes<br>Perform the corresponding DTC troubleshooting.                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                           |
| 7    | <ul style="list-style-type: none"> <li>Measure the signal voltage at keyless control module terminal 2H when each request switch and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch are operated.</li> <li>Is the signal voltage <b>B+→1.0 V or less</b> when the transmitter (advanced key) is pressed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Inspect the wiring harness between the keyless receiver and the keyless control module.<br><b>If the wiring harness is normal:</b> <ul style="list-style-type: none"> <li>• Replace the advanced key, then go to the next step.</li> </ul> <b>If the wiring harness is malfunctioning:</b> <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness, then go to the next step.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     | Action                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <ul style="list-style-type: none"><li>Verify the advanced keyless system operation by operating each request switch and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch with all the following conditions met.<ul style="list-style-type: none"><li>— The advanced key is outside of the cabin.</li><li>— All doors and trunk lid (4SD) are closed.</li><li>— The auxiliary key is not inserted in the ignition key cylinder.</li><li>— The start knob is in the LOCK position, and not pressed.</li><li>— The advanced key is within the reception area <b>(80 cm {31 in} radius)</b> from near the driver's door, front passenger's door, and the liftgate (3HB,5HB)/trunk lid (4SD).</li></ul></li><li>Does the advanced keyless entry operate normally?</li></ul> | Yes | System is normal. (Explain the customer about the keyless entry system.)                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                   |
| 4    | <ul style="list-style-type: none"><li>Inspect the signal voltages at the following keyless control module connector (30-pin) when the request switches and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch are pressed.<br/><b>12 V→1.0 V or less</b><ul style="list-style-type: none"><li>— Request switch (RF) (Terminal 3U)</li><li>— Request switch (LF) (Terminal 3X)</li></ul><br/><b>5 V→3.0 V or less</b><ul style="list-style-type: none"><li>— Liftgate (3HB, 5HB)/trunk lid (4SD) opener switch (Terminal 3G)</li></ul></li><li>Are the signal voltages normal?</li></ul>                                                                                                                                                                                  | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Inspect the applicable wiring harness between the request switch and the keyless control module for an open or short circuit, then go to the next step.                                                                                                                                                                                                                                                |
| 5    | <ul style="list-style-type: none"><li>Inspect the following keyless control connector signal voltages with the auxiliary key not in the ignition switch key cylinder, and the start knob in the LOCK position and not being pressed.<ul style="list-style-type: none"><li>— Keyless switch: <b>1.0 V or less</b> (Terminal 3W)</li><li>— Start knob (push switch): <b>1.0 V or less</b> (Terminal 3V)</li><li>— Power supply (ACC): <b>1.0 V or less</b> (Terminal 2A)</li><li>— Power supply (IG1): <b>1.0 V or less</b> (Terminal 2C)</li></ul></li><li>Are the signal voltages normal?</li></ul>                                                                                                                                                                         | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Inspect the applicable wiring harness between the switch and the keyless control module, repair if necessary, then go to the next step.                                                                                                                                                                                                                                                                |
| 6    | <ul style="list-style-type: none"><li>Perform the advanced keyless and start system DTC inspection with all the following condition met.<ul style="list-style-type: none"><li>— The start knob is not in the LOCK position.</li><li>— The start knob is not pressed.</li><li>— All doors and trunk lid (4SD) are closed.</li><li>— The auxiliary key is not inserted in the ignition key cylinder.</li></ul></li><li>Perform DTC inspection.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li><li>Are any DTCs displayed?</li></ul>                                                                                                                                                                                                               | Yes | Perform the corresponding DTC troubleshooting.                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                   |
| 7    | <ul style="list-style-type: none"><li>Measure the signal voltage at keyless control module terminal 2H when each request switch and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch are operated.</li><li>Is the signal voltage <b>B+→1.0 V or less</b> when the transmitter (advanced key) is pressed?</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Inspect the wiring harness between the keyless receiver and the keyless control module.<br><b>If the wiring harness is normal:</b> <ul style="list-style-type: none"><li>Replace the advanced key, then go to the next step.</li></ul> <b>If the wiring harness is malfunctioning:</b> <ul style="list-style-type: none"><li>Repair or replace the wiring harness, then go to the next step.</li></ul> |



## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action                                                                                                                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <ul style="list-style-type: none"> <li>Inspect the wiring harness between BCM terminal 6W and keyless control module terminal 2F.</li> <li>Is there any open or short circuit?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes<br>Repair or replace the malfunctioning part.                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Connect the connector, then go to the next step.                                                                                                                                                                                          |
| 9    | <ul style="list-style-type: none"> <li>Measure the signal voltages at the following BCM connector (16-pin) when each request switch and the liftgate (3HB, 5HB)/trunk lid (4SD) opener switch are operated. (See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)               <ul style="list-style-type: none"> <li>Door lock actuator (Vehicles with double locking system)                   <ul style="list-style-type: none"> <li>When the doors are locked (Terminal 3E): <b>1.0 V or less</b>→<b>B+</b>→<b>1.0 V or less</b></li> <li>When the doors are unlocked (Terminal 3O): <b>B+</b></li> </ul> </li> <li>Door lock actuator (Vehicles without double locking system)                   <ul style="list-style-type: none"> <li>When the doors are locked (Terminal 3M): <b>B+</b></li> <li>When the doors are unlocked (Terminal 3O): <b>B+</b></li> </ul> </li> <li>Liftgate (3HB, 5HB)/trunk lid (4SD) opener switch                   <ul style="list-style-type: none"> <li>When the switch is operated with all doors locked (Terminal 6U): Wave pattern</li> </ul> </li> <li>Are the voltages normal?</li> </ul> </li> </ul> | Yes<br>Inspect the BCM and replace it if necessary.<br>(See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Inspect the wiring harness between the BCM and the door lock actuator for an open or short circuit. Inspect the door lock actuator, repair if necessary, then go to the next step.<br>(See 09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.) |
| 10   | <ul style="list-style-type: none"> <li>Does the advanced keyless system operate normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes<br>Troubleshooting completed.                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Verify the malfunction, then go to Step 1 if it recurs.                                                                                                                                                                                   |

### NO.4 ADVANCED KEYLESS START FUNCTION INOPERATIVE [ADVANCED KEYLESS AND START SYSTEM]

id0903d1801500

| 4              | Advanced keyless start function inoperative                                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible Cause | <ul style="list-style-type: none"> <li>Transmitter (advanced key) malfunction</li> <li>Keyless control module malfunction</li> <li>Keyless receiver malfunction</li> <li>Keyless antenna malfunction</li> <li>PCM malfunction</li> </ul> |

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                | Action                                                                                                                                                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect for any advanced keyless and start system-related DTCs.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Are any DTCs displayed?</li> </ul> | Yes<br>Perform the corresponding DTC troubleshooting.                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                           | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                    |
| 2    | <ul style="list-style-type: none"> <li>Verify if the engine can be started using the auxiliary key.</li> <li>Does the engine start?</li> </ul>                                                                            | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                           | No<br>Perform symptom troubleshooting No.3 (Section 01-03).<br>(See 01-03-12 NO.3 WILL NOT CRANK [ZJ, ZY].)                                                                                                                                                                                                                                                                                   |
| 3    | <ul style="list-style-type: none"> <li>Verify that the keyless indicator light (green) illuminates when the start knob is pressed.</li> </ul>                                                                             | Yes<br>Go to Step 10.                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                           | No<br><b>If the keyless indicator light (green) does not illuminate:</b> <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul> <b>If the keyless indicator light (red) flashes:</b> <ul style="list-style-type: none"> <li>Go to Step 5.</li> </ul> <b>If the keyless indicator light (red) illuminates:</b> <ul style="list-style-type: none"> <li>Go to Step 8.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS AND START SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <ul style="list-style-type: none"> <li>Bring the advanced key into the cabin.</li> <li>Inspect the signal voltages at the following keyless control module connector (30-pin) when the start knob is pressed. <ul style="list-style-type: none"> <li>Start knob (push switch): B+ (Terminal 3V)</li> <li>Keyless switch: <b>1.0 V or less</b> (Terminal 3W)</li> </ul> </li> <li>Are the signal voltages normal?</li> </ul>                                                                                                                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5    | <ul style="list-style-type: none"> <li>Perform the advanced keyless and start system DTC inspection with all the following condition met. <ul style="list-style-type: none"> <li>The start knob is not in the LOCK position.</li> <li>The start knob is not pressed.</li> <li>All doors are closed.</li> <li>The auxiliary key is not inserted in the ignition key cylinder.</li> </ul> </li> <li>Perform DTC inspection.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Are any DTCs displayed?</li> </ul> | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Inspect the wiring harness between the steering lock unit and the keyless control module.</p> <p><b>If the wiring harness is normal:</b></p> <ul style="list-style-type: none"> <li>Replace the steering lock unit, then go to the next step.<br/>(See 06-13-4 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [L.H.D.].)</li> <li>(See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)</li> </ul> <p><b>If the wiring harness is malfunctioning:</b></p> <ul style="list-style-type: none"> <li>Repair or replace the wiring harness, then go to the next step.</li> </ul> |
| 6    | <ul style="list-style-type: none"> <li>Perform advanced keyless and start system DTC inspection with all the following condition met. <ul style="list-style-type: none"> <li>The start knob is not in the LOCK position.</li> <li>The start knob is not pressed.</li> <li>All doors are closed.</li> <li>The auxiliary key is not inserted in the ignition key cylinder.</li> </ul> </li> <li>Perform DTC inspection.<br/>(See 09-02A-5 DTC INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Are any DTCs displayed?</li> </ul>     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Perform the corresponding DTC troubleshooting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 7    | <ul style="list-style-type: none"> <li>Inspect the advanced key.</li> <li>Is the advanced key normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 8    | <ul style="list-style-type: none"> <li>Inspect the keyless receiver.<br/>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless receiver normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Replace the keyless receiver, then go to Step 8.<br>(See 09-14-108 KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 9    | <ul style="list-style-type: none"> <li>Inspect the advanced key.</li> <li>Is the advanced key normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Replace the advanced key, then go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 10   | <ul style="list-style-type: none"> <li>Inspect the keyless receiver.<br/>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the keyless receiver normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 11   | <ul style="list-style-type: none"> <li>Inspect the steering lock unit.<br/>(See 09-21-6 STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the steering lock unit normal?</li> </ul>                                                                                                                                                                                                                                                                                                                       | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Inspect the wiring harness between keyless control module connector (12-pin) terminal 2L and steering lock unit (8-pin) terminal G for an open or short circuit.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 12   | <ul style="list-style-type: none"> <li>Measure the voltage at keyless control module connector (12-pin) terminal 2L.</li> <li>Is the voltage <b>5.0 V</b>?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 13   | <ul style="list-style-type: none"> <li>Measure the voltage at keyless control module connector (12-pin) terminal 2L.</li> <li>Is the voltage <b>5.0 V</b>?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Inspect the wiring harness between keyless control module connector (12-pin) terminal 2L and steering lock unit (8-pin) terminal G for an open or short circuit.</p> <p><b>If the wiring harness is normal:</b></p> <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul> <p><b>If the wiring harness is malfunctioning:</b></p> <ul style="list-style-type: none"> <li>Replace the malfunctioning part, then go to the next step.</li> </ul>                                                                                                                                |
| 14   | <ul style="list-style-type: none"> <li>Inspect the steering lock unit.<br/>(See 09-21-6 STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM].)</li> <li>Is the steering lock unit normal?</li> </ul>                                                                                                                                                                                                                                                                                                                       | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Replace the keyless control module, then go to the next step.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 15   | <ul style="list-style-type: none"> <li>Turn the start knob to the START position.</li> <li>Does the advanced keyless entry and start system operate normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 16   | <ul style="list-style-type: none"> <li>Turn the start knob to the START position.</li> <li>Does the advanced keyless entry and start system operate normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Troubleshooting completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 17   | <ul style="list-style-type: none"> <li>Turn the start knob to the START position.</li> <li>Does the advanced keyless entry and start system operate normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Verify the malfunction, then go to Step 1 if it recurs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



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## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

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### 09-03C SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

#### SYMPTOM TROUBLESHOOTING CHART

|                              |          |
|------------------------------|----------|
| [KEYLESS ENTRY SYSTEM].....  | 09-03C-1 |
| KEYLESS ENTRY SYSTEM         |          |
| WIRING DIAGRAM               |          |
| [KEYLESS ENTRY SYSTEM].....  | 09-03C-2 |
| TROUBLESHOOTING INDEX        |          |
| [KEYLESS ENTRY SYSTEM].....  | 09-03C-2 |
| KEYLESS ENTRY SYSTEM         |          |
| CHECK SHEET                  |          |
| [KEYLESS ENTRY SYSTEM].....  | 09-03C-2 |
| KEYLESS ENTRY SYSTEM         |          |
| PRELIMINARY INSPECTION       |          |
| [KEYLESS ENTRY SYSTEM].....  | 09-03C-3 |
| ON-BOARD DIAGNOSTIC FUNCTION |          |
| [KEYLESS ENTRY SYSTEM].....  | 09-03C-4 |

#### NO.1 ONE OR MORE ON-BOARD

##### DIAGNOSTIC FUNCTIONS

##### INOPERATIVE

|                              |          |
|------------------------------|----------|
| [KEYLESS ENTRY SYSTEM] ..... | 09-03C-5 |
| Diagnostic Procedure .....   | 09-03C-5 |

#### NO.2 ALL ON-BOARD DIAGNOSTIC

##### FUNCTIONS INOPERATIVE

|                              |          |
|------------------------------|----------|
| [KEYLESS ENTRY SYSTEM] ..... | 09-03C-6 |
| Diagnostic Procedure .....   | 09-03C-6 |

#### NO.3 TRANSMITTER ID CODE

##### CANNOT BE REPROGRAMMED

|                              |          |
|------------------------------|----------|
| [KEYLESS ENTRY SYSTEM] ..... | 09-03C-7 |
| Diagnostic Procedure .....   | 09-03C-8 |

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## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

### SYMPTOM TROUBLESHOOTING CHART [KEYLESS ENTRY SYSTEM]

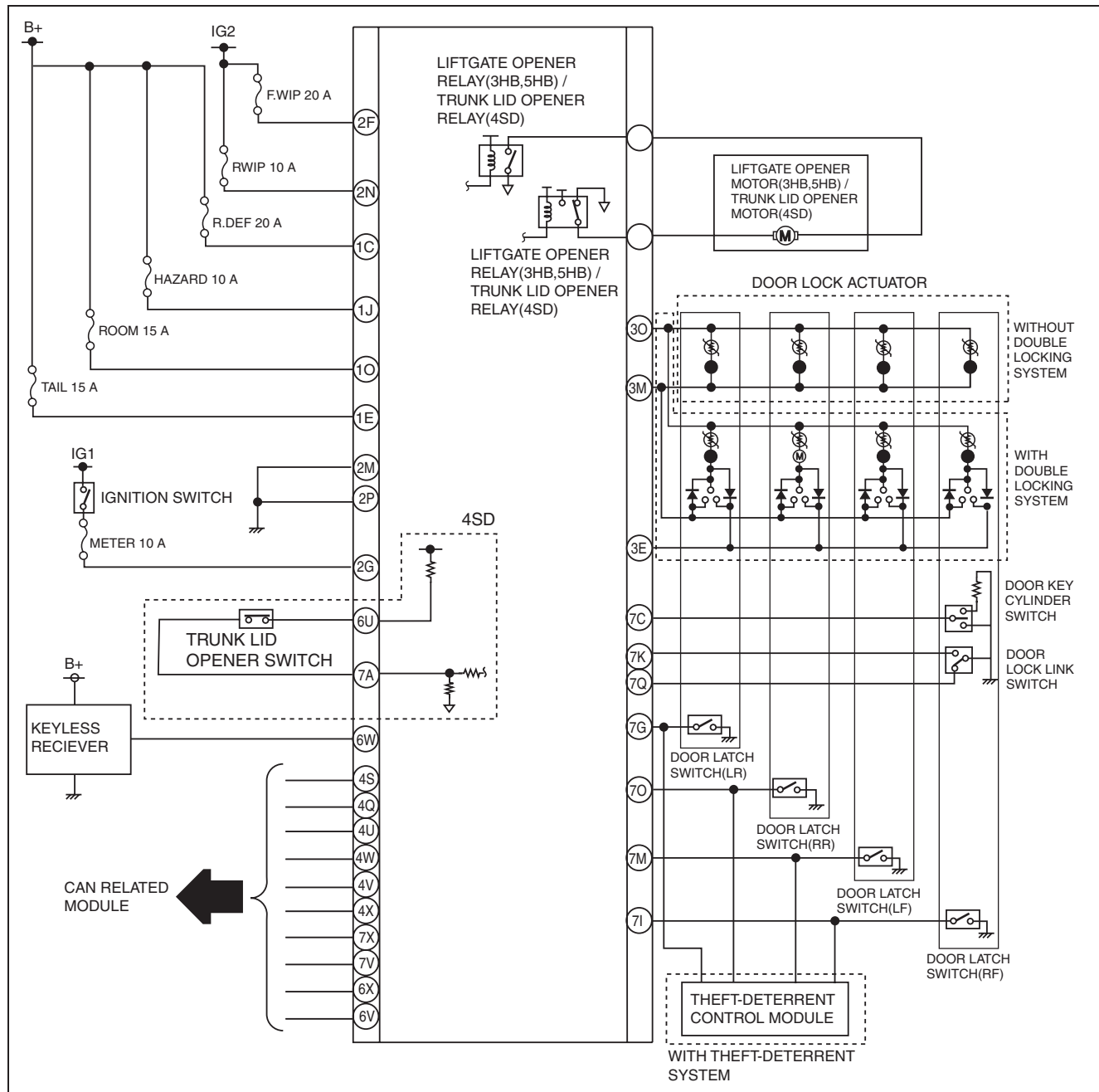
id0903d2814300

| No. | Troubleshooting item                                  | Description                                                                                                                                                                                              | Page                                                                                                           |
|-----|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1   | One or more on-board diagnostic functions inoperative | <ul style="list-style-type: none"><li>Malfunction in door lock linkage system</li></ul>                                                                                                                  | <a href="#">See 09-03C-5</a> NO.1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM] |
| 2   | All on-board diagnostic functions inoperative         | <ul style="list-style-type: none"><li>Malfunction in BCM power supply circuit, door latch switch circuit, BCM ground circuit, or keyless receiver.</li></ul>                                             | <a href="#">See 09-03C-6</a> NO.2 ALL ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM]         |
| 3   | Transmitter ID code cannot be reprogrammed            | <ul style="list-style-type: none"><li>Malfunction in transmitter battery, transmitter, keyless receive bracket, keyless receive bracket ground screw, or BCM circuit. keyless receive circuit.</li></ul> | <a href="#">See 09-03C-7</a> NO.3 TRANSMITTER ID CODE CANNOT BE REPROGRAMMED [KEYLESS ENTRY SYSTEM]            |

## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

### KEYLESS ENTRY SYSTEM WIRING DIAGRAM [KEYLESS ENTRY SYSTEM]

id0903d2800900



am2zzw0000510

### TROUBLESHOOTING INDEX [KEYLESS ENTRY SYSTEM]

id0903d2801000

- Refer to the general information and check the basic troubleshooting procedure.
- The keyless entry system is controlled by the BCM.
- The phrase "All doors" includes the liftgate (3HB, 5HB)/trunk lid (4SD).

### KEYLESS ENTRY SYSTEM CHECK SHEET [KEYLESS ENTRY SYSTEM]

id0903d2871400

- Use the sheet below as a customer interview sheet when accepting a vehicle for service.
- If the symptom is "Power door lock system does not operate with transmitter at all," find out how the customer uses the keyless entry system by following the check sheet below.

## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

Perform the following inspection with customer.

Q1. What's the customer's complaint?

- ☐ Power door lock system does not operate with transmitter (door does not lock/unlock).  
☐ Other \_\_\_\_\_

Q2. Is system factory-installed or after-market?

- ☐ Factory-installed system

→ GO to Q3.

- ☐ After-market system

→ Perform troubleshooting according to after-market keyless entry system manual.

Q3. Operate transmitter with customer from 2.5 m {8.2 ft} away from center of vehicle. (Make sure the ignition key is either in the LOCK position or removed.)

Does keyless entry system work?

- ☐ Yes

→ Explain the following to the customer.

- Keyless entry system does not work when ignition switch is in ON position.
- Keyless entry system does not work from excessive distances (more than 2.5 m {8.2 ft} away from center of vehicle).

- ☐ No

→ Go to Q4.

Q4. Check location where customer uses keyless entry system.

Does a particular area, such as being near TV towers, power plants, power lines, or factories, have an effect on malfunction?

- ☐ Yes Place \_\_\_\_\_

→ Area of operation is bad. Explain effect of outside interference on transmitter to customer.

- ☐ No

→ Go to Q5.

Q5. Make sure there are no after-market electrical parts installed on vehicle.

Are there any of the following present?

- Cellular phone
- Radio-wave equipment
- Remote engine starter
- TV, etc.

- ☐ Yes Parts \_\_\_\_\_

- ☐ No

Perform the keyless entry system preliminary inspection.

am2zzw0000200

### KEYLESS ENTRY SYSTEM PRELIMINARY INSPECTION [KEYLESS ENTRY SYSTEM]

id0903d2800300

- Perform the following preliminary inspection before troubleshooting.

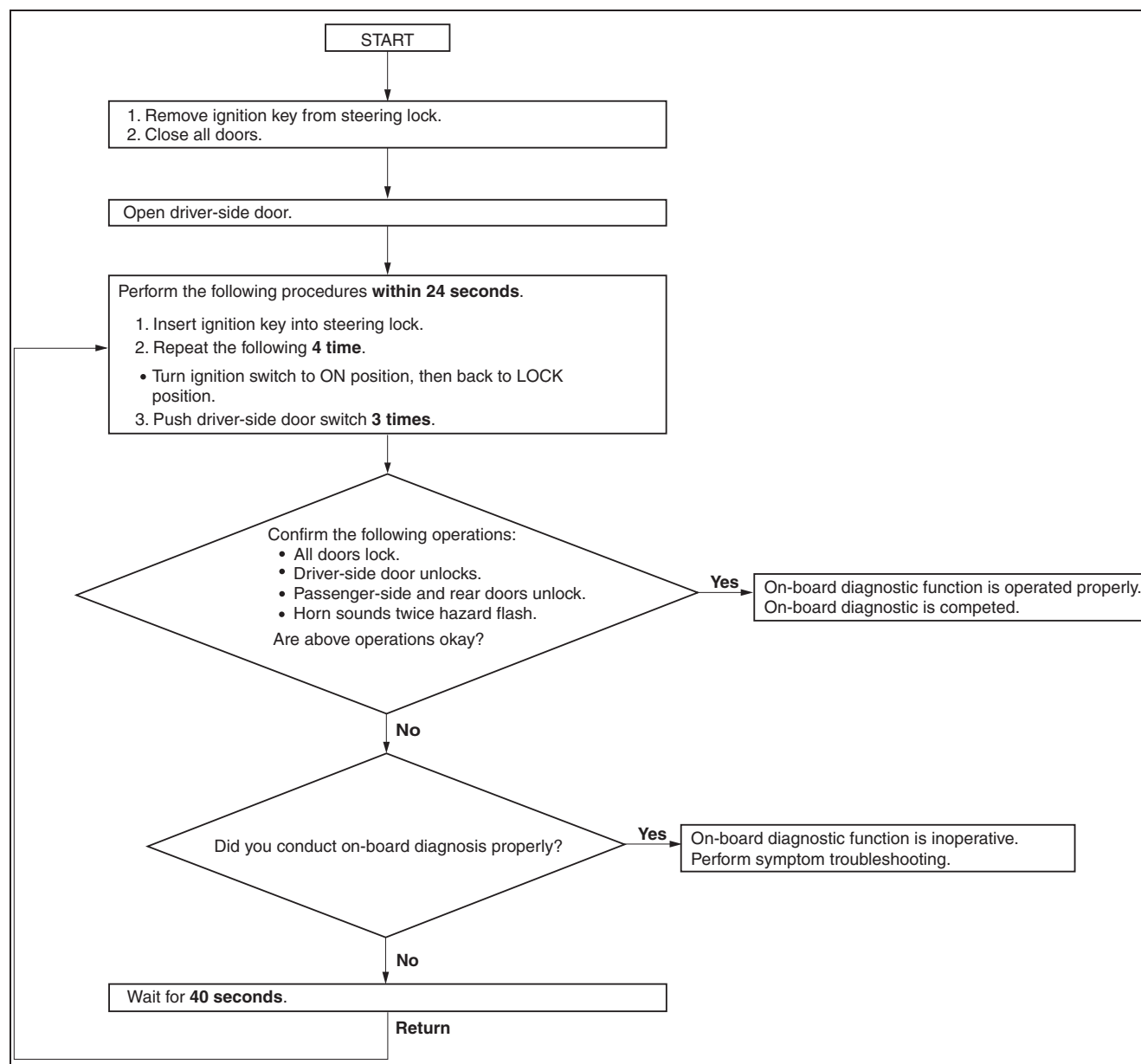
| STEP | INSPECTION                                                                                                                         |     | ACTION                                                                                                                                                                                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | • Is system an after-market one?                                                                                                   | Yes | Perform troubleshooting according to after-market keyless entry system manual.                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                    | No  | Go to next step.                                                                                                                                                                                                                                                                                                                                               |
| 2    | • Did customer activate keyless entry system when ignition switch was in LOCK position?                                            | Yes | Go to next step.                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                    | No  | <ul style="list-style-type: none"> <li>• Explain to customer that system does not work when ignition is in ON position.</li> <li>• Turn ignition switch to LOCK position, then go to next step.</li> </ul>                                                                                                                                                     |
| 3    | • Did customer use keyless entry system in particular area, such as being near TV towers, power plants, power lines, or factories? | Yes | Attempt to lock/unlock doors with transmitter in non-interference area.<br><b>If system operates:</b> <ul style="list-style-type: none"> <li>• Area of operation is bad. Explain effect of outside interference on transmitter to customer.</li> </ul> <b>If system does not operate:</b> <ul style="list-style-type: none"> <li>• Go to next step.</li> </ul> |
|      |                                                                                                                                    | No  | Go to next step.                                                                                                                                                                                                                                                                                                                                               |

## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

| STEP | INSPECTION                                                                                                                                                                                                                                                                | ACTION                                                                                                                                                                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <ul style="list-style-type: none"> <li>Are any of the following after-market electrical parts on the vehicle? <ul style="list-style-type: none"> <li>Cellular phone</li> <li>Radio-wave equipment</li> <li>Remote engine starter</li> <li>TV, etc.</li> </ul> </li> </ul> | Yes<br>Disconnect after-market electrical part connectors and attempt to lock/unlock doors with transmitter.<br><b>If system operates:</b> <ul style="list-style-type: none"> <li>After-market electrical parts are interfering with keyless entry system.</li> </ul> <b>If system does not operate:</b> <ul style="list-style-type: none"> <li>Go to next step.</li> </ul> |
|      |                                                                                                                                                                                                                                                                           | No<br>Go to next step.                                                                                                                                                                                                                                                                                                                                                      |
| 5    | <ul style="list-style-type: none"> <li>Perform on-board diagnostic function.<br/>(See 09-03C-4 ON-BOARD DIAGNOSTIC FUNCTION [KEYLESS ENTRY SYSTEM].)</li> <li>Does on-board diagnostic function work?</li> </ul>                                                          | Yes<br>Go to next step.                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                           | No<br><ul style="list-style-type: none"> <li>Go to Step 1 of NO. 1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE.</li> <li>Go to Step 1 of NO. 2 ALL ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE.</li> </ul>                                                                                                                                                          |
| 6    | <ul style="list-style-type: none"> <li>Attempt to reprogram transmitter ID code.</li> <li>Can transmitter ID code be reprogrammed?</li> </ul>                                                                                                                             | Yes<br>System is normal now.                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                           | No<br>Go to Step 1 of troubleshooting NO. 3 TRANSMITTER ID CODE CANNOT BE REPROGRAMMED.                                                                                                                                                                                                                                                                                     |

### ON-BOARD DIAGNOSTIC FUNCTION [KEYLESS ENTRY SYSTEM]

id0903d2871500



am2zzw0000468

## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

### NO.1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM]

id0903d2800600

| 1                     | One or more on-board diagnostic functions inoperative                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Possible Cause</b> | <ul style="list-style-type: none"> <li>• BCM power supply, ground, or input/output signal error               <ul style="list-style-type: none"> <li>— Power supply (IG1)</li> <li>— Power supply (B+)</li> <li>— Key reminder switch</li> <li>— Ground</li> <li>— Door latch switch</li> <li>— Turn light system malfunction</li> <li>— Door lock actuator malfunction</li> </ul> </li> </ul> |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     | Action                                                                                                                                                                                                                                                                                       |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Did any of the following operate during the malfunction diagnosis? <ul style="list-style-type: none"> <li>• All doors lock/unlock</li> <li>• Hazard warning lights flash</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Inspect the connection of the BCM connectors, then go to Step 4.                                                                                                                                                                                                                             |
| 2    | Did the following operate during the malfunction diagnosis? <ul style="list-style-type: none"> <li>• All doors lock/unlock</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Go to Step 7.                                                                                                                                                                                                                                                                                |
| 3    | Did the following operate during the malfunction diagnosis? <ul style="list-style-type: none"> <li>• Hazard warning lights flash</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Go to Step 9.                                                                                                                                                                                                                                                                                |
| 4    | Are the BCM power supply voltages normal? <ul style="list-style-type: none"> <li>• Power supply (IG1) (Terminal 2G)</li> <li>• Power supply (B+) (Terminals 1J, 1O, and 1P)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | <ul style="list-style-type: none"> <li>• Inspect for a burnt fuse (METER 10A, ROOM 15A, D/L 20 A).</li> <li>• Inspect the power supply system wiring harness for an open or short circuit.</li> </ul>                                                                                        |
| 5    | Is the BCM ground voltage normal? <ul style="list-style-type: none"> <li>• <b>0 V</b> (Terminals 2M and 2P)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | Inspect the ground system wiring harness for an open circuit.                                                                                                                                                                                                                                |
| 6    | Are the BCM and each door latch switch normal? <ul style="list-style-type: none"> <li>• Inspect each terminal (7G, 7O, 7M, and 7I) under the following conditions. (See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)               <ul style="list-style-type: none"> <li>— When the door is closed: <b>1.0 V or less</b></li> <li>— When the door is open: <b>Wave pattern</b></li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                    | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | <ul style="list-style-type: none"> <li>• Inspect the door latch switch.<br/>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)<br/>(See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)</li> <li>• Inspect the door latch switch system wiring harness for an open or short circuit.</li> </ul> |
| 7    | Is the signal voltage transmitted from the key reminder switch to the BCM normal? <ul style="list-style-type: none"> <li>— When the key is inserted into the steering lock: <b>B+</b> (Terminal 6R)</li> <li>— When the key is not inserted into the steering lock: <b>1.0 V or less</b> (Terminal 6R)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           | Yes | Go to the next step.                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | <ul style="list-style-type: none"> <li>• Inspect the wiring harness between the BCM and the key reminder switch for an open or short circuit.</li> <li>• Replace the key reminder switch.</li> </ul>                                                                                         |
| 8    | Are the signal voltages transmitted from the BCM to the door lock actuator normal? <ul style="list-style-type: none"> <li>• Do the signal voltages transmitted to the door lock actuator change as follows when the malfunction diagnosis inspection procedure is performed.               <ul style="list-style-type: none"> <li>— When the doors are unlocked: <b>1.0 V or less→B+→1.0V or less</b> (Terminal 3O)</li> <li>— When the doors are locked (Vehicles with double locking system): <b>1.0 V or less→B+→1.0V or less</b> (Terminal 3E)</li> <li>— When the doors are locked (Vehicles without double locking system): <b>1.0 V or less→B+→1.0V or less</b> (Terminal 3M)</li> </ul> </li> </ul> | Yes | Troubleshooting completed.                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | <ul style="list-style-type: none"> <li>• Inspect the wiring harness between the BCM and the door lock actuator for an open or short circuit.</li> <li>• Inspect the door lock actuator.<br/>(See 09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.)</li> </ul>                                   |
| 9    | Is the signal voltage transmitted to the BCM and each turn light normal? <ul style="list-style-type: none"> <li>• Does the signal voltage transmitted to each turn light change as follows when the malfunction diagnosis inspection procedure is performed.               <ul style="list-style-type: none"> <li>— <b>B+ ⇔ 1.0 V or less</b> (Terminals 1K, 1L, 3J, and 3L)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                         | Yes | Troubleshooting completed.                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No  | <ul style="list-style-type: none"> <li>• Inspect the wiring harnesses between the BCM and each turn light for an open or short circuit.</li> <li>• Inspect each turn light.<br/>(See 09-18-35 LIGHT SWITCH INSPECTION.)</li> </ul>                                                           |

## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

### NO.2 ALL ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM]

id0903d2800700

| 2              | All on-board diagnostic functions inoperative                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible Cause | <ul style="list-style-type: none"> <li>• Transmitter malfunction (battery or other parts)</li> <li>• Customer's mis-operation or misunderstanding</li> <li>• Effect of non-standard equipment (any control unit with built-in micro computer such as radio set, mobile telephone, and TV)</li> <li>• Mistakes in previous services</li> <li>• Keyless receiver malfunction</li> <li>• BCM malfunction</li> </ul> |

#### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                        | Action                                                                                                                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Does the on-board diagnosis function operate?                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | Perform symptom troubleshooting No.1<br>(See 09-03C-5 NO.1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM].)                                                                                             |
| 2    | Can any operation be performed using the transmitter?                                                                                                                                                             | Yes<br>Replace the transmitter, then <b>go to Step 24.</b>                                                                                                                                                                            |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |
| 3    | Did the customer operate the transmitter within the operation range (7.5 m {25 ft} from the vehicle)?                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | System is normal. (Explain to the customer to operate the transmitter within the operation range.)                                                                                                                                    |
| 4    | Did the customer operate at a place where extrinsic noise is received such as a TV tower, electric power station, or a broadcast station.                                                                         | Yes<br>System is normal. (Explain to the customer to operate the transmitter away from extrinsic noise.)                                                                                                                              |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |
| 5    | Did the customer operate the transmitter with the key inserted in the ignition key cylinder?                                                                                                                      | Yes<br>System is normal. (Explain to the customer that the system does not operate due to the cancel function with the key in the ignition key cylinder.)                                                                             |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |
| 6    | Has the customer ever updated the transmitter ID number before?                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | Go to Step 9.                                                                                                                                                                                                                         |
| 7    | Did the malfunction occur after the ID number updating?                                                                                                                                                           | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | Go to Step 9.                                                                                                                                                                                                                         |
| 8    | Does the malfunction occur only when the transmitter which had been used before the ID number updating is used?                                                                                                   | Yes<br>Update the ID number of the transmitter which cause the malfunction, then <b>go to Step 24.</b>                                                                                                                                |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |
| 9    | Did the malfunction occur after any non-standard equipment (any control unit with built-in micro computer such as radio set, mobile telephone, and TV) was installed?                                             | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | Go to Step 11.                                                                                                                                                                                                                        |
| 10   | Turn the ignition switch to the LOCK position. Disconnect the negative battery cable. Was the malfunction corrected when the connector of the equipment was disconnected?                                         | Yes<br>System is normal. (Explain to the customer that noise from the equipment affected the operation.)                                                                                                                              |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |
| 11   | Is there repair record of the customer's keyless entry system?                                                                                                                                                    | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | Go to Step 14.                                                                                                                                                                                                                        |
| 12   | Does the malfunction occur after the repair?                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | Go to Step 14.                                                                                                                                                                                                                        |
| 13   | Connect the negative battery cable. Is the malfunction corrected when the ID numbers for all the customer's transmitters are updated?<br>(See 09-14-120 TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM].) | Yes<br>System is normal. (Explain to the customer that the malfunction occurred because all the transmitter ID numbers were not updated even though the body control module or a transmitter was replaced in the previous servicing.) |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |
| 14   | Is lock/unlock possible only near the keyless receivers when the transmitter is operated?                                                                                                                         | Yes<br>Go to the next step.                                                                                                                                                                                                           |
|      | No                                                                                                                                                                                                                | <b>Go to Step 16.</b>                                                                                                                                                                                                                 |
| 15   | Verify the keyless and start system operation using another normal battery. Does the keyless system operate normally?                                                                                             | Yes<br>Replace the battery, then <b>go to Step 26.</b><br>(See 09-14-118 TRANSMITTER BATTERY REPLACEMENT [KEYLESS ENTRY SYSTEM].)                                                                                                     |
|      | No                                                                                                                                                                                                                | Go to the next step.                                                                                                                                                                                                                  |

## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Action                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16   | Visually inspect the transmitter battery.<br>Are the following correct?<br><ul style="list-style-type: none"> <li>Battery direction (polarity)</li> <li>Battery type<br/>— CR1620</li> </ul>                                                                                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Properly install the battery or replace the battery with a specified one (CR1620), then go to Step 26                                                                               |
| 17   | Visually inspect the transmitter.<br><ul style="list-style-type: none"> <li>Is there any rust on the battery terminals (+), (-)?</li> <li>Is there any poor contact between the battery terminals and the battery when the battery is inserted?</li> </ul>                                                                                                                                                                                                                           | Yes<br>Replace the transmitter or repair the battery terminals, then go to Step 23.                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                                                                |
| 18   | Inspect the battery.<br>Is it normal?                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes<br>Go to Step 20.                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                                                                |
| 19   | Verify the keyless and start system operation using another normal battery.<br>Does the keyless system operate normally?                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Replace the battery, then go to Step 26.<br>(See 09-14-118 TRANSMITTER BATTERY REPLACEMENT [KEYLESS ENTRY SYSTEM].)                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Replace the transmitter, then go to Step 26.                                                                                                                                        |
| 20   | Inspect the keyless receiver installation condition.<br>Is the bracket installed securely?                                                                                                                                                                                                                                                                                                                                                                                           | Yes<br>Go to the next step.                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Install the bracket securely, then go to the next step.                                                                                                                             |
| 21   | Perform ID number updating using another normal transmitter.<br>After the updating, does the keyless entry system operate normally?                                                                                                                                                                                                                                                                                                                                                  | Yes<br>Replace the transmitter, then go to Step 26.                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                                                                |
| 22   | Inspect the keyless receiver.<br><ul style="list-style-type: none"> <li>Is the keyless receiver power supply voltage normal?</li> </ul> <b>4-pin connector type</b><br>— Power supply (+B) (terminal B)<br><b>6-pin connector type</b><br>— Power supply (+B) (terminal A)                                                                                                                                                                                                           | Yes<br>Go to the next step.                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br><ul style="list-style-type: none"> <li>Inspect for a burnt fuse (ROOM 15 A).</li> <li>Inspect the power supply system wiring harness for an open or short circuit.</li> </ul>       |
| 23   | Inspect the keyless receiver.<br><ul style="list-style-type: none"> <li>Is the keyless receiver ground normal?</li> </ul> <b>4-pin connector type</b><br>— 0 V (terminal D)<br><b>6-pin connector type</b><br>— 0 V (terminal E)                                                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br><ul style="list-style-type: none"> <li>Inspect the ground system wiring harness for an open circuit.</li> <li>Inspect the ground tightening screw and nut for looseness.</li> </ul> |
| 24   | Turn the ignition switch to the LOCK position.<br>Disconnect the negative battery cable.<br>Disconnect the keyless receiver connector and the BCM connector.<br><ul style="list-style-type: none"> <li>Inspect the wiring harness between the following terminals for an open or short circuit.</li> </ul> <b>4-pin connector type</b><br>— Terminal C to 6W<br><b>6-pin connector type</b><br>— Terminal D to 6W<br><ul style="list-style-type: none"> <li>Is it normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Repair or replace the wiring harness between the keyless receiver connector and the BCM.                                                                                            |
| 25   | Replace the keyless receiver.<br>(See 09-14-109 KEYLESS RECEIVER REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)<br><ul style="list-style-type: none"> <li>Does the keyless entry system operate normally?</li> </ul>                                                                                                                                                                                                                                                                  | Yes<br>Troubleshooting completed.                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Replace the BCM, then go to the next step.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                         |
| 26   | Does the keyless entry system operate normal?                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes<br>Troubleshooting completed.                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Verify the malfunction, then go to Step 1 if it recurs.                                                                                                                             |

### NO.3 TRANSMITTER ID CODE CANNOT BE REPROGRAMMED [KEYLESS ENTRY SYSTEM]

id0903d2800800

|                       |                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------|
| <b>3</b>              | <b>Transmitter ID code cannot be reprogrammed</b>                                                        |
| <b>Possible Cause</b> | <ul style="list-style-type: none"> <li>Mis-operation in ID number updating or BCM malfunction</li> </ul> |



## SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

### Diagnostic Procedure

| Step | Inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action                                                                                                                                                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Is the customer's keyless entry system standard equipment?                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Perform troubleshooting following the separate service manual.                                                                                                               |
| 2    | Does the on-board diagnosis function operate?                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes<br>Go to the next step.                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Perform symptom troubleshooting No.1.<br>(See 09-03C-5 NO.1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM].)                                   |
| 3    | Do all doors lock/unlock using the transmitter?                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Perform symptom troubleshooting No.2.<br>(See 09-03C-6 NO.2 ALL ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM].)                                           |
| 4    | Perform ID number updating following the procedure.<br>(See 09-14-120 TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM].)<br>Can the ID number be updated?                                                                                                                                                                                                                                                                                                                                            | Yes<br>System is normal.                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Go to the next step.                                                                                                                                                         |
| 5    | Inspect the keyless receiver.<br><ul style="list-style-type: none"> <li>Is the keyless receiver power supply voltage normal?</li> </ul> <b>4-pin connector type</b><br>— Power supply (+B) (terminal B)<br><b>6-pin connector type</b><br>— Power supply (+B) (terminal A)                                                                                                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br><ul style="list-style-type: none"> <li>Inspect for a burnt fuse (ROOM 15 A)</li> <li>Inspect the power supply system wiring harness for an open or short circuit.</li> </ul> |
| 6    | Inspect the keyless receiver.<br><ul style="list-style-type: none"> <li>Is the keyless receiver grounded normally?</li> </ul> <b>4-pin connector type</b><br>— 0 V (terminal D)<br><b>6-pin connector type</b><br>— 0 V (terminal E)                                                                                                                                                                                                                                                                        | Yes<br>Go to the next step.                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Inspect the ground system wiring harness for an open circuit.                                                                                                                |
| 7    | Turn the ignition switch to the LOCK position.<br>Disconnect the negative battery cable.<br>Disconnect the keyless receiver connector (4-pin/6-pin) and the BSM connector (24-pin).<br><ul style="list-style-type: none"> <li>Inspect the wiring harness between the following terminals for an open or short circuit.</li> </ul> <b>4-pin connector type</b><br>— Terminal C to 6W<br><b>6-pin connector type</b><br>— Terminal D to 6W<br><ul style="list-style-type: none"> <li>Is it normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Repair or replace the wiring harness between the keyless receiver connector and the BCM connector, then go to the next step.                                                 |
| 8    | Connect the negative battery cable.<br>Is the signal voltage transmitted from the keyless receiver to the BCM is normal when the transmitter is operated with the key not inserted into the ignition key cylinder.<br><ul style="list-style-type: none"> <li>B+→1.0V or less (Terminal 6W)</li> </ul>                                                                                                                                                                                                       | Yes<br>Replace the BCM, then go to the next step.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Replace the keyless receiver, then go to the next step.<br>(See 09-14-109 KEYLESS RECEIVER REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)                                     |
| 9    | Can the ID number be updated?<br>(See 09-14-120 TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Troubleshooting completed.                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Verify the malfunction, then go to Step 1 if it recurs.                                                                                                                      |

## SYMPTOM TROUBLESHOOTING [IMMOBILIZER SYSTEM]

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### 09-03D SYMPTOM TROUBLESHOOTING [IMMOBILIZER SYSTEM]

SYMPTOM TROUBLESHOOTING  
CHART [IMMOBILIZER SYSTEM] . . . . 09-03D-1

NO.1 THE SECURITY LIGHT DISPLAY  
IS NOT NORMAL  
[IMMOBILIZER SYSTEM] . . . . .09-03D-1

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## SYMPTOM TROUBLESHOOTING [IMMOBILIZER SYSTEM]

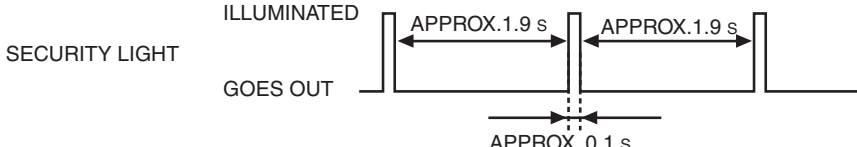
### SYMPTOM TROUBLESHOOTING CHART [IMMOBILIZER SYSTEM]

id0903f5814200

| No. | TROUBLESHOOTING ITEM                     | PAGE                                                                        |
|-----|------------------------------------------|-----------------------------------------------------------------------------|
| 1   | The security light display is not normal | 09-03D-1 NO.1 THE SECURITY LIGHT DISPLAY IS NOT NORMAL [IMMOBILIZER SYSTEM] |

### NO.1 THE SECURITY LIGHT DISPLAY IS NOT NORMAL [IMMOBILIZER SYSTEM]

id0903f5900400

| 1              | The security light display is not normal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DESCRIPTION    | <ul style="list-style-type: none"> <li>The security light remains illuminated 2 min or more after the ignition switch is turned to the ON position</li> <li>The security does not illuminate when the ignition switch is turned to the ON position</li> <li>The security light remains illuminated while the ignition switch is at the LOCK position</li> <li>The security light does not flash or the flashing interval is abnormal while the ignition switch is at the LOCK position</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>Keyless control module malfunction (with advanced keyless and start system)</li> <li>Instrument cluster malfunction</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>If the security light continues to remain illuminated or flashing even after 1 min has elapsed since the ignition switch was turned to the ON position and a DTC is displayed, perform the immobilizer system malfunction diagnosis according to that DTC. (See 09-02B-3 DTC TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)].) (See 09-02C-3 DTC TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].)</li> <li>While performing immobilizer system security access using the M-MDS, the security light does not illuminate even if the ignition switch is turned to the ON position. Verify the illumination condition of the security light by disconnecting the DLC-2 to release security access.</li> <li>The flashing security light conditions while the ignition switch is in the LOCK position are as follows:</li> </ul>  |

#### Note

- Normal operation of the security light is as follows. The light starts flashing every 2 s when the ignition switch is turned from ON to ACC position and the immobilizer system is armed. The light stops flashing when the ignition switch is turned to the ON position with the correct ignition key. At this time, the immobilizer system is disarmed and the security light illuminates for about 3 s and then goes out.

## SYMPTOM TROUBLESHOOTING [IMMOBILIZER SYSTEM]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTION                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>THE MALFUNCTION LOCATION IS SPLIT INTO EITHER INSTRUMENT CLUSTER WARNING LIGHT CONTROL CIRCUIT OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Verify that the other warning lights in the instrument cluster condition.</li> <li>Do the warning lights illumination normal?</li> </ul>                                                                                                                                                                                                                                              | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Refer to the symptom troubleshooting and inspect the instrument cluster.<br>(See 09-22-8 INSTRUMENT CLUSTER INSPECTION.)                                                                                                                                                                                                                                                                                  |
| 2    | <b>THE MALFUNCTION LOCATION IS SPLIT INTO EITHER SECURITY LIGHT CONTROL (MICRO-COMPUTER ALWAYS ON) OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>Verify that the security light illumination.</li> <li>Does the security light remains illuminate above 2 min?</li> </ul>                                                                                                                                                                                                                                                                                                                   | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                      |
| 3    | <b>THE MALFUNCTION LOCATION IS SPLIT INTO EITHER SECURITY LIGHT CONTROL CIRCUIT (SHORT CIRCUIT) OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Verify that the security light illumination.</li> <li>Does the security light remain illumination?</li> </ul>                                                                                                                                                                                                                                                                         | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                      |
| 4    | <b>THE MALFUNCTION LOCATION IS SPLIT INTO EITHER IMMOBILIZER SYSTEM OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>Verify that the security light is flashing.</li> <li>Does the security light flash normally?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>If the security light flashes with DTC patterns, perform the applicable DTC troubleshooting procedure.<br>(See 09-02B-3 DTC TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS AND START SYSTEM)]).<br>(See 09-02C-3 DTC TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]).<br>If the security light does not flash, replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.) |
| 5    | <b>VEHICLE SPECIFICATION VERIFICATION</b> <ul style="list-style-type: none"> <li>Is the advanced keyless and start system equipped?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)                                                                                                                                                                                                                                                                                                                |
| 6    | <b>THE MALFUNCTION LOCATION IS SPLIT INTO EITHER THE KEYLESS CONTROL MODULE OR THE INSTRUMENT CLUSTER.</b> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>DTCs could be stored in the keyless control module by performing the following procedure.</li> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the negative battery cable.</li> <li>Disconnect the keyless control module connectors.</li> <li>Connect the negative battery cable.</li> <li>Turn the ignition switch to the ON position.</li> <li>Does the security light illuminate normally?</li> </ul> | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the keyless control module.<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                   |

## SYMPTOM TROUBLESHOOTING [AUDIO]

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### 09-03E SYMPTOM TROUBLESHOOTING [AUDIO]

|                                            |          |                                           |           |
|--------------------------------------------|----------|-------------------------------------------|-----------|
| <b>FOREWORD [AUDIO]</b> . . . . .          | 09-03E-1 | <b>NO.3 NO SOUND FROM</b>                 |           |
| Troubleshooting Index . . . . .            | 09-03E-1 | <b>ALL SPEAKERS [AUDIO]</b> . . . . .     | 09-03E-6  |
| Quick Diagnostic Chart                     |          | <b>NO.4 NO SOUND FROM</b>                 |           |
| (Entire Audio System) . . . . .            | 09-03E-2 | <b>SOME SPEAKERS [AUDIO]</b> . . . . .    | 09-03E-7  |
| <b>CONFIRMATION STEP 1: AUDIO</b>          |          | <b>NO.5 SOUND BREAK-UP OR</b>             |           |
| <b>SWITCH CONFIRMATION [AUDIO]</b> . . .   | 09-03E-2 | <b>POOR SOUND QUALITY [AUDIO]</b> . . . . | 09-03E-9  |
| Diagnostic procedure . . . . .             | 09-03E-3 | <b>NO.6 SOUND BECOMES LOUD OR</b>         |           |
| <b>CONFIRMATION STEP 2: AUDIO</b>          |          | <b>WEAK WHILE DRIVING</b>                 |           |
| <b>CONTROL SWITCH CONFIRMATION</b>         |          | <b>THE VEHICLE [AUDIO]</b> . . . . .      | 09-03E-9  |
| <b>[AUDIO]</b> . . . . .                   | 09-03E-3 | <b>NO.7 ALC FUNCTION IS</b>               |           |
| Diagnostic procedure . . . . .             | 09-03E-3 | <b>INOPERATIVE [AUDIO]</b> . . . . .      | 09-03E-10 |
| <b>NO.1 AF NOISE OR POP NOISE AT ALL</b>   |          | <b>NO.8 NO AUDIO SYSTEM</b>               |           |
| <b>SOURCES (RADIO, CD) [AUDIO]</b> . . . . | 09-03E-4 | <b>ILLUMINATION [AUDIO]</b> . . . . .     | 09-03E-10 |
| <b>NO.2 NO POWER TO THE ENTIRE</b>         |          | <b>NO.9 LCD DOES NOT DISPLAY</b>          |           |
| <b>AUDIO SYSTEM [AUDIO]</b> . . . . .      | 09-03E-6 | <b>AT ALL [AUDIO]</b> . . . . .           | 09-03E-11 |

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## SYMPTOM TROUBLESHOOTING [AUDIO]

### FOREWORD [AUDIO]

id0903e1802700

#### Note

- Note down all radio programs set by the customer prior to the repairs. Reset all radio programs and adjust the time after the repairs.

### Troubleshooting Index

| No. | Symptom                                              | Possible DTC                       |
|-----|------------------------------------------------------|------------------------------------|
| 1   | AF noise or POP noise at all sources (Radio, CD)     | 09:Er20, 09:Er21                   |
| 2   | No power to the entire audio system                  | 09:Er20                            |
| 3   | No sound from all speakers                           | 09:Er20, 09:Er21, 10:Er07, 22:Er07 |
| 4   | No sound from some speakers                          | —                                  |
| 5   | Sound break-up or poor sound quality                 | 09:Er21                            |
| 6   | Sound becomes loud or weak while driving the vehicle | —                                  |
| 7   | ALC function is inoperative                          | —                                  |
| 8   | No audio system illumination                         | 09:Er20, 21:Er19                   |
| 9   | LCD does not display at all                          | 09:Er20, 21:Er19                   |

## SYMPTOM TROUBLESHOOTING [AUDIO]

### Quick Diagnostic Chart (Entire Audio System)

|                                                                |                      | X: Applicable                                    |                                     |                            |                             |                                      |                                                      |                             |                              |                             |
|----------------------------------------------------------------|----------------------|--------------------------------------------------|-------------------------------------|----------------------------|-----------------------------|--------------------------------------|------------------------------------------------------|-----------------------------|------------------------------|-----------------------------|
| Possible factor                                                | Troubleshooting item | 1                                                | 2                                   | 3                          | 4                           | 5                                    | 6                                                    | 7                           | 8                            | 9                           |
|                                                                |                      | AF noise or POP noise on all sources (Radio, CD) | No power on the entire audio system | No sound from all speakers | No sound from some speakers | Sound break-up or poor sound quality | Sound becomes loud or weak while driving the vehicle | ALC function is inoperative | No audio system illumination | LCD does not display at all |
| Low vehicle battery voltage                                    |                      | X                                                |                                     |                            |                             |                                      |                                                      |                             |                              |                             |
| Jammed radio signals from after market equipment               |                      | X                                                |                                     |                            |                             |                                      |                                                      |                             |                              |                             |
| Speaker malfunction (e. g., any foreign material, broken)      |                      | X                                                |                                     | X                          | X                           | X                                    |                                                      |                             |                              |                             |
| Improper speaker installation                                  |                      | X                                                |                                     |                            |                             | X                                    |                                                      |                             |                              |                             |
| Poor connection of audio unit connector, terminal damage       |                      | X                                                | X                                   |                            | X                           |                                      |                                                      |                             | X                            |                             |
| Antenna malfunction (e.g., poor ground)                        |                      | X                                                |                                     |                            |                             |                                      |                                                      |                             |                              |                             |
| Audio unit malfunction                                         |                      |                                                  | X                                   | X                          | X                           | X                                    | X                                                    | X                           | X                            | X                           |
| Burnt fuse (B+)                                                |                      |                                                  | X                                   |                            |                             |                                      |                                                      |                             |                              |                             |
| Burnt fuse (ACC)                                               |                      |                                                  | X                                   |                            |                             |                                      |                                                      |                             |                              |                             |
| Open or short circuit in power supply (B+) wiring harness      |                      |                                                  | X                                   |                            |                             |                                      |                                                      |                             |                              |                             |
| Open or short circuit in power supply (ACC) wiring harness     |                      |                                                  | X                                   |                            |                             |                                      |                                                      |                             |                              |                             |
| Short circuit in wiring harness between audio unit and speaker |                      |                                                  |                                     | X                          | X                           |                                      |                                                      |                             |                              |                             |
| Open circuit in wiring harness between audio unit and speaker  |                      |                                                  |                                     |                            | X                           |                                      |                                                      |                             |                              |                             |
| Short circuit inside speaker                                   |                      |                                                  |                                     | X                          | X                           |                                      |                                                      |                             |                              |                             |
| Vibration of door trim and/or package trim                     |                      |                                                  |                                     |                            |                             | X                                    |                                                      |                             |                              |                             |
| Open or short circuit in vehicle speed signal wiring harness   |                      |                                                  |                                     |                            |                             |                                      |                                                      | X                           |                              |                             |
| Burnt fuse (TNS signal)                                        |                      |                                                  |                                     |                            |                             |                                      |                                                      |                             | X                            |                             |
| Open or short circuit in TNS signal wiring harness             |                      |                                                  |                                     |                            |                             |                                      |                                                      |                             | X                            |                             |
| Center panel malfunction                                       |                      |                                                  |                                     |                            |                             |                                      |                                                      |                             | X                            |                             |

am2zzw0000378

### CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO]

id0903e1828800

- Verify the customer complaint and identify the malfunction as occurring from either the center panel or the audio unit.

## SYMPTOM TROUBLESHOOTING [AUDIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                |     | ACTION                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Activate the audio switch inspection mode. (See 09-02E-4 DIAGNOSTIC ASSIST FUNCTION [AUDIO].)</li> <li>Does the buzzer sound when a switch is pressed?</li> </ul>                                                                                                                                                                                  | Yes | Verify the customer complaint and then go to the appropriate symptom troubleshooting procedure.                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 2    | <ul style="list-style-type: none"> <li>Disassemble and reassemble the center panel and audio unit. (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.) (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.)</li> <li>Activate the audio switch inspection mode. (See 09-02E-4 DIAGNOSTIC ASSIST FUNCTION [AUDIO].)</li> <li>Does the buzzer sound when a switch is pressed?</li> </ul> | Yes | Go to the next step.                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Replace the center panel. (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.) (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.) |
| 3    | <ul style="list-style-type: none"> <li>Does the audio system operate properly?</li> </ul>                                                                                                                                                                                                                                                                                                 | Yes | The system is normal.                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Verify the customer complaint and then go to the appropriate symptom troubleshooting procedure.                                       |

### CONFIRMATION STEP 2: AUDIO CONTROL SWITCH CONFIRMATION [AUDIO]

id0903e1802900

- Verify the customer complaint and identify the malfunction as occurring from either the audio control switch or the audio unit.

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     | ACTION                                                                                                                                                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Is the symptom related to either the audio control switch or the audio panel operation?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes | Verify the customer complaint and then go to the appropriate symptom troubleshooting procedure.                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | <b>The symptom is related to the audio panel operation:</b> <ul style="list-style-type: none"> <li>Follow "Confirmation Step 1". (See 09-03E-2 CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO].)</li> </ul> <b>The symptom is related to the audio control switch operation:</b> <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul> |
| 2    | <ul style="list-style-type: none"> <li>Disconnect the audio unit connector (24-pin).</li> <li>Inspect both the audio unit and the wiring harness-side connectors for a poor connection. (such as damaged/pulled-out pins, corrosion).                             <ul style="list-style-type: none"> <li>Terminal 1N (ST SW1)</li> <li>Terminal 1P (ST SW2)</li> </ul> </li> <li>Are all the pins normal?</li> </ul>                                                                                                                                                                                  | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | <b>If the audio unit side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Replace the audio unit. (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.)</li> </ul> <b>If the wiring harness-side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Repair or replace the pins and/or the connector.</li> </ul>   |
| 3    | <ul style="list-style-type: none"> <li>Inspect the continuity between audio unit wiring harness-side connector terminals 1N and 1P while operating the audio control switch.</li> <li>Does the resistance change?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          | Yes | Verify the customer complaint and then go to the appropriate symptom troubleshooting procedure.                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                           |
| 4    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Remove the audio control switch. (See 09-20-23 AUDIO CONTROL SWITCH REMOVAL/INSTALLATION.)</li> <li>Inspect the continuity between the audio unit wiring harness-side connector (24-pin) terminal and the audio control switch wiring harness-side connector (16-pin) terminal.                             <ul style="list-style-type: none"> <li>Terminal 1N (24-pin) — Terminal K (16-pin)</li> <li>Terminal 1P (24-pin) — Terminal M (16-pin)</li> </ul> </li> <li>Is there continuity?</li> </ul> | Yes | Replace the audio control switch. (See 09-20-23 AUDIO CONTROL SWITCH REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Repair or replace the related wiring harnesses.                                                                                                                                                                                                                                                                                                                |



## SYMPTOM TROUBLESHOOTING [AUDIO]

### NO.1 AF NOISE OR POP NOISE AT ALL SOURCES (RADIO, CD) [AUDIO]

id0903e1817600

| 1              | AF noise or POP noise at all sources (Radio, CD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible DTC   | 09:Er20, 09:Er21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Possible cause | <ul style="list-style-type: none"><li>• Low vehicle battery voltage.</li><li>• Jammed radio signals from after market equipment.</li><li>• Speaker malfunction (e.g., foreign material penetration, damage)</li><li>• Improper speaker installation</li><li>• Audio unit malfunction</li><li>• Poor connection of audio unit connector, terminal damage</li><li>• Antenna malfunction (e.g., poor ground)</li></ul> <p><b>Note</b></p> <ul style="list-style-type: none"><li>• AF noise is a snapping noise that generally occurs during ON/OFF switching operations of electrical equipment other than the audio unit, or a continual rasping noise that occurs when electrical equipment is operated. This is caused by noise interference in the power supply wiring, signal wiring, speaker cable or head of cassette deck. Therefore noise can be heard regardless of radio wave conditions or the audio volume position. The noise will start after one click from the minimum position of the POWER/VOLUME switch but normally does not change even when volume is turned to a higher position.</li><li>• POP noise is snapping or popping noise that occurs during ON/OFF switching operation of the audio unit, or when switching from radio to CD. Even a normal audio unit sometimes emits a little noise depending on the conditions.</li></ul> |

## SYMPTOM TROUBLESHOOTING [AUDIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect the vehicle battery voltage.</li> <li>Is the vehicle battery voltage normal?</li> </ul> <b>Specification:</b><br><b>Ignition switch ON: 11.5 V or more</b><br><b>Idle: 12.5 V or more</b>                                                                                                                                                                                                                                | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | Charge the battery, then go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2    | <ul style="list-style-type: none"> <li>Turn the audio system on.</li> <li>Is there any noise?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | The system is normal. Explain to the customer that the vehicle battery voltage was low.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3    | <ul style="list-style-type: none"> <li>Are any of the following after-market equipment installed? (Inspect especially near the antenna.)                             <ul style="list-style-type: none"> <li>— Radar detector</li> <li>— Remote engine starter</li> <li>— Anti-theft device</li> <li>— Other</li> </ul> </li> </ul>                                                                                                                                      | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4    | <ul style="list-style-type: none"> <li>Remove the after-market equipment.</li> <li>Turn the audio system on.</li> <li>Is there any noise?</li> </ul>                                                                                                                                                                                                                                                                                                                    | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | The system is normal. The after-market electrical devices might be the cause of the noise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5    | <ul style="list-style-type: none"> <li>Is there noise coming from all the speakers?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          | Yes | Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 6    | <ul style="list-style-type: none"> <li>Inspect the suspect speaker.<br/>                             (See 09-20-7 FRONT DOOR SPEAKER INSPECTION.)<br/>                             (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>                             (See 09-20-11 REAR SPEAKER INSPECTION [3HB].)<br/>                             (See 09-20-12 TWEETER INSPECTION.)</li> <li>Is the speaker normal?</li> </ul>                                  | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | <b>If there is any foreign material adhering to the speaker:</b> <ul style="list-style-type: none"> <li>Remove the foreign material from the speaker.</li> </ul> <b>If the speaker is malfunctioning:</b> <ul style="list-style-type: none"> <li>Replace the speaker.<br/>                             (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>                             (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>                             (See 09-20-10 REAR SPEAKER REMOVAL/INSTALLATION [3HB].)<br/>                             (See 09-20-12 TWEETER REMOVAL/INSTALLATION.)</li> </ul> <b>If the speaker is not installed properly:</b> <ul style="list-style-type: none"> <li>Install the speaker properly.</li> </ul> |
| 7    | <ul style="list-style-type: none"> <li>Attempt to duplicate the symptom on another vehicle.</li> <li>Does the noise level improve compared to the customer's vehicle?</li> </ul>                                                                                                                                                                                                                                                                                        | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | The system is normal. Explain the noise generation mechanism to the customer.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>The noise level that may be heard varies depending on the operating speed of the audio power and/or mode switches.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 8    | <ul style="list-style-type: none"> <li>Remove the center panel unit.<br/>                             (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)</li> <li>Inspect the connection of the audio unit connector (24-pin).</li> <li>Disconnect the audio unit connector and inspect both the audio unit and the wiring harness-side connectors for a poor connection. (such as damaged/pulled-out pins, corrosion).</li> <li>Are all the pins normal?</li> </ul> | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | <b>If poor connection of audio unit connector:</b> <ul style="list-style-type: none"> <li>Securely connect the audio unit connector.</li> </ul> <b>If the audio unit side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>                             (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)<br/>                             (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.)</li> </ul> <b>If the wiring harness-side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Repair or replace the pins and/or the connector. After treating either the above-mentioned, then go to the next step.</li> </ul>                                                               |
| 9    | <ul style="list-style-type: none"> <li>Is there any noise?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | The system is normal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 10   | <ul style="list-style-type: none"> <li>Inspect the ground condition of manual antenna.</li> <li>Is the ground condition normal?</li> </ul>                                                                                                                                                                                                                                                                                                                              | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No  | Repair or replace the ground. Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## SYMPTOM TROUBLESHOOTING [AUDIO]

| STEP | INSPECTION                                                            | ACTION                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | <ul style="list-style-type: none"> <li>Is there any noise?</li> </ul> | Yes <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br/>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)</li> </ul> |
|      |                                                                       | No<br>The system is normal.                                                                                                                                                                         |

### NO.2 NO POWER TO THE ENTIRE AUDIO SYSTEM [AUDIO]

id0903e1817800

|                |                                                                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2              | No power to the entire audio system                                                                                                                                                                                                                                                                                                  |
| Possible DTC   | 09:Er20                                                                                                                                                                                                                                                                                                                              |
| Possible cause | <ul style="list-style-type: none"> <li>Poor connection of audio unit connector, terminal damage</li> <li>Audio unit malfunction</li> <li>Burnt fuse (B+)</li> <li>Burnt fuse (ACC)</li> <li>Open or short circuit in power supply (B+) wiring harness</li> <li>Open or short circuit in power supply (ACC) wiring harness</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                 | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect the following fuses:<br/>— MIRROR 7.5 A<br/>— ROOM 15 A</li> <li>Are the fuses normal?</li> </ul>                                                                                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Replace with the appropriate standard fuse.<br><ul style="list-style-type: none"> <li>If the fuse is melted, inspect the wiring harness for a short to ground. Repair or replace the wiring harness, then replace the fuse.</li> </ul>                                                                                                                                                                                                                                                                                                                                          |
| 2    | <ul style="list-style-type: none"> <li>Remove the center panel unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)</li> <li>Inspect the connection of the audio unit connector (24-pin).</li> <li>Disconnect the audio unit connector and inspect both the audio unit and the wiring harness-side connectors for a poor connection. (such as damaged/pulled-out pins, corrosion).</li> <li>Are all the pins normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br><b>If audio unit connector has a poor connection:</b> <ul style="list-style-type: none"> <li>Securely connect the audio unit connector.</li> </ul> <b>If the audio unit side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br/>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)</li> </ul> <b>If the wiring harness-side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Repair or replace the pins and/or the connector.</li> </ul> |
| 3    | <ul style="list-style-type: none"> <li>Connect the audio unit connector.</li> <li>Inspect the voltage for the power supply line (B+, ACC).</li> </ul> <b>Specification:</b><br><b>Ignition switch ON: 11.5 V or more</b><br><b>Idle: 12.5 V or more</b> <ul style="list-style-type: none"> <li>Is the voltage normal?</li> </ul>                                                                                                           | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the related wiring harnesses.<br>Charge the battery, if necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Remove the audio unit connector (24-pin).</li> <li>Inspect the continuity between audio unit wiring harness-side connector terminal 1W and the ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                             | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                            | No<br>Repair or replace the wiring harness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### NO.3 NO SOUND FROM ALL SPEAKERS [AUDIO]

id0903e1803200

|                |                                                                                                                                                                                                                                                                  |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3              | No sound from all speakers                                                                                                                                                                                                                                       |
| Possible DTC   | 09:Er20, 09:Er21, 10:Er07, 22:Er07                                                                                                                                                                                                                               |
| Possible cause | <ul style="list-style-type: none"> <li>Speaker malfunction (e.g., foreign material penetration, damage)</li> <li>Audio unit malfunction</li> <li>Short circuit in wiring harness between audio unit and speaker</li> <li>Short circuit inside speaker</li> </ul> |

## SYMPTOM TROUBLESHOOTING [AUDIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACTION                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Press AUDIO CONT switch for <b>1 s or more</b>.</li> <li>Play the CD or Radio.</li> <li>Adjust the volume between "10" and "15".</li> <li>Is there sound?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Press the MENU switch for approx. 1 s or more to initialize the sound adjustment value, then start the inspection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>The system is normal.                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                      |
| 2    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Remove the center panel unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)</li> <li>Disconnect the audio connector (24-pin).</li> <li>Inspect the continuity between the audio unit wiring harness-side connector terminal and ground:</li> </ul> <p><b>For front door speakers</b></p> <ul style="list-style-type: none"> <li>Terminal 1A (LH+)—ground</li> <li>Terminal 1C (LH-)—ground</li> <li>Terminal 1D (RH+)—ground</li> <li>Terminal 1F (RH-)—ground</li> </ul> <p><b>For rear door speakers/rear speakers (3HB)</b></p> <ul style="list-style-type: none"> <li>Terminal 1S (LH+)—ground</li> <li>Terminal 1U (LH-)—ground</li> <li>Terminal 1V (RH+)—ground</li> <li>Terminal 1X (RH-)—ground</li> </ul> <ul style="list-style-type: none"> <li>Is there continuity?</li> </ul> | Yes<br>Repair or replace the suspect wiring harness or speaker unit.                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                      |
| 3    | <ul style="list-style-type: none"> <li>Remove the speaker.<br/>(See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>(See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>(See 09-20-10 REAR SPEAKER REMOVAL/INSTALLATION [3HB].)</li> <li>Disconnect the speaker connector (4-pin).</li> <li>Inspect the continuity between the speaker wiring harness-side connector (4-pin) terminal and ground:</li> </ul> <p><b>For each speaker</b></p> <ul style="list-style-type: none"> <li>Terminal B—ground</li> <li>Terminal C—ground</li> </ul> <ul style="list-style-type: none"> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                         | Yes<br>Replace the speaker.                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.) |

### NO.4 NO SOUND FROM SOME SPEAKERS [AUDIO]

id0903e1818100

|                       |                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4</b>              | <b>No sound from some speakers</b>                                                                                                                                                                                                                                       |
| <b>Possible DTC</b>   | —                                                                                                                                                                                                                                                                        |
| <b>Possible cause</b> | <ul style="list-style-type: none"> <li>Speaker malfunction (e.g., foreign material penetration, damage)</li> <li>Audio unit malfunction</li> <li>Short circuit inside speaker</li> <li>Open or short circuit in wiring harness between audio unit and speaker</li> </ul> |

## SYMPTOM TROUBLESHOOTING [AUDIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ACTION                                                                                                                                                                                                                                                                                                                                          |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Activate the speaker Inspection mode.<br/>(See 09-02E-4 DIAGNOSTIC ASSIST FUNCTION [AUDIO].)</li> <li>Is there any speaker that does not output sound?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes<br><b>If there is no sound from some speakers:</b> <ul style="list-style-type: none"> <li>Go to the next step.</li> </ul> <b>If there is no sound at all:</b> <ul style="list-style-type: none"> <li>Go to the troubleshooting of “No.3 No sound from all speakers”.<br/>(See 09-03E-6 NO.3 NO SOUND FROM ALL SPEAKERS [AUDIO].)</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>The troubleshooting is completed.                                                                                                                                                                                                                                                                                                         |
| 2    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Remove the center panel unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)</li> <li>Inspect the continuity between the audio unit wiring harness-side connector (24-pin) terminal and ground.</li> <li>Is there continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes<br>Repair or replace the suspect wiring harness or speaker unit.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>If there is a short circuit between the speaker harness or the speaker lead wire and ground, the protector circuit inside the audio unit operates to cut the sound.</li> </ul>                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                      |
| 3    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Remove the audio unit.</li> <li>Disconnect the audio unit connector (24-pin).</li> <li>Inspect the continuity between the audio unit wiring harness-side connector terminal and ground:</li> </ul> <b>For front door speaker</b> <ul style="list-style-type: none"> <li>Terminal 1A (LH+) – GND</li> <li>Terminal 1C (LH-) – GND</li> <li>Terminal 1D (RH+) – GND</li> <li>Terminal 1F (RH-) – GND</li> </ul> <b>For rear speaker/rear door speaker</b> <ul style="list-style-type: none"> <li>Terminal 1S (LH+) – GND</li> <li>Terminal 1U (LH-) – GND</li> <li>Terminal 1V (RH+) – GND</li> <li>Terminal 1X (RH-) – GND</li> </ul> <li>Is there continuity?</li>                                                | Yes<br>Repair or replace the suspect wiring harness or speaker unit.                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Go to the next Step.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>If there is a short circuit between the speaker harness or speaker lead wire and ground, the protector circuit inside the audio unit operates to cut the sound.</li> </ul>                                                                                 |
| 4    | <ul style="list-style-type: none"> <li>Disconnect the speaker connector (2-pin) and inspect the resistance of speaker.</li> <li>Inspect the continuity between the audio unit wiring harness-side connector terminal and speaker wiring harness-side connector:</li> </ul> <b>Audio unit-front door speaker</b> <ul style="list-style-type: none"> <li>Terminal 1A (LH+) – terminal C</li> <li>Terminal 1C (LH-) – terminal B</li> <li>Terminal 1D (RH+) – terminal C</li> <li>Terminal 1F (RH-) – terminal B</li> </ul> <b>Audio unit-rear speaker/rear door speaker</b> <ul style="list-style-type: none"> <li>Terminal 1S (LH+) – terminal C</li> <li>Terminal 1U (LH-) – terminal B</li> <li>Terminal 1V (RH+) – terminal C</li> <li>Terminal 1X (RH-) – terminal B</li> </ul> <li>Is there continuity?</li> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Repair or replace the suspect wiring harness or speaker unit.                                                                                                                                                                                                                                                                             |
| 5    | <ul style="list-style-type: none"> <li>Inspect the suspect speaker.<br/>(See 09-20-7 FRONT DOOR SPEAKER INSPECTION.)<br/>(See 09-20-9 REAR DOOR SPEAKER INSPECTION.)<br/>(See 09-20-11 REAR SPEAKER INSPECTION [3HB].)<br/>(See 09-20-12 TWEETER INSPECTION.)</li> <li>Is the speaker normal?</li> </ul> <b>Note</b> <ul style="list-style-type: none"> <li>If the speaker lead wire contacts to either ground or vehicle frame, replace the speaker.</li> </ul>                                                                                                                                                                                                                                                                                                                                                 | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.)                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Replace the speaker.<br>(See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)<br>(See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)<br>(See 09-20-10 REAR SPEAKER REMOVAL/INSTALLATION [3HB].)<br>(See 09-20-12 TWEETER REMOVAL/INSTALLATION.)                                                                                        |

## SYMPTOM TROUBLESHOOTING [AUDIO]

### NO.5 SOUND BREAK-UP OR POOR SOUND QUALITY [AUDIO]

id0903e1818300

|                     |                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5</b>            | <b>Sound break-up or poor sound quality</b>                                                                                                                                                                                                           |
| <b>Possible DTC</b> | <b>09:Er21</b>                                                                                                                                                                                                                                        |
| Possible cause      | <ul style="list-style-type: none"> <li>• Speaker malfunction (e.g., foreign material penetration, damage)</li> <li>• Improper speaker installation</li> <li>• Audio unit malfunction</li> <li>• Vibration of door trim and/or package trim</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                               | ACTION                                                                                                                                             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>• Is there sound break-up or poor sound quality from all speakers?</li> </ul>                                                                                                                                                                                                                     | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>Go to Step 5.                                                                                                                                |
| 2    | <ul style="list-style-type: none"> <li>• Inspect the sound while adjusting the sound volume.</li> <li>• Is there sound break-up or poor sound quality between “15” and “20”?</li> </ul>                                                                                                                                                  | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>The system is normal.                                                                                                                        |
| 3    | <ul style="list-style-type: none"> <li>• Inspect the BASS/TREB.</li> <li>• Is there poor sound quality between “-3 — +3” of “BASS/TREB”?</li> </ul>                                                                                                                                                                                      | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>If there is sound break-up between “+6—6” of BASS/TREB at the maximum volume, the system is normal.                                          |
| 4    | <ul style="list-style-type: none"> <li>• Attempt to duplicate the symptom on another vehicle.</li> <li>• Is the sound quality better than the customer's vehicle?</li> </ul>                                                                                                                                                             | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>The system is normal.                                                                                                                        |
| 5    | <ul style="list-style-type: none"> <li>• Identify the speaker with sound break-up by adjusting BAL/FADE.</li> <li>• Is the suspect speaker pointed upward?</li> </ul>                                                                                                                                                                    | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>Install the speaker properly.                                                                                                                |
| 6    | <ul style="list-style-type: none"> <li>• Remove the speaker.<br/>(See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>(See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)<br/>(See 09-20-10 REAR SPEAKER REMOVAL/ INSTALLATION [3HB].)</li> <li>• Is there any foreign material penetration or damage to the speaker?</li> </ul> | Yes<br>Repair or replace the suspect speaker.                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>Go to the next step.                                                                                                                         |
| 7    | <ul style="list-style-type: none"> <li>• Inspect the sound again.</li> <li>• Is there sound break-up?</li> </ul>                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>Inspect for vibration from the door trim and/or package trim. Repair or replace the suspect trim if necessary.                               |
| 8    | <ul style="list-style-type: none"> <li>• Replace with a speaker known to be operational. (e.g., swap right and left speakers)</li> <li>• Does the sound break-up heard at the same location?</li> </ul>                                                                                                                                  | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                                                                                                                                                                                          | No<br>Replace the speaker.                                                                                                                         |

### NO.6 SOUND BECOMES LOUD OR WEAK WHILE DRIVING THE VEHICLE [AUDIO]

id0903e1803500

|                     |                                                                                                                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6</b>            | <b>Sounds becomes loud or weak while driving the vehicle</b>                                                                                                                                                           |
| <b>Possible DTC</b> | —                                                                                                                                                                                                                      |
| Possible cause      | <ul style="list-style-type: none"> <li>• Audio unit malfunction</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Inspect the ALC function while driving the vehicle and playing a CD.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [AUDIO]

### Diagnostic procedure

Diagnostic procedure

| STEP | INSPECTION                                                                                                                          | ACTION |                                                                                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"><li>Does the ALC function turn on?</li></ul>                                                      | Yes    | Go to the next step.                                                                                                                              |
|      |                                                                                                                                     | No     | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/<br>INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/<br>ASSEMBLY.) |
| 2    | <ul style="list-style-type: none"><li>Turn the ALC function off.</li><li>Does the sound change while driving the vehicle?</li></ul> | Yes    | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/<br>INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/<br>ASSEMBLY.) |
|      |                                                                                                                                     | No     | The system is normal.<br>Explain the ALC function to the customer.                                                                                |

### NO.7 ALC FUNCTION IS INOPERATIVE [AUDIO]

id0903e1803600

|                       |                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7</b>              | <b>ALC function is inoperative</b>                                                                                                                                                                                                                                                                                                                           |
| <b>Possible DTC</b>   | —                                                                                                                                                                                                                                                                                                                                                            |
| <b>Possible cause</b> | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Instrument cluster malfunction</li> <li>Open or short circuit in vehicle speed signal wiring harness (e. g., instrument cluster)</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Inspect the ALC function while driving the vehicle and playing a CD.</li> </ul> |

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                     |     | ACTION                                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"><li>• Turn the ALC function on.</li><li>• Inspect the ALC function operation while driving the vehicle.</li><li>• Does the ALC system operate properly?</li></ul>                            | Yes | The system is normal.Explain the ALC function to the customer.                                                                                    |
|      |                                                                                                                                                                                                                                | No  | Go to the next step.                                                                                                                              |
| 2    | <ul style="list-style-type: none"><li>• Verify that the speedometer operation.</li><li>• Does the speedometer indicate vehicle speed correctly?</li></ul>                                                                      | Yes | Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                | No  | Go to the instrument cluster symptom troubleshooting “No.7 Speedometer indication is defective.” procedure.                                       |
| 3    | <ul style="list-style-type: none"><li>• Inspect for open or short circuit in wiring between the audio unit (24-pin) terminal 11 and instrument cluster terminal 2O.</li><li>• Is the open or short circuit detected?</li></ul> | Yes | Repair or replace for open or short circuit.                                                                                                      |
|      |                                                                                                                                                                                                                                | No  | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/<br>INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/<br>ASSEMBLY.) |

### NO.8 NO AUDIO SYSTEM ILLUMINATION [AUDIO]

id0903e1818700

|                       |                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>8</b>              | <b>No audio system illumination</b>                                                                                                                                                                                                                                       |
| <b>Possible DTC</b>   | <b>09:Er20, 21:Er19</b>                                                                                                                                                                                                                                                   |
| <b>Possible cause</b> | <ul style="list-style-type: none"> <li>Poor connection of audio unit connector, terminal damage</li> <li>Audio unit malfunction</li> <li>Burnt fuse (TNS signal)</li> <li>Open or short circuit in TNS signal wiring harness</li> <li>Center panel malfunction</li> </ul> |



## SYMPTOM TROUBLESHOOTING [AUDIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                             |     | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Is all the illumination on the audio unit turned off?</li> </ul>                                                                                                                                                                                                                | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                        | No  | Replace the center panel.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect the fuse (ILLUMI 7.5 A).</li> <li>Is the fuse normal?</li> </ul>                                                                                                                                                | Yes | Go to the Step 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                        | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the audio unit connector (24-pin) and inspect the continuity between the audio unit wiring harness-side connector terminal 1E (TNS) and the ground.</li> <li>Is there continuity?</li> </ul>                 | Yes | Repair or replace the short circuit in the suspect wiring harness. After repairing the wiring harness, replace with the appropriate standard fuse.                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                        | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4    | <ul style="list-style-type: none"> <li>Inspect the connection of the audio unit connector (24-pin).</li> <li>Inspect both the audio unit and wiring harness-side connector terminal 1E for a poor connection (such as damaged/pulled-out pins, corrosion).</li> <li>Are all the pins normal?</li> </ul>                | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                        | No  | <b>If audio unit connector has a poor connection:</b> <ul style="list-style-type: none"> <li>Securely connect the audio unit connector.</li> </ul> <b>If the audio unit side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br/>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)</li> </ul> <b>If the wiring harness-side connector is malfunctioning:</b> <ul style="list-style-type: none"> <li>Repair or replace the pins and/or the connector.</li> </ul> |
| 5    | <ul style="list-style-type: none"> <li>Connect the audio unit connector (24-pin).</li> <li>Turn the ignition switch to the ACC position.</li> <li>Inspect the voltage at the audio unit connector terminal 1E (TNS).</li> <li>Is the voltage <b>B+</b> when the light switch is turned to the TNS position?</li> </ul> | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                        | No  | Repair or replace the related wiring harness (TNS signal).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### NO.9 LCD DOES NOT DISPLAY AT ALL [AUDIO]

id0903e1803800

|                       |                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------|
| <b>9</b>              | <b>LCD does not display at all</b>                                                                          |
| <b>Possible DTC</b>   | <b>09:Er20, 21:Er19</b>                                                                                     |
| <b>Possible cause</b> | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Center panel malfunction.</li> </ul> |

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                         |     | ACTION                                                                                                                                        |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Activate the LCD inspection mode.<br/>(See 09-02E-4 DIAGNOSTIC ASSIST FUNCTION [AUDIO].)</li> <li>Does the LCD display properly?</li> </ul> | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)   |
|      |                                                                                                                                                                                    | No  | Replace the center panel.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |



## SYMPTOM TROUBLESHOOTING [RADIO]

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### 09-03F SYMPTOM TROUBLESHOOTING [RADIO]

|                                          |          |                                        |           |
|------------------------------------------|----------|----------------------------------------|-----------|
| FOREWORD [RADIO] . . . . .               | 09-03F-1 | NO.3 NOISE FROM RADIO (FM ONLY)        |           |
| Troubleshooting Index . . . . .          | 09-03F-1 | [RADIO] . . . . .                      | 09-03F-7  |
| Quick Diagnostic Chart (Radio) . . . . . | 09-03F-2 | NO.4 CANNOT TUNE                       |           |
| CONFIRMATION STEP 1:                     |          | (SEEK DOES NOT STOP) [RADIO] . . . . . | 09-03F-9  |
| RECEPTION CONDITION SYMPTOM              |          | NO.5 CANNOT PRESET (PRESET             |           |
| (EXAMPLE) [RADIO] . . . . .              | 09-03F-2 | FUNCTION DOES NOT OPERATE)             |           |
| CONFIRMATION STEP 2:                     |          | [RADIO] . . . . .                      | 09-03F-10 |
| ANTENNA SYSTEM SYMPTOM                   |          | NO.6 RECEPTION FREQUENCY OF            |           |
| (EXAMPLE) [RADIO] . . . . .              | 09-03F-2 | RADIO SLIPS [RADIO] . . . . .          | 09-03F-11 |
| CONFIRMATION STEP 3:                     |          | REFERENCE [RADIO] . . . . .            | 09-03F-12 |
| ANTENNA SYSTEM SIMPLE                    |          | 1. Multipath Noise . . . . .           | 09-03F-12 |
| INSPECTION [RADIO] . . . . .             | 09-03F-3 | 2. Flutter/Skip Noise . . . . .        | 09-03F-12 |
| NO.1 NO RADIO RECEPTION (AM/FM)/         |          | 3. Stereo and Monaural                 |           |
| NO OR LOW VOLUME [RADIO] . . . . .       | 09-03F-3 | Receptions . . . . .                   | 09-03F-12 |
| NO.2 NOISE FROM RADIO (AM ONLY)          |          | Measures in Audio System . . . . .     | 09-03F-12 |
| [RADIO] . . . . .                        | 09-03F-5 | Effect Setting of Separation Control   |           |
|                                          |          | and High Tone Control . . . . .        | 09-03F-12 |

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## SYMPTOM TROUBLESHOOTING [RADIO]

### FOREWORD [RADIO]

id0903e3802700

#### Note

- If the case location, time, and broadcasting station etc. can be specified through interview with the customer, there is the possibility that the signal reception environment is the cause of the problem.
- Perform confirmation of symptom and evaluate under the conditions that customer reported (location, time, broadcasting station etc.). If this is not possible, perform it under equivalent conditions.
- Before inspection or repair, record the broadcasting stations that customer has preset and reset them accordingly after the inspection or repair. Adjust the clock too.

### Troubleshooting Index

| No. | Symptom                                          | Possible DTC     |
|-----|--------------------------------------------------|------------------|
| 1   | No radio reception (AM/FM)/No or low volume      | 09:Er20, 09:Er22 |
| 2   | Noise from radio (AM only)                       | 09:Er22          |
| 3   | Noise from radio (FM only)                       | 09:Er22          |
| 4   | Cannot tune (SEEK does not stop)                 | 09:Er20, 09:Er22 |
| 5   | Cannot preset (preset function does not operate) | —                |
| 6   | Reception frequency of radio slips               | 09:Er22          |

## SYMPTOM TROUBLESHOOTING [RADIO]

### Quick Diagnostic Chart (Radio)

| Possible factor                                                                                                | X: Applicable                               |                            |                            |                                  |                                                  |                                    |
|----------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------|----------------------------|----------------------------------|--------------------------------------------------|------------------------------------|
|                                                                                                                | 1                                           | 2                          | 3                          | 4                                | 5                                                | 6                                  |
| Troubleshooting item                                                                                           | No radio reception (AM/FM)/No or low volume | Noise from radio (AM only) | Noise from radio (FM only) | Cannot tune (SEEK does not stop) | Cannot preset (preset function does not operate) | Reception frequency of radio slips |
| Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc)            | X                                           | X                          | X                          |                                  |                                                  |                                    |
| Audio unit                                                                                                     | X                                           | X                          | X                          | X                                | X                                                | X                                  |
| Antenna plug poor connection                                                                                   | X                                           | X                          | X                          | X                                |                                                  |                                    |
| Antenna feeder                                                                                                 | X                                           | X                          | X                          | X                                |                                                  |                                    |
| Open or short circuit in wiring harness between audio unit and antenna (antenna amplifier power supply system) | X                                           | X                          | X                          | X                                |                                                  |                                    |
| Electronic jamming from outside, or inferior condition of broadcasting station radio wave                      | X                                           | X                          | X                          | X                                |                                                  | X                                  |
| Antenna rod is not installed (standard parts)                                                                  | X                                           | X                          | X                          | X                                |                                                  |                                    |
| Noise from electrical system on vehicle (e.g. fuel pump)                                                       |                                             | X                          | X                          |                                  |                                                  |                                    |
| Battery                                                                                                        |                                             | X                          | X                          |                                  |                                                  |                                    |
| Charging system                                                                                                |                                             | X                          | X                          |                                  |                                                  |                                    |
| Antenna installation loosened                                                                                  |                                             | X                          | X                          |                                  |                                                  |                                    |
| Center panel                                                                                                   |                                             |                            |                            | X                                | X                                                |                                    |

am2zzw0000497

### CONFIRMATION STEP 1: RECEPTION CONDITION SYMPTOM (EXAMPLE) [RADIO]

id0903e3804000

| Symptom                                                                                   | Antenna signal condition                                                                                                                                                                                                    | Source                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Only a buzzing sound from the speakers                                                    | <ul style="list-style-type: none"> <li>There is no broadcasting wave.</li> <li>Signals from antenna to audio unit are not transmitted.</li> </ul>                                                                           | <ul style="list-style-type: none"> <li>Electric noise caused by the operation of internal circuit from audio unit it self</li> <li>Atmosphere noise</li> </ul>                                                                                                    |
| A buzzing or crunching sound and normal sound produced at the same time from the speakers | <ul style="list-style-type: none"> <li>Though signals are transmitted from antenna to audio unit, electric noise from other sources is larger.</li> </ul>                                                                   | <ul style="list-style-type: none"> <li>Electrical noise caused by operation of electrical component on vehicle</li> <li>Electrical noise from high tension wire, transformer substation (factory), electrical feeder line (street car), or motorcycle.</li> </ul> |
| A thumping sound and normal sound produced at the same time from the speakers (FM only)   | <ul style="list-style-type: none"> <li>Noise occurs due to radio wave environment at specific places (e.g. in valleys between buildings). Noise varies when own vehicle or surrounding vehicles moves. (FM only)</li> </ul> | <ul style="list-style-type: none"> <li>Interference between direct and reflected waves of FM signals causes noise (Multipass noise).</li> </ul>                                                                                                                   |

### CONFIRMATION STEP 2: ANTENNA SYSTEM SYMPTOM (EXAMPLE) [RADIO]

id0903e3804100

| Possible cause                                                                                                                | AM reception condition | FM reception condition                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Antenna feeder axis, open circuit</li> <li>Antenna feeder plug not attached</li> </ul> | NG: No reception       | YES: Reception possible.<br>(Sensitivity decreases, but reception is possible under strong electric field.) |
| <ul style="list-style-type: none"> <li>Antenna feeder axis (+) to ground (-), open circuit</li> </ul>                         | NG: No reception       | NG: No reception                                                                                            |

## SYMPTOM TROUBLESHOOTING [RADIO]

| Possible cause                                                                                  | AM reception condition                                   | FM reception condition                                                                                     |
|-------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Antenna feeder and antenna, poor ground</li> </ul>       | YES: Reception possible<br>(Noise may occur)             | YES: Reception possible<br>(Sensitivity decreases, but reception is possible under strong electric field.) |
| <ul style="list-style-type: none"> <li>Antenna feeder, jack and plug poor connection</li> </ul> | NG: No reception<br>(Depending on connection conditions) | YES: Reception possible<br>(Depending on connection conditions)                                            |

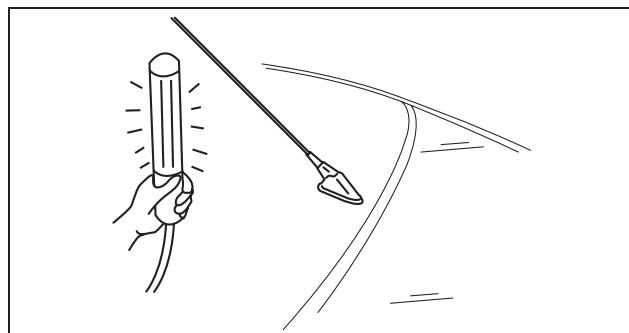
### CONFIRMATION STEP 3: ANTENNA SYSTEM SIMPLE INSPECTION [RADIO]

id0903e3804200

- Because the antenna system is equipped with a capacitor, the continuity cannot be checked. Therefore proceed to the following simple inspection.
  - Turn the AM radio on.
  - Tune to the frequency with no broadcast and listen for a buzzing sound.
  - Turn a hand-held light on and shake it around the antenna rod (around **10—20 mm{0.40—0.78 in}**)
  - If a whirring sound from the speaker synchronized to the work light movement is confirmed, the antenna system is normal.

#### Note

- Use a fluorescent light type for the inspection. Accurate diagnostic cannot be done with an incandescent light.



adejiw00001109

### NO.1 NO RADIO RECEPTION (AM/FM)/NO OR LOW VOLUME [RADIO]

id0903e3804300

| 1              | No radio reception (AM/FM) / no or low volume                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible DTC   | 09:Er20, 09:Er22                                                                                                                                                                                                                                                                                                                                                                                                    |
| Possible cause | <ul style="list-style-type: none"> <li>Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.)</li> <li>Audio unit malfunction</li> <li>Poor connection of antenna feeder plug</li> <li>Antenna feeder malfunction</li> <li>Electronic jamming from outside, or inferior condition of broadcasting station radio wave</li> <li>Antenna rod is not installed</li> </ul> |

## SYMPTOM TROUBLESHOOTING [RADIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                |     | ACTION                                                                                                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the audio unit power to on.</li> <li>Is the LCD indicated correctly?</li> </ul>                                                                                                                                                                                               | Yes | Go to Step 3.                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                                                                           |
| 2    | <ul style="list-style-type: none"> <li>Measure the voltage at <b>B+</b> and ACC terminals.</li> <li>Is the voltage normal?</li> </ul> <b>Specification</b><br><b>With ignition switch ON: 11.5 V or more</b><br><b>At idling: 12.5 V or more</b>                                                                          | Yes | Go to the next step.                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Follow diagnostic procedure for symptom No. 2 (Audio).<br>(See 09-03E-6 NO.2 NO POWER TO THE ENTIRE AUDIO SYSTEM [AUDIO].)                                                                     |
| 3    | <ul style="list-style-type: none"> <li>Set the volume between 10 and 15.</li> <li>Is a buzzing sound or voice confirmed?</li> </ul>                                                                                                                                                                                       | Yes | Go to the next step.                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Follow diagnostic procedure for symptom No. 3 (Audio) or No. 4 (Audio).<br>(See 09-03E-6 NO.3 NO SOUND FROM ALL SPEAKERS [AUDIO].)<br>(See 09-03E-7 NO.4 NO SOUND FROM SOME SPEAKERS [AUDIO].) |
| 4    | <ul style="list-style-type: none"> <li>Tune to a local broadcasting station and check the reception condition.</li> <li>Is the reception normal?</li> </ul>                                                                                                                                                               | Yes | Go to the next step.                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Go to Step 6.                                                                                                                                                                                  |
| 5    | <ul style="list-style-type: none"> <li>Push the Preset switches and check the preset conditions.</li> <li>Have preset stations been stored?</li> </ul>                                                                                                                                                                    | Yes | The system is normal.                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Preset broadcasting stations.                                                                                                                                                                  |
| 6    | <ul style="list-style-type: none"> <li>Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) installed?</li> </ul> <b>Note</b> <ul style="list-style-type: none"> <li>A TV antenna located close to the audio antenna can be the cause of noise. Relocate the TV antenna.</li> </ul> | Yes | Go to the next step.                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Go to Step 8.                                                                                                                                                                                  |
| 7    | <ul style="list-style-type: none"> <li>Remove aftermarket electronic equipment.</li> <li>Turn the audio unit on and check the reception condition.</li> <li>Does reception improve?</li> </ul>                                                                                                                            | Yes | The system is normal.<br>(Explain to the customer that aftermarket electronic equipment is the cause of the noise)                                                                             |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                                                                           |
| 8    | <ul style="list-style-type: none"> <li>Refer to confirmation Step 3, and inspect the antenna system.</li> <li>Is a whirring sound present?</li> </ul>                                                                                                                                                                     | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                    |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                                                                           |
| 9    | <ul style="list-style-type: none"> <li>Inspect the antenna feeder plug connection condition.</li> <li>Is the connection normal?</li> </ul>                                                                                                                                                                                | Yes | Go to the next step.                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Insert the antenna feeder plug securely.                                                                                                                                                       |
| 10   | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Measure the continuity between the antenna feeder axis and ground.</li> <li>Is there any continuity?</li> </ul>                                                                                                            | Yes | Replace the antenna feeder.<br>(See 09-20-17 ANTENNA FEEDER NO.1 REMOVAL/ INSTALLATION.)<br>(See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/ INSTALLATION.)                                          |
|      |                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                                                                           |

## SYMPTOM TROUBLESHOOTING [RADIO]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ACTION                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | <ul style="list-style-type: none"> <li>Compare the reception with another audio unit on the same model (model/unit) under the same problem conditions.</li> <li>Is the reception equivalent to the customer's unit?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Due to the following differences, you may sense a difference in reception efficiency.               <p><b>(Vehicle factor)</b></p> <ul style="list-style-type: none"> <li>Antenna installation location, height, feeder wiring routing, optional electrical equipment</li> </ul> <p><b>(Audio unit factor)</b></p> <ul style="list-style-type: none"> <li>High-tone setting: Decreases effective volume range when signals become weak. (Noise is easy to be conspicuous)</li> <li>Noise restraint setting: Widens effective volume range when signals become weak.</li> </ul> </li> </ul> | Yes<br>The system is normal.<br>(It is caused by electronic jamming from outside, or inferior broadcasting station signal condition.)         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No<br>Replace audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |

### NO.2 NOISE FROM RADIO (AM ONLY) [RADIO]

id0903e3804400

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2              | Noise from radio (AM only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Possible DTC   | 09:Er22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Possible cause | <ul style="list-style-type: none"> <li>Antenna rod is not installed</li> <li>Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.)</li> <li>Noise from electrical system on vehicle (e.g. fuel pump)</li> <li>Battery malfunction</li> <li>Charging system malfunction</li> <li>Audio unit malfunction</li> <li>Poor connection of antenna feeder plug</li> <li>Antenna feeder malfunction</li> <li>Electronic jamming from outside, or inferior condition of broadcasting station radio wave</li> <li>Antenna installation loosened</li> </ul> |

## SYMPTOM TROUBLESHOOTING [RADIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ACTION                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Tune to a local broadcasting station and check the reception condition.</li> <li>Is the reception normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes<br>Tune to the correct frequency for the broadcasting station. If not preset, preset it.                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                               |
| 2    | <ul style="list-style-type: none"> <li>Inspect the antenna rod condition.</li> <li>Is the antenna rod installed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Advise the customer to install the antenna rod when the radio is used.                                                                             |
| 3    | <ul style="list-style-type: none"> <li>Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) installed?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>A TV antenna located close to the audio antenna can be the cause of noise. Relocate the TV antenna.</li> </ul>                                                                                                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to Step 5.                                                                                                                                      |
| 4    | <ul style="list-style-type: none"> <li>Remove aftermarket electronic equipment.</li> <li>Turn the audio unit on and check the reception condition.</li> <li>Does reception improve?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes<br>The system is normal. (Explain to the customer that aftermarket electronic equipment is the cause of the noise)                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                               |
| 5    | <ul style="list-style-type: none"> <li>Measure the battery voltage.</li> <li>Is battery voltage normal?</li> </ul> <p><b>Standard</b><br/><b>With ignition switch ON: 11.5 V or more</b><br/><b>At idling: 12.5 V or more</b></p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Verify that the battery cables are connected to the terminals securely.</li> </ul>                                                                                                                                                                                                                                                         | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Charge the battery. Inspect the charging system, and repair or replace if necessary.                                                               |
| 6    | <ul style="list-style-type: none"> <li>Does the noise occur only when the vehicle electrical system (e.g. fuel pump) operates?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Identify the suspect electrical component by disconnecting fuses, turning switches on &amp; off, or disconnecting &amp; connecting connectors.</li> <li>It is easier to use the simulation function on the M-MDS.</li> </ul>                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to Step 8.                                                                                                                                      |
| 7    | <ul style="list-style-type: none"> <li>Verify the condition of the power supply and ground of the electric components, and the noise prevention capacitor.</li> <li>Is noise present after the inspection?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Inspect the following: <ul style="list-style-type: none"> <li>Power supply to electrical component for voltage drop (compare with battery voltage)</li> <li>Resistance between ground of electrical component and body. (Should be close to 0 ohm)</li> <li>Installation condition of noise prevention capacitor for fuel pump.</li> </ul> </li> </ul> | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Troubleshooting completed.                                                                                                                         |
| 8    | <ul style="list-style-type: none"> <li>Inspect the antenna feeder plug connection condition.</li> <li>Is the connection normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Go to the next step.                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Insert the antenna feeder plug securely.                                                                                                           |
| 9    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Measure the continuity between the antenna the feeder axis and ground.</li> <li>Is there any continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Replace antenna feeder.<br>(See 09-20-17 ANTENNA FEEDER NO.1 REMOVAL/ INSTALLATION.)<br>(See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/ INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                               |

## SYMPTOM TROUBLESHOOTING [RADIO]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ACTION                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 10   | Compare the reception with another audio unit on the same model (model/unit) under the same problem conditions. <ul style="list-style-type: none"> <li>Is the reception equivalent to the customer's unit?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Due to the following differences, you may sense a difference in reception efficiency.               <p><b>(Vehicle factor)</b></p> <ul style="list-style-type: none"> <li>Antenna installation location, height, feeder wiring routing, optional electrical equipment</li> </ul> <p><b>(Audio unit factor)</b></p> <ul style="list-style-type: none"> <li>High-tone setting: Decreases effective volume range when signals become weak. (Noise is easy to be conspicuous)</li> <li>Noise restraint setting: Widens effective volume range when signals become weak. (Noise is not conspicuous.)</li> </ul> </li> </ul> | Yes<br>The system is normal (It is caused by electronic jamming from outside, or inferior broadcasting station signal condition).                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                         |
| 11   | <ul style="list-style-type: none"> <li>Retighten the ground for the antenna and antenna amplifier.</li> <li>Retighten the antenna rod.</li> <li>Is noise present, after retightening?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No<br>Troubleshooting completed.                                                                                                                   |

### NO.3 NOISE FROM RADIO (FM ONLY) [RADIO]

id0903e3804500

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3              | Noise from radio (FM only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Possible DTC   | 09:Er22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Possible cause | <ul style="list-style-type: none"> <li>Antenna rod is not installed</li> <li>Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.)</li> <li>Noise from electrical system on vehicle (e.g. fuel pump)</li> <li>Battery malfunction</li> <li>Charging system malfunction</li> <li>Audio unit malfunction</li> <li>Poor connection of antenna feeder plug</li> <li>Antenna feeder malfunction</li> <li>Electronic jamming from outside, or inferior condition of broadcasting station radio wave</li> <li>Antenna installation loosened</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>FM broadcasts are known for good sound quality and resistance to noise, but FM broadcasts do carry characteristic noise. Though the audio unit is designed to reduce noise, there are times when noise occurs due to reception conditions.</li> </ul> |



## SYMPTOM TROUBLESHOOTING [RADIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ACTION                                                                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Tune to a local broadcasting station and check the reception condition.</li> <li>Is the reception normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Tune to the correct frequency for the broadcasting station. If not preset, preset it.                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                   |
| 2    | <ul style="list-style-type: none"> <li>Inspect the antenna rod condition.</li> <li>Is the antenna rod installed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Advise the customer to install the antenna rod when the radio is used.                                                                                 |
| 3    | <ul style="list-style-type: none"> <li>Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) installed?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to Step 5.                                                                                                                                          |
| 4    | <ul style="list-style-type: none"> <li>Remove aftermarket electronic equipment.</li> <li>Turn the audio unit on and check the reception condition.</li> <li>Does the reception improve?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes<br>The system is normal. (Explain to the customer that the aftermarket electronic equipment is the cause of the noise)                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                   |
| 5    | <ul style="list-style-type: none"> <li>Measure the battery voltage.</li> <li>Is the battery voltage normal?</li> </ul> <p><b>Standard</b><br/> <b>With ignition switch ON: 11.5 V or more</b><br/> <b>At idling: 12.5 V or more</b></p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Verify that the battery cables are connected to the terminals securely.</li> </ul>                                                                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Charge the battery. Inspect the charging system, and repair or replace if necessary.                                                                   |
| 6    | <ul style="list-style-type: none"> <li>Does the noise occur only when the vehicle's electrical system (e.g. fuel pump) operates?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Identify the suspect electrical component by disconnecting fuses, turning switches on &amp; off, or disconnecting &amp; connecting connectors.</li> <li>It is easier to use the simulation function on the M-MDS.</li> </ul>                                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to Step 8.                                                                                                                                          |
| 7    | <ul style="list-style-type: none"> <li>Verify the condition of the power supply and ground of the electric components, and the noise prevention capacitor.</li> <li>Is the noise present after inspection?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Inspect the following: <ul style="list-style-type: none"> <li>Power supply to electrical component for voltage drop (compare with battery voltage)</li> <li>Resistance between ground of electrical component and body. (Should be close to <b>0 ohm</b>)</li> <li>Installation condition of noise prevention capacitor for fuel pump.</li> </ul> </li> </ul> | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Troubleshooting completed.                                                                                                                             |
| 8    | <ul style="list-style-type: none"> <li>Inspect the antenna feeder plug connection condition.</li> <li>Is the connection normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes<br>Go to the next step.                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Insert the antenna feeder plug securely.                                                                                                               |
| 9    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Measure the continuity between the antenna feeder axis and ground.</li> <li>Is there any continuity?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes<br>Replace the antenna feeder.<br>(See 09-20-17 ANTENNA FEEDER NO.1 REMOVAL/ INSTALLATION.)<br>(See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/ INSTALLATION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                   |
| 10   | <ul style="list-style-type: none"> <li>Compare the reception with another audio unit on the same model (model/unit) under the same problem conditions.</li> <li>Is the reception equivalent to the customer's unit?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                | Yes<br>The system is normal (It is caused by electronic jamming from outside, or inferior broadcasting station signal condition).                            |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No<br>Go to the next step.                                                                                                                                   |

## SYMPTOM TROUBLESHOOTING [RADIO]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                               |     | ACTION                                                                                                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | <ul style="list-style-type: none"> <li>Retighten the ground for the antenna installation part and antenna amplifier.</li> <li>Retighten the antenna rod.</li> <li>Is the noise present, after retightening?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>When the antenna is not grounded properly, FM noise is likely to be noticed.</li> </ul> | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                                                                                                                                                                                                                          | No  | Troubleshooting completed.                                                                                                                  |

### NO.4 CANNOT TUNE (SEEK DOES NOT STOP) [RADIO]

id0903e3804600

|                |                                                                                                                                                                                                                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4              | Cannot tune (SEEK does not stop)                                                                                                                                                                                                                                                                                                        |
| Possible DTC   | 09:Er20, 09:Er22                                                                                                                                                                                                                                                                                                                        |
| Possible cause | <ul style="list-style-type: none"> <li>Center panel malfunction</li> <li>Poor connection of antenna feeder plug</li> <li>Antenna feeder malfunction</li> <li>Audio unit malfunction</li> <li>Electronic jamming from outside, or inferior condition of broadcasting station radio wave</li> <li>Antenna rod is not installed</li> </ul> |

## SYMPTOM TROUBLESHOOTING [RADIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                     | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Verify that the SEEK switch is normal when the switch is pushed and released.</li> <li>Is it normal?</li> </ul>                                                         | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                | No<br>Perform confirmation step 1: audio switch confirmation.<br>(See 09-03E-2 CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO].)<br>Replace the center panel if necessary.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2    | <ul style="list-style-type: none"> <li>Inspect the indication of LCD.</li> <li>Does the frequency indication increase or decrease when SEEK switch is pushed?</li> </ul>                                       | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                | No<br>Perform confirmation step 1: audio switch confirmation.<br>(See 09-03E-2 CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO].)<br>Replace the center panel if necessary.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 3    | <ul style="list-style-type: none"> <li>Manually tune to a local broadcasting station and check the reception condition.</li> <li>Is the reception normal?</li> </ul>                                           | Yes<br>Go to Step 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | <ul style="list-style-type: none"> <li>Inspect the antenna feeder plug connection condition.</li> <li>Is the connection normal?</li> </ul>                                                                     | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                | No<br>Insert the antenna feeder plug securely.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Measure the continuity between the antenna feeder axis and ground.</li> <li>Is there any continuity?</li> </ul> | Yes<br>Replace antenna feeder.<br>(See 09-20-17 ANTENNA FEEDER NO.1 REMOVAL/ INSTALLATION.)<br>(See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/ INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 6    | <ul style="list-style-type: none"> <li>Check if the number of broadcasting stations changes depending on time and place.</li> <li>Does it change?</li> </ul>                                                   | Yes<br>The system is normal. (Explain to customer that SEEK sometimes does not stop depending on the signal reception condition.)<br><br><b>Note</b><br><ul style="list-style-type: none"> <li>Signals tend to reach longer distances at night. (It is conspicuous in AM signals, several audio functions may stop due to foreign broadcasting station or noise.) Though the audio system restrains sensitivity of SEEK and SCAN functions at night, the audio system may select broadcasting stations other than those desired when signals are considerably strong. This function is linked to the parking light. When the parking light or the headlights are turned on, SEEK and SCAN may not function for weak signals.</li> </ul> |
|      |                                                                                                                                                                                                                | No<br>Replace audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### NO.5 CANNOT PRESET (PRESET FUNCTION DOES NOT OPERATE) [RADIO]

id0903e3804700

|                |                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------|
| 5              | Cannot preset (preset function does not operate)                                                           |
| Possible DTC   | —                                                                                                          |
| Possible cause | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Center panel malfunction</li> </ul> |

## SYMPTOM TROUBLESHOOTING [RADIO]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                           |     | ACTION                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Tune to the desired station and press channel preset switch 1 for <b>about 2 s</b> to store it.</li> <li>Repeat the above for other stations using channel preset switch 2 to 5.</li> <li>Press channel preset switch 1 to 6 one by one.</li> <li>Are the stored stations present?</li> </ul> | Yes | Go to the next step.                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                      | No  | Go to Step 3.                                                                                                                                 |
| 2    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK and then to ACC.</li> <li>Check if the preset stations are stored by pressing the preset switch.</li> <li>Are the stations stored?</li> </ul>                                                                                                            | Yes | The system is normal. (Explain preset procedure to customer using Owner's Manual)                                                             |
|      |                                                                                                                                                                                                                                                                                                                                      | No  | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)   |
| 3    | <ul style="list-style-type: none"> <li>Remove the center panel from the audio unit, and reinstall the center panel to the audio unit.</li> <li>Activate the audio switch inspection mode.<br/>(See 09-02E-4 DIAGNOSTIC ASSIST FUNCTION [AUDIO].)</li> <li>Does the buzzer sound when a switch is pressed?</li> </ul>                 | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)   |
|      |                                                                                                                                                                                                                                                                                                                                      | No  | Replace the center panel.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |

### NO.6 RECEPTION FREQUENCY OF RADIO SLIPS [RADIO]

id0903e3804800

|                |                                                                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6              | Reception frequency of radio slip                                                                                                                                           |
| Possible DTC   | 09:Er22                                                                                                                                                                     |
| Possible cause | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Electronic jamming from outside, or inferior condition of broadcasting station radio wave</li> </ul> |

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     | ACTION                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Press the SEEK switch and check if the desired broadcasting station is tuned.</li> <li>Is it normal?</li> </ul>                                                                                                                                                                                                                                                                                                                                | Yes | Go to Step 3.                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                        |
| 2    | <ul style="list-style-type: none"> <li>Check if another broadcasting station is received at a certain location when the indication of the reception frequency remains.</li> <li>Is other station received?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>While receiving a weak signal from one broadcasting station and approaching a broadcasting antenna which emits a strong signal, broadcasting from the strong signal is sometimes received.</li> </ul> | Yes | Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Replace audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)     |
| 3    | <ul style="list-style-type: none"> <li>Compare the reception with another audio unit on the same model (model/unit) under the same problem conditions.</li> <li>Is the reception equivalent to the customer's unit?</li> </ul>                                                                                                                                                                                                                                                        | Yes | Troubleshooting completed (Audio unit is normal).                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No  | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |

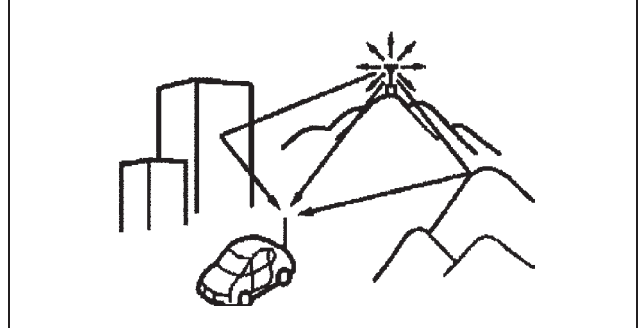
## SYMPTOM TROUBLESHOOTING [RADIO]

### REFERENCE [RADIO]

id0903e3830000

#### 1. Multipath Noise

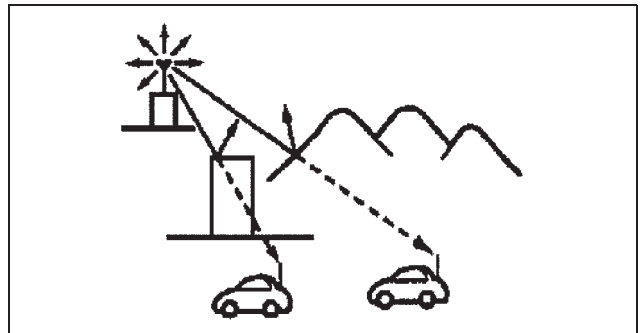
- Signals from an FM transmitter are a high frequency and similar to beams of light because they do not bend around corners, but they do reflect. Since FM signals can be reflected by obstructions, it is possible to receive both the direct signal and the reflected signal at the same time. This causes a slight delay in reception and may be heard as a broken sound or a distortion.



E6U902HWB007

#### 2. Flutter/Skip Noise

- Signals become weak in valleys between mountains, tall buildings, and other obstacles. When the vehicle passes through such an area, the reception conditions may change suddenly, resulting in annoying noise.



E6U902HWB008

#### 3. Stereo and Monaural Receptions

- As signals become weak, noise may appear more in stereo reception. Compared to stereo reception, noise in monaural reception is relatively less striking.

#### Measures in Audio System

##### Separation control

- Utilizing the characteristic of monaural reception that noise is relatively less striking than stereo reception, the audio system automatically changes the reception from stereo to monaural and lessens annoying noise when signals become weak or a multipath phenomenon occurs.

##### High tone control

- When signals become weak or a multipath phenomenon occurs, the audio system restrains volume level in high frequency band and lessens annoying noise.

##### Effect Setting of Separation Control and High Tone Control

- The separation and high tone controls influence sound quality. Therefore they are specifically tuned for individual model. (Comparison of characteristic must be done on the same models)

High tone setting



Less effective range



Noise is conspicuous

Noise restraint setting



Wider effective range



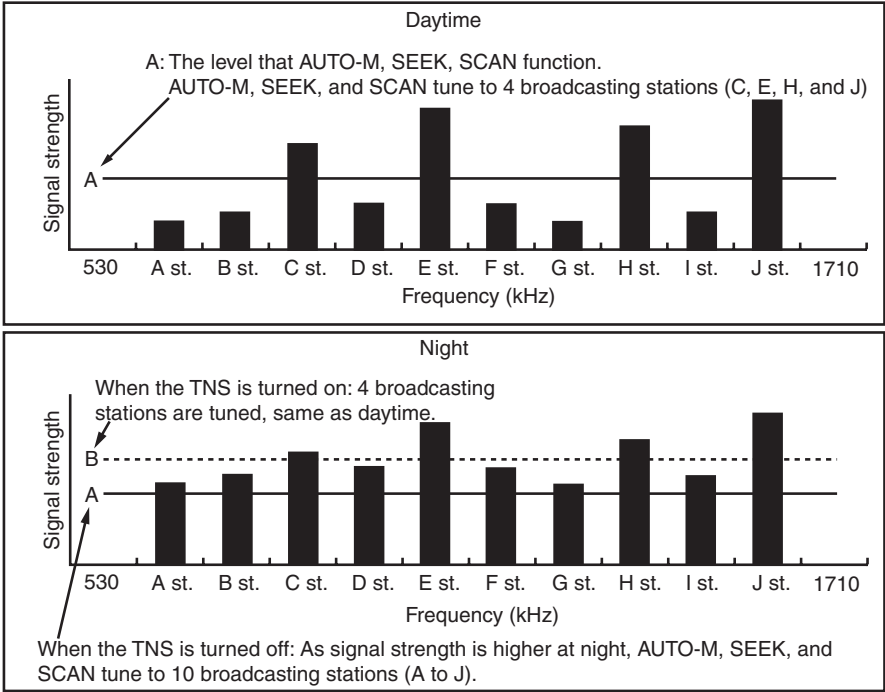
Noise is less conspicuous

DPE903EW1V0A

SYMPTOM TROUBLESHOOTING [RADIO]

Remarks

- Signals tend to reach longer distances at night. It is conspicuous in AM signals, several audio functions may stop due to foreign broadcasting station or noise. Though the audio system restrains sensitivity of SEEK and SCAN functions at night, the audio system may select other than desired broadcasting station when signals are considerably strong. This function is linked to the parking light. When the parking light or the headlight is turned on, SEEK and SCAN may not function for weak signals.



e5u903azw5s03

## SYMPTOM TROUBLESHOOTING [CD]

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### 09-03G SYMPTOM TROUBLESHOOTING [CD]

|                                 |          |                                   |           |
|---------------------------------|----------|-----------------------------------|-----------|
| FOREWORD [CD] .....             | 09-03G-1 | NO.7 CD PLAYER DOES NOT PLAY      |           |
| Troubleshooting Index .....     | 09-03G-1 | THE MP3-FORMATTED FILE [CD] ..... | 09-03G-7  |
| NO.1 CD PLAYER/CHANGER DOES NOT |          | NO.8 MP3-FORMATTED FILE FOLDER    |           |
| LOAD THE CD OR EJECTS           |          | SELECTION IS INOPERATIVE/TRACK    |           |
| THE CD IMMEDIATELY [CD] .....   | 09-03G-3 | SEARCH IS INOPERATIVE [CD] .....  | 09-03G-8  |
| NO.2 CD PLAYER/CHANGER DOES NOT |          | NO.9 CD PLAYER DOES NOT INDICATE  |           |
| EJECT THE CD [CD] .....         | 09-03G-3 | THE MP3 TITLE TEXT [CD] .....     | 09-03G-9  |
| NO.3 CD PLAYER/CHANGER DOES NOT |          | NO.10 CD PLAYER DOES NOT PLAY     |           |
| PLAY THE CD/NO SOUND [CD] ..... | 09-03G-4 | THE AUDIO DATA (CDDA) [CD] .....  | 09-03G-10 |
| NO.4 SOUND JUMPS [CD] .....     | 09-03G-5 | NO.11 TRACK CHANGE IS             |           |
| NO.5 CD PLAYER/CHANGER          |          | INOPERATIVE [CD] .....            | 09-03G-11 |
| SCRATCHES ON THE CD [CD] .....  | 09-03G-6 | REFERENCE [CD] .....              | 09-03G-11 |
| NO.6 DISC CHANGE IS             |          | MP3-Formatted File .....          | 09-03G-12 |
| INOPERATIVE [CD] .....          | 09-03G-6 |                                   |           |

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## SYMPTOM TROUBLESHOOTING [CD]

### FOREWORD [CD]

id090362804900

#### Troubleshooting Index

| No. | Items                               | Symptom                                                                        | Possible DTC                                         |
|-----|-------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------|
| 1   | CD player/changer                   | CD player/changer does not load the CD or ejects the CD immediately            | 10:Er01, 10:Er10, 22:Er01, 22:Er10                   |
| 2   |                                     | CD player/changer does not eject the CD                                        | 10:Er01, 10:Er10, 22:Er01, 22:Er10                   |
| 3   |                                     | CD player/changer does not play the CD/No sound                                | 10:Er01, 10:Er07, 10:Er10, 22:Er02, 22:Er07, 22:Er10 |
| 4   |                                     | Sound jumps                                                                    | 10:Er02, 22:Er02                                     |
| 5   |                                     | CD player/changer scratches on the CD                                          | 10:Er01, 22:Er01                                     |
| 6   | CD changer                          | Disc changer is inoperative                                                    | 22:Er01                                              |
| 7   | MP3 applicable<br>CD player/changer | CD player does not play the MP3-formatted file                                 | —                                                    |
| 8   |                                     | MP3-formatted file folder selection is inoperative/Track search is inoperative | —                                                    |
| 9   |                                     | CD player does not indicate the MP3 title text                                 | —                                                    |
| 10  |                                     | CD player does not play the audio data (CDDA)                                  | —                                                    |
| 11  | CD player/changer                   | Track change is inoperative                                                    | 10:Er02, 22:Er02                                     |



## SYMPTOM TROUBLESHOOTING [CD]

| <div style="text-align: center;"> <div style="display: inline-block; width: 45%; transform: rotate(-45deg);">Possible factor</div> <div style="display: inline-block; width: 45%; transform: rotate(45deg);">Troubleshooting Item</div> </div> |                                                                                                            | X: Applicable                                                       |                                         |                                                 |             |                                       |                            |                                                |                                                                                    |                                                |                                               |                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------|-------------|---------------------------------------|----------------------------|------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|-----------------------------|
|                                                                                                                                                                                                                                                |                                                                                                            | CD player/changer                                                   |                                         |                                                 |             |                                       | CD changer                 | MP3 applicable<br>CD player/changer            |                                                                                    |                                                |                                               | CD player/changer           |
|                                                                                                                                                                                                                                                |                                                                                                            | 1                                                                   | 2                                       | 3                                               | 4           | 5                                     | 6                          | 7                                              | 8                                                                                  | 9                                              | 10                                            | 11                          |
|                                                                                                                                                                                                                                                |                                                                                                            | CD player/changer does not load the CD or ejects the CD immediately | CD player/changer does not eject the CD | CD player/changer does not play the CD/No sound | Sound jumps | CD player/changer scratches on the CD | Disc change is inoperative | CD player does not play the MP3-formatted file | MP3-formatted file folder selection is inoperative/<br>Track search is inoperative | CD player does not indicate the MP3 title text | CD player does not play the audio data (CODA) | Track change is inoperative |
|                                                                                                                                                                                                                                                | CD is inserted upside down                                                                                 | X                                                                   |                                         | X                                               |             |                                       |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Audio unit malfunction                                                                                     | X                                                                   | X                                       | X                                               | X           | X                                     | X                          |                                                |                                                                                    |                                                |                                               | X                           |
|                                                                                                                                                                                                                                                | Defective CD (egg., cracked, badly bent, rough edges, scratch, dirty CD, condensation)                     | X                                                                   | X                                       | X                                               | X           |                                       |                            |                                                |                                                                                    |                                                |                                               | X                           |
|                                                                                                                                                                                                                                                | Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc) | X                                                                   | X                                       | X                                               |             |                                       |                            |                                                |                                                                                    |                                                |                                               | X                           |
|                                                                                                                                                                                                                                                | Poor connection of audio unit connector or terminal (e.g., damaged, bent, pull-out pin, corrosion)         | X                                                                   | X                                       |                                                 |             |                                       |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Improper center panel installation                                                                         |                                                                     | X                                       |                                                 |             |                                       | X                          |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Improper CD cover installation                                                                             |                                                                     | X                                       |                                                 |             |                                       |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Improper audio unit installation (e.g., rattle, loose)                                                     |                                                                     |                                         |                                                 | X           |                                       |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Inadequate tire pressure                                                                                   |                                                                     |                                         |                                                 | X           |                                       |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Deformed disc is used (e.g., out of specification (thickness), bent disc)                                  | X                                                                   | X                                       |                                                 |             | X                                     |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Multiple CDs are inserted into the CD player at the same time                                              |                                                                     | X                                       |                                                 |             | X                                     |                            |                                                |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Center panel is malfunctioning                                                                             |                                                                     |                                         |                                                 |             |                                       | X                          |                                                |                                                                                    |                                                |                                               | X                           |
|                                                                                                                                                                                                                                                | CD-R/RW written format is out of specification                                                             |                                                                     |                                         |                                                 |             |                                       |                            | X                                              |                                                                                    |                                                | X                                             |                             |
|                                                                                                                                                                                                                                                | MP3 and other format data are in the CD-R/RW                                                               |                                                                     |                                         |                                                 |             |                                       |                            | X                                              |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | File extension for MP3-formatted file is incorrect (Correct: ".mp3", Incorrect: e.g., RIFF)                |                                                                     |                                         |                                                 |             |                                       |                            | X                                              |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Defective CD-R/RW (e.g., dirty, scratch)                                                                   |                                                                     |                                         |                                                 |             |                                       |                            | X                                              | X                                                                                  | X                                              | X                                             |                             |
|                                                                                                                                                                                                                                                | CD-R/RW (MP3 files are all written to RIFF format)                                                         |                                                                     |                                         |                                                 |             |                                       |                            | X                                              |                                                                                    |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | Conflict of ID tag version for CD-R/RW                                                                     |                                                                     |                                         |                                                 |             |                                       |                            |                                                | X                                                                                  | X                                              |                                               |                             |
|                                                                                                                                                                                                                                                | Improper folder and/or music title in CD-R/RW                                                              |                                                                     |                                         |                                                 |             |                                       |                            |                                                | X                                                                                  |                                                |                                               |                             |
|                                                                                                                                                                                                                                                | The number of characters of folder/music file name in CD-R/RW exceeds the maximum number of characters     |                                                                     |                                         |                                                 |             |                                       |                            |                                                | X                                                                                  | X                                              |                                               |                             |
|                                                                                                                                                                                                                                                | Improper encode in CD-R/RW                                                                                 |                                                                     |                                         |                                                 |             |                                       |                            |                                                | X                                                                                  | X                                              |                                               |                             |
|                                                                                                                                                                                                                                                | MP3 applicable CD player malfunction                                                                       |                                                                     |                                         |                                                 |             |                                       |                            | X                                              | X                                                                                  | X                                              | X                                             | X                           |
|                                                                                                                                                                                                                                                | No title input in CD-R/RW                                                                                  |                                                                     |                                         |                                                 |             |                                       |                            |                                                |                                                                                    | X                                              |                                               |                             |
|                                                                                                                                                                                                                                                | Input title text by 2-bytes characters                                                                     |                                                                     |                                         |                                                 |             |                                       |                            |                                                |                                                                                    | X                                              |                                               |                             |
|                                                                                                                                                                                                                                                | Data other than the audio data is in CD-R/RW                                                               |                                                                     |                                         |                                                 |             |                                       |                            |                                                |                                                                                    |                                                | X                                             |                             |

am2zzw0000495

## SYMPTOM TROUBLESHOOTING [CD]

### NO.1 CD PLAYER/CHANGER DOES NOT LOAD THE CD OR EJECTS THE CD IMMEDIATELY [CD]

id090362826100

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b>            | <b>CD player/changer does not load the CD or ejects the CD immediately</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Possible DTC</b> | <b>10:Er01, 10:Er10, 22:Er01, 22:Er10</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Possible cause      | <ul style="list-style-type: none"> <li>• CD is inserted upside down</li> <li>• Audio unit malfunction</li> <li>• Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)</li> <li>• Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)</li> <li>• Poor connection of audio unit connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)</li> <li>• Deformed disc is used (e.g., out of specification (thickness), bent disc)</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                           | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>• Is CD inserted properly, label-side up?</li> </ul>                                                                                                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Explain to the customer that CD should be inserted into the slot, label-side up.                                                                                                                                                                                                                                                                                                                                                  |
| 2    | <ul style="list-style-type: none"> <li>• Replace with a CD known to be good.</li> <li>• Does the CD player/changer load the CD?</li> </ul>                                                                                                                                                                                                                                           | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                       |
| 3    | Visually inspect the CD.<br>— Is there any dirt, scratch or deformation on the CD?<br>— Is the CD a non-conventional disc?                                                                                                                                                                                                                                                           | Yes<br>Explain to the customer that the defective CD or non-conventional disc cannot be used.                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Inspect the connection of the audio unit connector (24-pin).</li> <li>• Inspect both audio unit connector and wiring harness-side connector for a poor connection. (such as damaged/bent/pulled-out pins, corrosion)</li> <li>• Are all the pins and connector normal?</li> </ul> | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                      | No<br><b>If the audio unit connector/pin is malfunctioning:</b> <ul style="list-style-type: none"> <li>• Replace the audio unit.</li> </ul> (See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)<br><b>If the wiring harness-side connector/pin is malfunctioning:</b> <ul style="list-style-type: none"> <li>• Repair or replace the pins and/or the connector.</li> </ul> |

### NO.2 CD PLAYER/CHANGER DOES NOT EJECT THE CD [CD]

id090362826200

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2</b>            | <b>CD player/changer does not eject the CD</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Possible DTC</b> | <b>10:Er01, 10:Er10, 22:Er01, 22:Er10</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Possible cause      | <ul style="list-style-type: none"> <li>• Audio unit malfunction</li> <li>• Defective CD. (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)</li> <li>• Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)</li> <li>• Poor connection of audio unit connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)</li> <li>• Improper center panel installation</li> <li>• Improper CD cover installation</li> <li>• Deformed disc is used (e.g., out of specification (thickness), bent disc).</li> <li>• Multiple CDs are inserted into the CD player at the same time</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• The CD may be malfunctioning if the CD player/changer does not eject the certain CD only. Inspect the CD player/changer operation using a CD known to be operational.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                 | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect the operation of the audio system other than CD player/changer (e.g. Radio).</li> <li>Does the other audio system operate?</li> </ul>                                                                                                                                                                                       | Yes<br>Go to Step 3.                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                            | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Inspect the connection of the audio unit connector (24-pin).</li> <li>Inspect both audio unit connector and wiring harness-side connector for poor connection. (such as damaged/bent/pulled-out pins, corrosion)</li> <li>Are all the pins and connector normal?</li> </ul> | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                            | No<br><b>If the audio unit connector/pin is malfunctioning:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.</li> </ul> (See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)<br><b>If the wiring harness-side connector/pin is malfunctioning:</b> <ul style="list-style-type: none"> <li>Repair or replace the pins and/or the connector.</li> </ul> |
| 3    | <ul style="list-style-type: none"> <li>Eject the CD.</li> <li>Is the CD ejected from the CD player/ changer?</li> </ul>                                                                                                                                                                                                                                                    | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                            | No<br>Inspect the center panel installation. Securely install the center panel if necessary.                                                                                                                                                                                                                                                                                                                                        |
| 4    | <ul style="list-style-type: none"> <li>Insert the CD into the CD player/changer.</li> <li>Does the CD insert into the CD player/ changer smoothly?</li> </ul>                                                                                                                                                                                                              | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                            | No<br>Install the center panel properly, then go to the next step.                                                                                                                                                                                                                                                                                                                                                                  |
| 5    | <ul style="list-style-type: none"> <li>Is the CD ejected from the CD player/ changer?</li> </ul>                                                                                                                                                                                                                                                                           | Yes<br>Troubleshooting completed.<br>Explain repairs to the customers.                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                            | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                   |

### NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND [CD]

id090362806100

|                       |                                                                                                                                                                                                                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3</b>              | <b>CD player/changer does not play the CD/No sound</b>                                                                                                                                                                                                                                                                           |
| <b>Possible DTC</b>   | <b>10:Er02, 10:Er07, 10:Er10, 22:Er02, 22:Er07, 22:Er10</b>                                                                                                                                                                                                                                                                      |
| <b>Possible cause</b> | <ul style="list-style-type: none"> <li>CD is inserted upside down</li> <li>Audio unit malfunction</li> <li>Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)</li> <li>Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)</li> </ul> |

## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                            | ACTION                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the radio on and check for sound.</li> <li>Is there a sound?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Check the volume dial position.</li> </ul>                                                                              | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                       | No<br>Go to the symptom troubleshooting No.3 (audio)<br>(See 09-03E-6 NO.3 NO SOUND FROM ALL SPEAKERS [AUDIO].)                                   |
| 2    | <ul style="list-style-type: none"> <li>Was CD inserted properly, label-side up?</li> </ul>                                                                                                                                                                                                            | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                       | No<br>Explain to the customer that CD should be inserted into the slot, label-side up.                                                            |
| 3    | <ul style="list-style-type: none"> <li>Replace with a CD known to be operational.</li> <li>Does the CD player/changer load the CD?</li> </ul>                                                                                                                                                         | Yes<br>Go to the next step.                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                       | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
| 4    | <ul style="list-style-type: none"> <li>Visually inspect the CD.                             <ul style="list-style-type: none"> <li>Is there any dirt, scratches or deformation on the CD?</li> <li>Is the CD a non-conventional disc?</li> <li>Is there a CD in MP3 recording?</li> </ul> </li> </ul> | Yes<br>Explain to the customer that the defective CD or non-conventional disc cannot be use.                                                      |
|      |                                                                                                                                                                                                                                                                                                       | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |

### NO.4 SOUND JUMPS [CD]

id090362806200

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4</b>            | <b>Sound jumps</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Possible DTC</b> | <b>10:Er02, 22:Er02</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Possible cause      | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)</li> <li>Improper audio unit installation (e.g., rattle, loose)</li> <li>Inadequate tire pressure</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>The CD may be malfunctioning if the sound jumps on the certain CD only. Inspect the CD player/ changer operation using a CD known to be operational.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                             |     | ACTION                                                                                                                                      |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Does the sound jump when the vehicle is stopped?</li> </ul>                                                                     | Yes | Go to Step 6.                                                                                                                               |
|      |                                                                                                                                                                        | No  | Go to the next step.                                                                                                                        |
| 2    | <ul style="list-style-type: none"> <li>Drive the vehicle.</li> <li>Does the sound jump when driving over uneven surfaces?</li> </ul>                                   | Yes | Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                        | No  | Go to Step 6.                                                                                                                               |
| 3    | <ul style="list-style-type: none"> <li>Is the audio unit installed securely?</li> </ul>                                                                                | Yes | Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                        | No  | Install the audio unit securely.                                                                                                            |
| 4    | <ul style="list-style-type: none"> <li>Inspect the tire pressure.</li> <li>Is the tire pressure normal?</li> </ul>                                                     | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                        | No  | Go to the next step.                                                                                                                        |
| 5    | <ul style="list-style-type: none"> <li>Adjust the tire pressure within specification.</li> <li>Does the sound jump when driving the vehicle?</li> </ul>                | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                        | No  | Audio system is normal. Explain repairs to the customers.                                                                                   |
| 6    | <ul style="list-style-type: none"> <li>Replace with a CD other than the one known to be operational.</li> <li>Does the sound jump when driving the vehicle?</li> </ul> | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                        | No  | Audio system is normal. Explain to the customer that the CD is malfunctioning.                                                              |

### NO.5 CD PLAYER/CHANGER SCRATCHES ON THE CD [CD]

id090362806300

|                |                                                                                                                                                                                                                                    |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5              | CD player/changer scratches on the CD                                                                                                                                                                                              |
| Possible DTC   | 10:Er01, 22:Er01                                                                                                                                                                                                                   |
| Possible cause | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Deformed disc is used (e.g., out of specification (thickness), bent disc)</li> <li>Multiple CDs are inserted into the CD player at the same time</li> </ul> |

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                         |     | ACTION                                                                                                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Were the multiple CDs inserted into the CD player at the same time?</li> </ul>                                              | Yes | Explain to the customer to insert a CD one by one.                                                                                          |
|      |                                                                                                                                                                    | No  | Go to the next step.                                                                                                                        |
| 2    | <ul style="list-style-type: none"> <li>Visually inspect the CD.</li> <li>Is the CD a deformed disc (e.g., out of specification (thickness), bent disc)?</li> </ul> | Yes | Audio system is normal. Explain to the customer that the CD is malfunctioning.                                                              |
|      |                                                                                                                                                                    | No  | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |

### NO.6 DISC CHANGE IS INOPERATIVE [CD]

id090362806400

|                |                                                                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6              | Disc change is inoperative                                                                                                                             |
| Possible DTC   | 22:Er01                                                                                                                                                |
| Possible cause | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Improper center panel installation</li> <li>Center panel malfunction</li> </ul> |

## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                             |     | ACTION                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect the CD changer operation.</li> <li>Does the CD changer operate properly?</li> </ul>                                                                                                                                                     | Yes | Go to the next step.                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                        | No  | Go to the symptom troubleshooting "No.3 CD player/changer does not play the CD/No sound".<br>(See 09-03G-4 NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND [CD].)                       |
| 2    | <ul style="list-style-type: none"> <li>Inspect the followings:                             <ul style="list-style-type: none"> <li>Is the display shown properly when operating the disc change switch?</li> <li>Does the radio band selection operate properly?</li> </ul> </li> </ul> | Yes | Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                  |
|      |                                                                                                                                                                                                                                                                                        | No  | Go to the next step.                                                                                                                                                                         |
| 3    | <ul style="list-style-type: none"> <li>Inspect the center panel installation.</li> <li>Does the CD changer change the disc properly after re-installing the center panel?</li> </ul>                                                                                                   | Yes | Install the center panel securely and properly.                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                        | No  | Go to the "Confirmation step 1: Audio switch confirmation" in this section. Replace the center panel as necessary.<br>(See 09-03E-2 CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO].) |

### NO.7 CD PLAYER DOES NOT PLAY THE MP3-FORMATTED FILE [CD]

id090362806500

| 7              | CD player does not play the MP3-formatted file                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible DTC   | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Possible cause | <ul style="list-style-type: none"> <li>CD-R/RW written format is out of specification</li> <li>MP3 and other format data are in the CD-R/RW</li> <li>File extension for MP3-formatted file is incorrect (Correct: ".mp3", incorrect: e.g., RIFF)</li> <li>Defective CD-R/RW (e.g. dirty CD, scratch)</li> <li>MP3 applicable CD player malfunction</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Free-software for MP3-formatting available on the market may cause deterioration of sound quality, or cause noise and defective play, which could result in the CD player not playing the customer-made MP3-formatted files.</li> <li>The CD player may not play the CD-R/RW properly due to the disc condition.</li> <li>If there are MP3-formatted files and other files on the same disc, the CD player may not play the disc.</li> <li>If there are MP-3-formatted file and audio data on the same disc, the CD player loads and plays the first session of the data only.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                            | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Inspect the written format of the recorded data on the CD-R/RW.</li> <li>Is the write format correct?</li> </ul>                               | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                       | No<br>Write the CD-R/RW to the correct specification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2    | <ul style="list-style-type: none"> <li>Inspect the recorded data on the CD-R/RW.</li> <li>Are there MP3 or other format data on the CD-R/RW.</li> </ul>                               | Yes<br>Replace with an operational CD-R/RW (MP3-formatted file data only), then inspect the CD player operation.<br><b>If the CD player plays the MP3-formatted file:</b> <ul style="list-style-type: none"> <li>Audio system is normal. Explain to the customer that the CD player does not operate properly if MP3 or other format data are recorded the CD-R/RW.</li> </ul> <b>If the CD player does not play the MP3-formatted file:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>               (See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br/>               (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)</li> </ul> |
|      |                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3    | <ul style="list-style-type: none"> <li>Inspect the CD-R/RW written format.</li> <li>Is the written format within the specification (“.mp3” is the correct file extension)?</li> </ul> | Yes<br>Replace with the CD-R/RW using the “.mp3” file extension, then inspect the CD player operation.<br><b>If the CD player plays the MP3-formatted file:</b> <ul style="list-style-type: none"> <li>Audio system is normal. Explain to the customer that the CD player does not operate properly if the correct file extension is not used.</li> </ul> <b>If the CD player does not play the MP3-formatted file:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>               (See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br/>               (See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)</li> </ul>                      |
|      |                                                                                                                                                                                       | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4    | <ul style="list-style-type: none"> <li>Visually inspect the CD-R/RW.</li> <li>Is there any dirt or scratches on the CD-R/RW?</li> </ul>                                               | Yes<br>Clean the disc or replace it within an operational CD-R/RW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                       | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### NO.8 MP3-FORMATTED FILE FOLDER SELECTION IS INOPERATIVE/TRACK SEARCH IS INOPERATIVE [CD]

id090362806600

| 8              | MP3-formatted file folder selection is inoperative/Track search is inoperative                                                                                                                                                                                                                                                                                                                        |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible DTC   | —                                                                                                                                                                                                                                                                                                                                                                                                     |
| Possible cause | <ul style="list-style-type: none"> <li>Defective CD-R/RW (e.g. dirty CD, scratch)</li> <li>Conflict of ID tag version for CD-R/RW</li> <li>Improper folder and/or music title in CD-R/RW</li> <li>The number of characters of folder/audio file name in CD-R/RW exceeds the maximum number of characters</li> <li>Improper encode in CD-R/RW</li> <li>MP3 applicable CD player malfunction</li> </ul> |

#### Note

- ID3 is a tagging format for MP3-formatted file. ID3 allows metadata (e.g., title, artist, track number, etc.) to be added to the MP3-formatted file.
- There are two versions in the ID tag.
  - ID3v1: This is the most widespread standard tag formats and most software is compatible with this version. There is a limitation on the maximum number of characters for the text data.
  - ID3v2: There are a variety of version in V2, but there is no interchangeability among the versions.

## SYMPTOM TROUBLESHOOTING [CD]

### Limitation on the maximum number of characters for the text data (ID3v1)

| Item    | Maximum number of characters | Description                           |
|---------|------------------------------|---------------------------------------|
| Title   | 30                           | Music title                           |
| Artist  | 30                           | Artist name                           |
| Album   | 30                           | Album title                           |
| Year    | 4                            | Album produced year/CD wholesale year |
| Genre   | —                            | Music category selection              |
| Comment | 30                           | Free comment                          |
| Track   | 3                            | Track number                          |

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                       | ACTION                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Visually inspect the CD-R/RW.</li> <li>Is there any dirt or scratch on the CD-R/RW?</li> </ul>                                                                                                                                                            | Yes<br>Clean the disc or replace with the CD-R/RW known to be good.                                                                                |
|      |                                                                                                                                                                                                                                                                                                  | No<br>Go to the next step.                                                                                                                         |
| 2    | <ul style="list-style-type: none"> <li>Inspect the ID tag version.</li> <li>Is ID tag correct?</li> </ul>                                                                                                                                                                                        | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                  | No<br>Write the CD-R/RW with the correct ID tag version.                                                                                           |
| 3    | <ul style="list-style-type: none"> <li>Inspect folder and audio file name.</li> <li>Are all file name input correctly?</li> </ul>                                                                                                                                                                | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                  | No<br>Use the CD-R/RW that a folder and audio file name is input correctly.                                                                        |
| 4    | <ul style="list-style-type: none"> <li>Inspect the encode for the folder and audio file name in the CD-R/RW.</li> <li>Is the encode correct?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Unreadable characters may be displayed if incorrect encode is used.</li> </ul> | Yes<br>Go to the next step.                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                  | No<br>Use the correct encode.                                                                                                                      |
| 5    | <ul style="list-style-type: none"> <li>Inspect the number of characters for the folder and audio file name.</li> <li>Is the number of characters within the maximum number of characters?</li> </ul>                                                                                             | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.) |
|      |                                                                                                                                                                                                                                                                                                  | No<br>Input the folder and audio file name within the maximum number of characters.                                                                |

### NO.9 CD PLAYER DOES NOT INDICATE THE MP3 TITLE TEXT [CD]

id090362806700

| 9              | CD player does not indicate the MP3 title text                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible DTC   | —                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Possible cause | <ul style="list-style-type: none"> <li>Defective CD-R/RW (e.g. dirty CD, scratch)</li> <li>Conflict of ID tag version for CD-R/RW</li> <li>The number of characters of folder/audio file name in CD-R/RW exceeds the maximum number of characters</li> <li>Improper encode in CD-R/RW</li> <li>MP3 applicable CD player malfunction</li> <li>No title input in CD-R/RW</li> <li>Input title text by 2-bytes characters</li> </ul> |



## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                           | ACTION                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Visually inspect the CD-R/RW.</li> <li>Is there any dirt or scratch on the CD/R/RW?</li> </ul>                                                                | Yes<br>Clean the disc or replace with the CD-R/RW known to be good.                                                                                  |
|      |                                                                                                                                                                                                      | No<br>Go to the next step.                                                                                                                           |
| 2    | <ul style="list-style-type: none"> <li>Inspect the display the LCD.</li> <li>Is the CD (other than MP3 compatible) displayed on the LCD?</li> </ul>                                                  | Yes<br>Go to the next step.                                                                                                                          |
|      |                                                                                                                                                                                                      | No<br>Go to the symptom troubleshooting No.9 (audio).<br>(See 09-03E-11 NO.9 LCD DOES NOT DISPLAY AT ALL [AUDIO].)                                   |
| 3    | <ul style="list-style-type: none"> <li>Inspect the ID tag version.</li> <li>Is the ID tag correct?</li> </ul>                                                                                        | Yes<br>Go to the next step.                                                                                                                          |
|      |                                                                                                                                                                                                      | No<br>Write the CD-R/RW with the correct ID tag version.                                                                                             |
| 4    | <ul style="list-style-type: none"> <li>Is the title text input into the CD-R/RW?</li> </ul>                                                                                                          | Yes<br>Go to the next step.                                                                                                                          |
|      |                                                                                                                                                                                                      | No<br>Input the title text.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Do not input the title text by two-bytes character.</li> </ul> |
| 5    | <ul style="list-style-type: none"> <li>Inspect the encode for the folder and audio file name in the CD-R/RW.</li> <li>Is the encode correct?</li> </ul>                                              | Yes<br>Go to the next step.                                                                                                                          |
|      |                                                                                                                                                                                                      | No<br>Use the correct encode.                                                                                                                        |
| 6    | <ul style="list-style-type: none"> <li>Inspect the number of characters for the folder and audio file name.</li> <li>Is the number of characters within the maximum number of characters?</li> </ul> | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)   |
|      |                                                                                                                                                                                                      | No<br>Input the folder and audio file name within the maximum number of characters.                                                                  |

### NO.10 CD PLAYER DOES NOT PLAY THE AUDIO DATA (CDDA) [CD]

id090362806800

| 10             | CD player does not play the audio data (CDDA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible DTC   | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Possible cause | <ul style="list-style-type: none"> <li>CD-R/RW written format is out of specification</li> <li>Defective CD-R/RW (e.g., dirty CD, scratch)</li> <li>MP3 applicable CD player malfunction</li> <li>Data other than the audio data is in CD-R/RW</li> </ul> <b>Note</b> <ul style="list-style-type: none"> <li>The CD player may not play the CD-R/RW properly due to the disc condition.</li> <li>If there are MP-3-formatted file and audio data in the same disc, the CD player loads and plays the first session of the data only.</li> </ul> |

## SYMPTOM TROUBLESHOOTING [CD]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                          | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Replace with the audio-CD known to be good.</li> <li>Does the CD player play the audio-CD properly?</li> </ul>               | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                     | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2    | <ul style="list-style-type: none"> <li>Inspect the written format of the recorded data on the CD-R/RW.</li> <li>Is the written format correct?</li> </ul>           | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                     | No<br>Write the CD-R/RW with the correct specification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3    | <ul style="list-style-type: none"> <li>Inspect the recorded data in the CD-R/RW.</li> <li>Is any data other than the audio data recorded in the CD-R/RW?</li> </ul> | Yes<br>Replace with the CD-R/RW known to be good (record audio data only), then inspect the CD player operation.<br><b>If the CD-R/RW plays:</b> <ul style="list-style-type: none"> <li>Audio system is normal. Explain to the customer that the CD player does not operate properly if the audio data and other data are recorded in the CD-R/RW.</li> </ul> <b>If the CD-R/RW does not play:</b> <ul style="list-style-type: none"> <li>Replace the audio unit.<br/>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br/>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)</li> </ul> |
|      |                                                                                                                                                                     | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4    | <ul style="list-style-type: none"> <li>Visually inspect the CD-R/RW.</li> <li>Is there any dirt or scratch on the CD-R/RW?</li> </ul>                               | Yes<br>Clean the disc or replace with the CD-R/RW known to be good.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                     | No<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### NO.11 TRACK CHANGE IS INOPERATIVE [CD]

id090362806900

|                |                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11             | Track change is inoperative                                                                                                                                                                                                                                                                                                                                                  |
| Possible DTC   | 10:Er02, 22:Er02                                                                                                                                                                                                                                                                                                                                                             |
| Possible cause | <ul style="list-style-type: none"> <li>Audio unit malfunction</li> <li>Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)</li> <li>Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)</li> <li>Center panel malfunction</li> <li>MP3 applicable CD player malfunction</li> </ul> |

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                             | ACTION                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Replace the CD/MD known to be good.</li> <li>Does the CD player/MD player change the track?</li> </ul>                                                          | Yes<br>Explain to the customer that the defective CD or non-conventional disc cannot be used.                                                                                                      |
|      |                                                                                                                                                                                                        | No<br>Go to the next step.                                                                                                                                                                         |
| 2    | <ul style="list-style-type: none"> <li>Inspect the center panel installation.</li> <li>Does the CD player change the track number on the display when pressing the track up or down switch?</li> </ul> | Yes<br>Replace the audio unit.<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/ INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ ASSEMBLY.)                                                 |
|      |                                                                                                                                                                                                        | No<br>Go to the "Confirmation step 1: Audio switch confirmation" in this section. Replace the center panel as necessary.<br>(See 09-03E-2 CONFIRMATION STEP 1: AUDIO SWITCH CONFIRMATION [AUDIO].) |

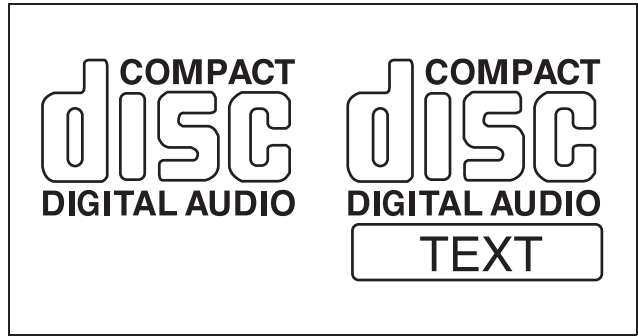
### REFERENCE [CD]

id090362830000

- The CD player/changer has been designed to play CDs bearing the identification logo, COMPACT DISC DIGITAL AUDIO, as shown. No other discs can be played on the CD player/changer other than MP3 applicable one.

## SYMPTOM TROUBLESHOOTING [CD]

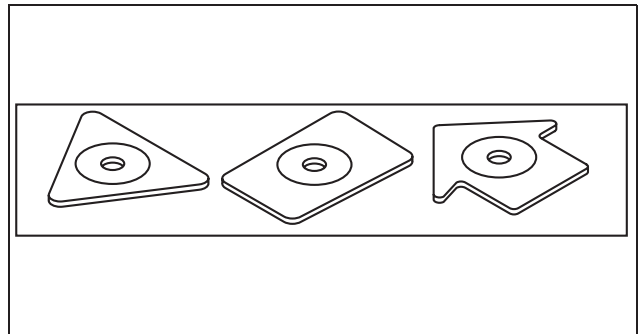
- The CD player/changer may not play the following CD:
  - Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD condensation)
  - 8 cm (3 in) CDs accessories (e.g., 8 cm (3 in) disc adapter, sticker, label)
  - Nonstandard CD (e.g., Diameter/thickness is out of specification)  
Specification: 119.7—120.3 mm (4.668—4.692 in) of diameter, 1.2+0.3 or -0.1 mm (0.047+0.012 or 0.004 in) of thickness
  - Do not use non-conventional discs. The CD player/changer could be damaged.



am2zzw0000023

### Examples:

- Although the same physical size as the compact disc, SACD uses a different kind of digital audio signal, Direct Stream Digital.
- The CD player/changer may not play the CD-R/RW properly due to the disc condition (excluding the MP3).



am2zzw0000023

### MP3-Formatted File

#### Outline of CD-R and CD-RW

- Definition
  - CD-R: The CD-R is a non-rewritable version. Once a section of a CD-R is written, it cannot be erased or rewritten.
  - CD-RW: The CD-RW is a re-writable version of CD-ROM and the data can be written an unlimited number of times.
  - Since the reflected laser beam amount of a CD-R/RW is less than the reflected laser beam amount of the conventional CD media, the CD player/changer may not play the CD-R/RW or the sound may jump.
  - Since the recording quality of the CD-R/RWs vary widely, some CD-R/RWs may not play.

#### Recording method

- There are two methods for recording.
- Classification by recorder
  - Record the audio data in the audio-CD by audio recorder
    - The price of the audio recorder and original audio-CD include the copyright fee.
  - Record the audio data to a conventional data-CD using a personal computer
    - The data-CD is cheaper than the audio-CD. But, there are lower quality CDs.
- Classification by audio data extraction/compression
  - Extracted audio data
    - The CD-R/RW player can play the extracted audio data.
  - Compressed audio data
    - It is possible to record a large quantity of music to a disc. The sound quality varies depending on the audio data compression format. The compressed audio data can be played on the applicable player only.
  - Types of compression format:
    - MP3: MPEG Audio Layer 3—Mazda genuine MP3 applicable CD player is available.
    - WMA: Windows Media Audio
    - ATRAC: Adaptive TRAnsform Acoustic Coding

### MP3

- The following conditions should be met in order to record the MP3-formatted data to the MP3 applicable CD player:

| Media               | Applicable to the CD-R/RW         |
|---------------------|-----------------------------------|
| Logical format      | ISO 9660 level 1&2 /Joliet /Romeo |
| Directory hierarchy | To 8 levels                       |

## SYMPTOM TROUBLESHOOTING [CD]

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| Media           | Applicable to the CD-R/RW                                                          |
|-----------------|------------------------------------------------------------------------------------|
| Number of files | Maximum 255 as the total number of files and folders<br>Maximum of 155 for folders |
| ID3 TAG         | Applicable to Ver1.1, 2.3 and 2.4                                                  |
| File extension  | MP3                                                                                |
| Packet writing  | Not applicable                                                                     |
| Bit rate        | 8kbps—320 kbps/VBR                                                                 |
| Sampling rate   | 11.025kHz—48 kHz                                                                   |

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## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

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### 09-03H SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

#### SYMPTOM TROUBLESHOOTING

[INSTRUMENT CLUSTER] . . . . . 09-03H-1

#### QUICK DIAGNOSTIC CHART

[INSTRUMENT CLUSTER] . . . . . 09-03H-2

NO. 1 FUEL GAUGE INDICATION IS  
INCORRECT

[INSTRUMENT CLUSTER] . . . . . 09-03H-2

NO. 2 ALL METERS AND GAUGES  
DO NOT OPERATE

[INSTRUMENT CLUSTER] . . . . . 09-03H-4

NO. 3 ABS WARNING LIGHT  
ILLUMINATES

[INSTRUMENT CLUSTER] . . . . . 09-03H-5

NO. 4 MIL ILLUMINATES

[INSTRUMENT CLUSTER] . . . . . 09-03H-7

NO. 5 BRAKE SYSTEM WARNING LIGHT  
ILLUMINATES

[INSTRUMENT CLUSTER] . . . . . 09-03H-9

#### NO. 6 INSTRUMENT CLUSTER

ILLUMINATION DOES NOT

ILLUMINATE

[INSTRUMENT CLUSTER] . . . . . 09-03H-11

NO. 7 SPEEDOMETER INDICATION IS  
DEFECTIVE

[INSTRUMENT CLUSTER] . . . . . 09-03H-12

NO. 8 TACHOMETER INDICATION IS  
DEFECTIVE

[INSTRUMENT CLUSTER] . . . . . 09-03H-14

NO. 9 LOW ENGINE COOLANT  
TEMPERATURE INDICATOR LIGHT/  
HIGH ENGINE COOLANT  
TEMPERATURE

WARNING LIGHT ILLUMINATES OR  
FLASHES CONTINUOUSLY

[INSTRUMENT CLUSTER] . . . . . 09-03H-16

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## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

id0903d5807200

| No. | TROUBLESHOOTING ITEM                                                                                                             | PAGE                                                                                                                                                                         |
|-----|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Fuel gauge indication is incorrect                                                                                               | (See 09-03H-2 NO. 1 FUEL GAUGE INDICATION IS INCORRECT [INSTRUMENT CLUSTER].)                                                                                                |
| 2   | All meters and gauges do not operate                                                                                             | (See 09-03H-4 NO. 2 ALL METERS AND GAUGES DO NOT OPERATE [INSTRUMENT CLUSTER].)                                                                                              |
| 3   | ABS warning light illuminates                                                                                                    | (See 09-03H-5 NO. 3 ABS WARNING LIGHT ILLUMINATES [INSTRUMENT CLUSTER].)                                                                                                     |
| 4   | MIL illuminates                                                                                                                  | (See 09-03H-7 NO. 4 MIL ILLUMINATES [INSTRUMENT CLUSTER].)                                                                                                                   |
| 5   | Brake system warning light illuminates                                                                                           | (See 09-03H-9 NO. 5 BRAKE SYSTEM WARNING LIGHT ILLUMINATES [INSTRUMENT CLUSTER].)                                                                                            |
| 6   | Instrument cluster illumination does not illuminate                                                                              | (See 09-03H-11 NO. 6 INSTRUMENT CLUSTER ILLUMINATION DOES NOT ILLUMINATE [INSTRUMENT CLUSTER].)                                                                              |
| 7   | Speedometer indication is defective                                                                                              | (See 09-03H-12 NO. 7 SPEEDOMETER INDICATION IS DEFECTIVE [INSTRUMENT CLUSTER].)                                                                                              |
| 8   | Tachometer indication is defective                                                                                               | (See 09-03H-14 NO. 8 TACHOMETER INDICATION IS DEFECTIVE [INSTRUMENT CLUSTER].)                                                                                               |
| 9   | Low engine coolant temperature indicator light/High engine coolant temperature warning light illuminates or flashes continuously | (See 09-03H-16 NO. 9 LOW ENGINE COOLANT TEMPERATURE INDICATOR LIGHT/HIGH ENGINE COOLANT TEMPERATURE WARNING LIGHT ILLUMINATES OR FLASHES CONTINUOUSLY [INSTRUMENT CLUSTER].) |

# SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

## QUICK DIAGNOSTIC CHART [INSTRUMENT CLUSTER]

id0903d5807300

| Troubleshooting item |                                                                                                                                  | Possible factor                                                      |                                                                  |                        |                    |                                                |                                                                               |                                                                                               |                          |                                                            |                                                                     |                                                                    |                      |     |                                                                 |                                                   |                                                    |                                                   |     |                                                                        |                          |                                                                    |                      |                                 |  | X: Applicable |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------|------------------------|--------------------|------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------|----------------------|-----|-----------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------|---------------------------------------------------|-----|------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------|----------------------|---------------------------------|--|---------------|
|                      |                                                                                                                                  | Poor connection of fuel gauge sender unit connector, terminal damage | Poor connection of instrument cluster connector, terminal damage | Fuel gauge sender unit | Instrument cluster | Fuel gauge sender unit is improperly installed | Open or short circuit in wiring harness between instrument cluster and ground | Open or short circuit in wiring harness between instrument cluster and fuel gauge sender unit | Fuse malfunction (METER) | Open or short circuit in power supply (IG1) wiring harness | Open or short circuit in ground wiring harness ABS HU/CM, DSC HU/CM | Poor connection of ABS HU/CM, DSC HU/CM connector, terminal damage | ABS HU/CM, DSC HU/CM | BCM | Short circuit in wiring harness between CAN-L, CAN-H and ground | Open circuit in CAN wiring harness (CAN-L, CAN-H) | CAN wiring harness (CAN-L, CAN-H) short each other | Poor connection of PCM connector, terminal damage | PCM | Poor connection of brake fluid level sensor connector, terminal damage | Brake fluid level sensor | Poor connection of Parking brake switch connector, terminal damage | Parking brake switch | Fuse malfunction (ROOM, ILLUMI) |  |               |
| No.                  |                                                                                                                                  |                                                                      |                                                                  |                        |                    |                                                |                                                                               |                                                                                               |                          |                                                            |                                                                     |                                                                    |                      |     |                                                                 |                                                   |                                                    |                                                   |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 1                    | Fuel gauge indication incorrect                                                                                                  | X                                                                    | X                                                                | X                      | X                  | X                                              | X                                                                             | X                                                                                             |                          |                                                            |                                                                     |                                                                    |                      |     |                                                                 |                                                   |                                                    |                                                   |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 2                    | All meters and gauges do not operate                                                                                             |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               | X                        | X                                                          | X                                                                   |                                                                    |                      |     |                                                                 |                                                   |                                                    |                                                   |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 3                    | ABS warning light illuminates                                                                                                    |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            | X                                                                   | X                                                                  |                      | X   | X                                                               | X                                                 |                                                    |                                                   |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 4                    | MIL illuminates                                                                                                                  |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            |                                                                     |                                                                    |                      | X   | X                                                               | X                                                 | X                                                  | X                                                 |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 5                    | Brake system warning light illuminates                                                                                           |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            | X                                                                   | X                                                                  | X                    | X   | X                                                               | X                                                 |                                                    |                                                   | X   | X                                                                      | X                        | X                                                                  |                      |                                 |  |               |
| 6                    | Instrument cluster illumination does not illuminate                                                                              |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            |                                                                     |                                                                    |                      |     |                                                                 |                                                   |                                                    |                                                   |     |                                                                        |                          |                                                                    | X                    |                                 |  |               |
| 7                    | Speedometer indication is defective                                                                                              |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            | X                                                                   | X                                                                  |                      | X   | X                                                               | X                                                 | X                                                  | X                                                 |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 8                    | Tachometer indication is defective                                                                                               |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            |                                                                     |                                                                    |                      | X   | X                                                               | X                                                 | X                                                  | X                                                 |     |                                                                        |                          |                                                                    |                      |                                 |  |               |
| 9                    | Low engine coolant temperature indicator light/High engine coolant temperature warning light illuminates or flashes continuously |                                                                      | X                                                                |                        | X                  |                                                |                                                                               |                                                                                               |                          |                                                            |                                                                     |                                                                    |                      |     | X                                                               | X                                                 | X                                                  | X                                                 | X   |                                                                        |                          |                                                                    |                      |                                 |  |               |

am2zzw0000461

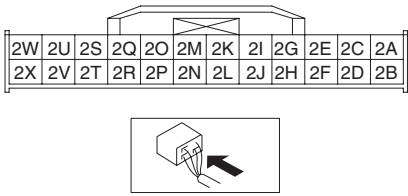
## NO. 1 FUEL GAUGE INDICATION IS INCORRECT [INSTRUMENT CLUSTER]

id0903d5005000

| 1              | Fuel gauge indication is incorrect                                                                                                                                                                                                                                                                                                |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>Fuel gauge sender unit malfunction</li> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Fuel gauge sender unit is improperly installed</li> <li>Open or short circuit in wiring harness between instrument cluster and fuel gauge sender unit</li> </ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                           | ACTION |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Verify that the fuel gauge needle does not move after ignition switch is turned off, or the display does not indicate F even though fuel tank is full.</li> <li>Is the fuel gauge normal?</li> </ul>                                                                                                                                                    | Yes    | Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2    | <ul style="list-style-type: none"> <li>Retrieve the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is the DTC detected?</li> </ul>                                                                                                                                                                                                                                                          | Yes    | Go to applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3    | <ul style="list-style-type: none"> <li>Inspect the instrument cluster.<br/>(See 09-22-8 INSTRUMENT CLUSTER INSPECTION.)<br/>(See 09-22-12 INSTRUMENT CLUSTER INSPECTION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)</li> <li>Is the fuel gauge display normal?</li> </ul>                                                                                                                                                                                 | Yes    | Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                                                                                                                                                                    | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Repair or replace the terminal.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect for continuity following the wiring harness between instrument cluster and fuel gauge sender unit.<br/>— 2T terminal—B terminal<br/>— 2R terminal—D terminal</li> <li>Is there continuity?</li> </ul>                                                                                                                                             | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Repair or replace for open circuit in the wiring harness between the instrument cluster and the fuel gauge sender unit.                                                                                                                                                                                                                                                                                                                                                                   |
| 6    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Remove the instrument cluster.</li> <li>Disconnect the instrument cluster connector.</li> <li>Inspect for continuity between the following wiring harness.<br/>— 2R terminal—ground</li> <li>Is there continuity?</li> </ul> <div style="text-align: center;">  </div> | Yes    | Repair or replace the wiring harness for short to ground.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |
| 7    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the fuel gauge sender unit connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                                                                                                                                                                | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
| 8    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Is the fuel gauge sender unit installed properly?</li> </ul>                                                                                                                                                                                                                                                                                              | Yes    | Inspect the fuel gauge sender unit.<br>(See 09-22-18 FUEL GAUGE SENDER UNIT INSPECTION.)<br>(See 09-22-18 FUEL GAUGE SENDER UNIT INSPECTION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No     | Reinstall the fuel gauge sender unit.<br>(See 09-22-15 FUEL GAUGE SENDER UNIT REMOVAL/ INSTALLATION.)<br>(See 09-22-15 FUEL GAUGE SENDER UNIT REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                |



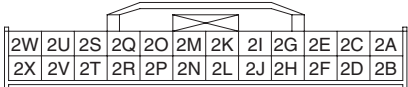
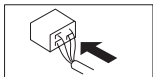
## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### NO. 2 ALL METERS AND GAUGES DO NOT OPERATE [INSTRUMENT CLUSTER]

id0903d5807500

| 2                     | All meters and gauges do not operate                                                                                                                                                                                                                                         |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Fuse malfunction</li> <li>Open or short circuit in power supply (IG1) wiring harness</li> <li>Open or short circuit in ground wiring harness</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ACTION |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"><li>Turn the ignition switch to the ON position.</li><li>Inspect the following:<ul style="list-style-type: none"><li>Does the odometer/tripmeter illuminate?</li><li>Does the fuel gauge operate?</li><li>Does the MIL turn ON?</li></ul></li></ul>                                                                                                                                                                                                                                                                                                         | Yes    | Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2    | <ul style="list-style-type: none"><li>Inspect the METER fuse.</li><li>Is the fuse normal?</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Replace the fuse. <ul style="list-style-type: none"><li>If the fuse is melted, inspect the wiring harness for a short to ground. Repair or replace the wiring harness, then replace the fuse.</li></ul>                                                                                                                                                                                                                                                                                 |
| 3    | <ul style="list-style-type: none"><li>Inspect the DTC for the instrument cluster ON-BOARD DIAGNOSTIC SYSTEM.</li><li>Have any DTC's been recorded in memory?</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes    | Perform the recorded DTC's troubleshooting.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 4    | <ul style="list-style-type: none"><li>Turn the ignition switch to LOCK position.</li><li>Remove the instrument cluster.</li><li>Disconnect the instrument cluster connector.</li><li>Inspect the voltage between instrument cluster wiring harness-side connector terminal 2S and terminal 2A.</li><li>Turn the ignition switch to the ON position.</li><li>Is the voltage <b>B+</b>?</li></ul> <div></div> <div></div> | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | Inspect the suspect wiring harness, then repair or replace.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5    | <ul style="list-style-type: none"><li>Turn the ignition switch to LOCK position.</li><li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li><li>Are the terminals normal?</li></ul>                                                                                                                                                                                                                                                                                                                                 | Yes    | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No     | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### NO. 3 ABS WARNING LIGHT ILLUMINATES [INSTRUMENT CLUSTER]

id0903d5807600

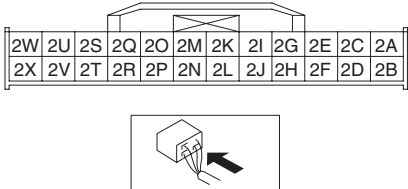
| 3                 | ABS warning light illuminates                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE<br>CAUSE | <ul style="list-style-type: none"><li>• ABS HU/CM malfunction</li><li>• ABS HU/CM stores DTC</li><li>• DSC HU/CM malfunction</li><li>• DSC HU/CM stores DTC</li><li>• Instrument cluster malfunction</li><li>• Connector or pin malfunction</li><li>• Short circuit in wiring harness between CAN-L, CAN-H and ground</li><li>• Open circuit in CAN wiring harness (CAN-L, CAN-H)</li><li>• CAN wiring harness (CAN-L, CAN-H) short each other</li></ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                            |     | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Does the ABS warning light turn off?</li> </ul>                                                                                                                                                                                     | Yes | Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Verify that the warning and indicator lights condition.</li> <li>Do two or more lights illuminate at the same time?</li> </ul>                                                                                                      | Yes | Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3    | <ul style="list-style-type: none"> <li>Reactive the DTC of ABS HU/CM or DSC HU/CM using M-MDS.<br/>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br/>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)</li> <li>Is the DTC detected?</li> </ul>                                         | Yes | Go to applicable DTC troubleshooting procedure.<br>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4    | <ul style="list-style-type: none"> <li>Turn off the ABS warning light using M-MDS instrument cluster active command modes WL+IL.<br/>(See 09-02F-18 ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Does the ABS warning light turn off according to active command modes?</li> </ul> | Yes | Verify that the ABS HU/CM or DSC HU/CM connector is connected securely.<br><b>If the ABS HU/CM or DSC HU/CM connector is poor connection:</b><br>Connect the ABS HU/CM connector securely.<br><b>If malfunction is in the ABS HU/CM or DSC HU/CM side connector:</b><br>Replace the ABS HU/CM or DSC HU/CM.<br>(See 04-13-3 ABS HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-13-6 ABS HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br>(See 04-15-5 DSC HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-15-9 DSC HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
|      |                                                                                                                                                                                                                                                                                                       | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5    | <ul style="list-style-type: none"> <li>Reactive the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is the DTC detected?</li> </ul>                                                                                                           | Yes | Go to the applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the DLC-2 terminals F and E.</li> <li>Is the resistance <b>below 60 ohms</b>?</li> </ul>                                                                                        | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to Step 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 7    | <ul style="list-style-type: none"> <li>Inspect the DLC-2 terminals F and E for short to power supply or ground.</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                         | Yes | Inspect the wiring harness and CAN system-related module.<br>Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|      |                                                                                                                                                                                                                                                                                                       | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 8    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                     | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                       | No  | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part.                                                                                                                                                              |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                               | ACTION                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the instrument cluster connector terminals 2B and 2D.</li> <li>Is the resistance <b>114—126 ohms</b>?</li> </ul>  | Yes<br>Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                          | No<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].) |

### NO. 4 MIL ILLUMINATES [INSTRUMENT CLUSTER]

id0903d5807700

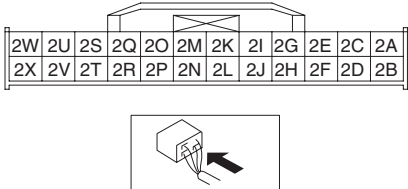
| 4              | MIL illuminates                                                                                                                                                                                                                                                                                                                                                         |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>PCM malfunction</li> <li>PCM stores DTC</li> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Short circuit in wiring harness between CAN-L, CAN-H and ground</li> <li>Open circuit in CAN wiring harness (CAN-L, CAN-H)</li> <li>CAN wiring harness (CAN-L, CAN-H) short each other</li> </ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                            |     | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Does the MIL turn off?</li> </ul>                                                                                                                                                                                                   | Yes | Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Verify that the warning and indicator lights condition.</li> <li>Do two or more lights illuminate at the same time?</li> </ul>                                                                                                      | Yes | Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3    | <ul style="list-style-type: none"> <li>Reactive the DTC of PCM using M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)<br/>Is the DTC detected?</li> </ul> | Yes | Go to applicable DTC troubleshooting procedure.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 4    | <ul style="list-style-type: none"> <li>Turn off the MIL using M-MDS instrument cluster active command modes WL+IL.<br/>(See 09-02F-18 ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER].)<br/>Does the MIL turn off according to active command modes?</li> </ul>                                  | Yes | Verify that the PCM connector is connected securely.<br><b>If the PCM connector is poor connection:</b><br>Connect the PCM connector securely.<br><b>If malfunction is in the PCM side connector:</b><br>Replace the PCM.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
|      |                                                                                                                                                                                                                                                                                                       | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                      |
| 5    | <ul style="list-style-type: none"> <li>Reactive the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)<br/>Is the DTC detected?</li> </ul>                                                                                                                | Yes | Go to the applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 6    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the DLC-2 terminals F and E.</li> <li>Is the resistance <b>below 60 ohms</b>?</li> </ul>                                                                                        | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                       | No  | Go to Step 8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7    | <ul style="list-style-type: none"> <li>Inspect the DLC-2 terminals F and E for short to power supply or ground.</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                         | Yes | Inspect the wiring harness and CAN system-related module.<br>Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                       | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                      |
| 8    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                     | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                       | No  | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part.                       |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                               | ACTION                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the instrument cluster connector terminals 2B and 2D.</li> <li>Is the resistance <b>114—126 ohms</b>?</li> </ul>  | Yes<br>Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                          | No<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].) |

### NO. 5 BRAKE SYSTEM WARNING LIGHT ILLUMINATES [INSTRUMENT CLUSTER]

id0903d5807800

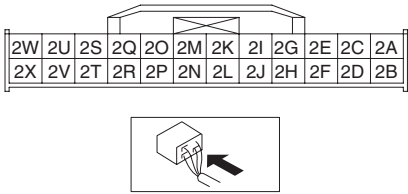
| 5              | Brake system warning light illuminates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>ABS HU/CM malfunction</li> <li>DSC HU/CM malfunction</li> <li>BCM malfunction</li> <li>Brake fluid level sensor malfunction</li> <li>Parking brake switch malfunction</li> <li>Short to ground circuit in wiring harness between brake fluid level sensor and BCM</li> <li>Short to ground circuit in wiring harness between parking brake switch and BCM</li> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Short circuit in wiring harness between CAN-L, CAN-H and ground</li> <li>Open circuit in CAN wiring harness (CAN-L, CAN-H)</li> <li>CAN wiring harness (CAN-L, CAN-H) short each other</li> </ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                              | ACTION |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Release the parking brake.</li> <li>Does the brake system warning light turn off?</li> </ul>                                                                                                                                                                                                          | Yes    | Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2    | <ul style="list-style-type: none"> <li>Does the brake fluid need replenishment?</li> </ul>                                                                                                                                                                                                                                                                              | Yes    | Add brake fluid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3    | <ul style="list-style-type: none"> <li>Inspect following: <ul style="list-style-type: none"> <li>Brake fluid level sensor</li> <li>Parking brake switch</li> <li>Wiring harness between brake fluid level sensor and BCM terminal 4A</li> <li>Wiring harness between parking brake switch and BCM terminal 7B</li> </ul> </li> <li>Is there any malfunction?</li> </ul> | Yes    | Repair or replace malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Verify that the warning and indicator lights condition.</li> <li>Do two or more lights illuminate at the same time?</li> </ul>                                                                                                                                                                        | Yes    | Go to Step 7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5    | <ul style="list-style-type: none"> <li>Reactive the DTC of BCM, ABS HU/CM or DSC HU/CM using M-MDS.<br/>(See 09-02G-2 DTC INSPECTION [BCM].)<br/>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br/>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)<br/>Is the DTC detected?</li> </ul>                                                                  | Yes    | Go to applicable DTC troubleshooting procedure.<br>(See 09-02G-3 DTC TABLE [BCM].)<br>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6    | <ul style="list-style-type: none"> <li>Turn off the brake system warning light using M-MDS instrument cluster according to active command modes WL+IL.<br/>(See 09-02F-18 ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Does the brake system warning light turn off active command modes?</li> </ul>                                                 | Yes    | Verify that the BCM, ABS HU/CM or DSC HU/CM connector is connected securely.<br><b>If the BCM, ABS HU/CM or DSC HU/CM connector is poor connection:</b><br>Connect the BCM, ABS HU/CM or DSC HU/CM connector securely.<br><b>If malfunction is in the BCM, ABS HU/CM or DSC HU/CM side connector:</b><br>Replace the BCM, ABS HU/CM or DSC HU/CM.<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)<br>(See 04-13-3 ABS HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-13-6 ABS HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br>(See 04-15-5 DSC HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-15-9 DSC HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7    | <ul style="list-style-type: none"> <li>Reactive the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)<br/>Is the DTC detected?</li> </ul>                                                                                                                                                                                  | Yes    | Go to the applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the DLC-2 terminals F and E.</li> <li>Is the resistance <b>below 60 ohms</b>?</li> </ul>                                                                                                                                                          | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                         | No     | Go to Step 10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                         | ACTION |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Inspect the DLC-2 terminals F and E for short to power supply or ground.</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                      | Yes    | Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                    | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |
| 10   | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                                                                                  | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                    | No     | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
| 11   | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the instrument cluster connector terminals 2B and 2D.</li> <li>Is the resistance <b>114—126 ohms</b>?</li> </ul> <div style="text-align: center;">  </div> | Yes    | Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                    | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |

### NO. 6 INSTRUMENT CLUSTER ILLUMINATION DOES NOT ILLUMINATE [INSTRUMENT CLUSTER]

id0903d5807900

|                       |                                                                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6</b>              | <b>Instrument cluster illumination does not illuminate</b>                                                                                       |
| <b>POSSIBLE CAUSE</b> | <ul style="list-style-type: none"> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Fuse malfunction</li> </ul> |



## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                        | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Turn the light switch to the TNS position.</li> <li>Does the instrument cluster illumination turn on?</li> </ul>                                                                                                           | Yes<br>Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                   | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2    | <ul style="list-style-type: none"> <li>Does the non-illumination include the entire instrument cluster?</li> </ul>                                                                                                                                                | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                   | No<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |
| 3    | <ul style="list-style-type: none"> <li>Inspect the ROOM and ILLUMI fuse.</li> <li>Are the fuses normal?</li> </ul>                                                                                                                                                | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                   | No<br>Replace the fuse. <ul style="list-style-type: none"> <li>If the fuse is melted, inspect the wiring harness for short to ground. Repair or replace the wiring harness, then replace the fuse.</li> </ul>                                                                                                                                                                                                                                                                                 |
| 4    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul> | Yes<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                               |
|      |                                                                                                                                                                                                                                                                   | No<br><b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |

### NO. 7 SPEEDOMETER INDICATION IS DEFECTIVE [INSTRUMENT CLUSTER]

id0903d5808000

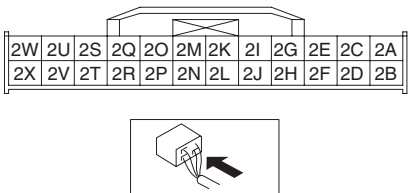
| 7              | Speedometer indication is defective                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>ABS HU/CM malfunction</li> <li>DSC HU/CM malfunction</li> <li>PCM malfunction</li> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Short circuit in wiring harness between CAN-L, CAN-H and ground</li> <li>Open circuit in CAN wiring harness (CAN-L, CAN-H)</li> <li>CAN wiring harness (CAN-L, CAN-H) short each other</li> </ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Start the engine, and drive the vehicle.                             <ul style="list-style-type: none"> <li>Does the speedometer needle move smoothly?</li> <li>Does the speedometer needle indicate correct speed?</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                       | Yes<br>Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2    | <ul style="list-style-type: none"> <li>Reactive the DTC of PCM, ABS HU/CM or DSC HU/CM using M-MDS.<br/>(See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)<br/>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br/>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)</li> <li>Is the DTC detected?</li> </ul>                                                                                                                | Yes<br>Go to applicable DTC troubleshooting procedure.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)<br>(See 04-02A-2 ON-BOARD DIAGNOSIS [ABS].)<br>(See 04-02B-2 ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Verify that the tachometer indication and high engine coolant temperature warning light illumination.</li> <li>Do the tachometer and high engine coolant temperature warning light work properly?</li> </ul>                                                                                                                                                                                                                                                                                          | Yes<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4    | <ul style="list-style-type: none"> <li>Monitor the following PIDs for the ABS HU/CM or DSC HU/CM using the M-MDS:<br/>WSPD_LF, WSPD_LR, WSPD_RF, WSPD_RR<br/><b>Caution</b> <ul style="list-style-type: none"> <li>To prevent an accident, work with two people when the vehicle is being driven. (One drives the vehicle and the other operates the M-MDS.)</li> </ul> </li> <li>Drive the vehicle and compare the M-MDS monitored value with the speedometer indication.</li> <li>Does the M-MDS monitored value correspond to the speedometer indication?</li> </ul> | Yes<br>Verify that the PCM, ABS HU/CM or DSC HU/CM connector is connected securely.<br><b>If the PCM, ABS HU/CM or DSC HU/CM connector is poor connection:</b><br>Connect the PCM, ABS HU/CM or DSC HU/CM connector securely.<br><b>If malfunction is in the PCM, ABS HU/CM or DSC HU/CM side connector:</b><br>Replace the PCM, ABS HU/CM or DSC HU/CM.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 04-13-3 ABS HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-13-6 ABS HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br>(See 04-15-5 DSC HU/CM REMOVAL/INSTALLATION [L.H.D.].)<br>(See 04-15-9 DSC HU/CM REMOVAL/INSTALLATION [R.H.D.].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part.<br><b>If malfunction is not detected:</b><br>Inspect the ABS wheel-speed sensor and related part.<br>(See 04-13-14 FRONT ABS WHEEL-SPEED SENSOR INSPECTION.)<br>(See 04-13-16 REAR ABS WHEEL-SPEED SENSOR INSPECTION.) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5    | <ul style="list-style-type: none"> <li>Reactive the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is the DTC detected?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             | Yes<br>Go to the applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                          | ACTION |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the DLC-2 terminals F and E.</li> <li>Is the resistance <b>below 60 ohms</b>?</li> </ul>                                                                                                                                                      | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No     | Go to Step 8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Inspect the DLC-2 terminals F and E for short to power supply or ground.</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                       | Yes    | Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |
| 8    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                                                                                   | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No     | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
| 9    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the instrument cluster connector terminals 2B and 2D.</li> <li>Is the resistance <b>114—126 ohms</b>?</li> </ul> <div style="text-align: center;">  </div> | Yes    | Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                     | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |

### NO. 8 TACHOMETER INDICATION IS DEFECTIVE [INSTRUMENT CLUSTER]

id0903d5808100

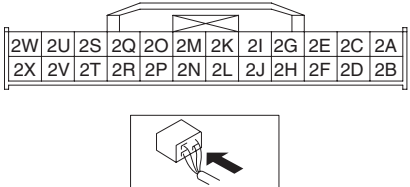
| 8              | Tachometer indication is defective                                                                                                                                                                                                                                                                                                              |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>PCM malfunction</li> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Short circuit in wiring harness between CAN-L, CAN-H and ground</li> <li>Open circuit in CAN wiring harness (CAN-L, CAN-H)</li> <li>CAN wiring harness (CAN-L, CAN-H) short each other</li> </ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                             |     | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Start the engine.                             <ul style="list-style-type: none"> <li>Does the tachometer needle move smoothly?</li> <li>Does the tachometer needle indicate correct engine speed?</li> </ul> </li> </ul>                                        | Yes | Troubleshooting completed. (The system is normal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      |                                                                                                                                                                                                                                                                                                        | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2    | <ul style="list-style-type: none"> <li>Reactive the DTC of PCM using M-MDS. (See 01-02A-8 ON-BOARD DIAGNOSTIC TEST [ZJ, ZY].)<br/>(See 01-02B-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.4 DI Turbo].)<br/>(See 01-02C-5 ON-BOARD DIAGNOSTIC TEST [MZ-CD 1.6 (Y6)].)</li> <li>Is the DTC detected?</li> </ul> | Yes | Go to applicable DTC troubleshooting procedure.<br>(See 01-02A-14 DTC TABLE [ZJ, ZY].)<br>(See 01-02B-8 DTC TABLE [MZ-CD 1.4 DI Turbo].)<br>(See 01-02C-8 DTC TABLE [MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                        | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Verify that the tachometer indication and high engine coolant temperature warning light illumination.</li> <li>Do the tachometer and high engine coolant temperature warning light work properly?</li> </ul>                         | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                        | No  | Go to Step 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4    | <ul style="list-style-type: none"> <li>Monitor the PCM PID RPM using the M-MDS.</li> <li>Start the engine and compare the M-MDS monitored value with the tachometer indication.</li> <li>Does the M-MDS monitored value correspond to the tachometer indication?</li> </ul>                            | Yes | Verify that the PCM connector is connected securely.<br><b>If the PCM connector is poor connection:</b><br>Connect the PCM connector securely.<br><b>If malfunction is in the PCM side connector:</b><br>Replace the PCM.<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
|      |                                                                                                                                                                                                                                                                                                        | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                      |
| 5    | <ul style="list-style-type: none"> <li>Reactive the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is the DTC detected?</li> </ul>                                                                                                            | Yes | Go to the applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                                                                                                                                                                                                                                         |
|      |                                                                                                                                                                                                                                                                                                        | No  | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 6    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the DLC-2 terminals F and E.</li> <li>Is the resistance <b>below 60 ohms</b>?</li> </ul>                                                                                         | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                        | No  | Go to Step 8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Inspect the DLC-2 terminals F and E for short to power supply or ground.</li> <li>Is there any malfunction?</li> </ul>                                                                                          | Yes | Inspect the wiring harness and CAN system-related module.<br>Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                                       |
|      |                                                                                                                                                                                                                                                                                                        | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                                      |
| 8    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                      | Yes | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|      |                                                                                                                                                                                                                                                                                                        | No  | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part.                       |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                               | ACTION                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the instrument cluster connector terminals 2B and 2D.</li> <li>Is the resistance <b>114—126 ohms</b>?</li> </ul>  | Yes<br>Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                          | No<br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].) |

### NO. 9 LOW ENGINE COOLANT TEMPERATURE INDICATOR LIGHT/HIGH ENGINE COOLANT TEMPERATURE WARNING LIGHT ILLUMINATES OR FLASHES CONTINUOUSLY [INSTRUMENT CLUSTER]

id0903d5869200

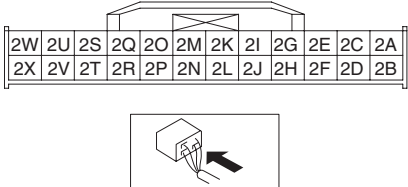
|                |                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9              | Low engine coolant temperature indicator light/High engine coolant temperature warning light illuminates or flashes continuously.                                                                                                                                                                                                               |
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>PCM malfunction</li> <li>Instrument cluster malfunction</li> <li>Connector or pin malfunction</li> <li>Short circuit in wiring harness between CAN-L, CAN-H and ground</li> <li>Open circuit in CAN wiring harness (CAN-L, CAN-H)</li> <li>CAN wiring harness (CAN-L, CAN-H) short each other</li> </ul> |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     | ACTION                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Retrieve the DTC of instrument cluster using M-MDS.<br/>(See 09-02F-1 DTC INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Is the DTC detected?</li> </ul>                                                                                                                                                                                                                                                                                   | Yes | Go to applicable DTC troubleshooting procedure.<br>(See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)                                                                                                                                                                                           |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Go to the next step.                                                                                                                                                                                                                                                                        |
| 2    | <ul style="list-style-type: none"> <li>Cool down the engine.</li> <li>Turn the ignition switch to ON position.</li> <li>Verify that the high engine coolant temperature warning light condition.</li> <li>Does the high engine coolant temperature warning light illuminate or flash while <b>3—30 s</b> after the ignition switch is turned to ON position?</li> </ul>                                                                                                       | Yes | Go to the next step.                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Go to Step 4.                                                                                                                                                                                                                                                                               |
| 3    | <ul style="list-style-type: none"> <li>Monitor the PCM PID ECT using the M-MDS.</li> <li>Is the PID ECT monitoring value for following value?<br/>— <b>Above 120 °C {248 °F}</b> when high engine coolant temperature warning light flashes.<br/>— <b>Above 125 °C {257 °F}</b> when high engine coolant temperature warning light illuminates.</li> </ul>                                                                                                                    | Yes | Go to the next step.                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | No Go to Step 5.                                                                                                                                                                                                                                                                            |
| 4    | <ul style="list-style-type: none"> <li>Start the engine.</li> <li>Monitor PCM PID ECT using the M-MDS.</li> <li>Verify that the low engine coolant temperature indicator light condition when the ECT monitoring value <b>above 55 °C {131 °F}</b> [ZJ, ZY], <b>40 °C {104 °F}</b> [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].</li> <li>Does the low engine coolant temperature indicator light illuminate?</li> </ul>                                                              | Yes | Go to the next step.                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Troubleshooting is completed. (The system is normal.)                                                                                                                                                                                                                                       |
| 5    | <ul style="list-style-type: none"> <li>Do the speedometer and tachometer indicate correct?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                         | Yes | Go to the next step.                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Go to Step 7.                                                                                                                                                                                                                                                                               |
| 6    | <ul style="list-style-type: none"> <li>Turn on and off both low engine coolant temperature indicator light/high engine coolant temperature warning light using M-MDS instrument cluster active command modes WL+IL.<br/>(See 09-02F-18 ACTIVE COMMAND MODES INSPECTION [INSTRUMENT CLUSTER].)</li> <li>Do the both low engine coolant temperature indicator light/high engine coolant temperature warning light turn on and off according to active command modes?</li> </ul> | Yes | Inspect the ECT sensor.<br>(See 01-40A-29 ENGINE COOLANT TEMPERATURE (ECT) SENSOR INSPECTION [ZJ, ZY].)<br>(See 01-40B-23 ENGINE COOLANT TEMPERATURE (ECT) SENSOR INSPECTION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40C-21 ENGINE COOLANT TEMPERATURE (ECT) SENSOR INSPECTION [MZ-CD 1.6 (Y6)].) |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                  |
| 7    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the DLC-2 terminals F and E.</li> <li>Is the resistance <b>below 60 ohms</b>?</li> </ul>                                                                                                                                                                                                                                                                | Yes | Go to the next step.                                                                                                                                                                                                                                                                        |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Go to Step 9.                                                                                                                                                                                                                                                                               |
| 8    | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Inspect the DLC-2 terminals F and E for short to power supply or ground.</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                                                                                                 | Yes | Inspect the wiring harness and CAN system-related module.<br>Repair or replace the malfunctioning part.                                                                                                                                                                                     |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No  | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                  |

## SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                        | ACTION |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | <ul style="list-style-type: none"> <li>Turn the ignition switch to LOCK position.</li> <li>Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion).</li> <li>Are the terminals normal?</li> </ul>                                                                                                 | Yes    | Go to the next step.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|      |                                                                                                                                                                                                                                                                                                                                                                   | No     | <b>If the instrument cluster connector is poor connection:</b><br>Connect the instrument cluster connector securely.<br><b>If malfunction is in the instrument cluster side connector:</b><br>Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)<br><b>If malfunction is in vehicle side connector:</b><br>Repair or replace malfunctioning part. |
| 10   | <ul style="list-style-type: none"> <li>Disconnect the negative battery cable.</li> <li>Measure the resistance between the instrument cluster connector terminals 2B and 2D.</li> <li>Is the resistance <b>114—126 ohms</b>?</li> </ul> <div style="text-align: center;">  </div> | Yes    | Inspect the wiring harness and CAN system-related module.<br>Repair or replace the malfunctioning part.                                                                                                                                                                                                                                                                                                                                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                   | No     | Replace the instrument cluster.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-6 INSTRUMENT CLUSTER REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)].)                                                                                                                                                                                                                                                                                                |

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## BODY PANELS

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### 09-10 BODY PANELS

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#### BODY PANELS LOCATION INDEX

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#### BONNET ADJUSTMENT ..... 09-10-4

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Except AutoAlliance (AAT) Thailand

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AutoAlliance (AAT) Thailand

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Upper Mount Rubber Removal Note ... 09-10-23

#### COWL PANEL

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#### REAR BUMPER

REMOVAL/INSTALLATION ..... 09-10-23

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#### REAR BUMPER

REMOVAL/INSTALLATION [4SD] ..... 09-10-25

Rear Bumper Installation Note ..... 09-10-27

#### REAR BUMPER

DISASSEMBLY/ASSEMBLY ..... 09-10-27

#### REAR BUMPER

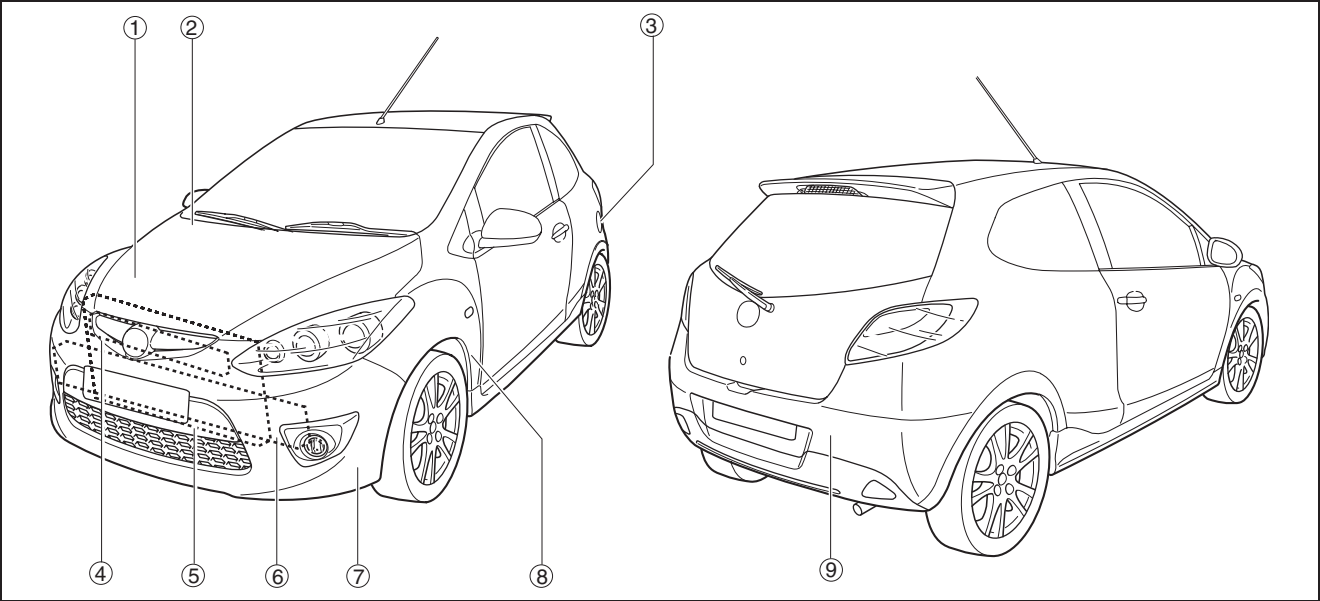
DISASSEMBLY/ASSEMBLY [4SD] .... 09-10-28



# BODY PANELS

## BODY PANELS LOCATION INDEX [3HB]

id0910004047z3



am2zzw0000349

|   |                                                                                          |   |                                                                                                                         |
|---|------------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------|
| 1 | Bonnet<br>(See 09-10-3 BONNET REMOVAL/INSTALLATION.)<br>(See 09-10-4 BONNET ADJUSTMENT.) | 3 | Fuel-filler lid<br>(See 09-10-8 FUEL-FILLER LID REMOVAL/<br>INSTALLATION.)<br>(See 09-10-8 FUEL-FILLER LID ADJUSTMENT.) |
| 2 | Cowl panel<br>(See 09-10-23 COWL PANEL REMOVAL/<br>INSTALLATION.)                        | 4 | Seal board upper<br>(See 09-10-18 SEAL BOAD UPPER REMOVAL/<br>INSTALLATION.)                                            |

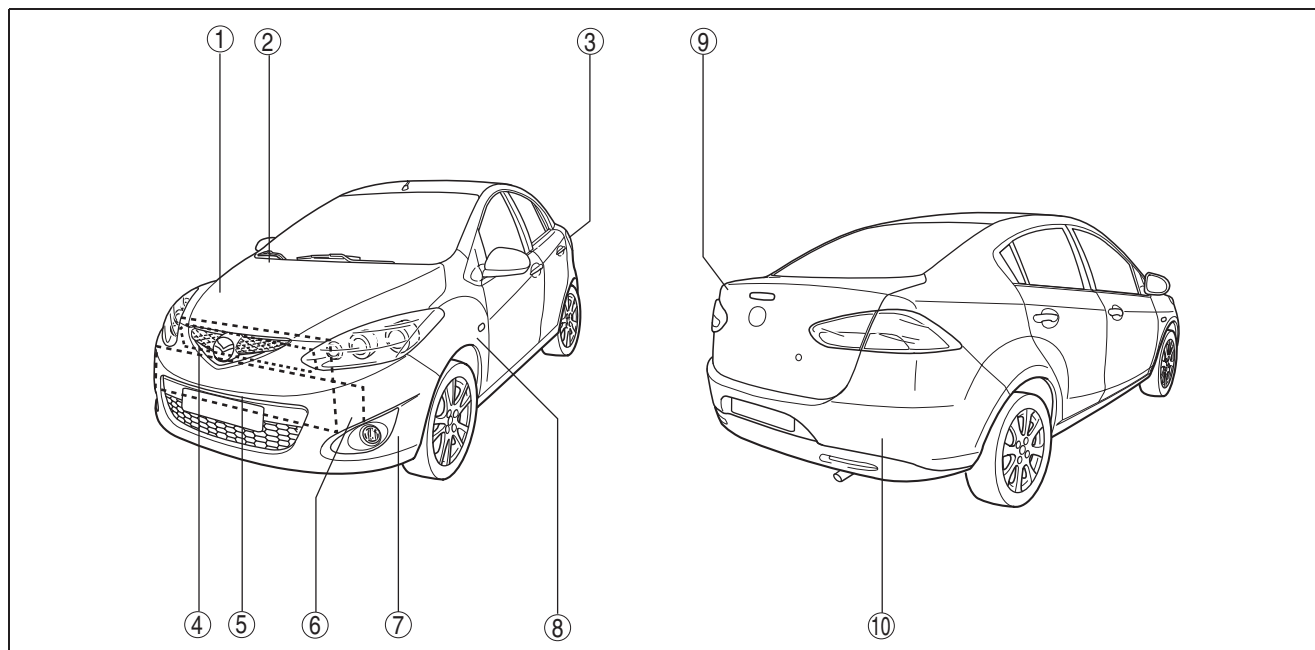
## BODY PANELS

|   |                                                                                                                             |
|---|-----------------------------------------------------------------------------------------------------------------------------|
| 5 | Shroud panel<br>(See 09-10-18 SHROUD PANEL REMOVAL/INSTALLATION.)                                                           |
| 6 | Bumper reinforcement<br>(See 09-10-15 BUMPER REINFORCEMENT REMOVAL/INSTALLATION.)                                           |
| 7 | Front bumper<br>(See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)<br>(See 09-10-13 FRONT BUMPER DISASSEMBLY/ASSEMBLY [3HB].) |
| 8 | Front fender panel<br>(See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION.)                                               |
| 9 | Rear bumper<br>(See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION.)<br>(See 09-10-27 REAR BUMPER DISASSEMBLY/ASSEMBLY.)         |

### BODY PANELS LOCATION INDEX [4SD, 5HB]

id0910004047z8

#### 4SD



am2zzw0000491

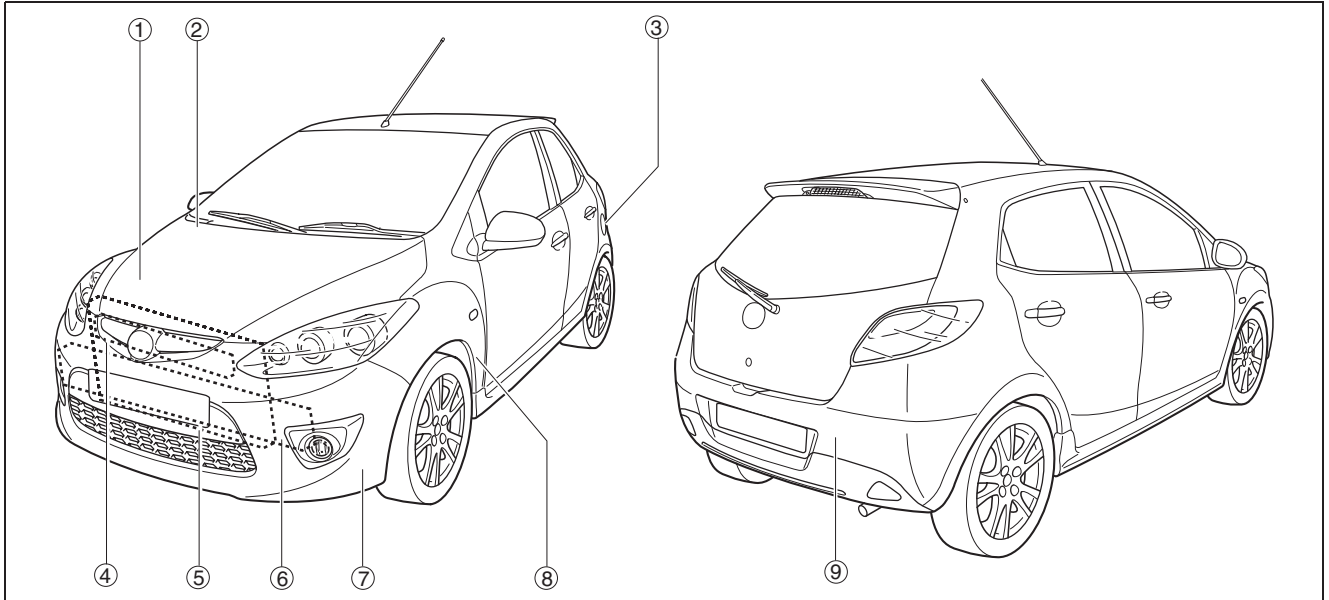
|   |                                                                                                                     |
|---|---------------------------------------------------------------------------------------------------------------------|
| 1 | Bonnet<br>(See 09-10-3 BONNET REMOVAL/INSTALLATION.)<br>(See 09-10-4 BONNET ADJUSTMENT.)                            |
| 2 | Cowl panel<br>(See 09-10-23 COWL PANEL REMOVAL/INSTALLATION.)                                                       |
| 3 | Fuel-filler lid<br>(See 09-10-8 FUEL-FILLER LID REMOVAL/INSTALLATION.)<br>(See 09-10-8 FUEL-FILLER LID ADJUSTMENT.) |
| 4 | Seal board upper<br>(See 09-10-18 SEAL BOAD UPPER REMOVAL/INSTALLATION.)                                            |
| 5 | Shroud panel<br>(See 09-10-18 SHROUD PANEL REMOVAL/INSTALLATION.)                                                   |

|   |                                                                                                                                                                      |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Bumper reinforcement<br>(See 09-10-15 BUMPER REINFORCEMENT REMOVAL/INSTALLATION.)                                                                                    |
| 7 | Front bumper<br>(See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)<br>(See 09-10-10 FRONT BUMPER DISASSEMBLY/ASSEMBLY.)                                                |
| 8 | Front fender panel<br>(See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION.)                                                                                        |
| 9 | Trunk lid<br>(See 09-10-6 TRUNK LID REMOVAL/INSTALLATION [4SD].)<br>(See 09-10-6 TRUNK LID ADJUSTMENT [4SD].)<br>(See 09-10-7 TRUNK LID STAY DAMPER DISPOSAL [4SD].) |

## BODY PANELS

|    |                                                                                                                                 |
|----|---------------------------------------------------------------------------------------------------------------------------------|
| 10 | Rear bumper<br>(See 09-10-25 REAR BUMPER REMOVAL/INSTALLATION [4SD].)<br>(See 09-10-28 REAR BUMPER DISASSEMBLY/ASSEMBLY [4SD].) |
|----|---------------------------------------------------------------------------------------------------------------------------------|

### 5HB



adejjw00001457

|   |                                                                                                                                         |   |                                                                                                                       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------|
| 1 | Bonnet<br>(See 09-10-3 BONNET REMOVAL/INSTALLATION.)<br>(See 09-10-4 BONNET ADJUSTMENT.)                                                | 6 | Bumper reinforcement<br>(See 09-10-15 BUMPER REINFORCEMENT REMOVAL/INSTALLATION.)                                     |
| 2 | Cowl panel<br>(See 09-10-23 COWL PANEL REMOVAL/INSTALLATION.)                                                                           | 7 | Front bumper<br>(See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)<br>(See 09-10-10 FRONT BUMPER DISASSEMBLY/ASSEMBLY.) |
| 3 | Fuel-filler lid<br>(See 09-10-8 FUEL-FILLER LID REMOVAL/INSTALLATION.)<br>(See 09-10-8 FUEL-FILLER LID ADJUSTMENT.)                     | 8 | Front fender panel<br>(See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION.)                                         |
| 4 | Seal board upper<br>(See 09-10-18 SEAL BOAD UPPER REMOVAL/INSTALLATION.)                                                                | 9 | Rear bumper<br>(See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION.)<br>(See 09-10-27 REAR BUMPER DISASSEMBLY/ASSEMBLY.)   |
| 5 | Shroud panel<br>(See 09-10-18 SHROUD PANEL REMOVAL/INSTALLATION.)<br>(See 09-10-20 SHROUD PANEL REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].) |   |                                                                                                                       |

### BONNET REMOVAL/INSTALLATION

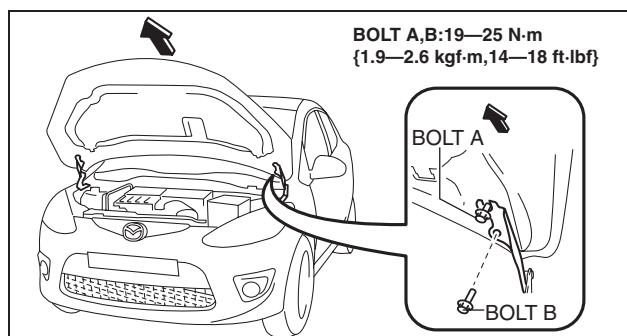
id091000407200

#### Warning

- Removing the bonnet without supporting it could cause the bonnet to fall and cause serious injury. Always perform the procedure with at least another person to prevent the bonnet from falling.

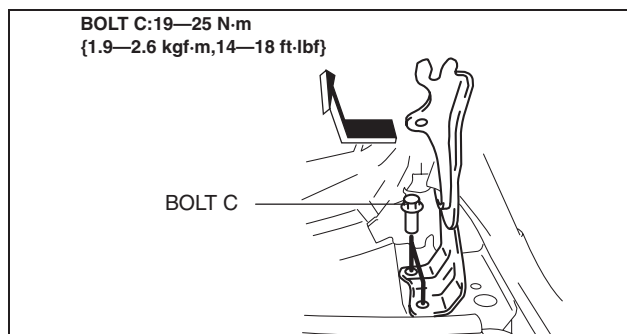
## BODY PANELS

1. After loosening bolt A and removing bolt B, remove the bonnet in the direction of the arrow shown in the figure.



am2zzw0000158

2. Remove bolt C, and remove the bonnet hinge in the direction of the arrow shown in the figure.
3. Install in the reverse order of removal.
4. When installing the bonnet, adjust the bonnet by moving the bonnet hinge. (See 09-10-4 BONNET ADJUSTMENT)



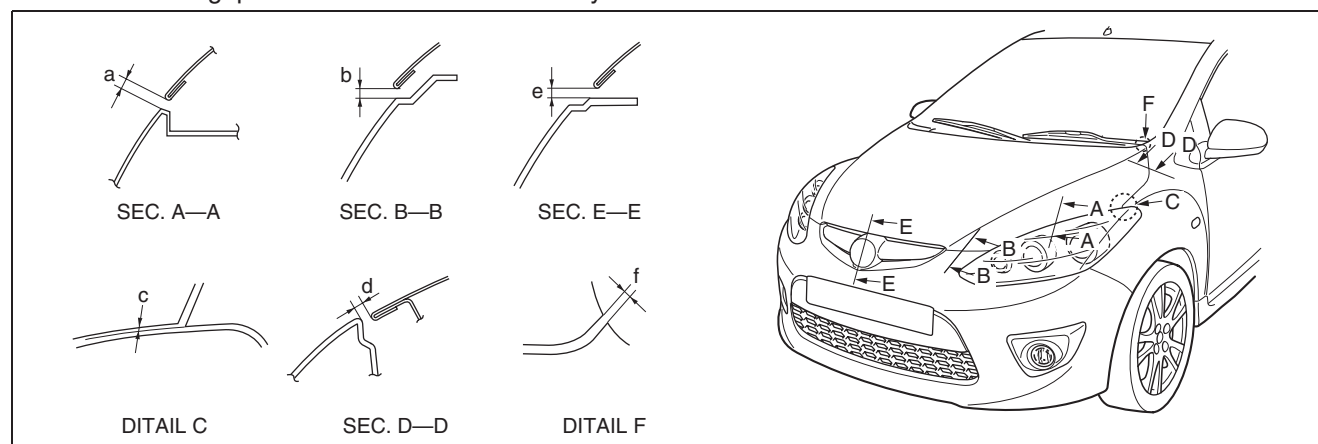
am2zzw0000158

## BONNET ADJUSTMENT

id091000407300

### Gap Adjustment

1. Measure the gap between the bonnet and body.



am2zzw0000378

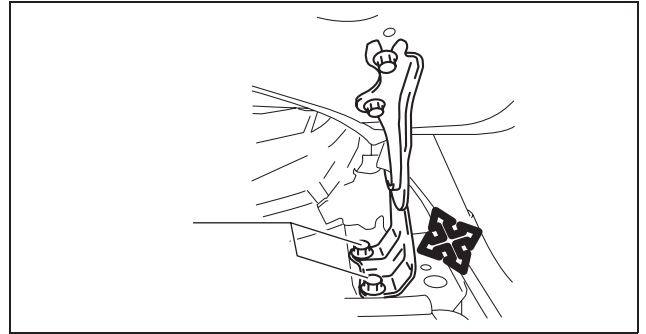
### Standard clearance

- a:2.9—6.1 mm {0.12—0.24 in}
- b:3.0—6.0 mm {0.12—0.23 in}
- c:-1.0—1.0 mm {-0.039—0.039 in}
- d:2.5—4.5 mm {0.10—0.17 in}
- e:3.0—6.0 mm {0.12—0.23 in}
- f:-1.0—1.0 mm {-0.039—0.039 in}

2. Remove the front fender molding. (See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION)

## BODY PANELS

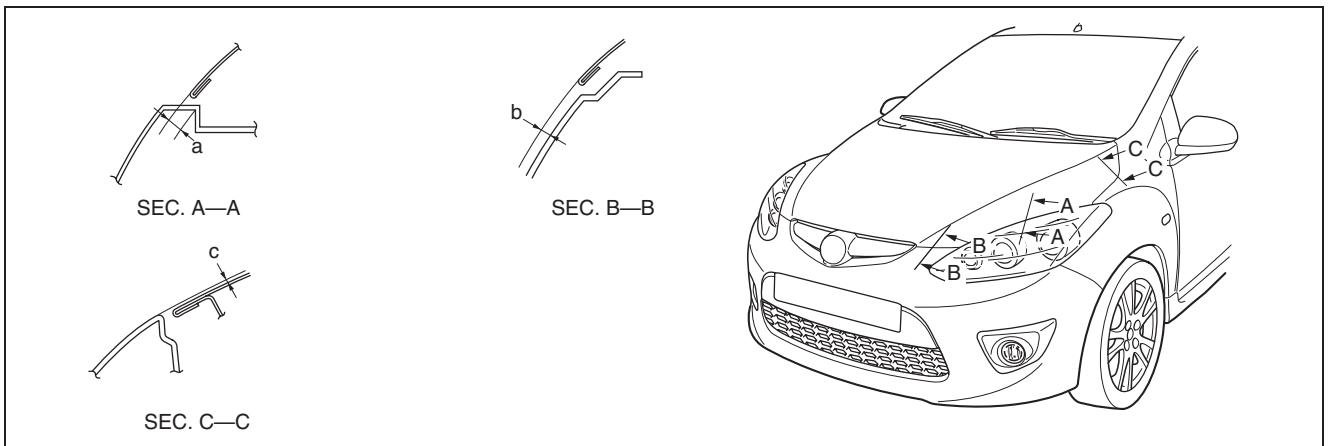
3. Loosen the bonnet hinge installation bolts and adjust the gap by moving the bonnet hinge back and forth, left and right.
4. Tighten the bolts. (See 09-10-3 BONNET REMOVAL/INSTALLATION)
5. Install the front fender molding. (See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION)



am2zzw0000503

### Height Difference Adjustment

1. Measure the height difference between the bonnet and body.

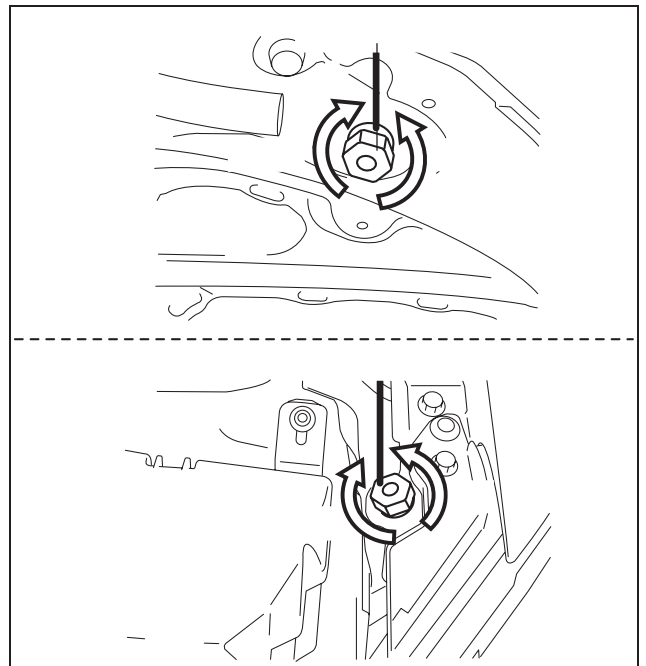


am2zzw0000159

### Standard clearance

- a: 1.9—4.5mm {0.08—0.17 in}
- b: 0.8—3.7mm {0.04—0.14 in}
- c: -1.0—0.5mm {-0.03—0.01 in}

2. Turn the stop rubber to adjust.



am2zzw0000160

## BODY PANELS

### TRUNK LID REMOVAL/INSTALLATION [4SD]

id0910008016z5

#### Warning

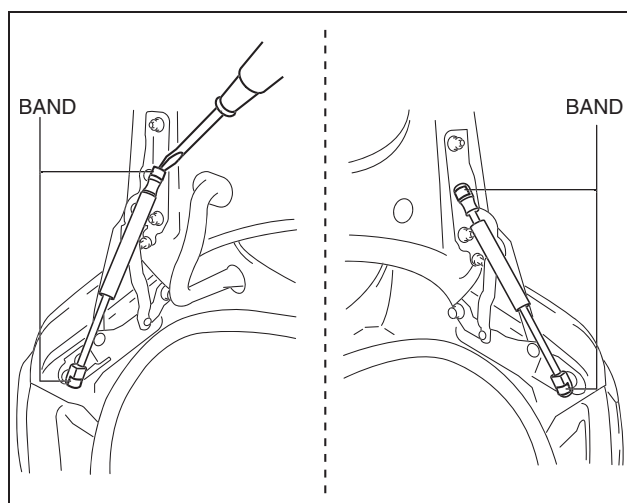
- Removing the stay damper without supporting the trunk lid can be dangerous. The trunk lid may fall and injure you. Be sure to open the trunk lid completely and support it securely before removing the stay damper.

1. Disconnect the negative battery cable.
2. Disconnect the trunk lid wiring harness connector, then take the trunk lid wiring harness out from the vehicle.



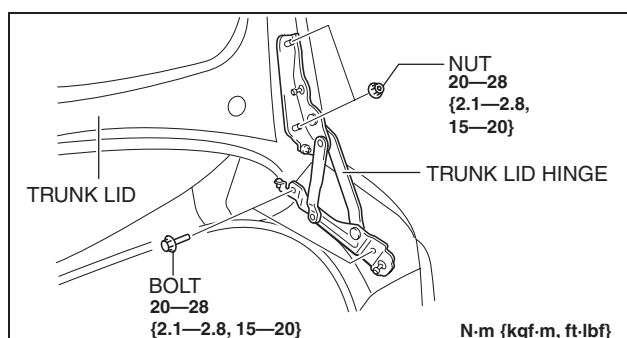
am2ccw0000019

3. Pry off the stay damper band using a flathead screwdriver.
4. Pry out the connecting part of the stay damper and the hinge with a flathead screwdriver to disconnect them, then remove the stay damper.



am2ccw0000019

5. Remove the nuts, then remove the trunk lid.
6. Remove the bolts, then remove the trunk lid hinge.
7. Install in the reverse order of removal.
8. Adjust the trunk lid. (See 09-10-6 TRUNK LID ADJUSTMENT [4SD].)



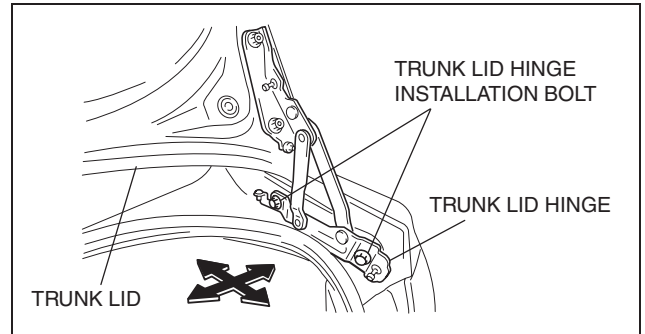
am2zzw0000498

### TRUNK LID ADJUSTMENT [4SD]

id0910008017z5

1. Measure the gap and height difference between the trunk lid and the body.
2. Loosen the trunk lid hinge installation bolts and adjust the trunk lid.
  - If necessary, loosen the trunk lid lock striker installation bolts and adjust the trunk lid. (See 09-14-98 TRUNK LID LOCK STRIKER REMOVAL/INSTALLATION.)

## BODY PANELS

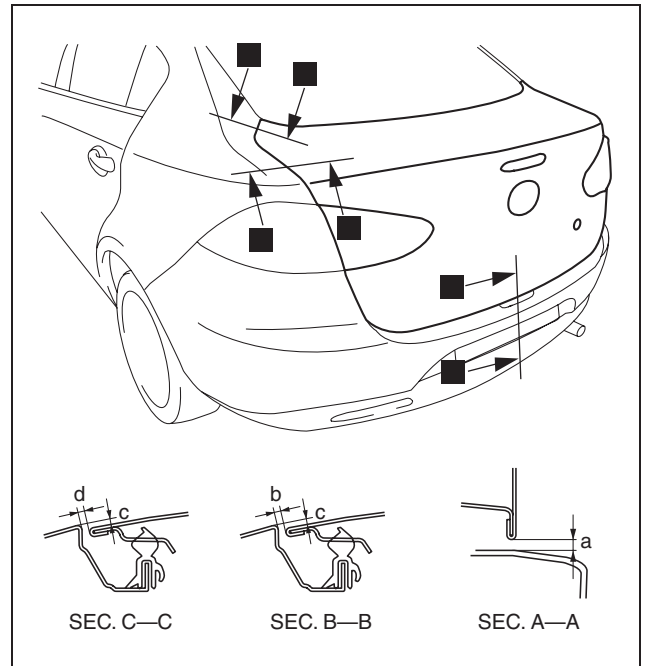


am3zzw0000223

### Standard clearance

- a: 4.0—8.0 mm {0.16—0.31 in}
- b: 2.5—4.5 mm {0.10—0.17 in}
- c: -0.5—1.5 mm {-0.019—0.059 in}
- d: 3.8—5.8 mm {0.15—0.22 in}

3. Tighten the bolts. (See 09-10-6 TRUNK LID REMOVAL/INSTALLATION [4SD].)



am2zzw0000503

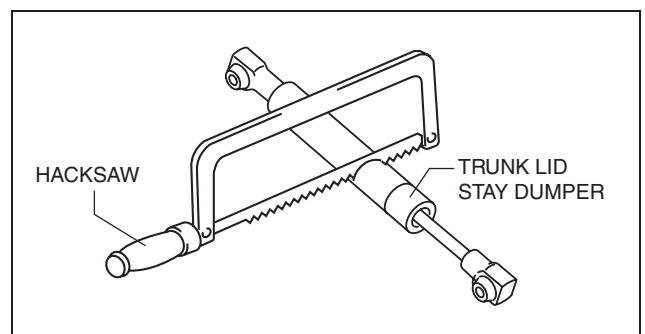
### TRUNK LID STAY DAMPER DISPOSAL [4SD]

id0910008027z5

#### Note

- The gas in the trunk lid stay damper is colorless, odorless, and non-toxic.

1. Wear protective eye wear.
2. Lay the trunk lid stay damper flat.
3. Saw **2—3 mm {0.08—0.11 in}** into the trunk lid stay damper using a hacksaw, and allow the gas to escape from the trunk lid stay damper.
4. Verify that the gas has escaped from the trunk lid stay damper.
5. Discard the stay damper.



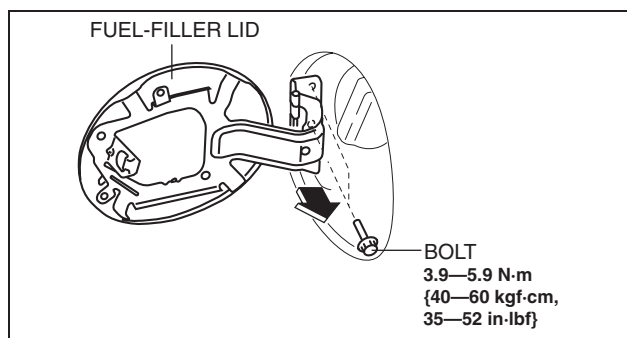
am2zzw0000491

## BODY PANELS

### FUEL-FILLER LID REMOVAL/INSTALLATION

id091000404800

1. Remove the bolts.
2. Remove the fuel filler lid in the direction of the arrow shown in the figure.
3. Install in the reverse order of removal.
4. Adjust the fuel-filler lid. (See 09-10-8 FUEL-FILLER LID ADJUSTMENT)



am2zzw0000160

### FUEL-FILLER LID ADJUSTMENT

id091000404900

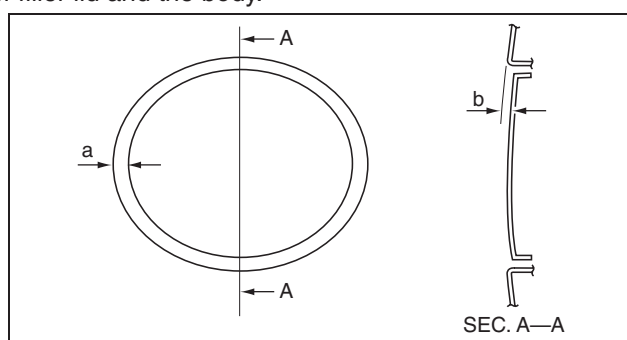
1. Measure the gap and height difference between the fuel-filler lid and the body.
2. Loosen the fuel-filler lid installation bolts and adjust the fuel-filler lid.

#### Standard clearance

a: 1.7—3.7 mm {0.07—0.14 in}

b: -0.5—1.5 mm {-0.01—0.05 in}

3. Tighten the bolts. (See 09-10-8 FUEL-FILLER LID REMOVAL/INSTALLATION)

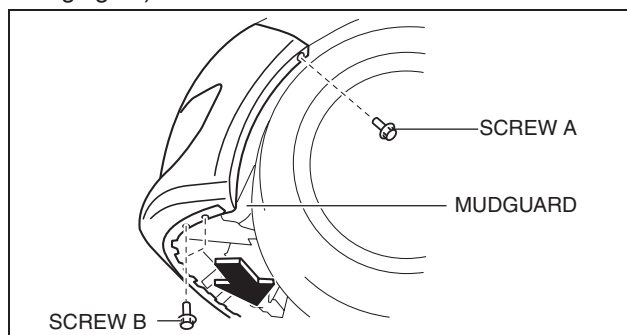


am2zzw0000383

### FRONT BUMPER REMOVAL/INSTALLATION

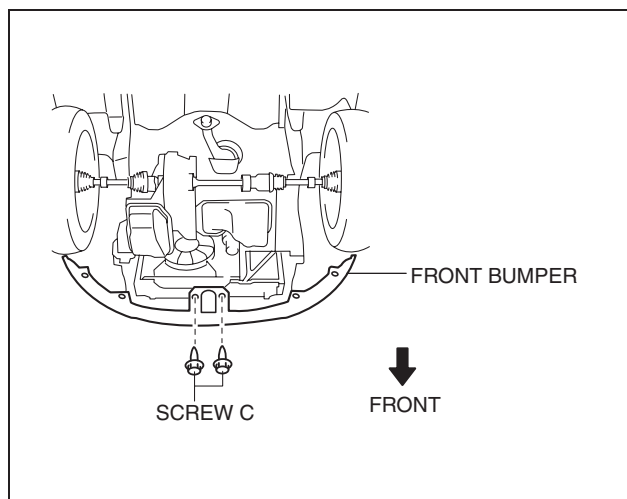
id091000405100

1. Disconnect the negative battery cable. (Vehicles with front fog lights)
2. Remove screw A and screws B, and set the mudguard out of the way in the direction of the arrow shown in the figure.



am2zzw0000160

3. Remove screws C.

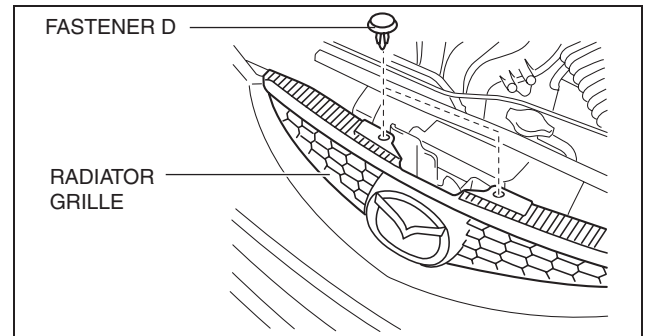


am2zzw0000346

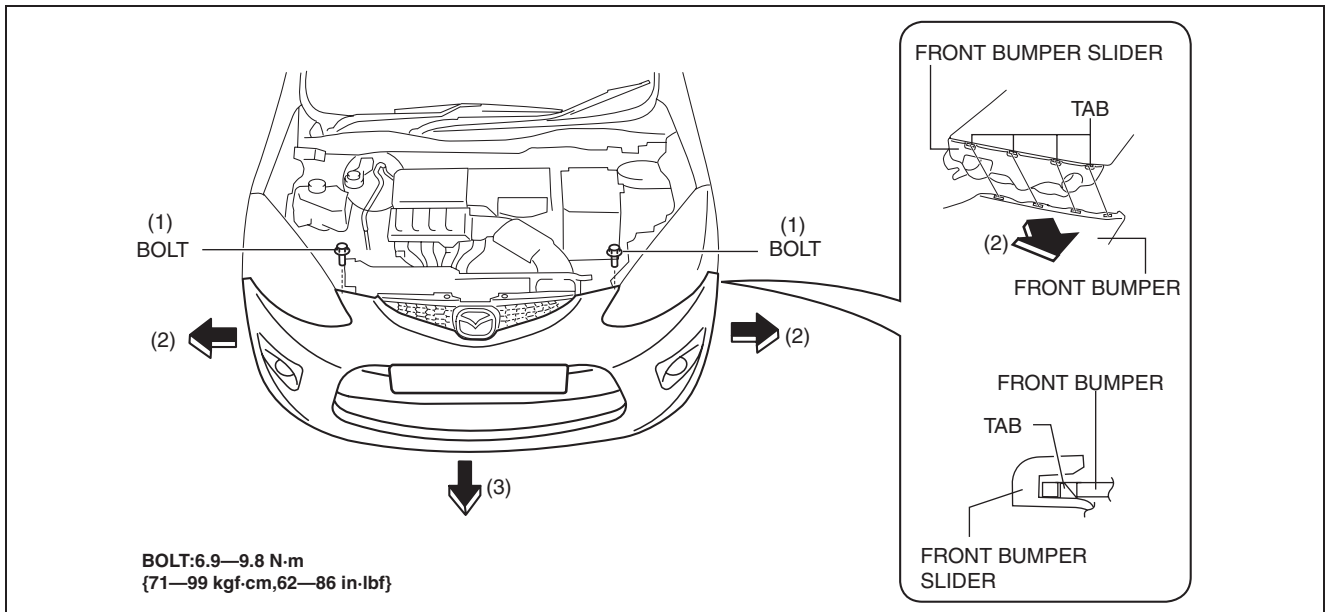


## BODY PANELS

4. Remove the fastener D.
5. Remove the bolts from position (1) indicated in the figure, pull the front bumper in the direction of arrow (2) shown in the figure to disengage the both ends from the front bumper slider, then remove the front bumper in the direction of arrow (3).



am2zzw0000160



am2zzw0000178

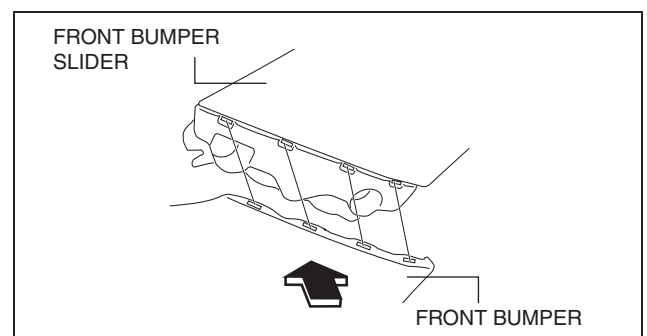
### Caution

- The front bumper and front bumper slider are engaged firmly. If they are disengaged forcibly the bumper could fall and be damaged. Perform the servicing carefully when disengaging the front bumper from the front bumper slider.
- When disengaging the front bumper from the front bumper slider, the front bumper could fall and be damaged. Support the front bumper so that it does not fall.

6. Disconnect the front fog light connector. (Vehicles with front fog lights)
7. Install in the reverse order of removal.
8. Adjust the front fog light aiming for vehicles with front fog lights. (See 09-18-20 FRONT FOG LIGHT AIMING)

### Front Bumper Installation Note

1. Spread the front bumper ends apart.
2. Assemble the front bumper to the body.
3. Press the front bumper connecting area in the direction of the arrow shown in the figure to engage with the front bumper slider.



am2zzw0000160

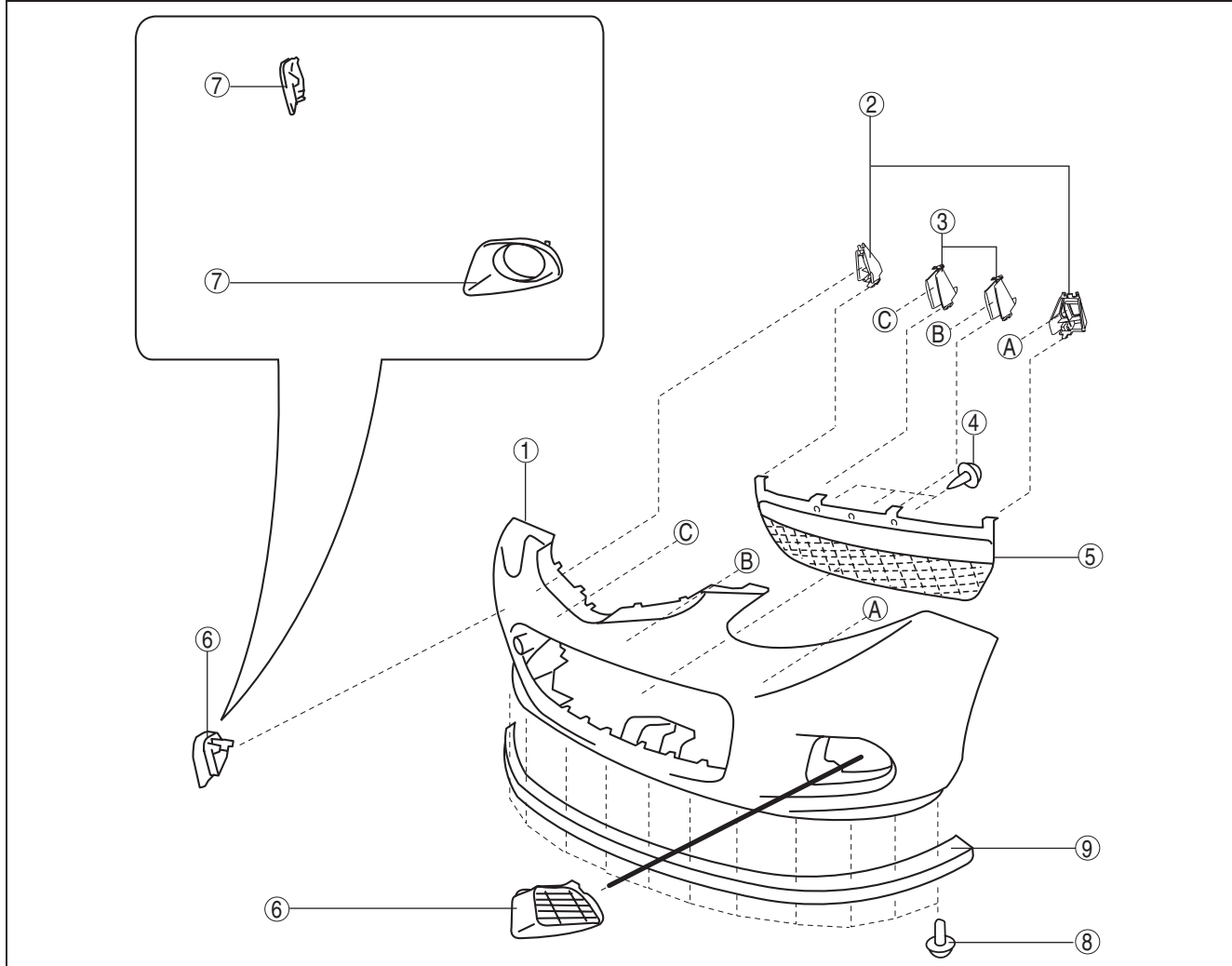
## BODY PANELS

### FRONT BUMPER DISASSEMBLY/ASSEMBLY

id091000405200

#### Except AutoAlliance (AAT) Thailand Manufactured Vehicles Standard type

1. Remove the front fog light. (see 09-18-16 FRONT FOG LIGHT REMOVAL/INSTALLATION)
2. Remove the radiator grille. (see 09-16-5 RADIATOR GRILLE REMOVAL/INSTALLATION)
3. Disassemble in the order indicated in the table.



am2zzw0000160

|   |                       |
|---|-----------------------|
| 1 | Front bumper face     |
| 2 | Bracket               |
| 3 | Front bumper retainer |
| 4 | Screw                 |
| 5 | Front bumper mesh     |

|   |                                                         |
|---|---------------------------------------------------------|
| 6 | Fog light hole cover (Vehicles without front fog light) |
| 7 | Front fog light cover (Vehicles with front fog light)   |
| 8 | Rivet                                                   |
| 9 | Airdam skirt                                            |

4. Assemble in the reverse order of disassembly.

#### Sports type

1. Remove the front fog light. (see 09-18-16 FRONT FOG LIGHT REMOVAL/INSTALLATION)
2. Remove the radiator grille. (see 09-16-5 RADIATOR GRILLE REMOVAL/INSTALLATION)

## BODY PANELS

3. Disassemble in the order indicated in the table.



am2zzw0000257

|   |                       |
|---|-----------------------|
| 1 | Front bumper face     |
| 2 | Bracket               |
| 3 | Front bumper retainer |
| 4 | Screw                 |
| 5 | Front bumper mesh     |

|   |                                                         |
|---|---------------------------------------------------------|
| 6 | Fog light hole cover (Vehicles without front fog light) |
| 7 | Front fog light cover (Vehicles with front fog light)   |
| 8 | Rivet                                                   |
| 9 | Airdam skirt                                            |

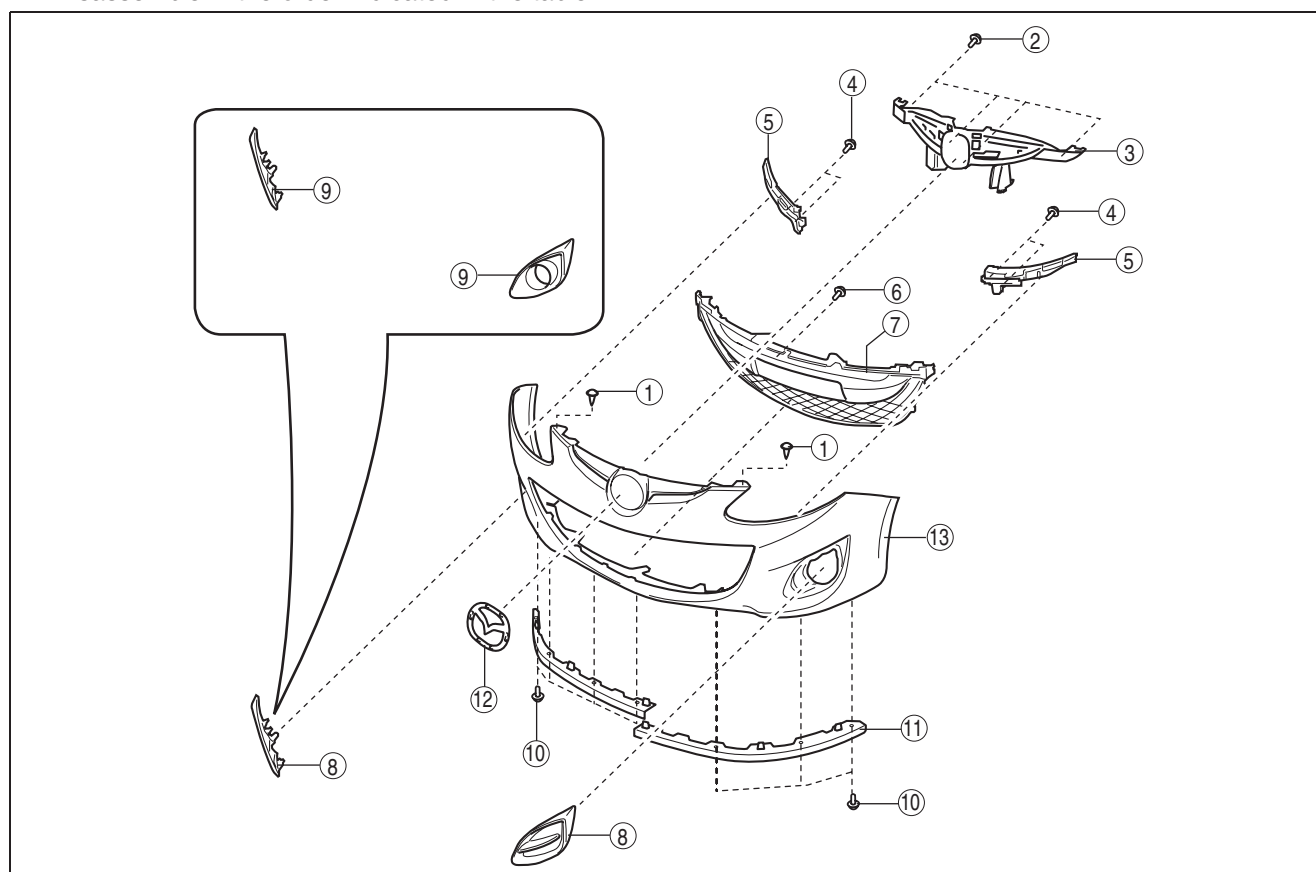
4. Assemble in the reverse order of disassembly.

### AutoAlliance (AAT) Thailand Manufactured Vehicles Standard type

1. Remove the front fog light. (Vehicles with front fog light) (see 09-18-16 FRONT FOG LIGHT REMOVAL/INSTALLATION)

## BODY PANELS

2. Disassemble in the order indicated in the table.



am2zzw0000443

|   |                               |
|---|-------------------------------|
| 1 | Fastener A                    |
| 2 | Screw B                       |
| 3 | Radiator grille reinforcement |
| 4 | Screw C                       |
| 5 | Bracket                       |
| 6 | Screw D                       |
| 7 | Front bumper mesh             |

|    |                                                         |
|----|---------------------------------------------------------|
| 8  | Fog light hole cover (Vehicles without front fog light) |
| 9  | Front fog light cover (Vehicles with front fog light)   |
| 10 | Rivet                                                   |
| 11 | Airdam skirt                                            |
| 12 | Ornament                                                |
| 13 | Front bumper face                                       |

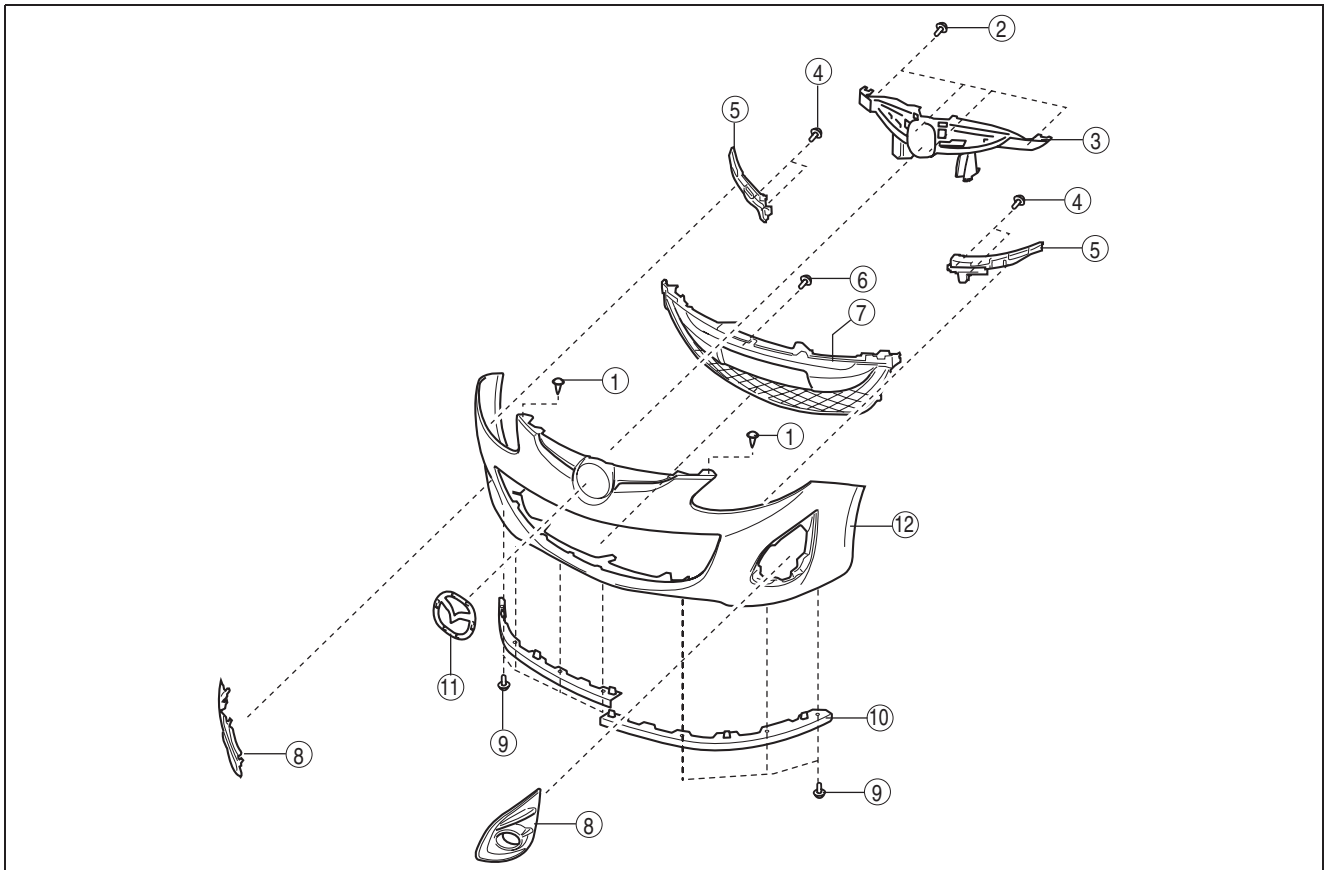
3. Assemble in the reverse order of disassembly.

### Sports type

1. Remove the front fog light. (see 09-18-16 FRONT FOG LIGHT REMOVAL/INSTALLATION)

## BODY PANELS

2. Disassemble in the order indicated in the table.



am2zzw0000443

|   |                               |
|---|-------------------------------|
| 1 | Fastener A                    |
| 2 | Screw B                       |
| 3 | Radiator grille reinforcement |
| 4 | Screw C                       |
| 5 | Bracket                       |
| 6 | Screw D                       |

|    |                       |
|----|-----------------------|
| 7  | Front bumper mesh     |
| 8  | Front fog light cover |
| 9  | Rivet                 |
| 10 | Airdam skirt          |
| 11 | Ornament              |
| 12 | Front bumper face     |

3. Assemble in the reverse order of disassembly.

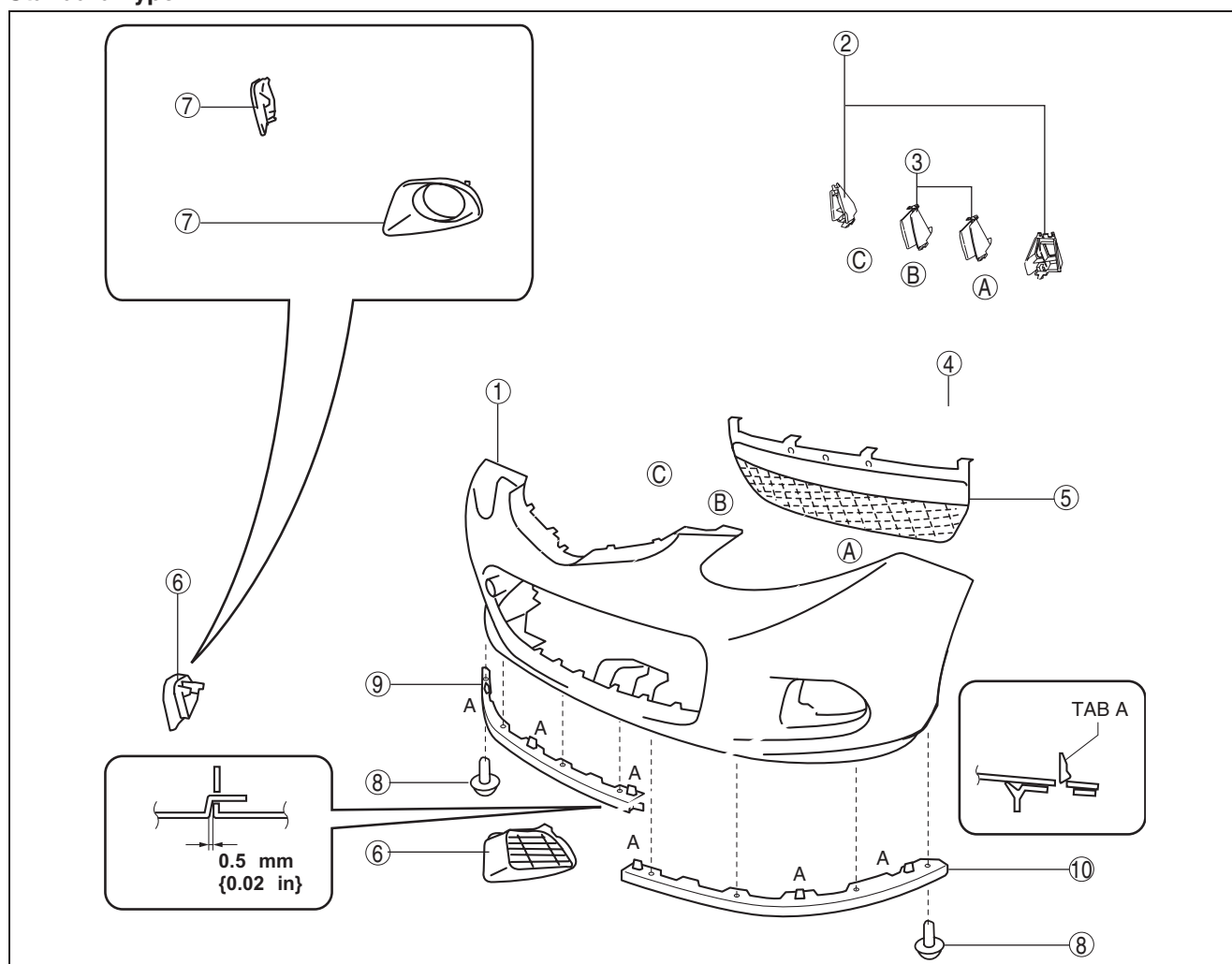
### FRONT BUMPER DISASSEMBLY/ASSEMBLY [3HB]

id0910004052z3

1. Remove the front fog light. (see 09-18-16 FRONT FOG LIGHT REMOVAL/INSTALLATION)
2. Remove the radiator grille. (see 09-16-5 RADIATOR GRILLE REMOVAL/INSTALLATION)
3. Disassemble in the order indicated in the table.

## BODY PANELS

### Standard Type



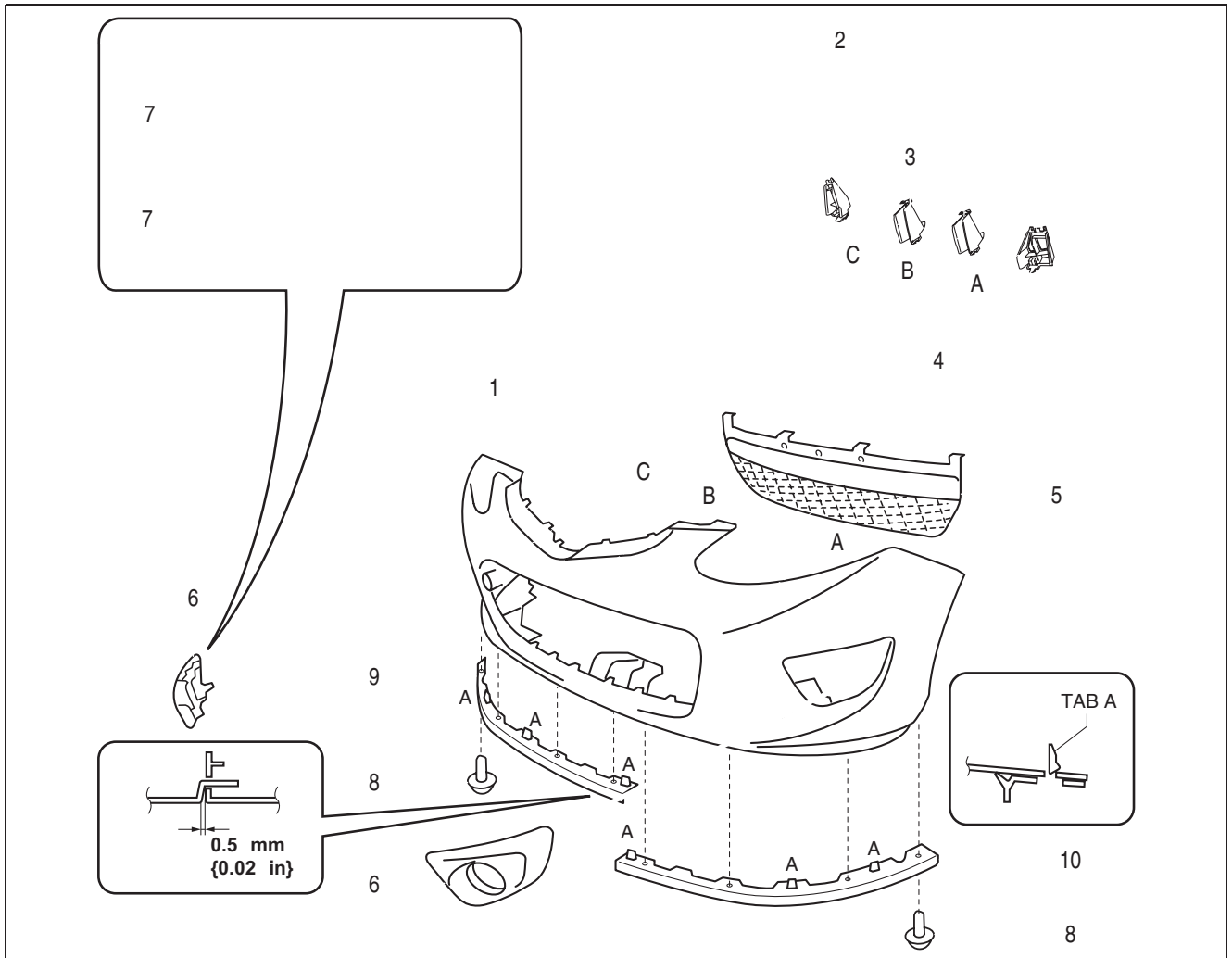
am2zzw0000343

|   |                       |
|---|-----------------------|
| 1 | Front bumper face     |
| 2 | Bracket               |
| 3 | Front bumper retainer |
| 4 | Screw                 |
| 5 | Front bumper mesh     |

|    |                                                         |
|----|---------------------------------------------------------|
| 6  | Fog light hole cover (Vehicles without front fog light) |
| 7  | Front fog light cover (Vehicles with front fog light)   |
| 8  | Rivet                                                   |
| 9  | Airdam skirt RH                                         |
| 10 | Airdam skirt LH                                         |

## BODY PANELS

### Sport Type



am2zzw0000344

|   |                       |
|---|-----------------------|
| 1 | Front bumper face     |
| 2 | Bracket               |
| 3 | Front bumper retainer |
| 4 | Screw                 |
| 5 | Front bumper mesh     |

|    |                                                         |
|----|---------------------------------------------------------|
| 6  | Front fog light cover (Vehicles with front fog light)   |
| 7  | Fog light hole cover (Vehicles without front fog light) |
| 8  | Rivet                                                   |
| 9  | Airdam skirt RH                                         |
| 10 | Airdam skirt LH                                         |

4. Assemble in the reverse order of disassembly.

### BUMPER REINFORCEMENT REMOVAL/INSTALLATION

id091000405700

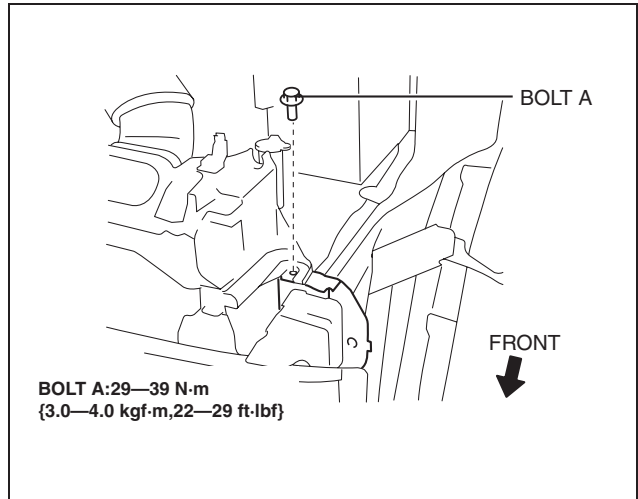
#### Caution

- Because the shroud panel is installed to the bumper reinforcement, support the shroud panel using a jack before removing the bumper reinforcement so as not to apply excessive force to the shroud panel.
- Since the servicing is performed with the bonnet open, secure the bonnet using a piece of wood to prevent it from falling.

- Disconnect the negative battery cable.
- Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)
- Remove the front combination light. (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION)
- Remove the horn. (See 09-22-20 HORN REMOVAL/INSTALLATION)
- Remove the washer tank. (See 09-19-13 WASHER TANK REMOVAL/INSTALLATION)

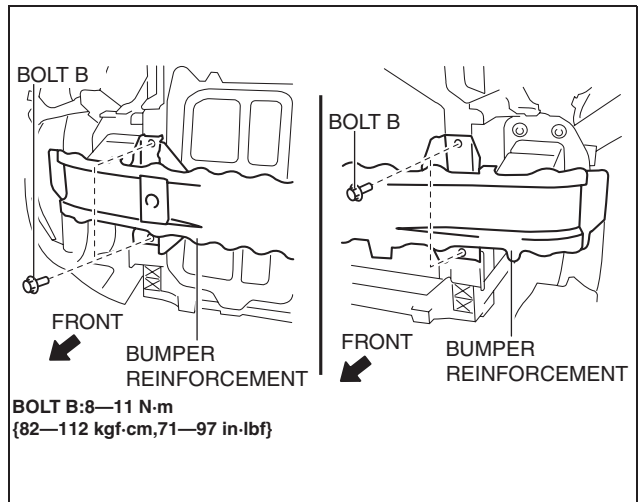
## BODY PANELS

6. Remove bolt A.



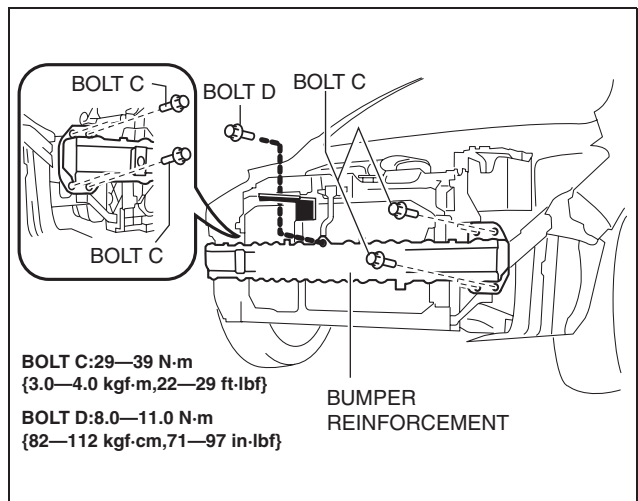
am2zzw0000346

7. Remove bolts B.



am2zzw0000346

8. Remove bolts C and D then remove the bumper reinforcement in the direction of the arrow shown in the figure.

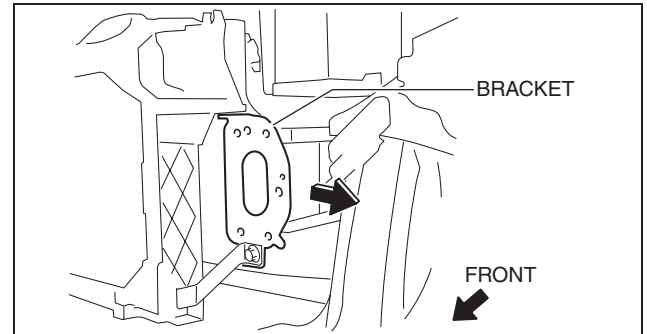


am2zzw0000344



## BODY PANELS

9. Remove the bracket in the direction shown of the arrow shown in the figure.
10. Install in the reverse order of removal.

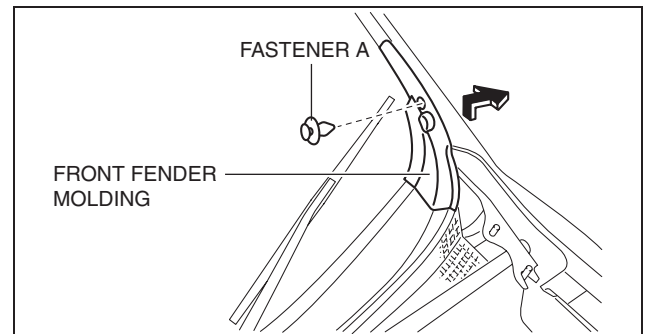


am2zzw0000346

### FRONT FENDER PANEL REMOVAL/INSTALLATION

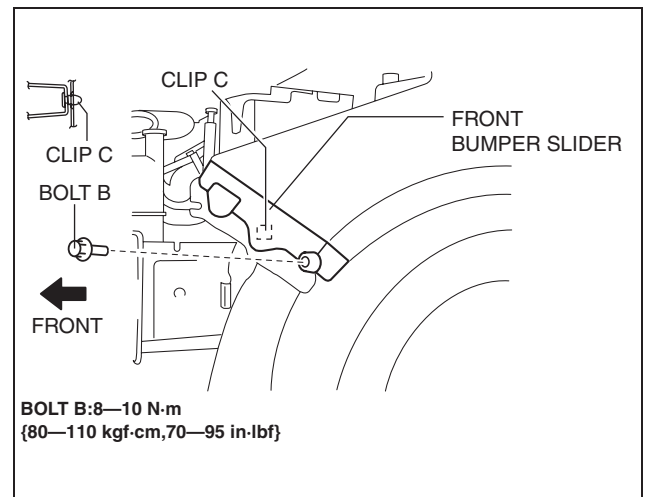
id091000405900

1. Disconnect the negative battery cable.
2. Remove the sail garnish. (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION)
3. Remove the front side turn lights. (See 09-18-23 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION)
4. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)
5. Remove the front combination lights. (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION)
6. Remove the side step molding. (vehicles with side step molding) (See 09-16-12 SIDE STEP MOLDING REMOVAL) (See 09-16-14 SIDE STEP MOLDING INSTALLATION) (See 09-16-13 SIDE STEP MOLDING REMOVAL [3HB]) (See 09-16-15 SIDE STEP MOLDING INSTALLATION [3HB])
7. Remove fastener A, then remove the front fender molding in the direction of the arrow shown in the figure.



am2zzw0000161

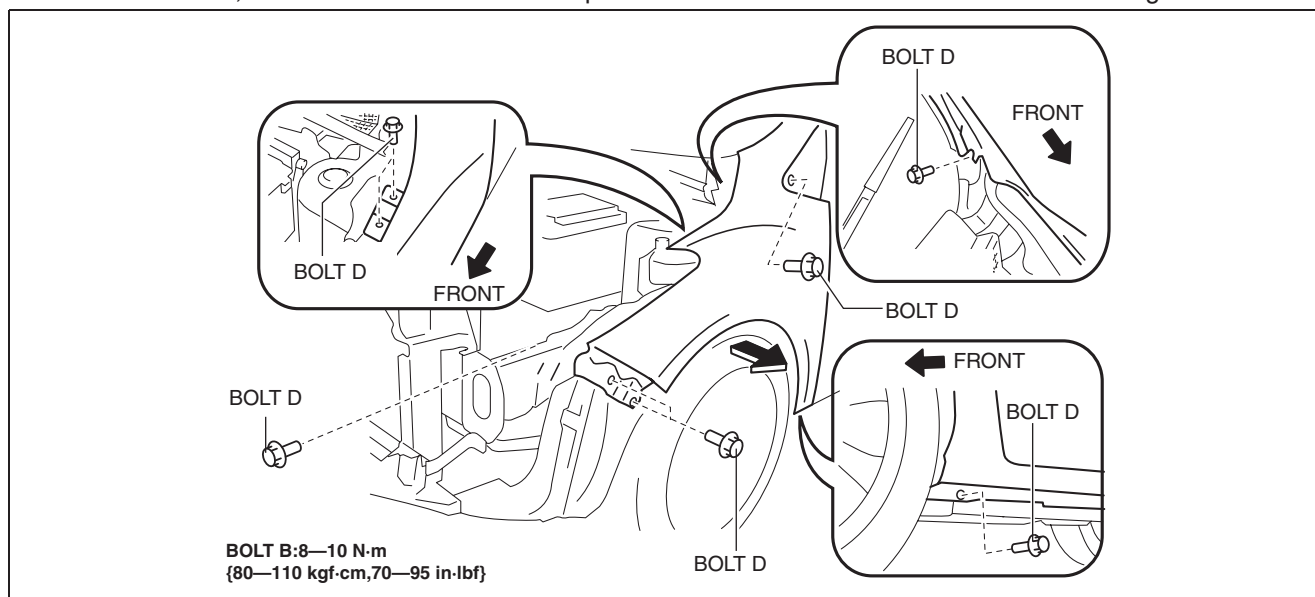
8. Remove bolt B and clip C, then remove the front bumper slider.



am2zzw0000346

## BODY PANELS

9. Remove bolts D, then remove the front fender panel in the direction of the arrow shown in the figure.



am2zzw0000347

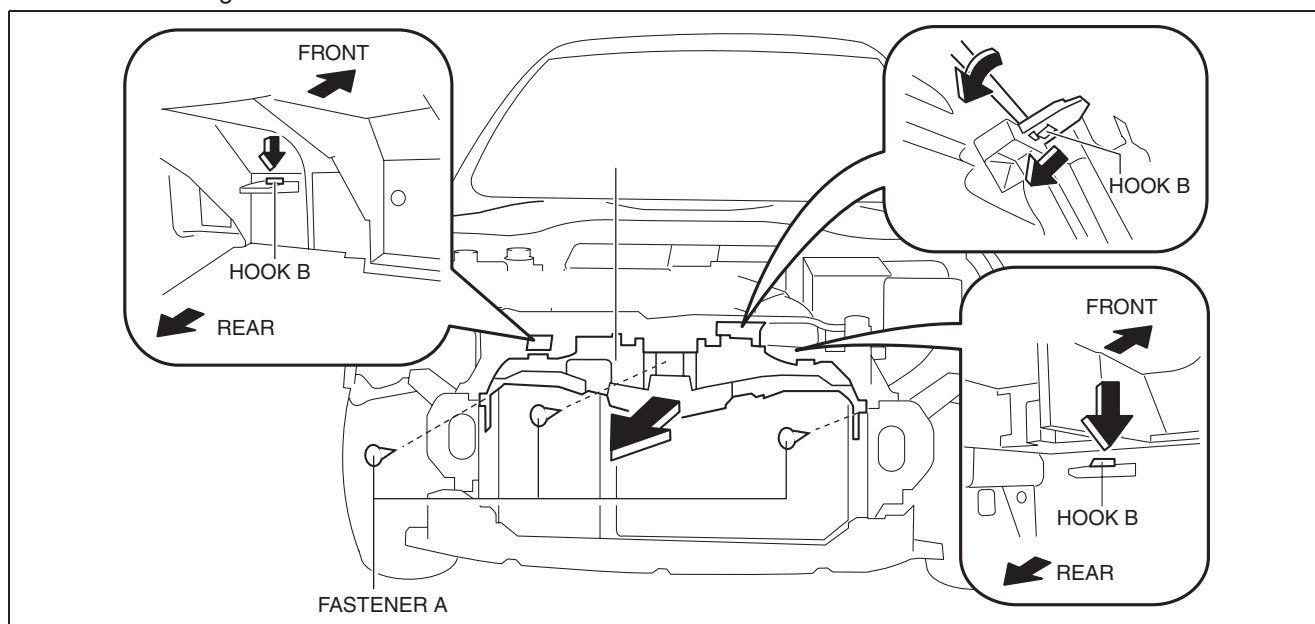
10. Install in the reverse order of removal.

11. Adjust the headlight aiming. (See 09-18-7 HEADLIGHT AIMING)

### SEAL BOAD UPPER REMOVAL/INSTALLATION

id091000466600

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)
3. After removing fasteners A, detach hooks B and remove the seal board upper in the direction of the arrow shown in the figure.



am2zzw0000447

4. Install in the reverse order of removal.

### SHROUD PANEL REMOVAL/INSTALLATION

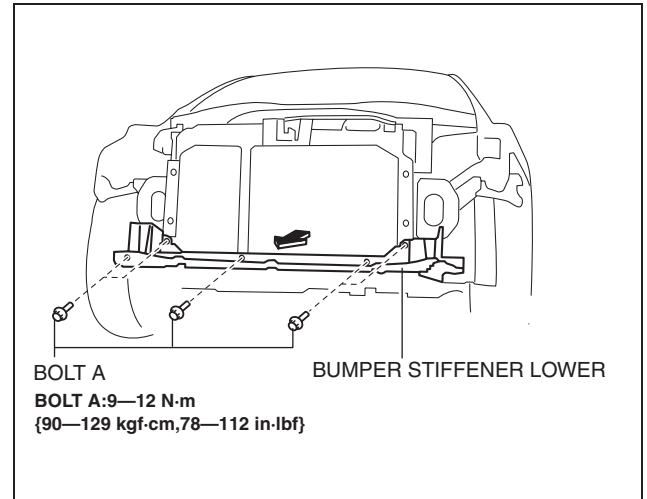
id091000406300

#### Caution

- Because the shroud panel is installed to the bumper reinforcement, support the shroud panel using a jack before removing the bumper reinforcement so as not to apply excessive force to the shroud panel.
- Since the servicing is performed with the bonnet open, secure the bonnet using a piece of wood to prevent it from falling.

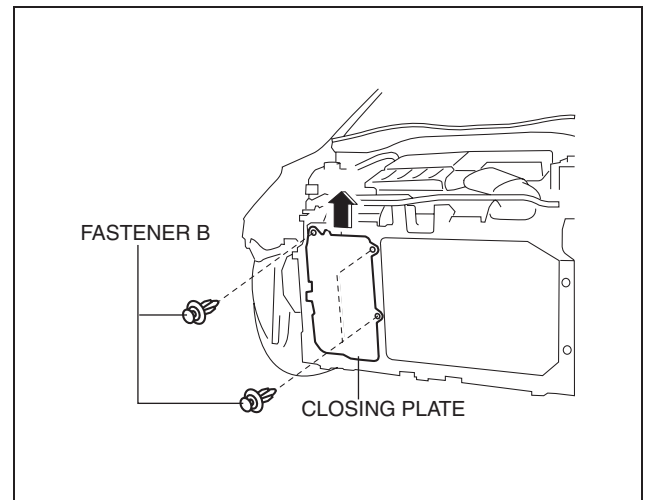
## BODY PANELS

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front bumper (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)
  - (2) Front combination lights (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION)
  - (3) Horn (See 09-22-20 HORN REMOVAL/INSTALLATION)
  - (4) Washer tank (See 09-19-13 WASHER TANK REMOVAL/INSTALLATION)
  - (5) Bumper reinforcement (See 09-10-15 BUMPER REINFORCEMENT REMOVAL/INSTALLATION)
  - (6) Seal board upper (See 09-10-18 SEAL BOAD UPPER REMOVAL/INSTALLATION)
  - (7) Bonnet latch (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION)
3. Remove bolts A, then remove the bumper stiffener lower in the direction of the arrow shown in the figure.



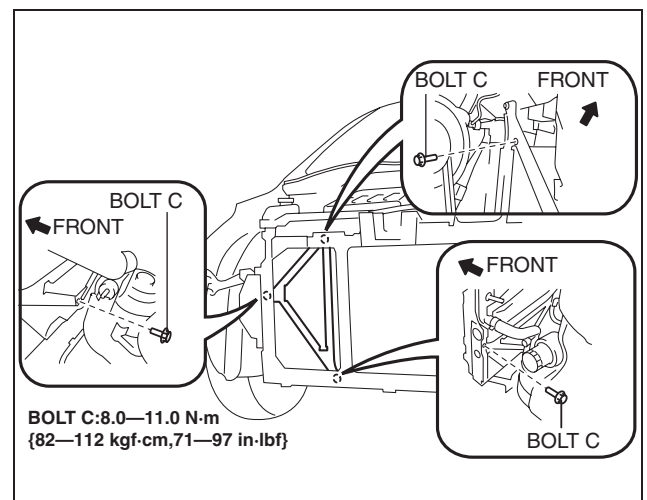
am2zzw0000161

4. Remove fasteners B, then remove the closing plate in the direction of the arrow shown in the figure.



am2zzw0000162

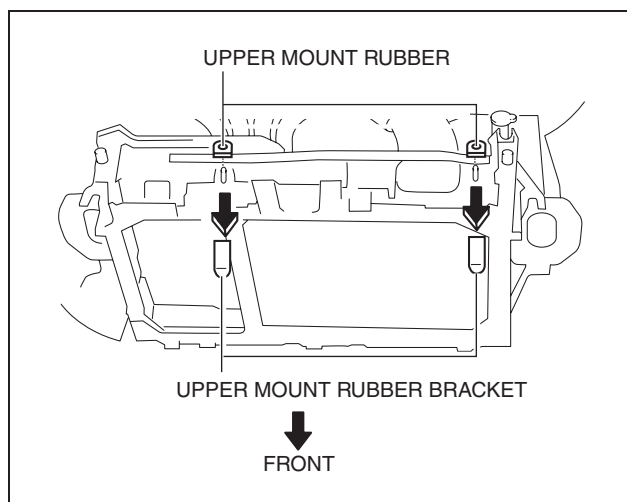
5. Remove bolts C, then set the shroud upper plate out of the way.



am2zzw0000337

## BODY PANELS

6. Remove the upper mount rubber bracket in the direction of the arrow in the figure, then remove the upper mount rubber. (See 09-10-20 Upper Mount Rubber Removal Note)



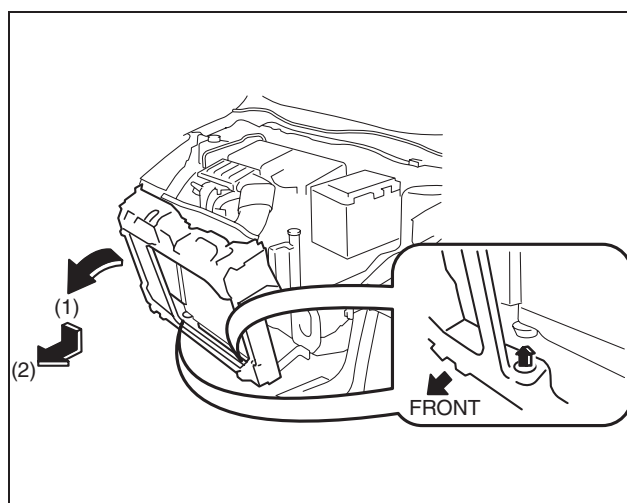
am2zzw0000447

7. Pull the shroud panel in the direction of arrow (1) in the figure, and remove it in the direction of arrow (2).

### Caution

- Support the lower surface of the radiator with a floor jack to prevent the radiator from falling off after the shroud panel is removed.

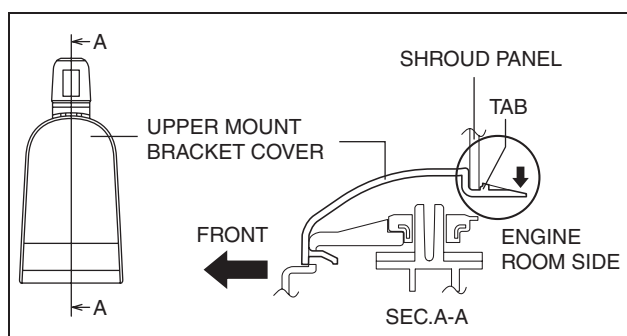
8. Install in the reverse order of removal.



am2zzw0000447

### Upper Mount Rubber Removal Note

1. Remove the upper mount rubber bracket while pressing down the upper mount rubber bracket tab in the direction of the arrow in the figure.



am2zzw0000447

## SHROUD PANEL REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)]

id0910004063z4

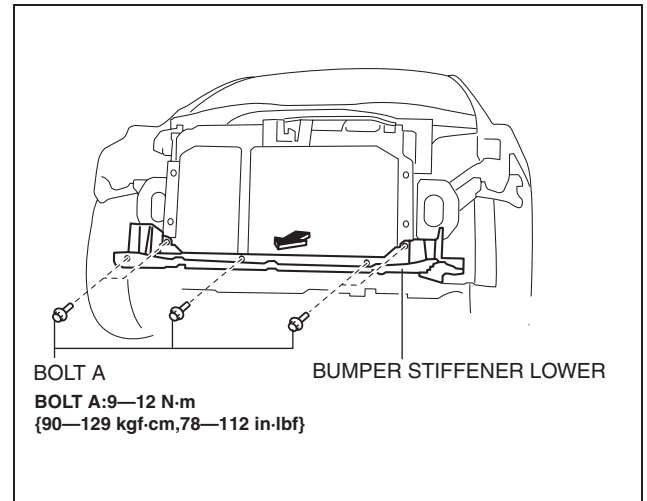
### Caution

- Because the shroud panel is installed to the bumper reinforcement, support the shroud panel using a jack before removing the bumper reinforcement so as not to apply excessive force to the shroud panel.
- Since the servicing is performed with the bonnet open, secure the bonnet using a piece of wood to prevent it from falling.

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front bumper (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)

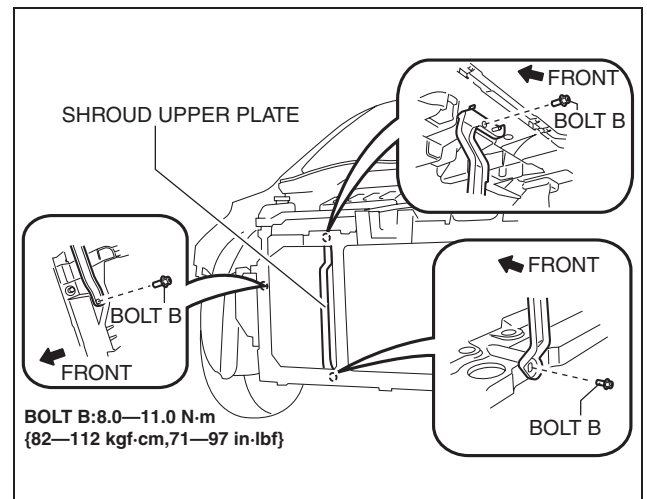
## BODY PANELS

- (2) Front combination lights (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION)
  - (3) Washer tank (See 09-19-13 WASHER TANK REMOVAL/INSTALLATION)
  - (4) Bumper reinforcement (See 09-10-15 BUMPER REINFORCEMENT REMOVAL/INSTALLATION)
  - (5) Seal board upper (See 09-10-18 SEAL BOAD UPPER REMOVAL/INSTALLATION)
  - (6) Bonnet latch (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION)
3. Remove bolts A, then remove the bumper stiffener lower in the direction of the arrow shown in the figure.



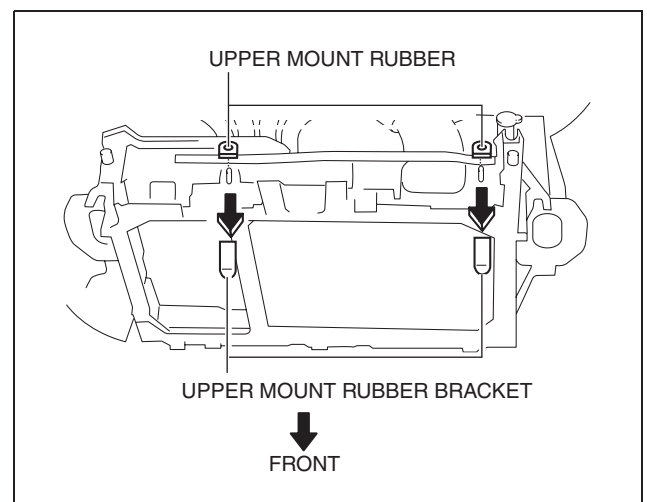
am2zzw0000161

4. Remove bolts B, then set the shroud upper plate out of the way.



am2zzw0000398

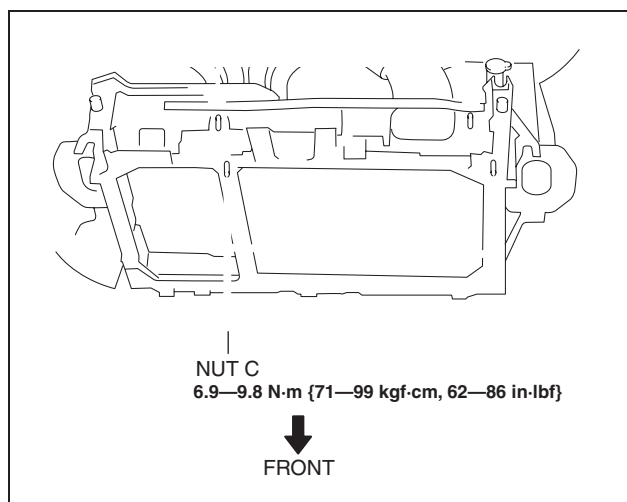
5. Remove the upper mount rubber bracket in the direction of the arrow in the figure, then remove the upper mount rubber. (See 09-10-23 Upper Mount Rubber Removal Note)



am2zzw0000447

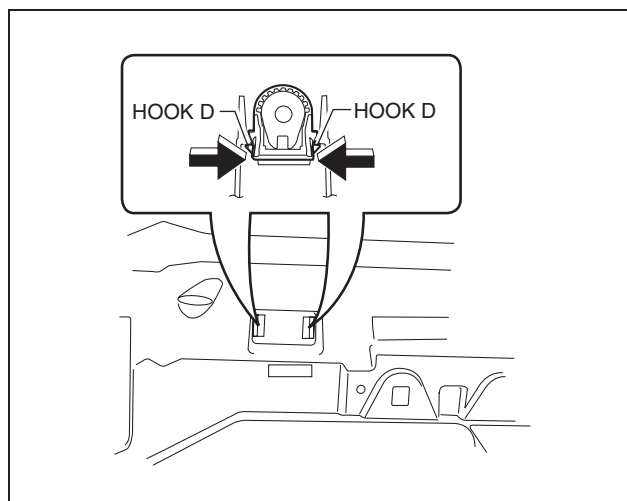
## BODY PANELS

6. Remove the nuts C.
7. Set the condenser out of the way.



am2zzw0000448

8. Release the hooks D in the direction of arrow shown in the figure.



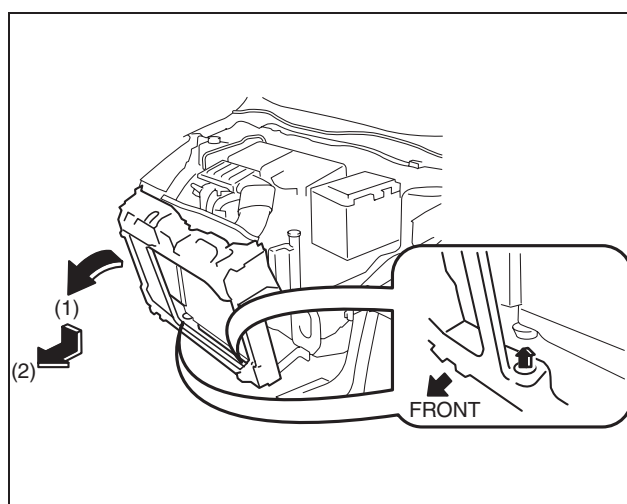
am2zzw0000402

9. Pull the shroud panel in the direction of arrow (1) in the figure, and remove it in the direction of arrow (2).

### Caution

- Support the lower surface of the radiator with a floor jack to prevent the radiator from falling off after the shroud panel is removed.

10. Install in the reverse order of removal.

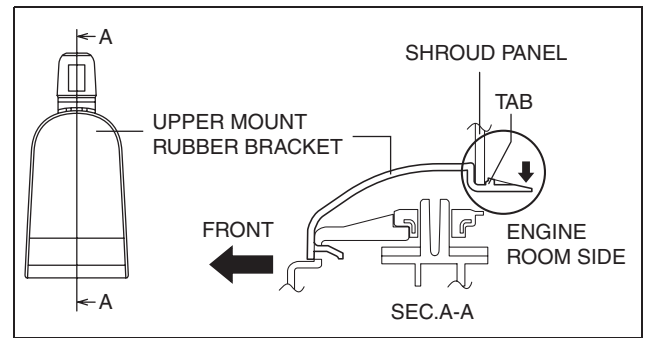


am2zzw0000448

## BODY PANELS

### Upper Mount Rubber Removal Note

1. Remove the upper mount rubber bracket while pressing down the upper mount rubber bracket tab in the direction of the arrow in the figure.

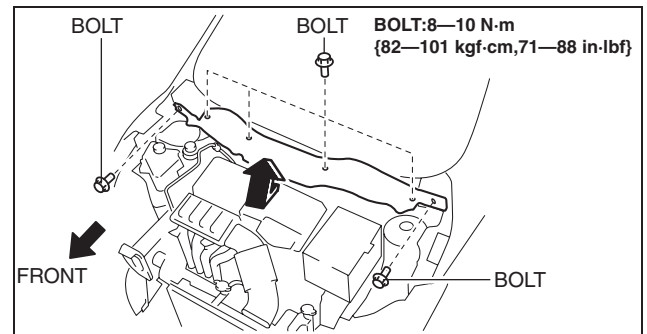


am2zzw0000448

### COWL PANEL REMOVAL/INSTALLATION

id091000406200

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Windshield wiper arm (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION)
  - (2) Front fender molding (See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION)
  - (3) Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION)
  - (4) Windshield wiper motor (See 09-19-9 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION)
3. Remove the washer hose grommet from the cowl panel and disconnect the front washer hose.
4. Remove bolts, and remove the cowl panel in the direction of the arrow shown in the figure.
5. Install in the reverse order of removal.

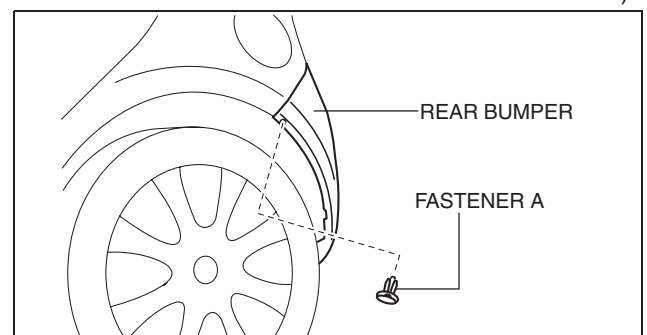


am2zzw0000347

### REAR BUMPER REMOVAL/INSTALLATION

id091000405300

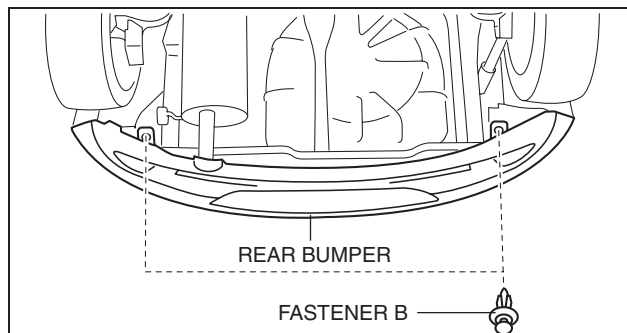
1. Disconnect the negative battery cable.
2. Remove the splash shield. (See 09-16-9 SPLASH SHIELD REMOVAL/INSTALLATION)
3. Remove the rear combination light. (See 09-18-23 REAR COMBINATION LIGHT REMOVAL/INSTALLATION)
4. Remove the fastener A.



am2zzw0000160

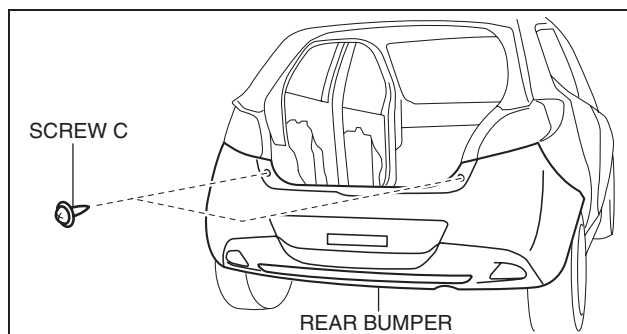
## BODY PANELS

5. Remove the fasteners B.



am2zzw0000161

6. Remove the screws C.

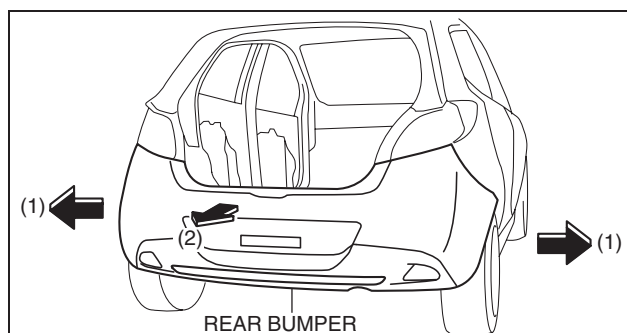


am2zzw0000161

7. Pull the rear bumper in the direction of arrow (1) shown in the figure to disengage the bumper from the rear bumper slider, then remove the rear bumper in the direction of arrow (2).

### Caution

- When disengaging the rear bumper from the rear bumper slider, the rear bumper could fall and be damaged. Support the rear bumper so that it does not fall.

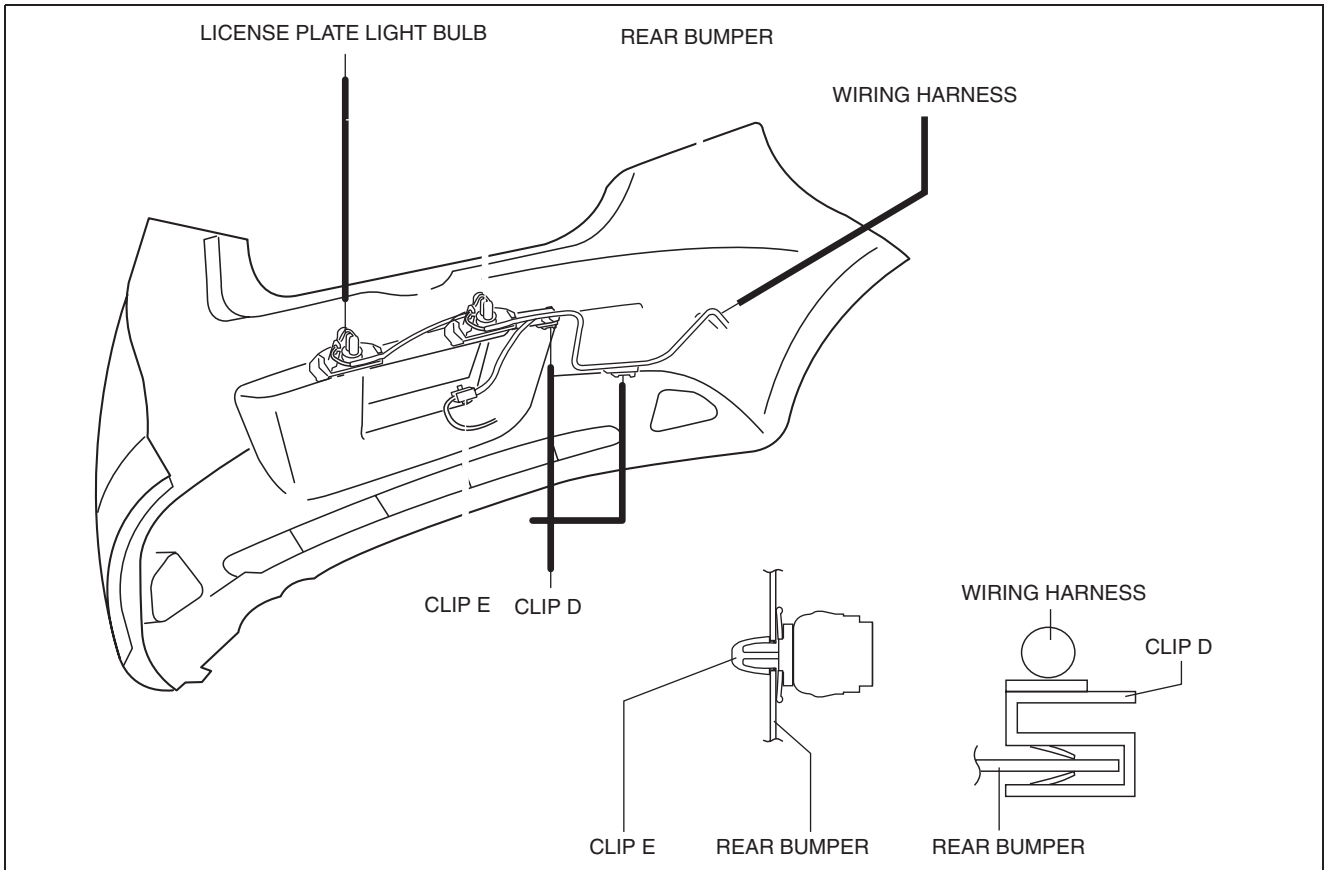


am2zzw0000161



## BODY PANELS

8. Remove clips D,E and the license plate light bulb, then set aside the wiring harness to the vehicle side.

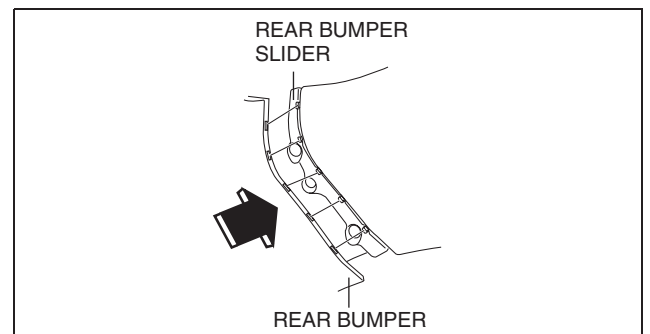


am2zzw0000178

9. Disconnect the rear fog light connector. (Vehicles with rear fog light)  
10. Install in the reverse order of removal.

### Rear Bumper Installation Note

1. Spread the rear bumper ends apart.
2. Assemble the rear bumper to the body.
3. Press the rear bumper connecting area in the direction of the arrow shown in the figure to engage with the rear bumper slider.



am2zzw0000161

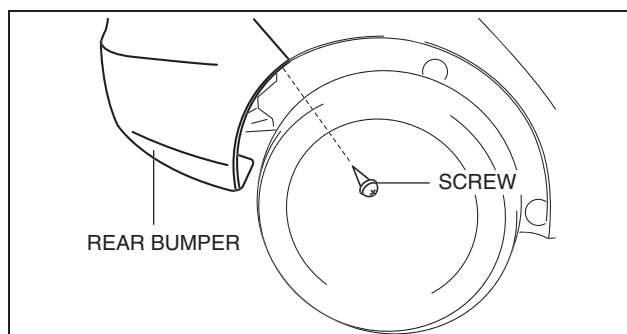
### REAR BUMPER REMOVAL/INSTALLATION [4SD]

id0910004053z5

1. Disconnect the negative battery cable.
2. Remove the splash shield. (See 09-16-9 SPLASH SHIELD REMOVAL/INSTALLATION.)

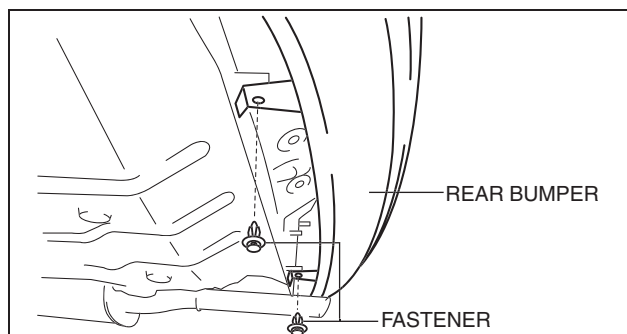
## BODY PANELS

3. Remove the screw.



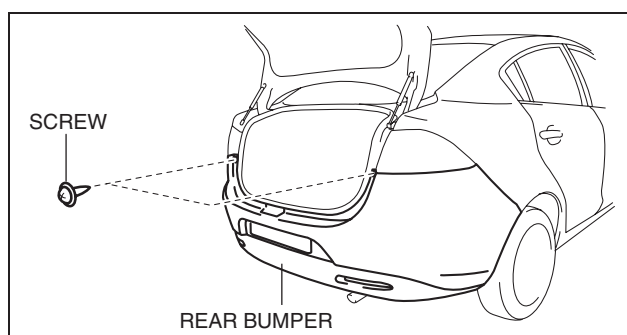
am2ccw0000025

4. Remove the fasteners.



am2ccw0000025

5. Remove the screws.

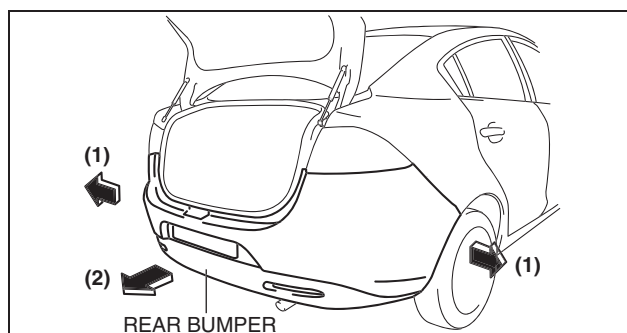


am2ccw0000026

6. Pull the rear bumper in the direction of arrow (1) shown in the figure to disengage the bumper from the rear bumper slider, then remove the rear bumper in the direction of arrow (2).

### Caution

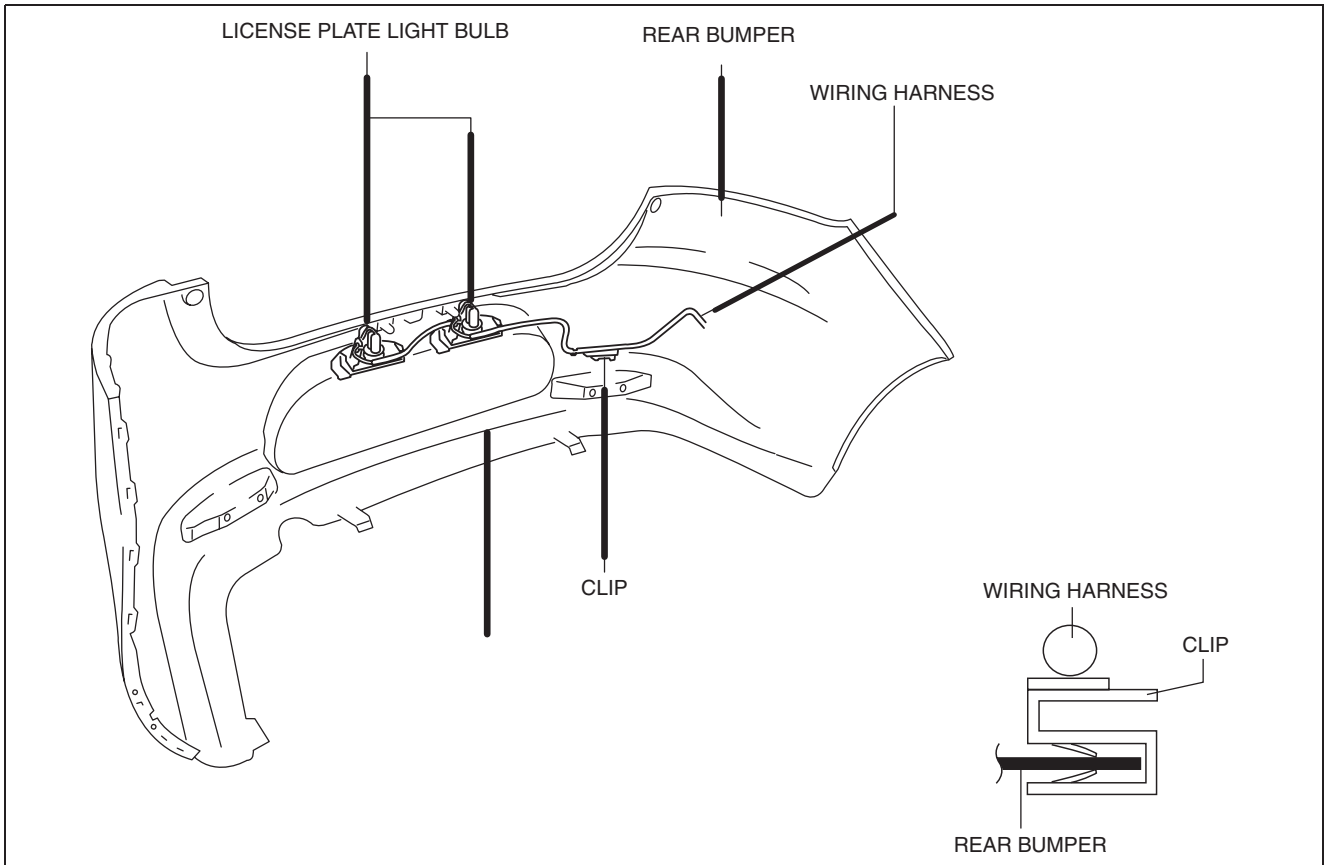
- When disengaging the rear bumper from the rear bumper slider, the rear bumper could fall and be damaged. Support the rear bumper so that it does not fall.



am2ccw0000026

## BODY PANELS

7. Remove clip and the license plate light, then set aside the wiring harness to the vehicle side.

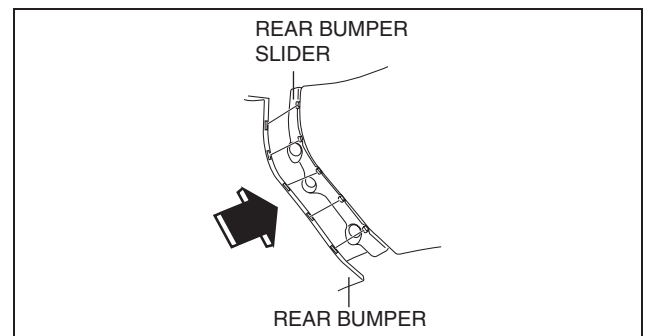


am2ccw0000026

8. Install in the reverse order of removal.

### Rear Bumper Installation Note

1. Spread the rear bumper ends apart.
2. Assemble the rear bumper to the body.
3. Press the rear bumper connecting area in the direction of the arrow shown in the figure to engage with the bumper slider.



am2zzw0000161

### REAR BUMPER DISASSEMBLY/ASSEMBLY

id091000405600

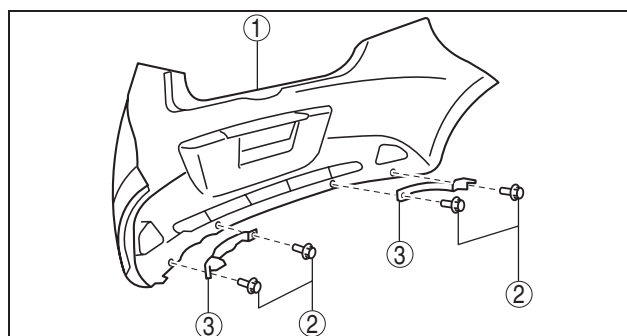
1. Remove the rear fog light. (Vehicles with rear fog light) (See 09-18-26 REAR FOG LIGHT REMOVAL/INSTALLATION)

## BODY PANELS

2. Remove in the order indicated in the table.

|   |                    |
|---|--------------------|
| 1 | Rear bumper fascia |
| 2 | Screw              |
| 3 | Rear bumper guard  |

3. Assemble in the reverse order of disassembly.



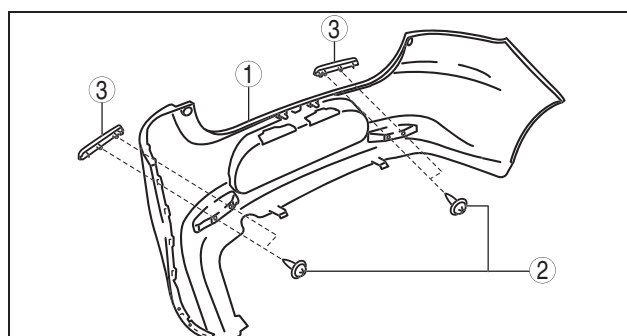
adejjw00003272

### REAR BUMPER DISASSEMBLY/ASSEMBLY [4SD]

1. Remove in the order indicated in the table.

|   |                       |
|---|-----------------------|
| 1 | Rear bumper fascia    |
| 2 | Screw                 |
| 3 | Rear bumper reflector |

2. Assemble in the reverse order of disassembly.



id0910004056z5

am2ccw0000019

## DOORS AND LIFTGATE

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### 09-11 DOORS AND LIFTGATE

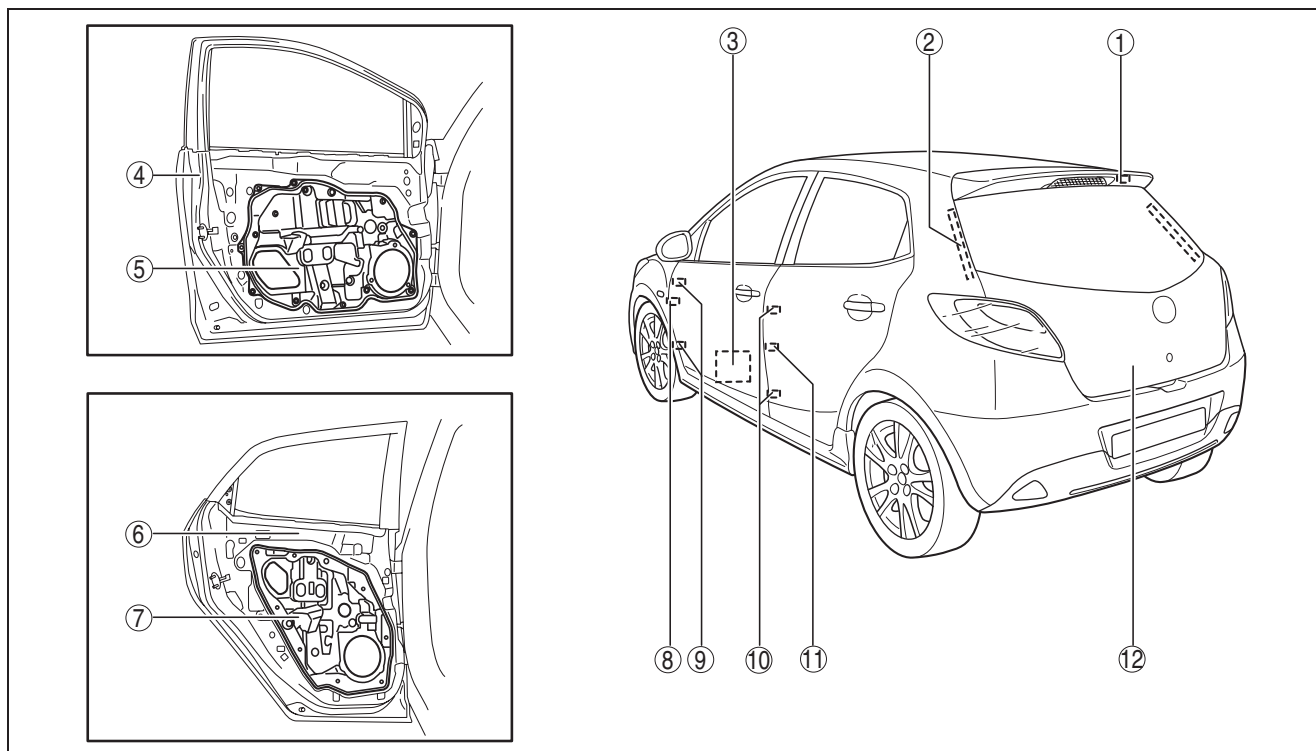
|                                    |          |  |
|------------------------------------|----------|--|
| <b>DOOR AND LIFTGATE</b>           |          |  |
| LOCATION INDEX.....                | 09-11-1  |  |
| <b>DOOR AND LIFTGATE</b>           |          |  |
| LOCATION INDEX [3HB] .....         | 09-11-2  |  |
| <b>DOOR AND LIFTGATE</b>           |          |  |
| LOCATION INDEX [4SD] .....         | 09-11-3  |  |
| <b>FRONT DOOR</b>                  |          |  |
| REMOVAL/INSTALLATION.....          | 09-11-4  |  |
| Connector Removal Note.....        | 09-11-5  |  |
| <b>FRONT DOOR</b>                  |          |  |
| REMOVAL/INSTALLATION [3HB] ....    | 09-11-5  |  |
| Connector Removal Note.....        | 09-11-6  |  |
| <b>FRONT DOOR PAD</b>              |          |  |
| REMOVAL/INSTALLATION.....          | 09-11-7  |  |
| <b>FRONT DOOR PAD</b>              |          |  |
| REMOVAL/INSTALLATION [3HB] ....    | 09-11-8  |  |
| <b>FRONT DOOR CHECKER</b>          |          |  |
| REMOVAL/INSTALLATION.....          | 09-11-8  |  |
| <b>FRONT DOOR CHECKER</b>          |          |  |
| REMOVAL/INSTALLATION [3HB] ....    | 09-11-9  |  |
| <b>FRONT DOOR HINGE</b>            |          |  |
| REMOVAL/INSTALLATION.....          | 09-11-10 |  |
| <b>FRONT DOOR HINGE</b>            |          |  |
| REMOVAL/INSTALLATION [3HB] ....    | 09-11-11 |  |
| <b>FRONT DOOR MODULE PANEL</b>     |          |  |
| REMOVAL/INSTALLATION.....          | 09-11-12 |  |
| <b>FRONT DOOR MODULE PANEL</b>     |          |  |
| REMOVAL/INSTALLATION [3HB] ....    | 09-11-13 |  |
|                                    |          |  |
| <b>REAR DOOR</b>                   |          |  |
| REMOVAL/INSTALLATION .....         | 09-11-15 |  |
| Connector Removal Note .....       | 09-11-16 |  |
| <b>REAR DOOR CHECKER</b>           |          |  |
| REMOVAL/INSTALLATION .....         | 09-11-16 |  |
| <b>REAR DOOR CHECKER</b>           |          |  |
| REMOVAL/INSTALLATION [4SD] .....   | 09-11-17 |  |
| <b>REAR DOOR HINGE</b>             |          |  |
| REMOVAL/INSTALLATION .....         | 09-11-18 |  |
| <b>REAR DOOR MODULE PANEL</b>      |          |  |
| REMOVAL/INSTALLATION .....         | 09-11-19 |  |
| <b>REAR DOOR MODULE PANEL</b>      |          |  |
| REMOVAL/INSTALLATION [4SD] .....   | 09-11-20 |  |
| <b>DOOR ADJUSTMENT</b> .....       | 09-11-22 |  |
| <b>DOOR ADJUSTMENT [3HB]</b> ..... | 09-11-22 |  |
| <b>DOOR ADJUSTMENT [4SD]</b> ..... | 09-11-23 |  |
| <b>LIFTGATE</b>                    |          |  |
| REMOVAL/INSTALLATION .....         | 09-11-24 |  |
| <b>LIFTGATE HINGE</b>              |          |  |
| REMOVAL/INSTALLATION .....         | 09-11-26 |  |
| <b>LIFTGATE HINGE</b>              |          |  |
| REMOVAL/INSTALLATION [3HB] .....   | 09-11-28 |  |
| <b>LIFTGATE MANUAL OPEN/CLOSE</b>  |          |  |
| PROCEDURE .....                    | 09-11-28 |  |
| Opening the Liftgate .....         | 09-11-28 |  |
| <b>STAY DAMPER DISPOSAL</b> .....  | 09-11-29 |  |
| <b>LIFTGATE ADJUSTMENT</b> .....   | 09-11-30 |  |

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## DOORS AND LIFTGATE

### DOOR AND LIFTGATE LOCATION INDEX

id091100520000



am2zzw0000434

- |   |                                                                           |
|---|---------------------------------------------------------------------------|
| 1 | Liftgate hinge<br>(See 09-11-26 LIFTGATE HINGE REMOVAL/<br>INSTALLATION.) |
|---|---------------------------------------------------------------------------|

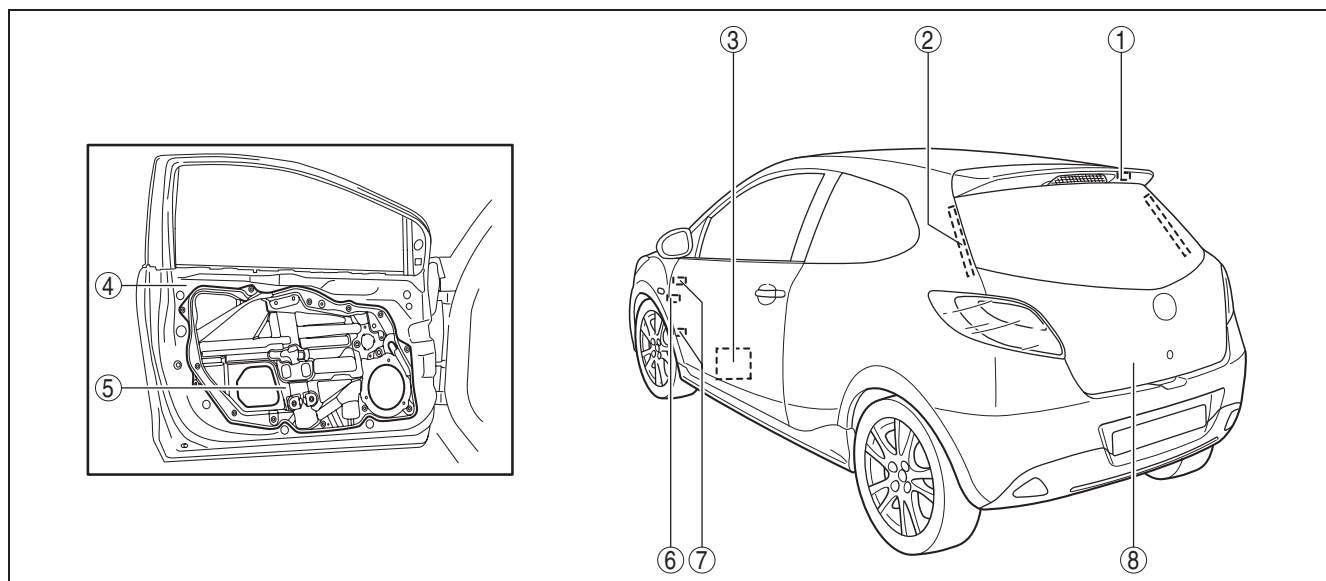
- |   |                                                     |
|---|-----------------------------------------------------|
| 2 | Stay damper<br>(See 09-11-29 STAY DAMPER DISPOSAL.) |
|---|-----------------------------------------------------|

## DOORS AND LIFTGATE

|    |                                                                                                                                                          |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | Front door pad<br>(See 09-11-7 FRONT DOOR PAD REMOVAL/INSTALLATION.)                                                                                     |
| 4  | Front door<br>(See 09-11-4 FRONT DOOR REMOVAL/INSTALLATION.)<br>(See 09-11-22 DOOR ADJUSTMENT.)                                                          |
| 5  | Front door module panel<br>(See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.)                                                                  |
| 6  | Rear door<br>(See 09-11-15 REAR DOOR REMOVAL/INSTALLATION.)<br>(See 09-11-22 DOOR ADJUSTMENT.)                                                           |
| 7  | Rear door module panel<br>(See 09-11-19 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION.)                                                                    |
| 8  | Front door hinge<br>(See 09-11-10 FRONT DOOR HINGE REMOVAL/INSTALLATION.)                                                                                |
| 9  | Front door checker<br>(See 09-11-8 FRONT DOOR CHECKER REMOVAL/INSTALLATION.)                                                                             |
| 10 | Rear door hinge<br>(See 09-11-18 REAR DOOR HINGE REMOVAL/INSTALLATION.)                                                                                  |
| 11 | Rear door checker<br>(See 09-11-16 REAR DOOR CHECKER REMOVAL/INSTALLATION.)                                                                              |
| 12 | Liftgate<br>(See 09-11-24 LIFTGATE REMOVAL/INSTALLATION.)<br>(See 09-11-30 LIFTGATE ADJUSTMENT.)<br>(See 09-11-28 LIFTGATE MANUAL OPEN/CLOSE PROCEDURE.) |

### DOOR AND LIFTGATE LOCATION INDEX [3HB]

id091100520006



am2zzw0000493

|   |                                                                             |
|---|-----------------------------------------------------------------------------|
| 1 | Liftgate hinge<br>(See 09-11-28 LIFTGATE HINGE REMOVAL/INSTALLATION [3HB].) |
| 2 | Stay damper<br>(See 09-11-29 STAY DAMPER DISPOSAL.)                         |

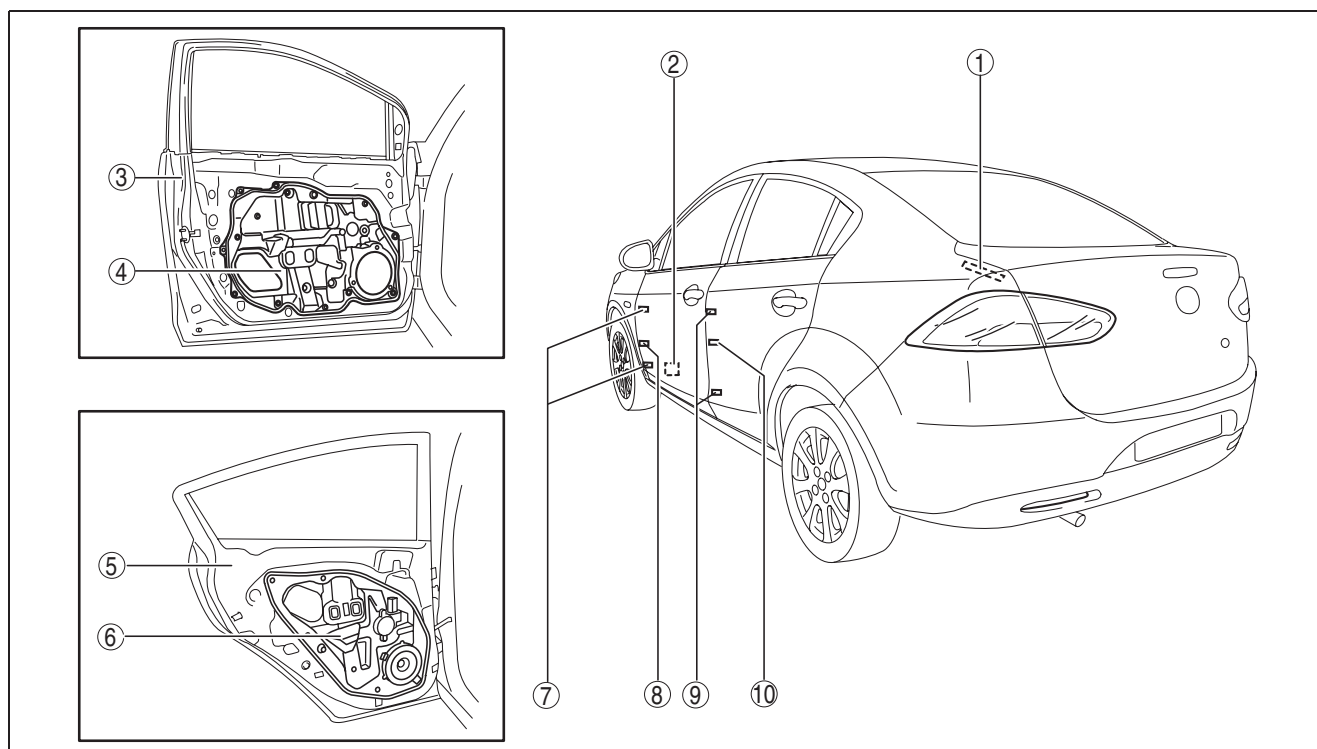
|   |                                                                            |
|---|----------------------------------------------------------------------------|
| 3 | Front door pad<br>(See 09-11-8 FRONT DOOR PAD REMOVAL/INSTALLATION [3HB].) |
|---|----------------------------------------------------------------------------|

## DOORS AND LIFTGATE

|   |                                                                                                                                                                 |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Front door<br>(See 09-11-5 FRONT DOOR REMOVAL/<br>INSTALLATION [3HB].)<br>(See 09-11-22 DOOR ADJUSTMENT [3HB].)                                                 |
| 5 | Front door module panel<br>(See 09-11-13 FRONT DOOR MODULE PANEL<br>REMOVAL/INSTALLATION [3HB].)                                                                |
| 6 | Front door hinge<br>(See 09-11-11 FRONT DOOR HINGE REMOVAL/<br>INSTALLATION [3HB].)                                                                             |
| 7 | Front door checker<br>(See 09-11-9 FRONT DOOR CHECKER REMOVAL/<br>INSTALLATION [3HB].)                                                                          |
| 8 | Liftgate<br>(See 09-11-24 LIFTGATE REMOVAL/<br>INSTALLATION.)<br>(See 09-11-30 LIFTGATE ADJUSTMENT.)<br>(See 09-11-28 LIFTGATE MANUAL OPEN/CLOSE<br>PROCEDURE.) |

### DOOR AND LIFTGATE LOCATION INDEX [4SD]

id091100520008



am2zzw0000491

|   |                                                                                                     |
|---|-----------------------------------------------------------------------------------------------------|
| 1 | Stay damper<br>(See 09-11-29 STAY DAMPER DISPOSAL.)                                                 |
| 2 | Front door pad<br>(See 09-11-7 FRONT DOOR PAD REMOVAL/<br>INSTALLATION.)                            |
| 3 | Front door<br>(See 09-11-4 FRONT DOOR REMOVAL/<br>INSTALLATION.)<br>(See 09-11-22 DOOR ADJUSTMENT.) |
| 4 | Front door module panel<br>(See 09-11-12 FRONT DOOR MODULE PANEL<br>REMOVAL/INSTALLATION.)          |

|   |                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------|
| 5 | Rear door<br>(See 09-11-15 REAR DOOR REMOVAL/<br>INSTALLATION.)<br>(See 09-11-23 DOOR ADJUSTMENT [4SD].) |
| 6 | Rear door module panel<br>(See 09-11-20 REAR DOOR MODULE PANEL<br>REMOVAL/INSTALLATION [4SD].)           |
| 7 | Front door hinge<br>(See 09-11-10 FRONT DOOR HINGE REMOVAL/<br>INSTALLATION.)                            |
| 8 | Front door checker<br>(See 09-11-8 FRONT DOOR CHECKER REMOVAL/<br>INSTALLATION.)                         |



## DOORS AND LIFTGATE

|    |                                                                                       |
|----|---------------------------------------------------------------------------------------|
| 9  | Rear door hinge<br>(See 09-11-18 REAR DOOR HINGE REMOVAL/<br>INSTALLATION.)           |
| 10 | Rear door checker<br>(See 09-11-17 REAR DOOR CHECKER REMOVAL/<br>INSTALLATION [4SD].) |

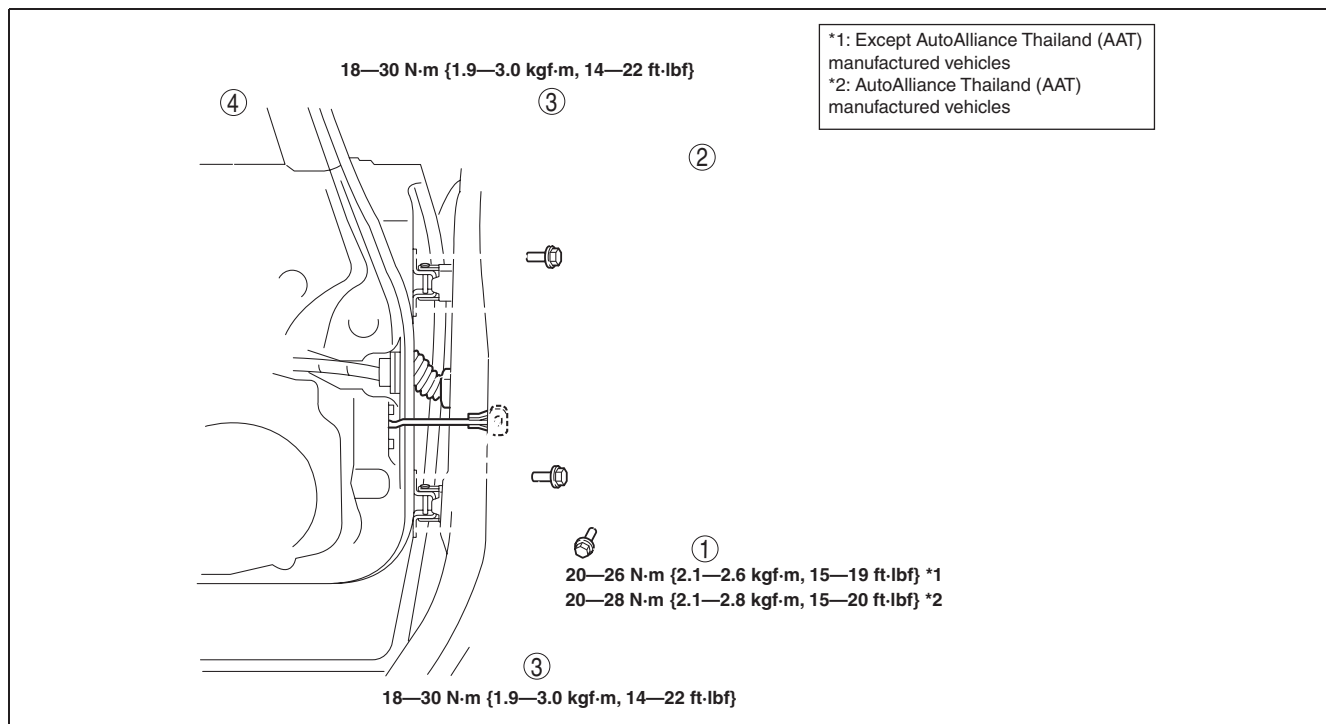
### FRONT DOOR REMOVAL/INSTALLATION

id091100520100

#### Warning

- Removing the front door without supporting it could cause the front door to fall and cause serious injury. Always perform the procedure with at least another person to prevent the front door from falling.

- Disconnect the negative battery cable.
- Remove in the order indicated in the table.



am2zzw0000480

|   |                                                    |
|---|----------------------------------------------------|
| 1 | Bolt A                                             |
| 2 | Connector<br>(See 09-11-5 Connector Removal Note.) |

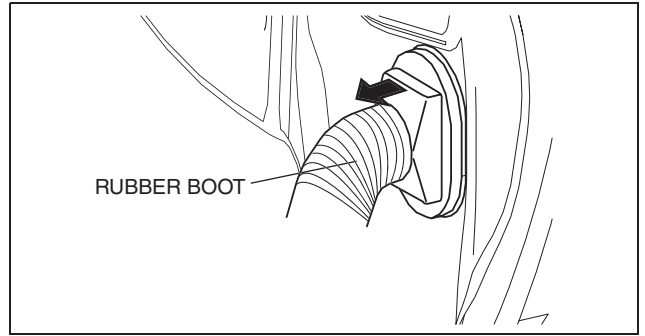
|   |            |
|---|------------|
| 3 | Bolt B     |
| 4 | Front door |

- Install in the reverse order of removal.
- Adjust the front door. (See 09-11-22 DOOR ADJUSTMENT.)

## DOORS AND LIFTGATE

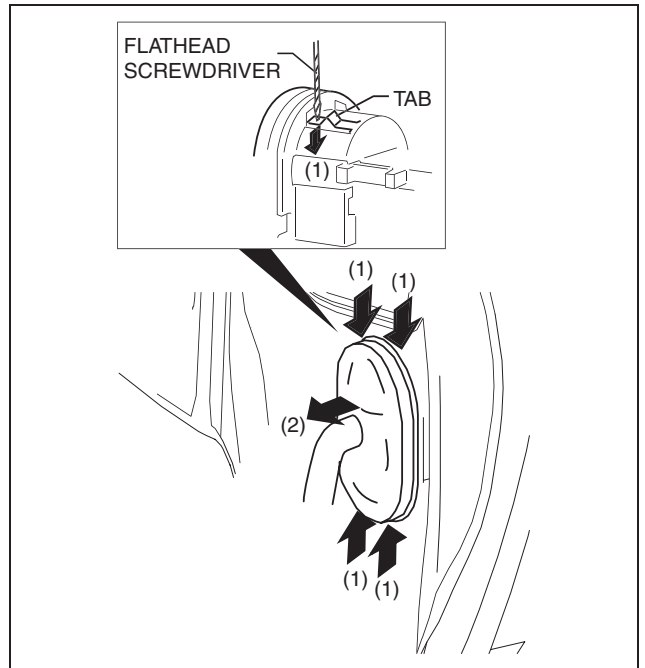
### Connector Removal Note

1. Pull the rubber boot outward.



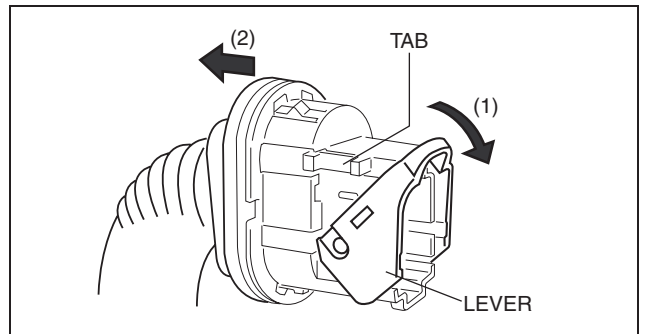
am2zzw0000041

2. Press the tab in the direction of arrow (1) shown in the figure using a tape-wrapped flathead screwdriver, and remove the connector from the body in the direction of arrow (2) shown in the figure.



am2zzw0000041

3. Lower the lever in the direction of arrow (1), and disconnect the connector in the direction of arrow (2).



am2zzw0000437

### FRONT DOOR REMOVAL/INSTALLATION [3HB]

id091100520106

#### Warning

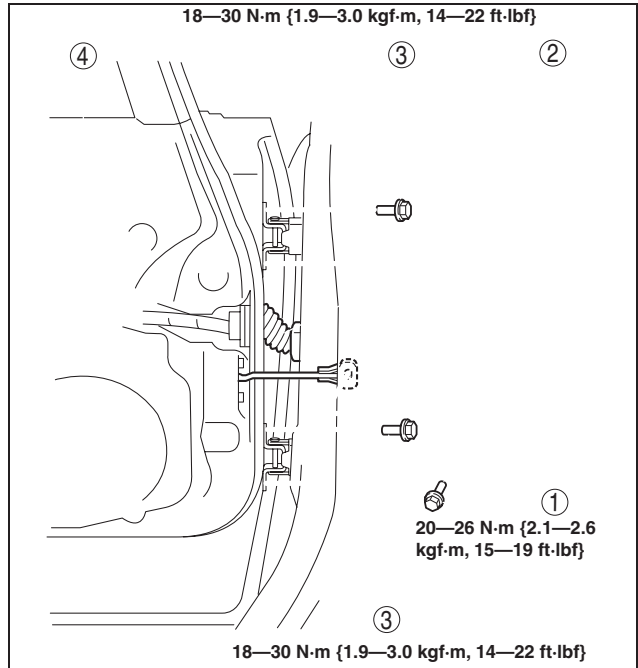
- Removing the front door without supporting it could cause the front door to fall and cause serious injury. Always perform the procedure with at least another person to prevent the front door from falling.

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.

## DOORS AND LIFTGATE

|   |                                                    |
|---|----------------------------------------------------|
| 1 | Bolt A                                             |
| 2 | Connector<br>(See 09-11-6 Connector Removal Note.) |
| 3 | Bolt B                                             |
| 4 | Front door                                         |

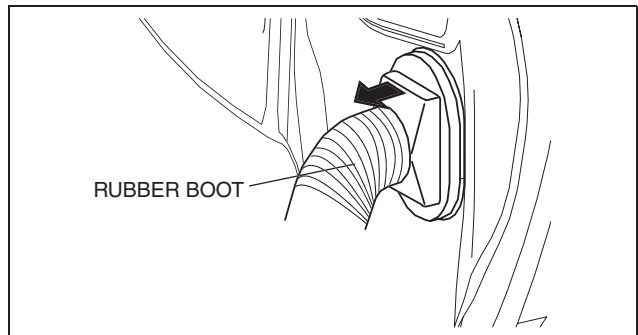
3. Install in the reverse order of removal.
4. Adjust the front door. (See 09-11-22 DOOR ADJUSTMENT [3HB].)



am2zzw0000480

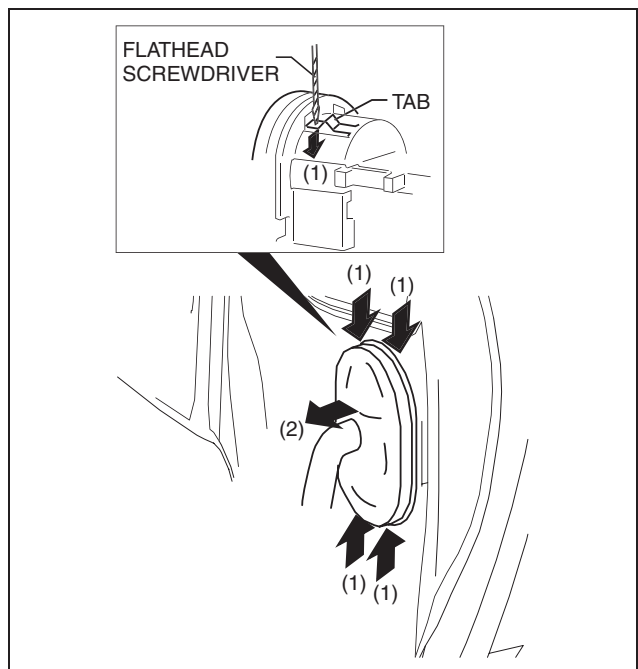
### Connector Removal Note

1. Pull the rubber boot outward.



am2zzw0000041

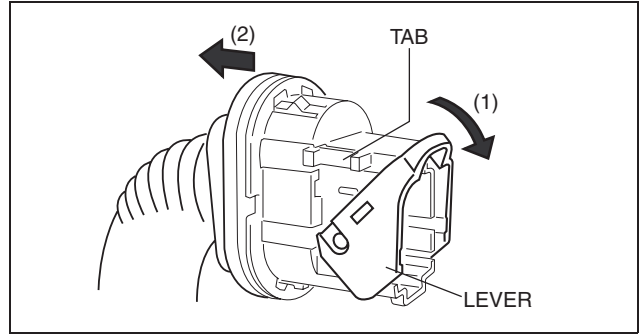
2. Press the tab in the direction of arrow (1) shown in the figure using a tape-wrapped flathead screwdriver, and remove the connector from the body in the direction of arrow (2) shown in the figure.



am2zzw0000041

## DOORS AND LIFTGATE

3. Lower the lever in the direction of arrow (1), and disconnect the connector in the direction of arrow (2).

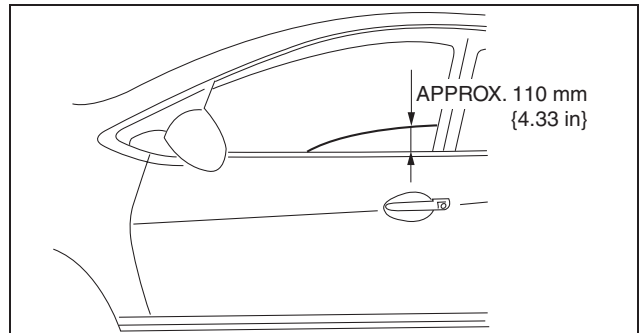


am2zzw0000437

### FRONT DOOR PAD REMOVAL/INSTALLATION

id091100520300

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is approx. 110 mm {4.33 in}.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.)
4. Remove the fasteners.
5. Remove the front door pad.
6. Remove the double-sided adhesive tape on the front door pad and body using a utility knife.

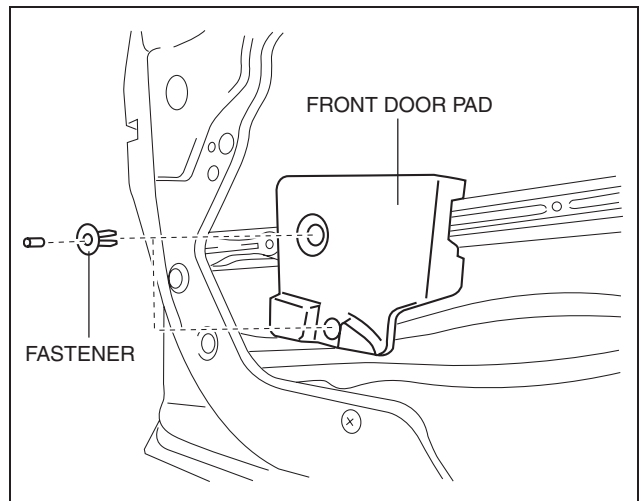


am2zzw0000438

#### Warning

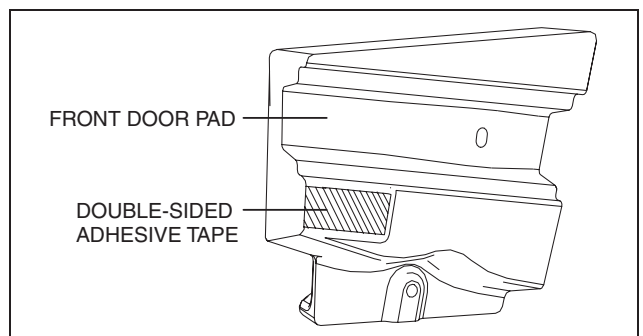
- Using a utility knife with bare hands can cause injury. Always wear gloves when using a razor.

7. Install in the reverse order of removal.



am2zzw0000040

- (1) When reusing the front door pad, affix double-sided adhesive tape to the front door pad as shown in the figure.



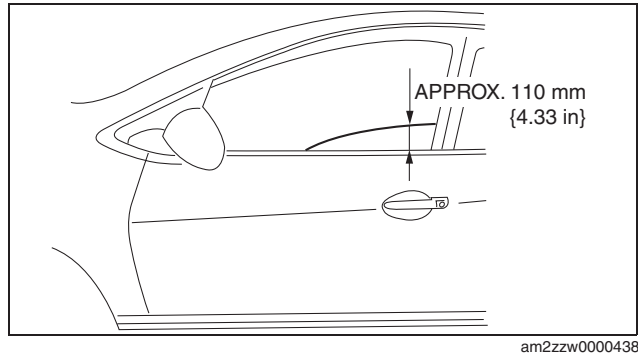
am2zzw0000040

## DOORS AND LIFTGATE

### FRONT DOOR PAD REMOVAL/INSTALLATION [3HB]

id091100520306

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is approx. 110 mm {4.33 in}.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-8 FRONT DOOR GLASS REMOVAL/INSTALLATION [3HB].)
  - (5) Front door module panel (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)

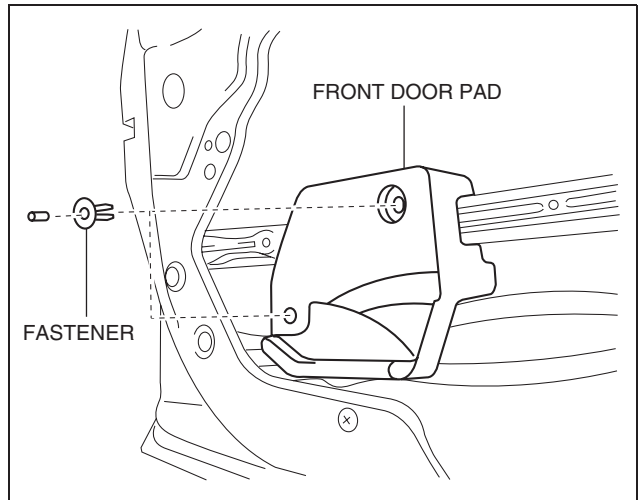


4. Remove the fasteners.
5. Remove the front door pad.
6. Remove the double-sided adhesive tape on the front door pad and body using a utility knife.

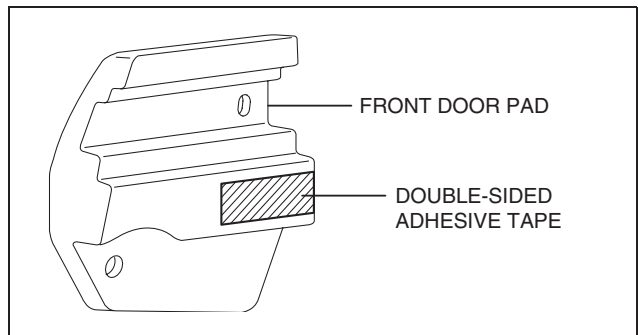
#### Warning

- Using a utility knife with bare hands can cause injury. Always wear gloves when using a razor.

7. Install in the reverse order of removal.



- (1) When reusing the front door pad, affix double-sided adhesive tape to the front door pad as shown in the figure.



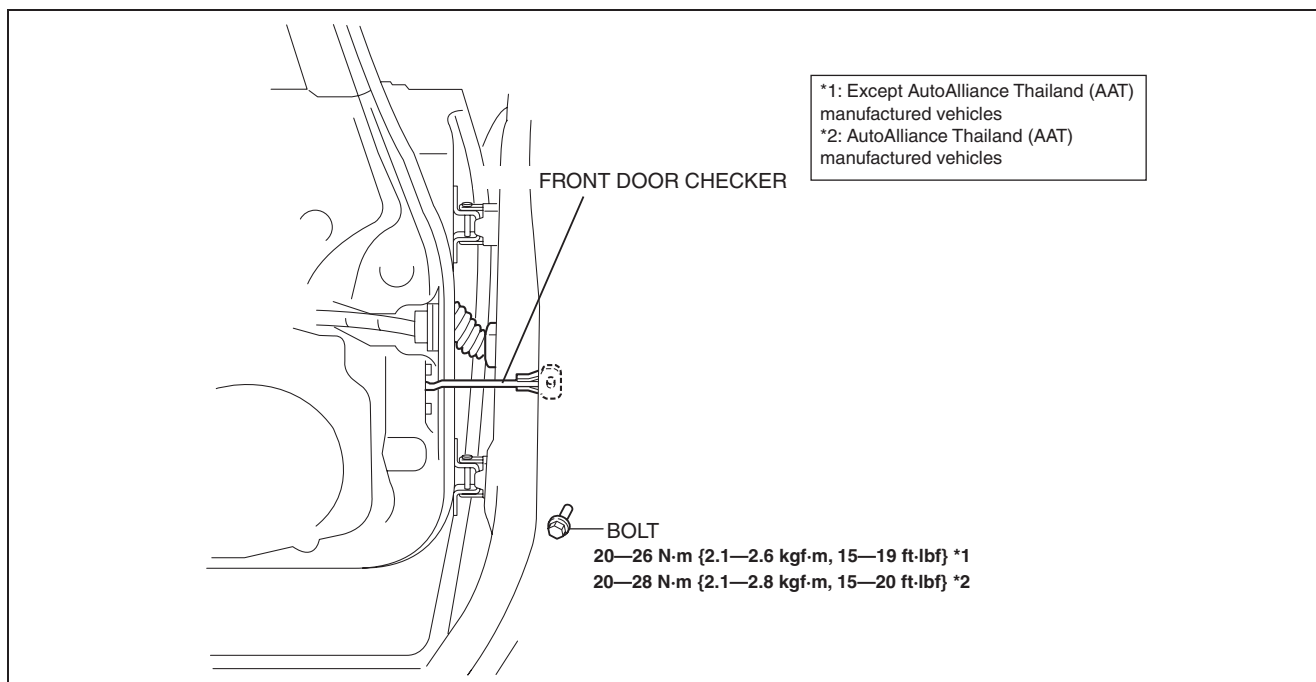
### FRONT DOOR CHECKER REMOVAL/INSTALLATION

id091100520400

1. Fully close the front door glass.
2. Disconnect the negative battery cable.
3. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the front door speaker. (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)

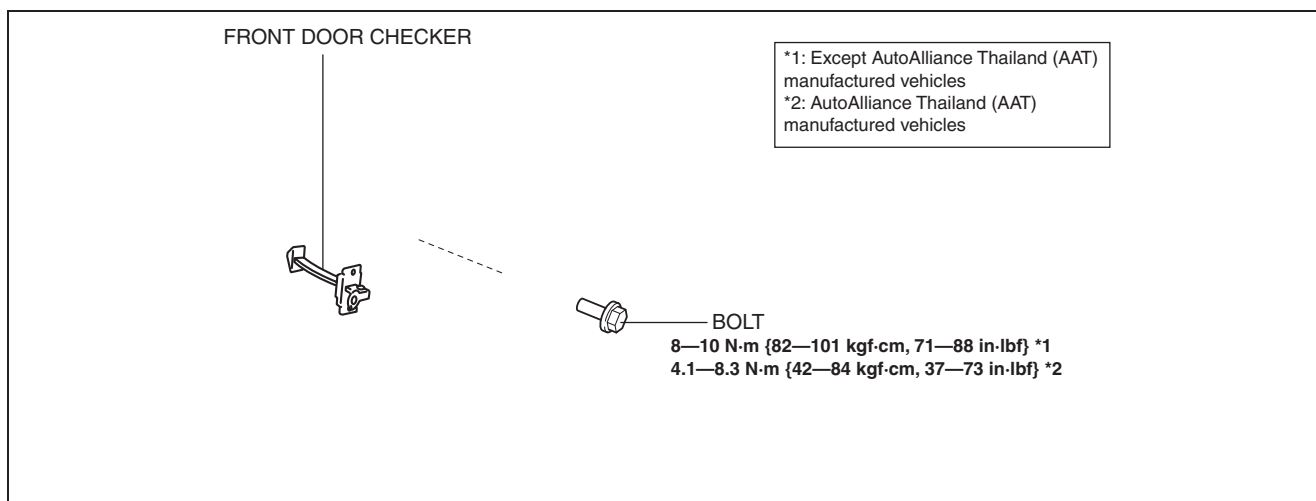
## DOORS AND LIFTGATE

### 6. Remove the bolt.



am2zzw0000480

### 7. Remove the bolts.



am2zzw0000481

### 8. Pull out the front door checker from the front speaker installation hole.

### 9. Install in the reverse order of removal.

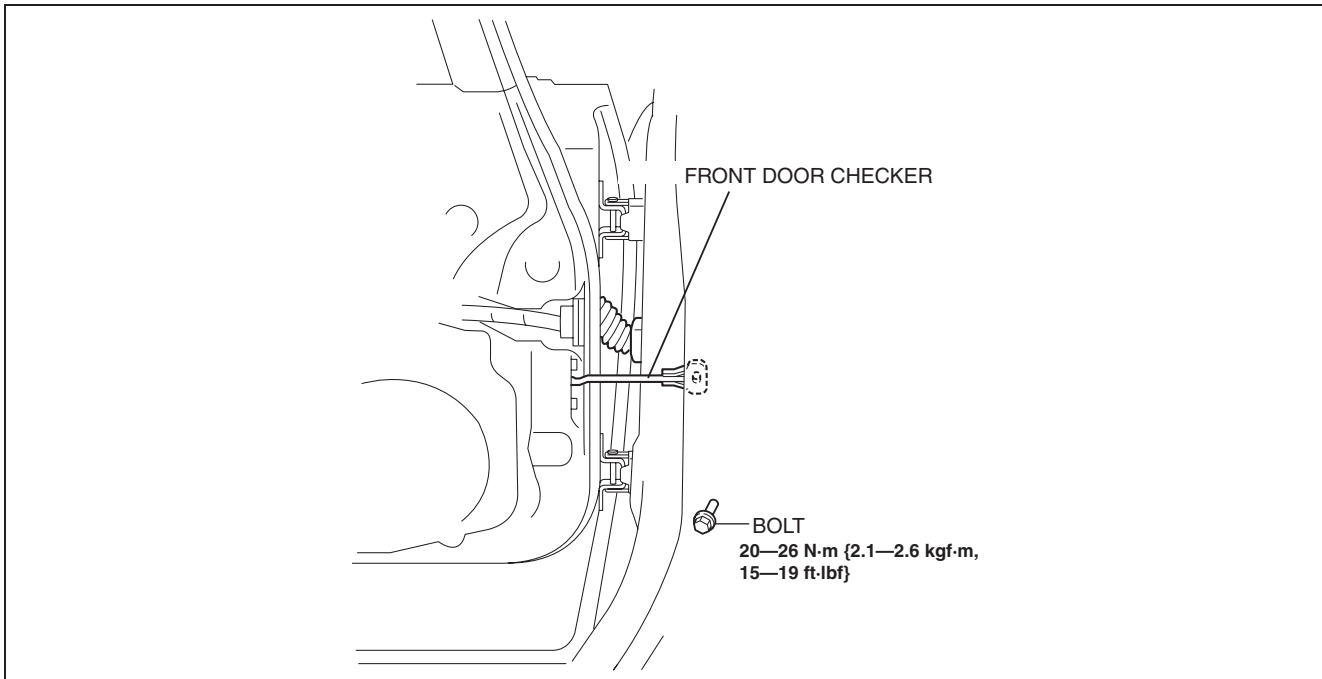
## FRONT DOOR CHECKER REMOVAL/INSTALLATION [3HB]

id091100520406

1. Fully close the front door glass.
2. Disconnect the negative battery cable.
3. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
5. Remove the front door speaker. (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)

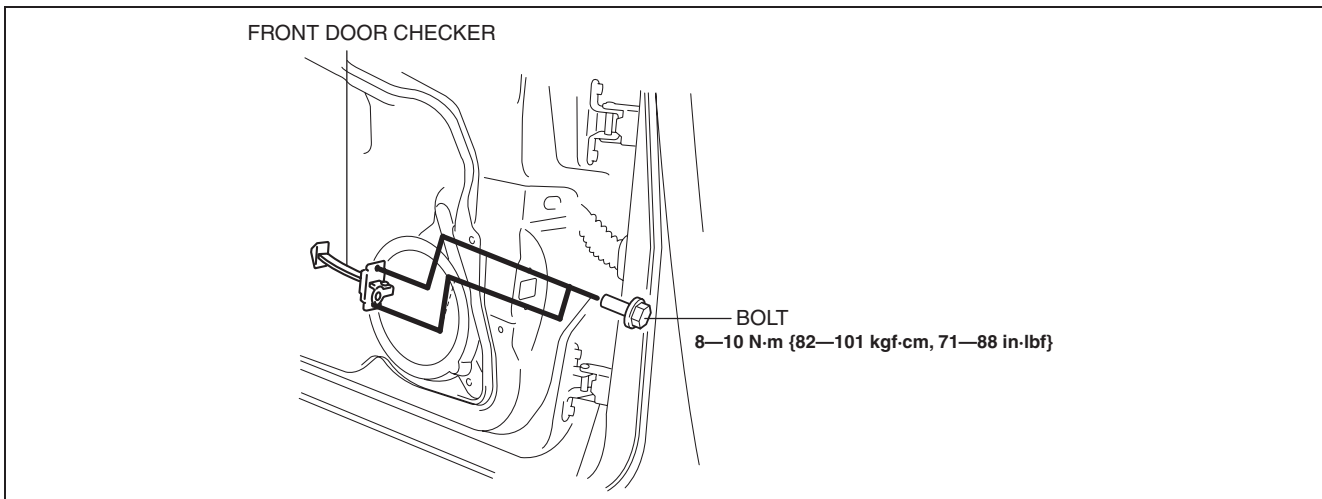
## DOORS AND LIFTGATE

6. Remove the bolt.



am2zzw0000481

7. Remove the bolts.



am2zzw0000481

8. Pull out the front door checker from the front speaker installation hole.

9. Install in the reverse order of removal.

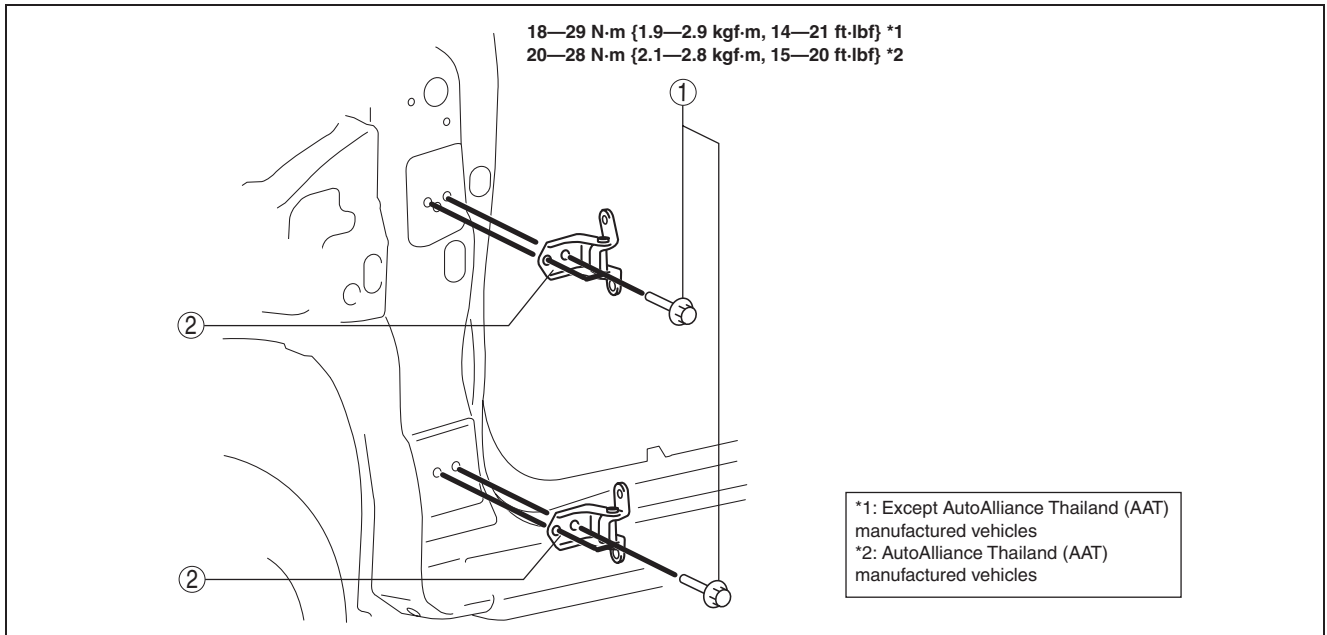
### FRONT DOOR HINGE REMOVAL/INSTALLATION

id091100520500

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Sail garnish (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
  - (2) Front side turn light (See 09-18-23 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
  - (3) Front bumper (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
  - (4) Front combination light (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
  - (5) Side step molding (vehicles with side step molding) (See 09-16-12 SIDE STEP MOLDING REMOVAL.) (See 09-16-14 SIDE STEP MOLDING INSTALLATION.)
  - (6) Front fender panel (See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION.)
  - (7) Front door (See 09-11-4 FRONT DOOR REMOVAL/INSTALLATION.)

## DOORS AND LIFTGATE

3. Remove in the order indicated in the table.



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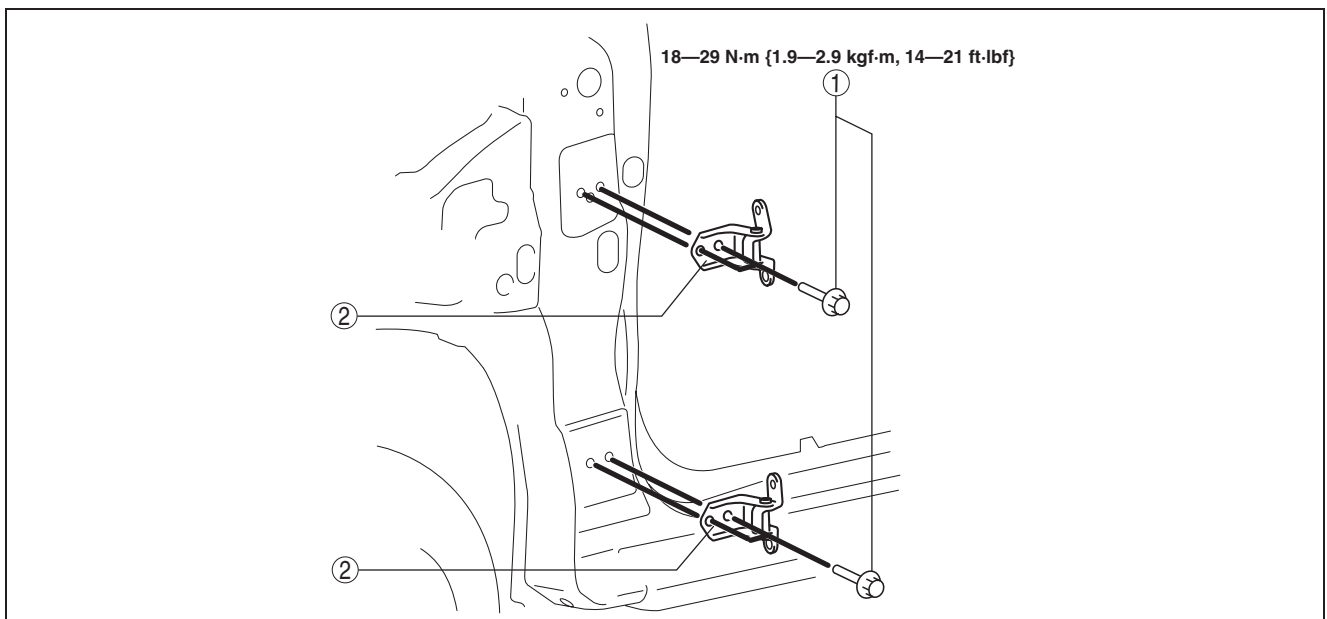
|   |                  |
|---|------------------|
| 1 | Bolt             |
| 2 | Front door hinge |

4. Install in the reverse order of removal.

### FRONT DOOR HINGE REMOVAL/INSTALLATION [3HB]

id091100520506

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Sail garnish (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
  - (2) Front side turn light (See 09-18-23 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
  - (3) Front bumper (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
  - (4) Front combination light (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
  - (5) Side step molding (vehicles with side step molding) (See 09-16-13 SIDE STEP MOLDING REMOVAL [3HB].) (See 09-16-15 SIDE STEP MOLDING INSTALLATION [3HB].)
  - (6) Front fender panel (See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION.)
  - (7) Front door (See 09-11-5 FRONT DOOR REMOVAL/INSTALLATION [3HB].)
3. Remove in the order indicated in the table.



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## DOORS AND LIFTGATE

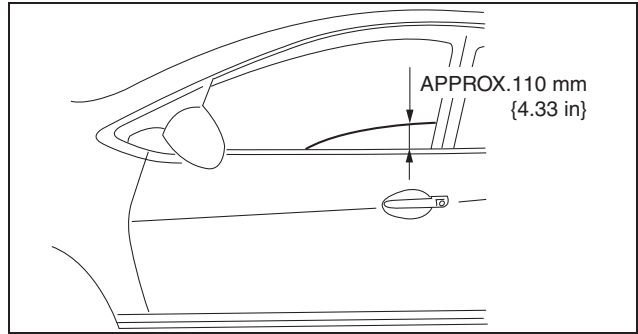
|   |                  |
|---|------------------|
| 1 | Bolt             |
| 2 | Front door hinge |

4. Install in the reverse order of removal.

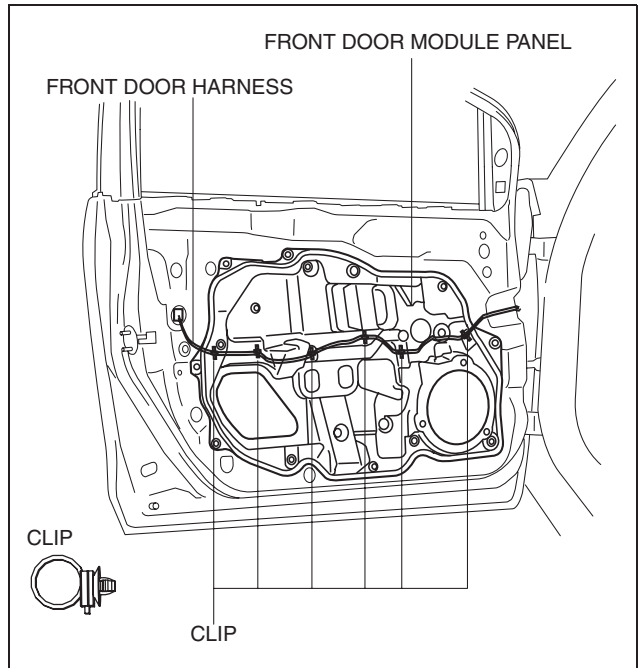
### FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION

id091100520200

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is approx. 110 mm {4.33 in}.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
4. Remove the clips securing the front door wiring harness from the front door module panel.



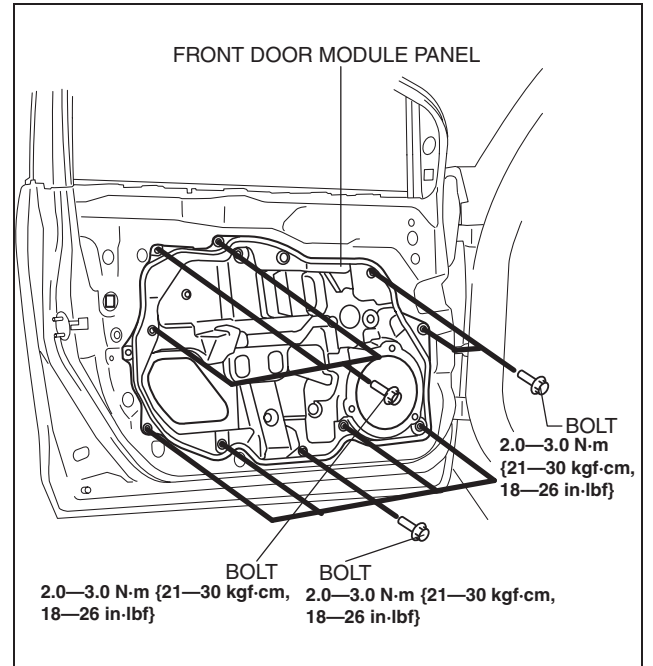
am2zzw0000437



am2zzw0000040

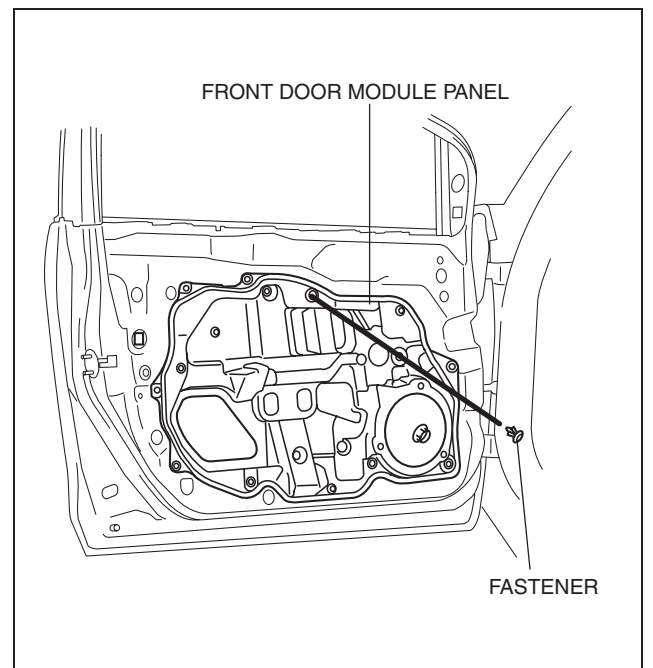
## DOORS AND LIFTGATE

5. Remove the bolts.



am2zzw0000493

6. Remove the fastener.
7. Remove the front door module panel.
8. Remove the front power window motor. (See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)
9. Remove the front power window regulator. (See 09-12-12 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)
10. Install in the reverse order of removal.

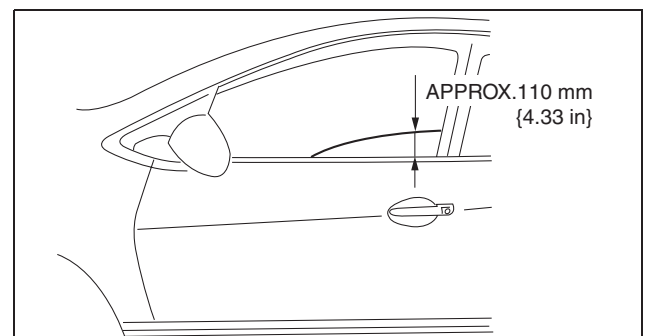


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### FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB]

id091100520206

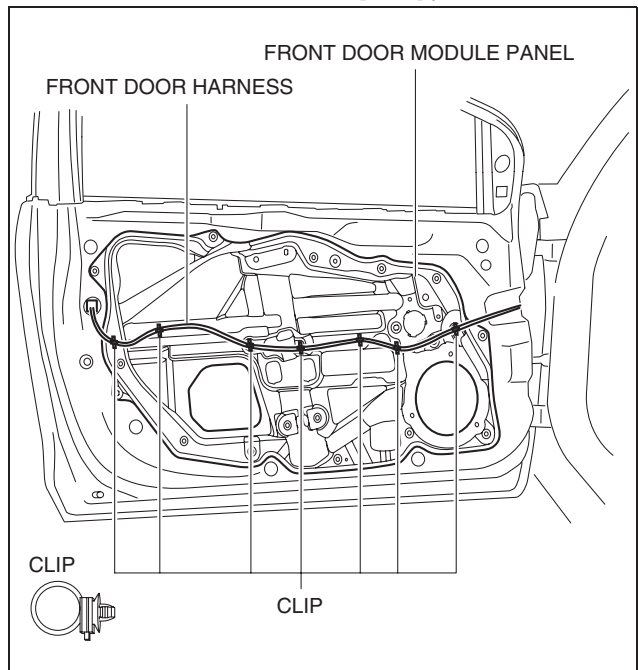
1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is approx. 110 mm {4.33 in}.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)



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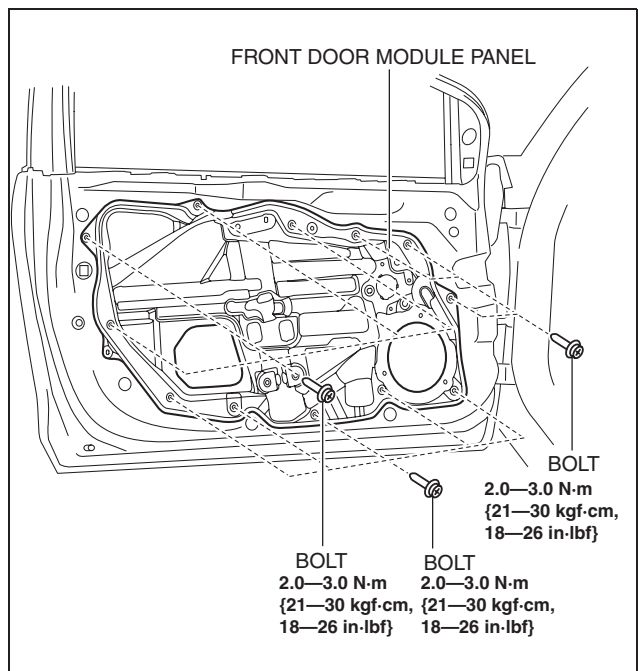
## DOORS AND LIFTGATE

- (4) Front door glass (See 09-12-8 FRONT DOOR GLASS REMOVAL/INSTALLATION [3HB].)
4. Remove the clips securing the front door wiring harness from the front door module panel.



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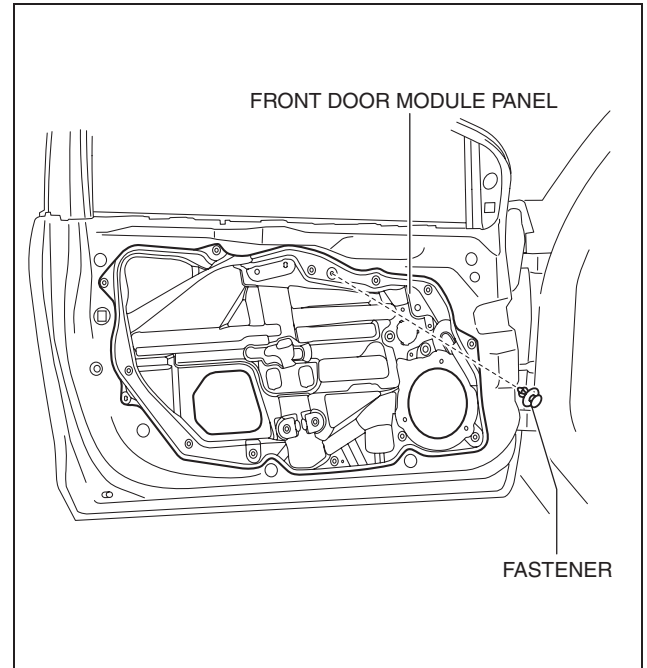
5. Remove the bolts.



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## DOORS AND LIFTGATE

6. Remove the fastener.
7. Remove the front door module panel.
8. Remove the front power window motor. (See 09-12-18 POWER WINDOW MOTOR REMOVAL/INSTALLATION [3HB].)
9. Remove the front power window regulator. (See 09-12-14 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION [3HB].)
10. Install in the reverse order of removal.



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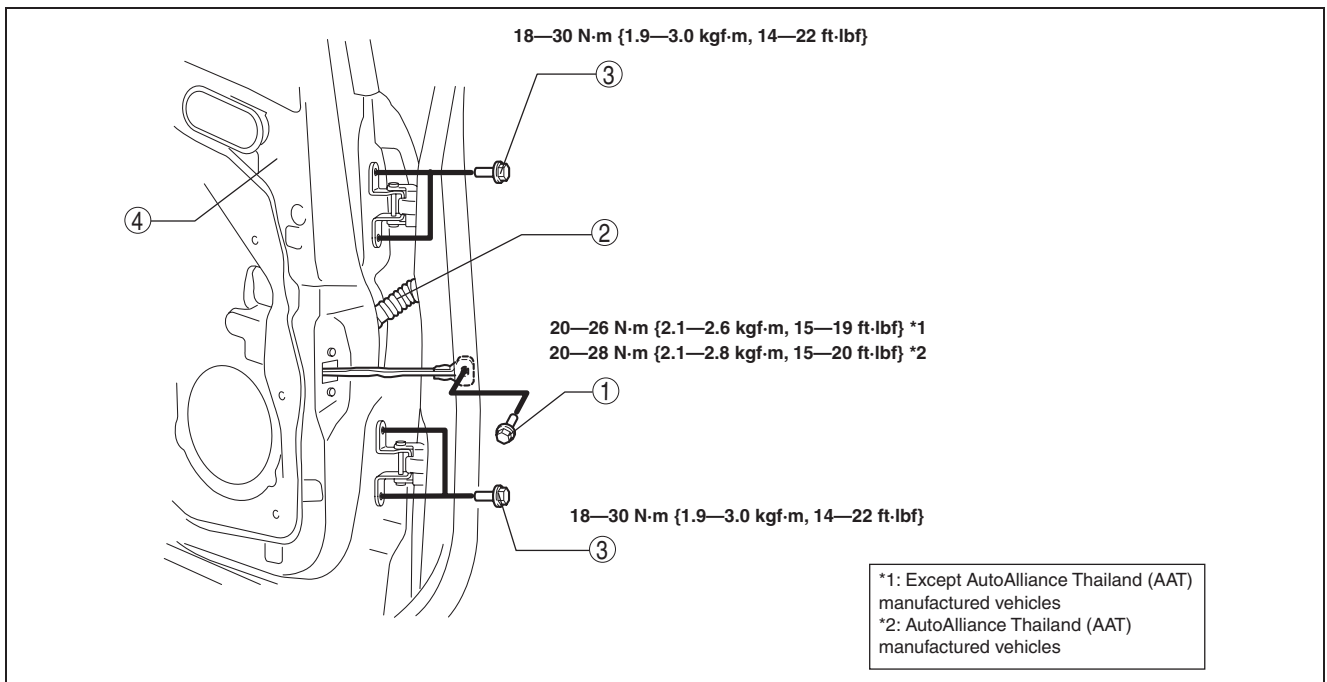
## REAR DOOR REMOVAL/INSTALLATION

id091100520600

### Warning

- Removing the rear door without supporting it could cause the rear door to fall and cause serious injury. Always perform the procedure with at least another person to prevent the rear door from falling.

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



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|   |                                                     |
|---|-----------------------------------------------------|
| 1 | Bolt A                                              |
| 2 | Connector<br>(See 09-11-16 Connector Removal Note.) |

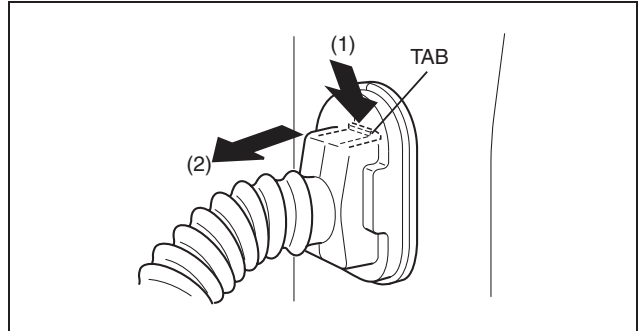
|   |           |
|---|-----------|
| 3 | Bolt B    |
| 4 | Rear door |

## DOORS AND LIFTGATE

3. Install in the reverse order of removal.
4. Adjust the rear door. (See 09-11-22 DOOR ADJUSTMENT.)

### Connector Removal Note

1. While pressing the tab in the direction of arrow (1), disconnect the connector in the direction of arrow (2).

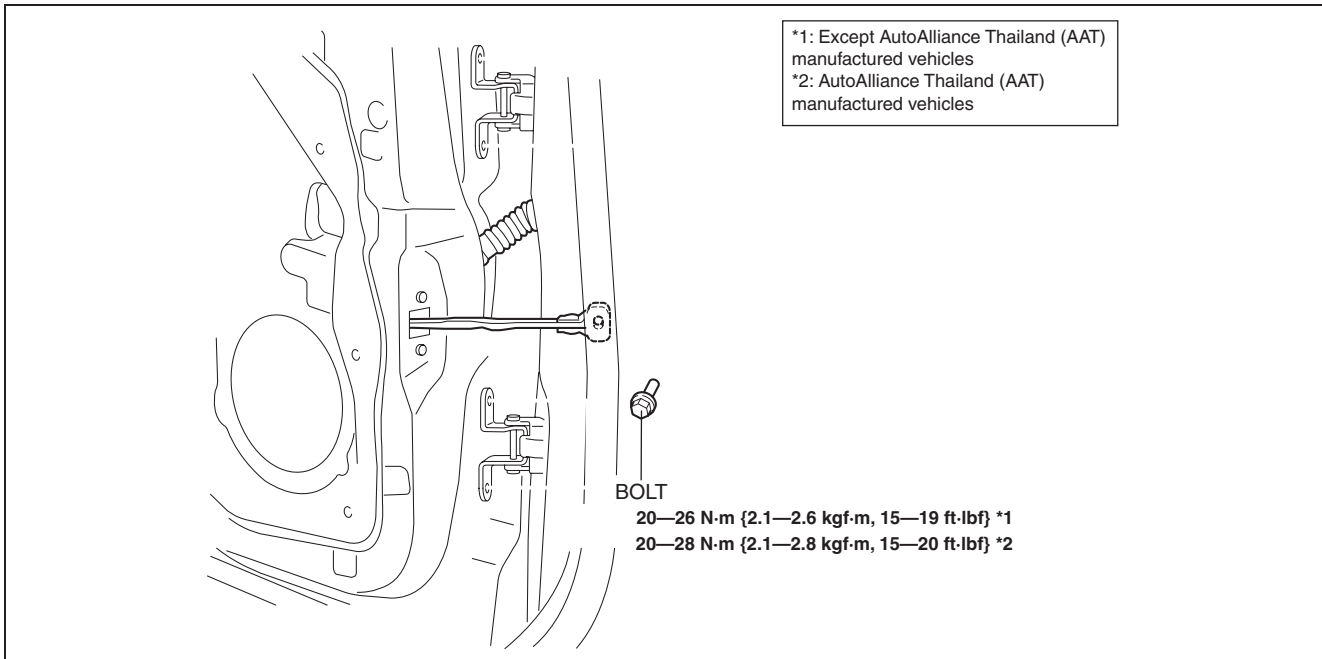


am2zzw000042

### REAR DOOR CHECKER REMOVAL/INSTALLATION

id091100520700

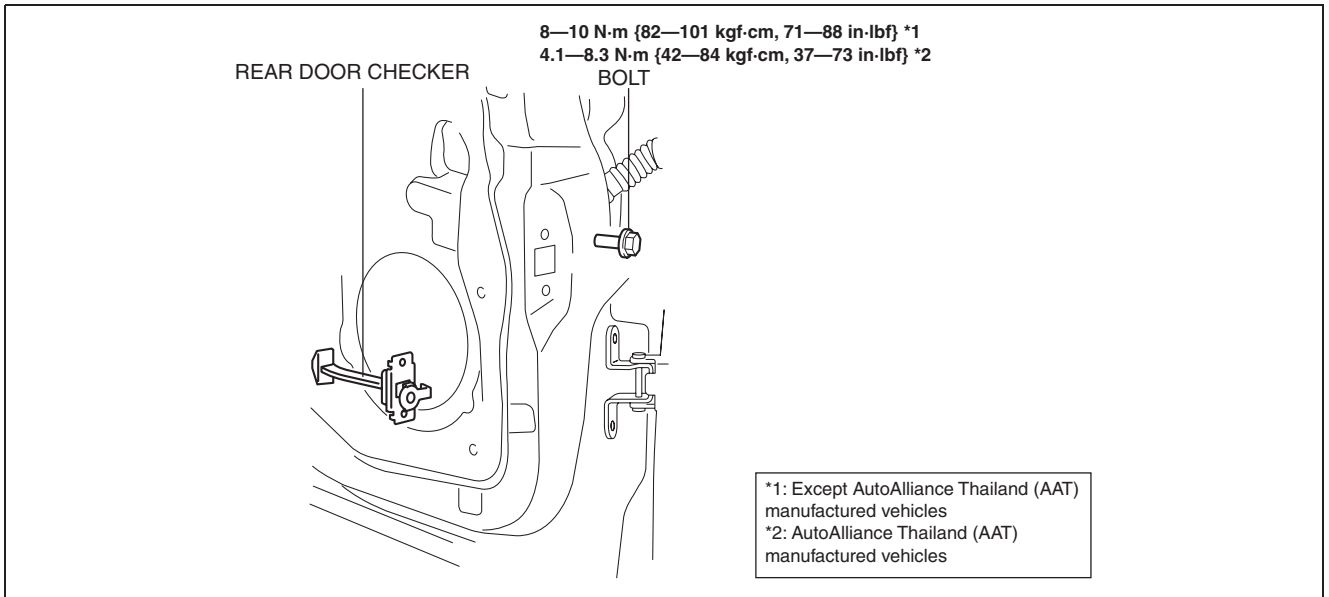
1. Fully close the rear door glass.
2. Disconnect the negative battery cable.
3. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the rear door speaker. (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
6. Remove the bolt.



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## DOORS AND LIFTGATE

7. Remove the bolts.



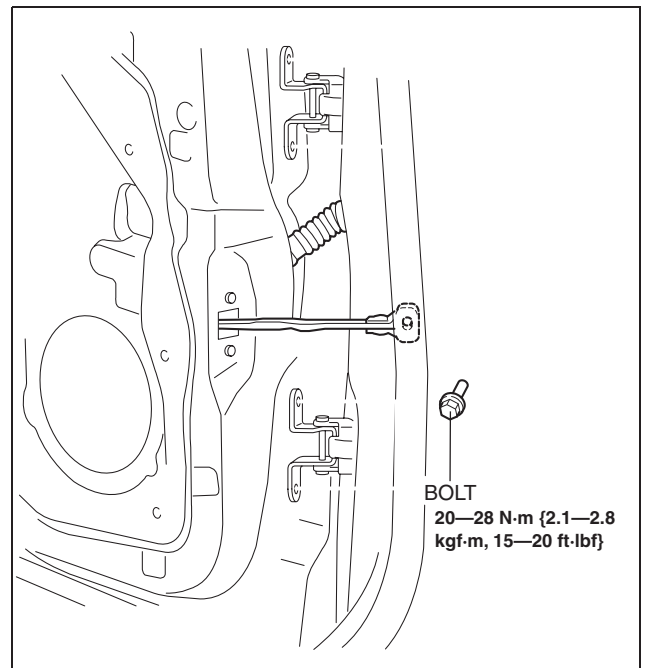
am2zzw0000481

8. Pull out the rear door checker from the rear speaker installation hole.
9. Install in the reverse order of removal.

### REAR DOOR CHECKER REMOVAL/INSTALLATION [4SD]

id091100520708

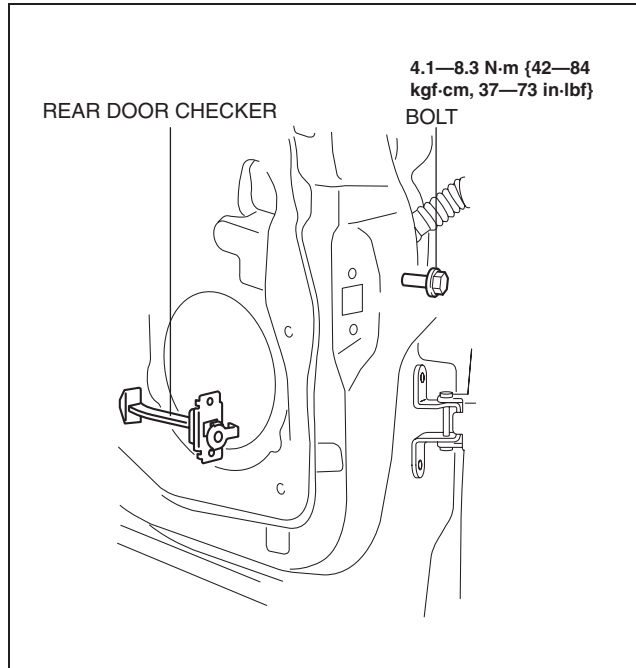
1. Fully close the rear door glass.
2. Disconnect the negative battery cable.
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the rear door speaker. (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
5. Remove the bolt.



am2zzw0000491

## DOORS AND LIFTGATE

6. Remove the bolts.
7. Pull out the rear door checker from the rear speaker installation hole.
8. Install in the reverse order of removal.

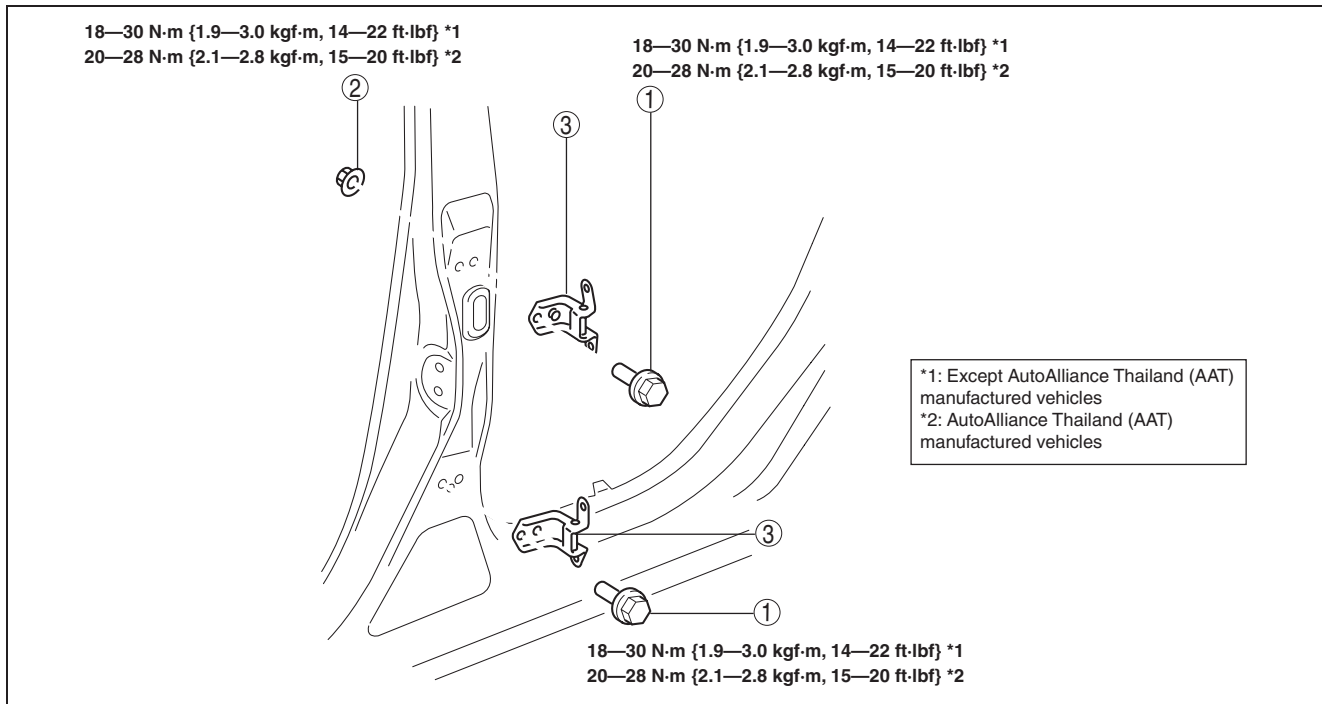


am2zzw0000491

### REAR DOOR HINGE REMOVAL/INSTALLATION

id091100520800

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Rear door (See 09-11-15 REAR DOOR REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (4) B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



am2zzw0000481

|   |                 |
|---|-----------------|
| 1 | Bolt            |
| 2 | Nut             |
| 3 | Rear door hinge |

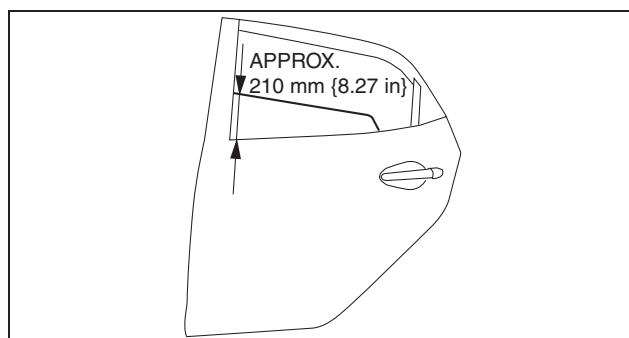
4. Install in the reverse order of removal.

## DOORS AND LIFTGATE

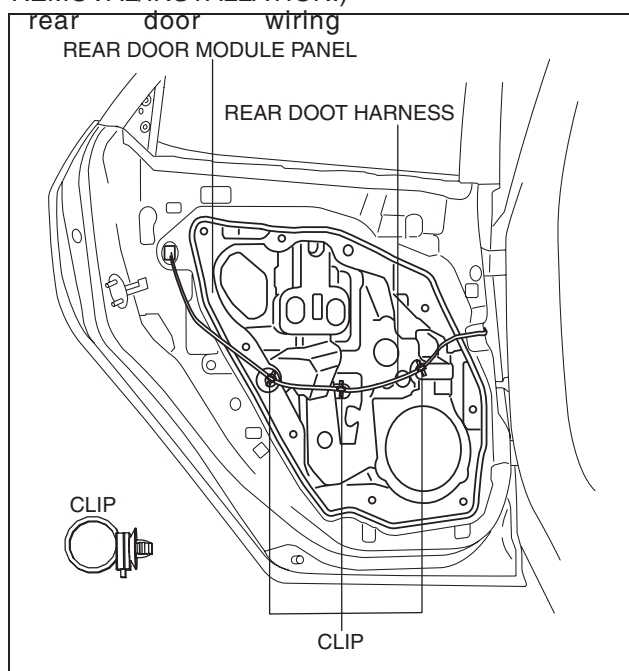
### REAR DOOR MODULE PANEL REMOVAL/INSTALLATION

id091100520900

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is approx. 210 mm {8.27 in}.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (3) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (4) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)
4. Remove the clips securing the harness from the rear door module panel.



am2zzw0000438

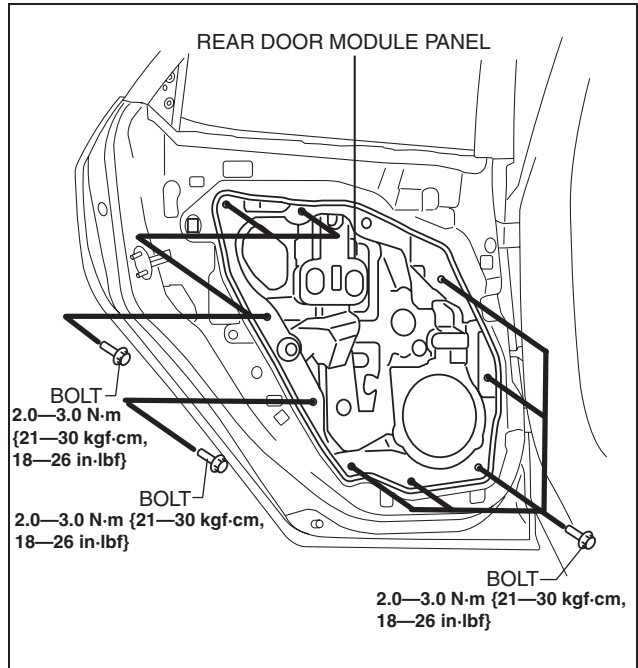


am2zzw0000041

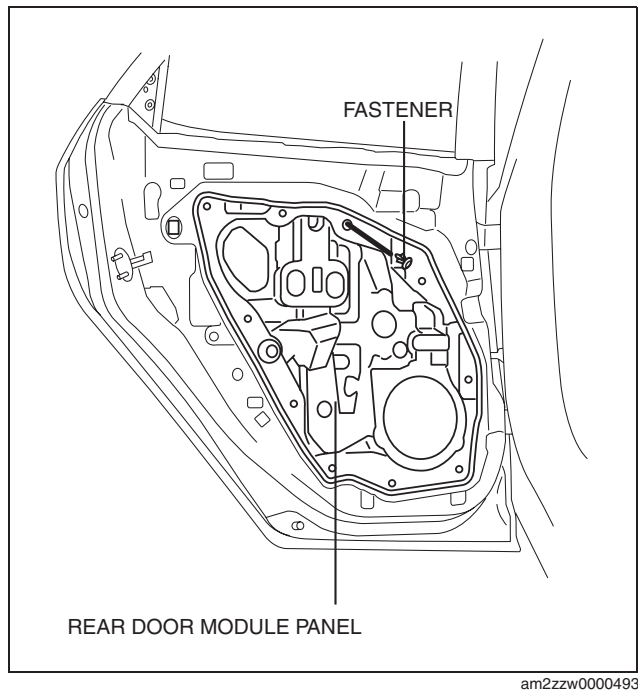


## DOORS AND LIFTGATE

5. Remove the bolts.

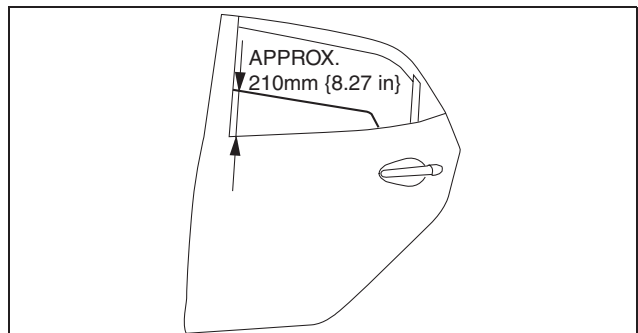


6. Remove the fastener.
7. Remove the rear door module panel.
8. Remove the rear power window motor. (See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)
9. Remove the rear power window regulator. (See 09-12-15 REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)
10. Install in the reverse order of removal.



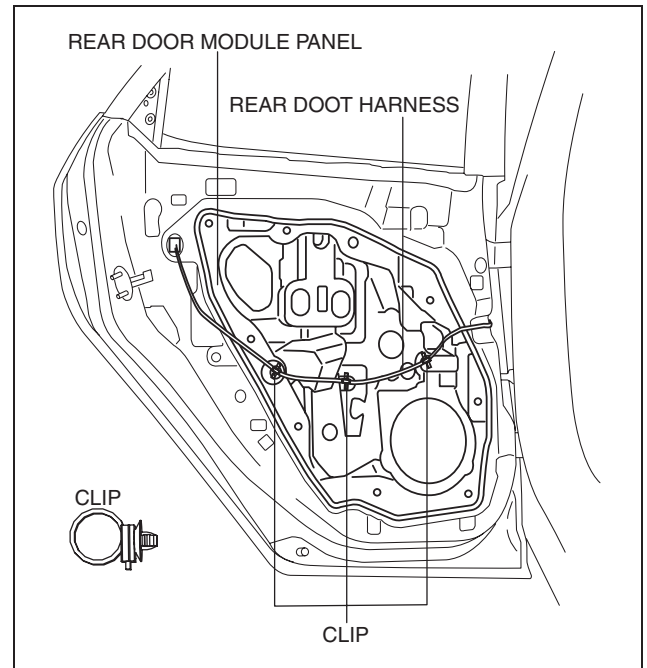
### REAR DOOR MODULE PANEL REMOVAL/INSTALLATION [4SD]

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is approx. 210 mm {8.27 in}.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (2) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (3) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)



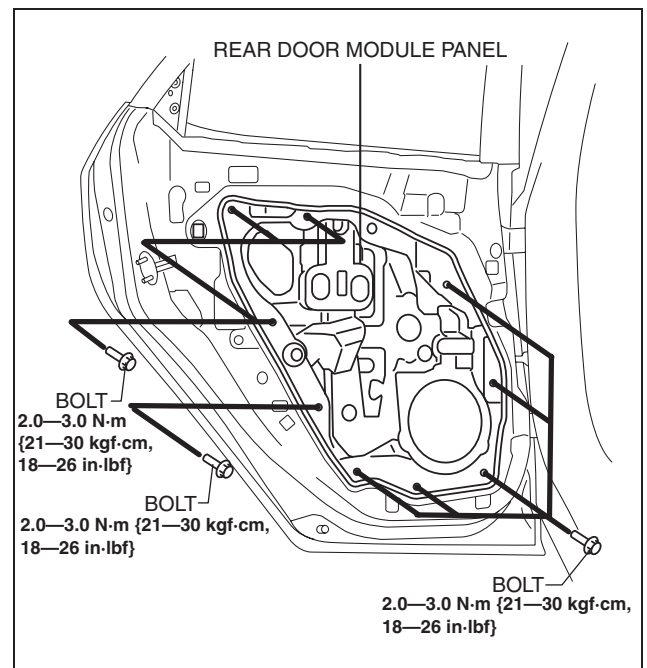
## DOORS AND LIFTGATE

4. Remove the clips securing the rear door wiring harness from the rear door module panel.



am2zzw0000041

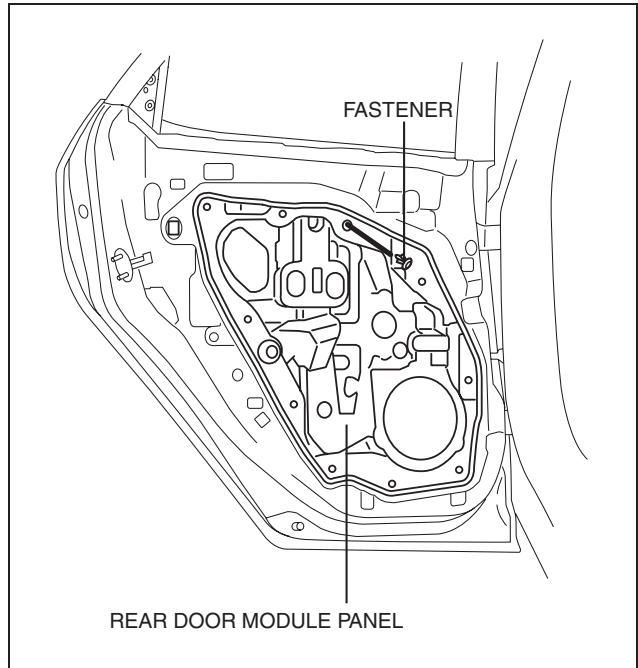
5. Remove the bolts.



am2zzw0000493

## DOORS AND LIFTGATE

6. Remove the fastener.
7. Remove the rear door module panel.
8. Remove the rear power window motor. (See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)
9. Remove the rear power window regulator. (See 09-12-15 REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)
10. Install in the reverse order of removal.

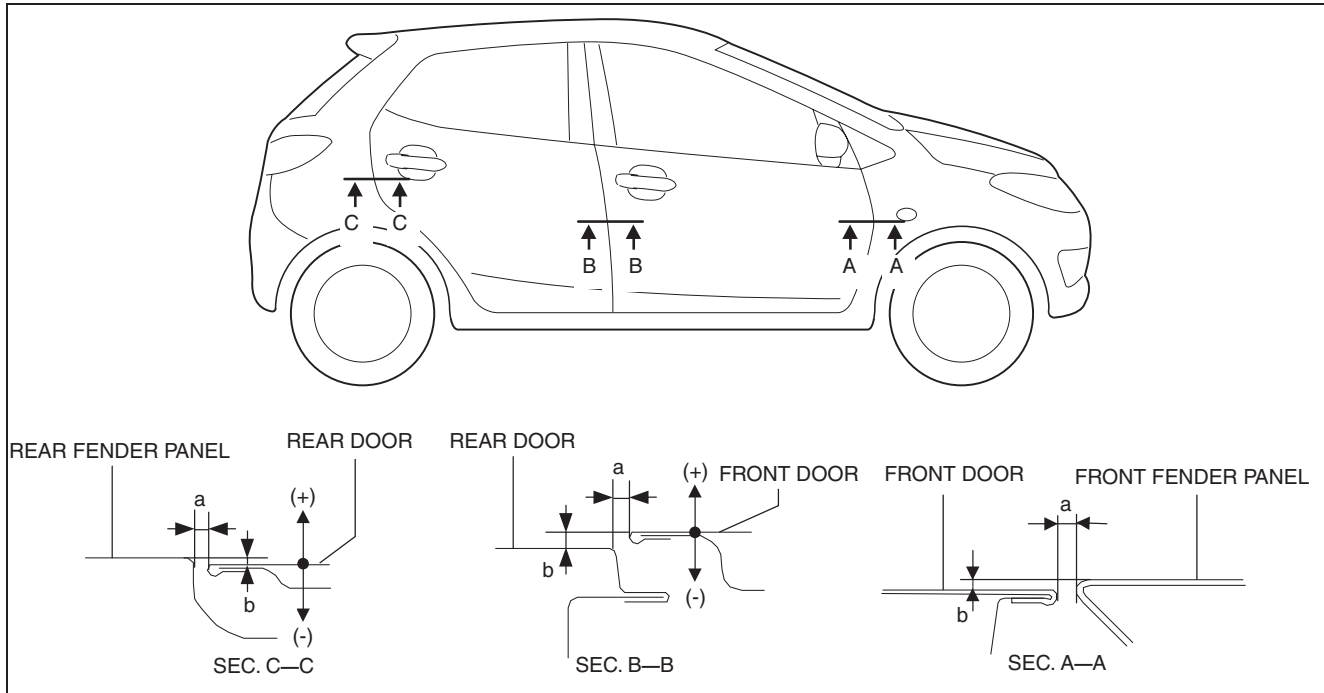


am2zzw0000494

### DOOR ADJUSTMENT

id091100521100

1. Loosen the door hinge installation bolts.
2. Adjust the gap and height difference to the standard range by moving the door back and forth, left and right.



am2zzw0000042

#### Standard range

a: 3.0—5.0 mm {0.12—0.19 in}

b: -1.0—1.0 mm {-0.039—0.039 in}

3. Tighten the bolts.
4. If the door does not open/close smoothly, adjust it by loosening the door lock striker installation screw.

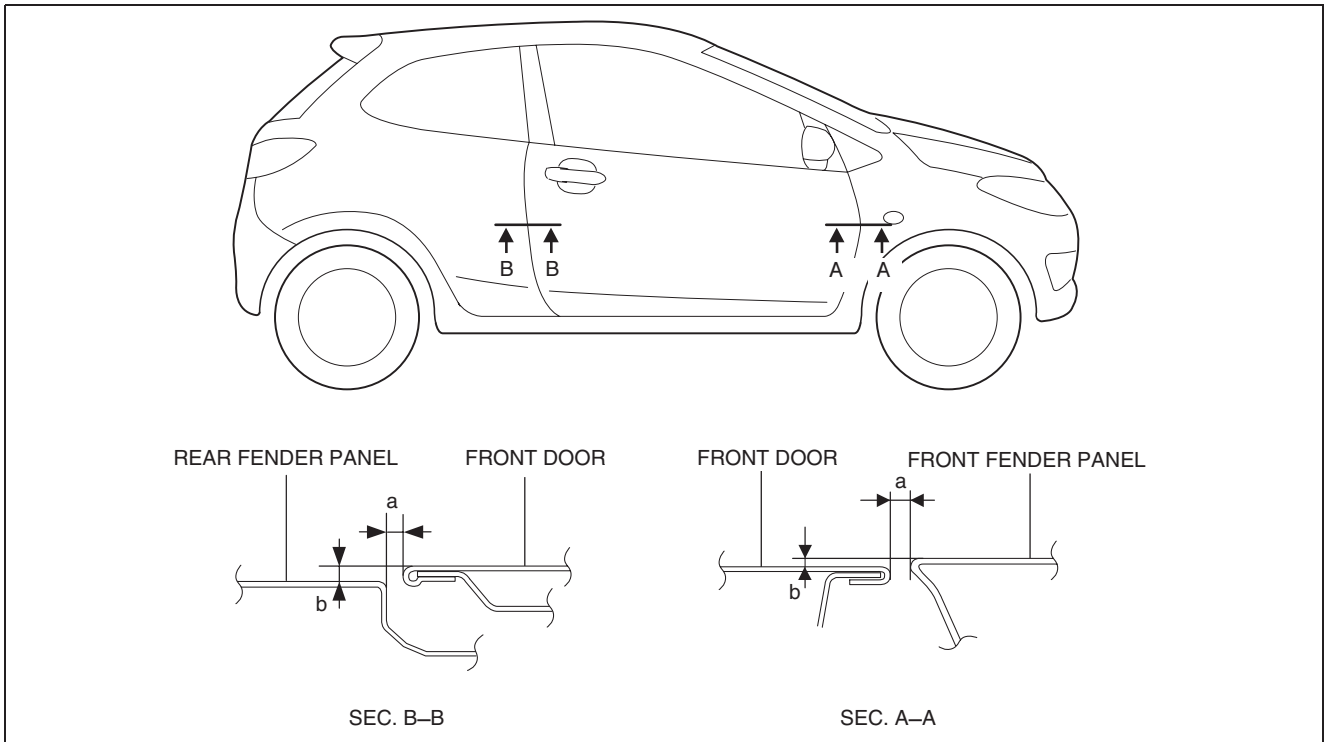
### DOOR ADJUSTMENT [3HB]

id091100521106

1. Loosen the door hinge installation bolts.

## DOORS AND LIFTGATE

- Adjust the gap and height difference to the standard range by moving the door back and forth, left and right.



am2zzw0000337

### Standard range

a: 3.0—5.0 mm {0.12—0.19 in}

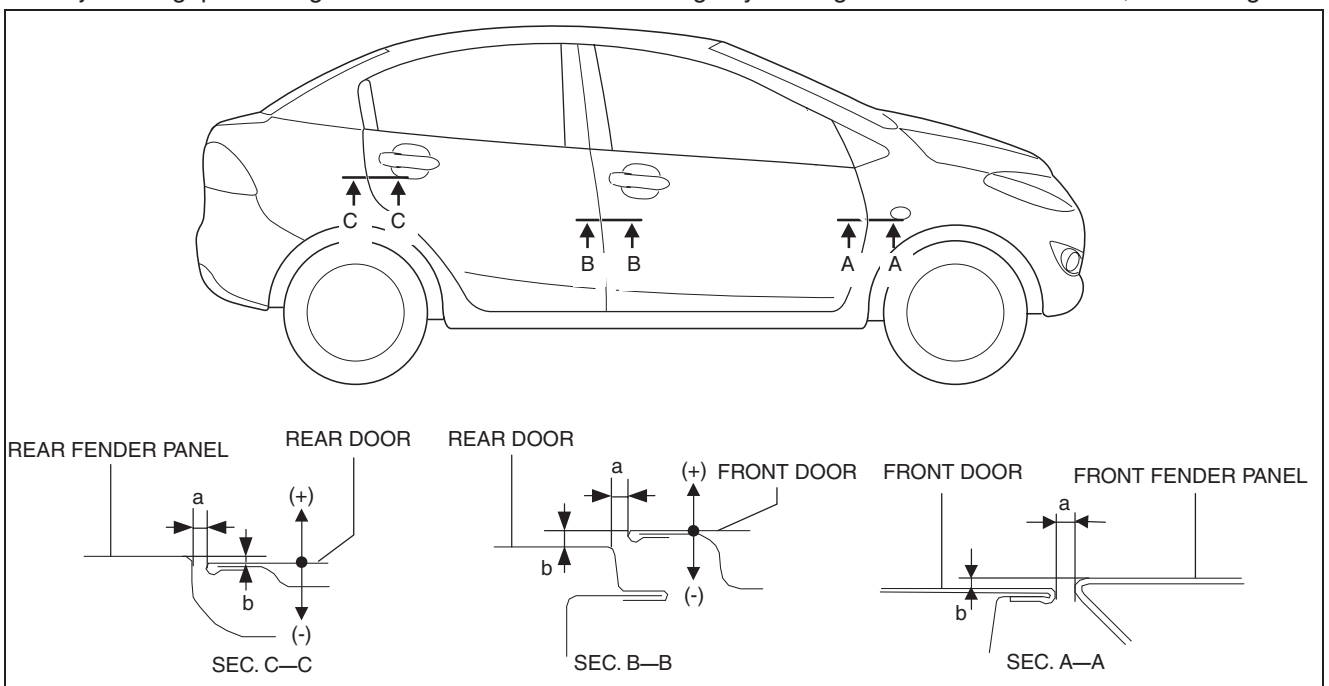
b: -1.0—1.0 mm {-0.039—0.039 in}

- Tighten the bolts.
- If the door does not open/close smoothly, adjust it by loosening the door lock striker installation screw.

### DOOR ADJUSTMENT [4SD]

id091100521108

- Loosen the door hinge installation bolts.
- Adjust the gap and height difference to the standard range by moving the door back and forth, left and right.



am2zzw0000485

## DOORS AND LIFTGATE

### Standard range

a: 3.0—5.0 mm {0.12—0.19 in}

b: -1.0—1.0 mm {-0.039—0.039 in}

3. Tighten the bolts.
4. If the door does not open/close smoothly, adjust it by loosening the door lock striker installation screw.

### LIFTGATE REMOVAL/INSTALLATION

id091100521200

#### Note

- If the liftgate cannot be locked or opened due to a discharged battery or malfunctions in the electrical system, open the liftgate using the liftgate manual open/close procedure. (See 09-11-28 LIFTGATE MANUAL OPEN/CLOSE PROCEDURE.)

#### Warning

- When removing the stay damper, serious injury may occur if the stay damper is removed without supporting the liftgate. Always perform the procedure with at least another person.

1. Disconnect the negative battery cable.
2. Remove the liftgate upper trim. (See 09-17-78 LIFTGATE UPPER TRIM REMOVAL/INSTALLATION.)
3. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
4. Disconnect the connectors.
5. Remove the grommets from the liftgate.

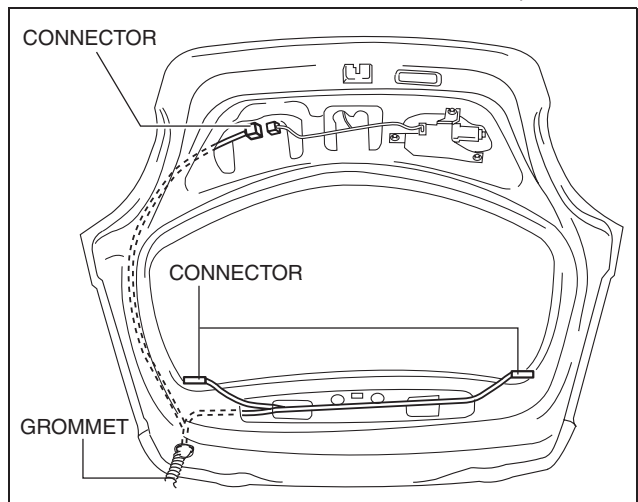
#### Note

- If the liftgate is to be replaced with a new one, remove the liftgate wiring harnesses without tying them with strings.

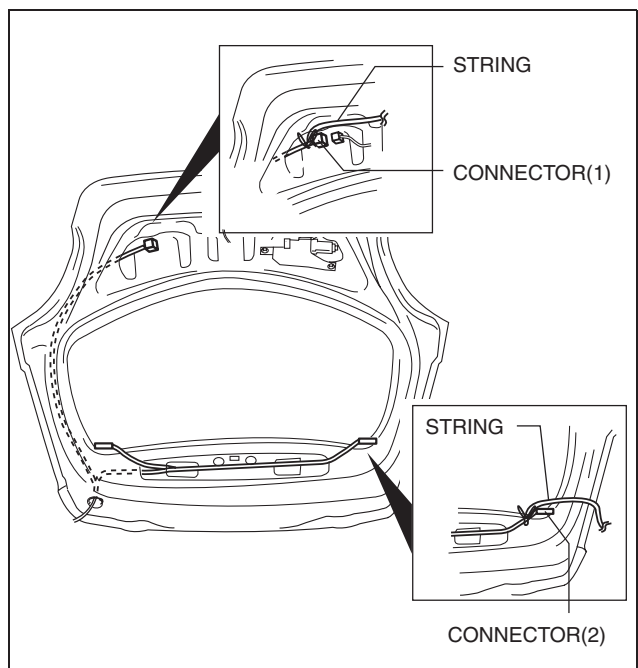
6. Tie each string to connectors (1) and (2) shown in the figure.

#### Note

- Prepare two strings of 150 cm {59.1 in} or longer length.



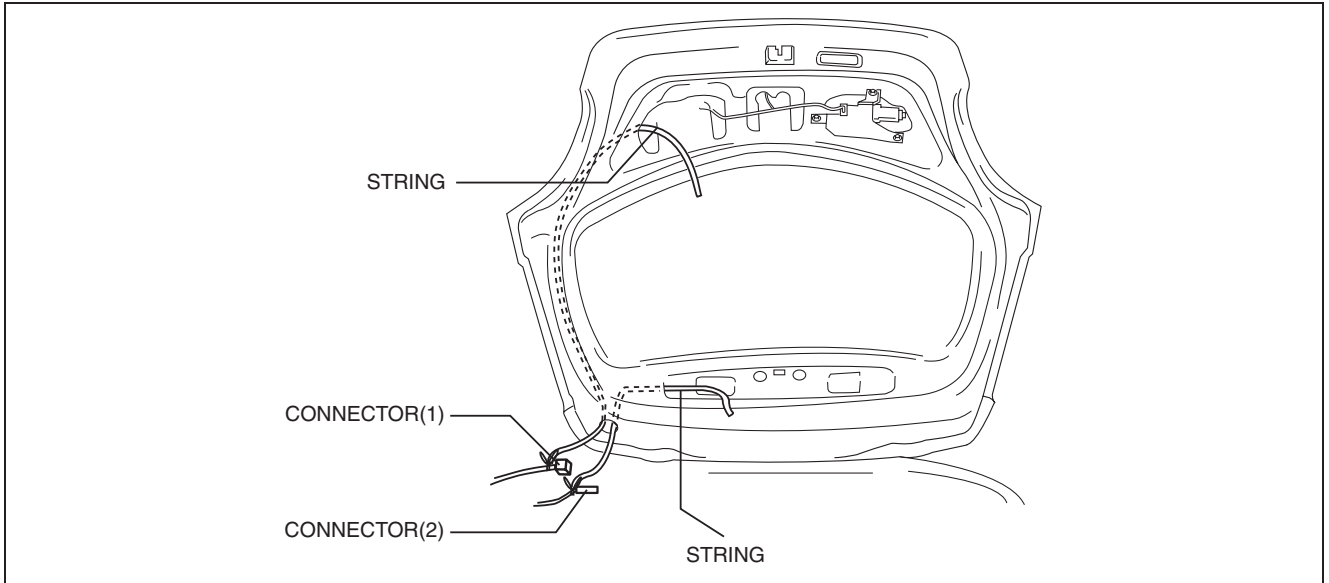
am2zzw0000509



am2zzw0000509

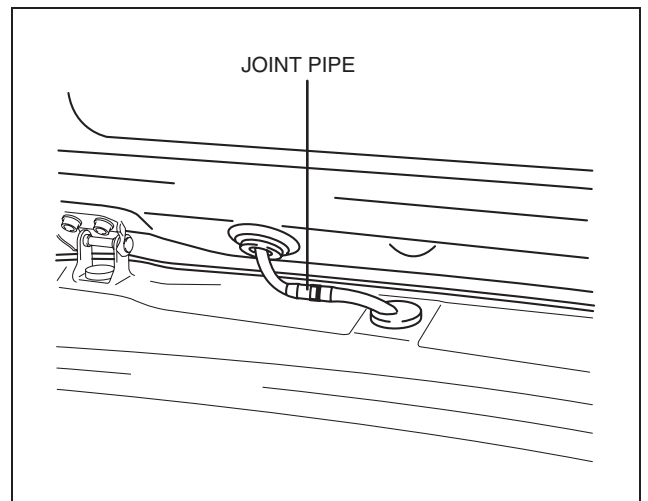
## DOORS AND LIFTGATE

7. Pull out the liftgate wiring harness as shown in the figure while grasping the end of the string so that the end of the string does not enter the liftgate.



am2zzw0000191

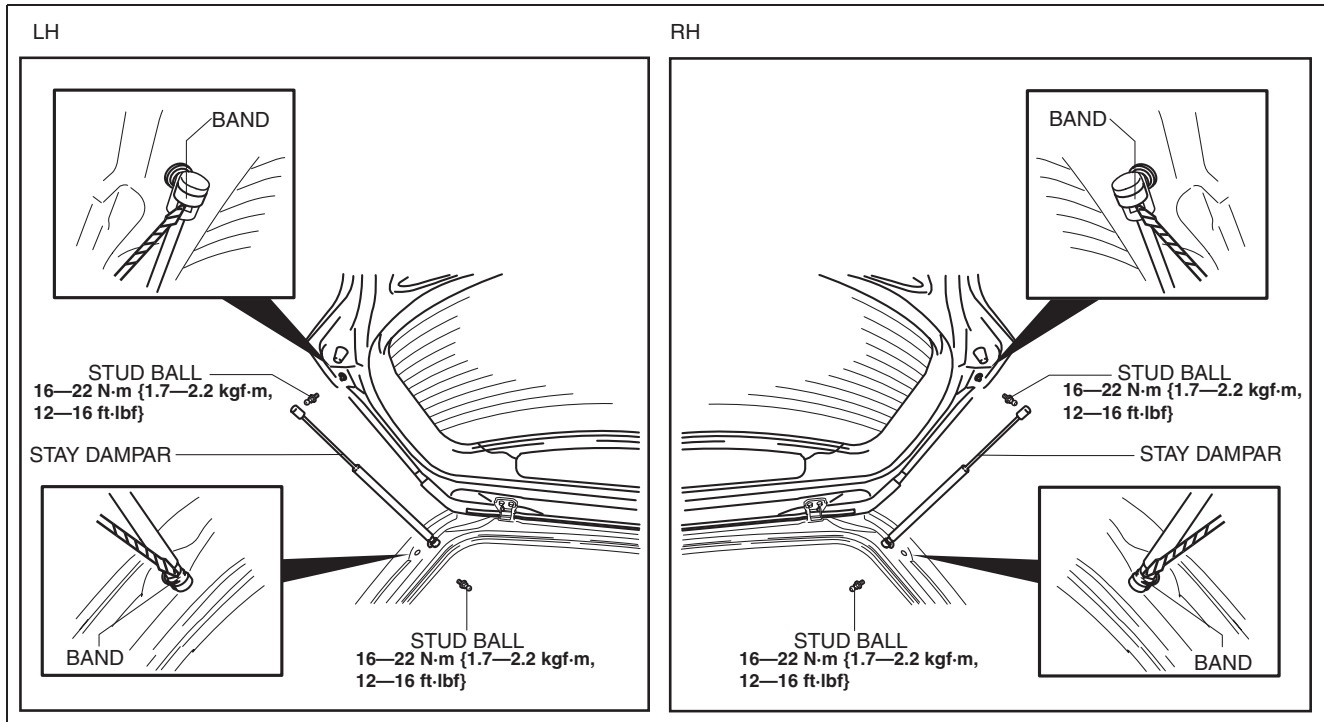
8. Untie the strings from connectors (1) and (2).
9. Disconnect the joint pipe of the rear washer hose.



am2zzw0000042

## DOORS AND LIFTGATE

10. Remove the stay damper band using a tape-wrapped flathead screwdriver.

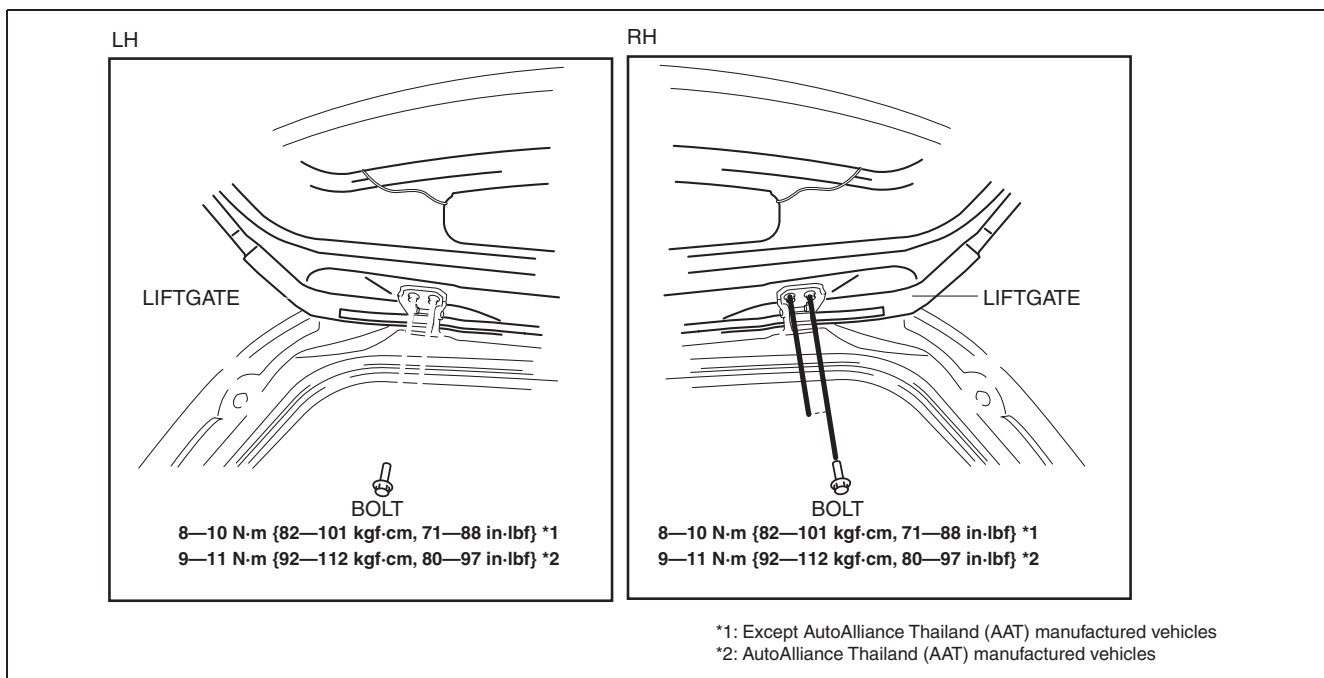


am2zzw000042

11. Remove the stay damper.

12. Remove the stud ball.

13. Remove the bolts.



am2zzw0000494

14. Remove the liftgate.

15. Install in the reverse order of removal.

16. Adjust the liftgate. (See 09-11-30 LIFTGATE ADJUSTMENT.)

### LIFTGATE HINGE REMOVAL/INSTALLATION

id091100521300

1. Disconnect the negative battery cable.

2. Remove the following parts:

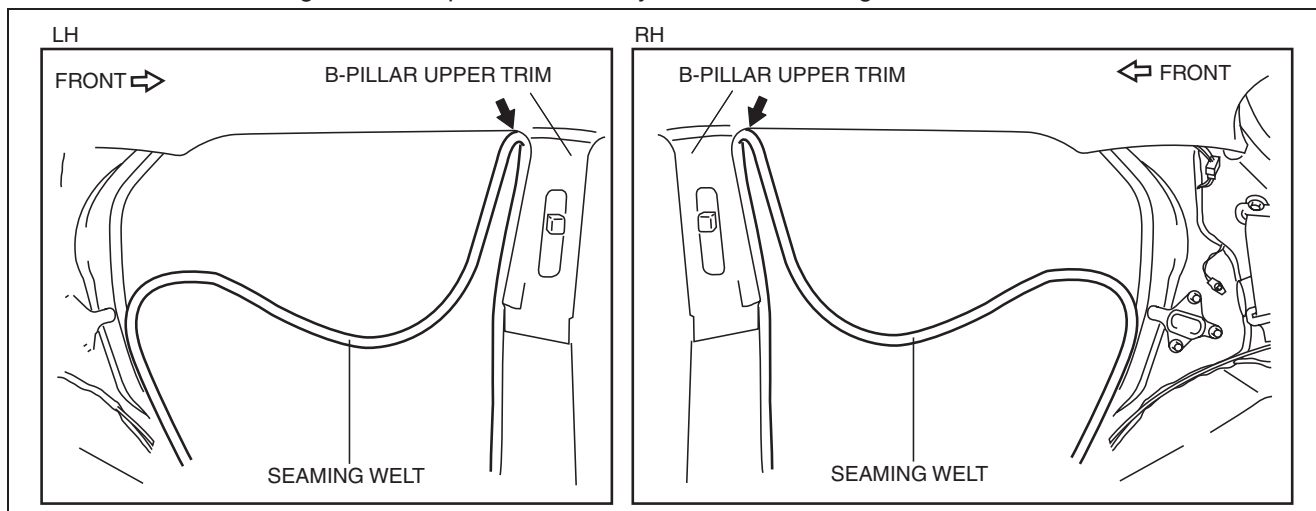
(1) Liftgate (See 09-11-24 LIFTGATE REMOVAL/INSTALLATION.)

(2) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)

## 09-11–26

## DOORS AND LIFTGATE

- (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (5) Lower anchor installation bolts on the rear seat belt. (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (6) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (7) Trunk side trim (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
  - (8) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
3. Peel back the seaming welt to the point indicated by the arrow in the figure.

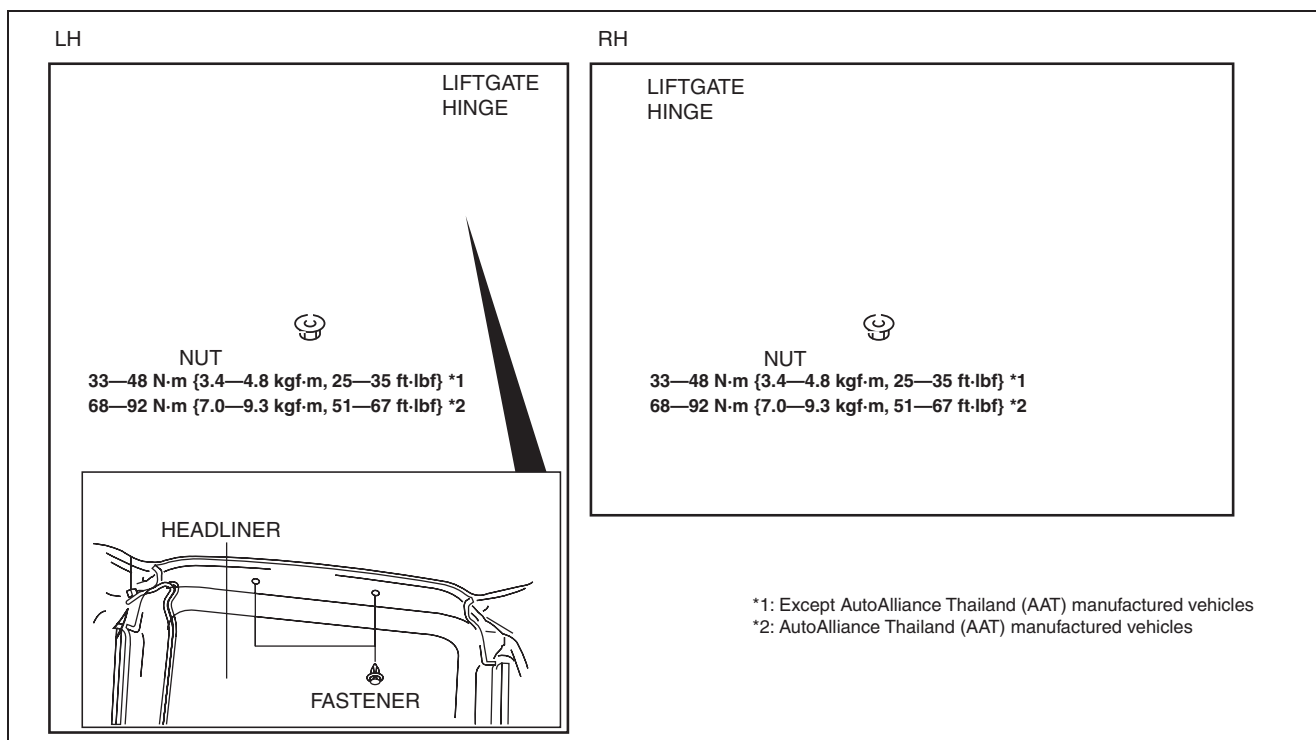


am2zzw000043

4. Remove the fasteners on the rear part of the headliner and remove the nut while partially peeling back the headliner.

### Note

- Be careful not to leave a fold-seam.



\*1: Except AutoAlliance Thailand (AAT) manufactured vehicles  
 \*2: AutoAlliance Thailand (AAT) manufactured vehicles

am2zzw0000494

5. Remove the liftgate hinge.
6. Install in the reverse order of removal.



## DOORS AND LIFTGATE

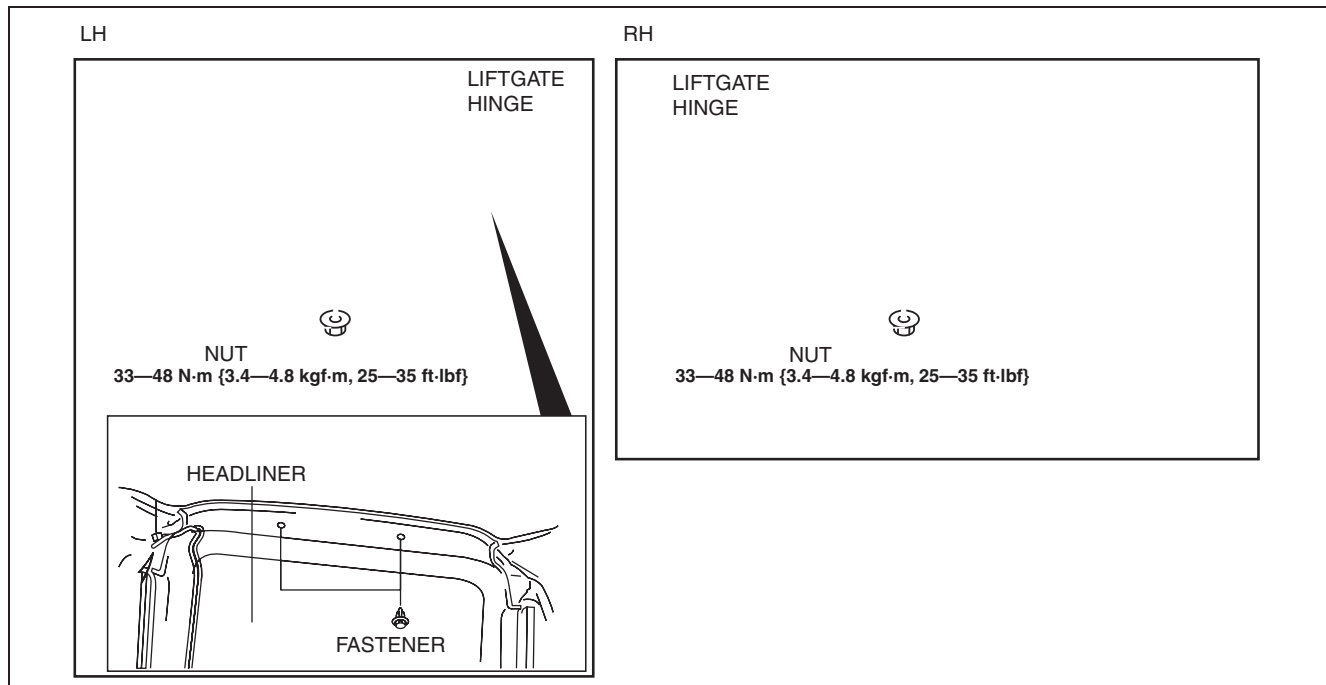
### LIFTGATE HINGE REMOVAL/INSTALLATION [3HB]

id091100521306

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Liftgate (See 09-11-24 LIFTGATE REMOVAL/INSTALLATION.)
  - (2) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (3) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (4) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (5) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (6) Lower anchor installation bolts on the rear seat belt. (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (7) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (8) C-pillar trim (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
3. Remove the fasteners on the rear part of the headliner and remove the nut while partially peeling back the headliner.

#### Note

- Be careful not to leave a fold-seam.



am2zzw0000509

4. Remove the liftgate hinge.
5. Install in the reverse order of removal.

### LIFTGATE MANUAL OPEN/CLOSE PROCEDURE

id091100009500

#### Note

- If the liftgate cannot be unlocked or opened due to a discharged battery or malfunction in the electrical system, it can be opened using the following procedure.

#### Opening the Liftgate

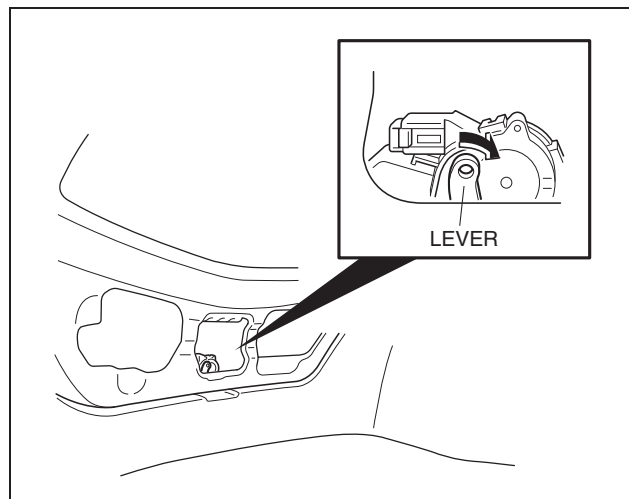
1. Fold down the rear seat back.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)

#### Caution

- Wear gloves when performing the procedure. The body edge can injure bare hands.

## DOORS AND LIFTGATE

3. Move the lever shown in the figure to the left to unlock the liftgate.



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### STAY DAMPER DISPOSAL

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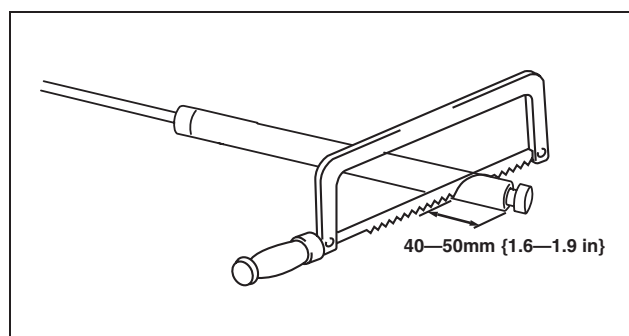
#### Note

- The stay damper contains colorless, odorless, nontoxic gas.

1. Wear protective eye wear.
2. Position the stay damper horizontally.
3. Drain gas and oil by cutting the position indicated in the figure to a **2—3 mm** {0.08—0.11 in} depth using a metal saw.

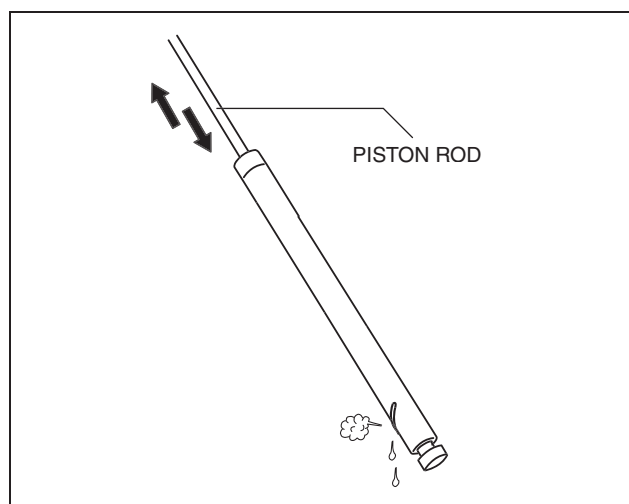
#### Caution

- **Be careful. The gas and oil may spray out with force.**



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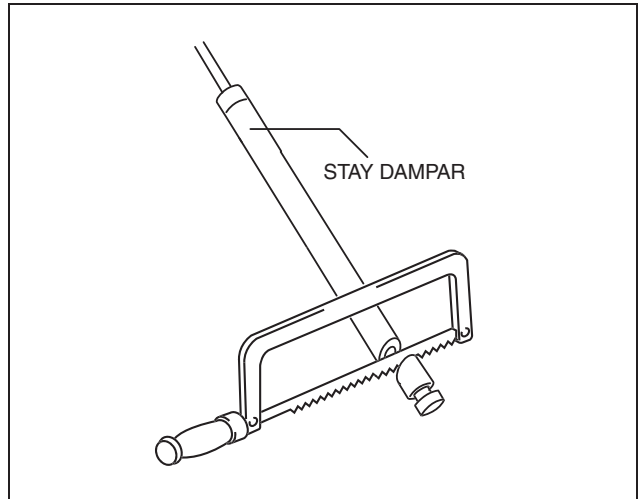
4. Verify that the gas and oil is drained completely by pulling and pushing the piston rod several times with the cut position facing downward.



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## DOORS AND LIFTGATE

5. Cut off the bottom of the stay damper.
6. Dispose of the stay damper.

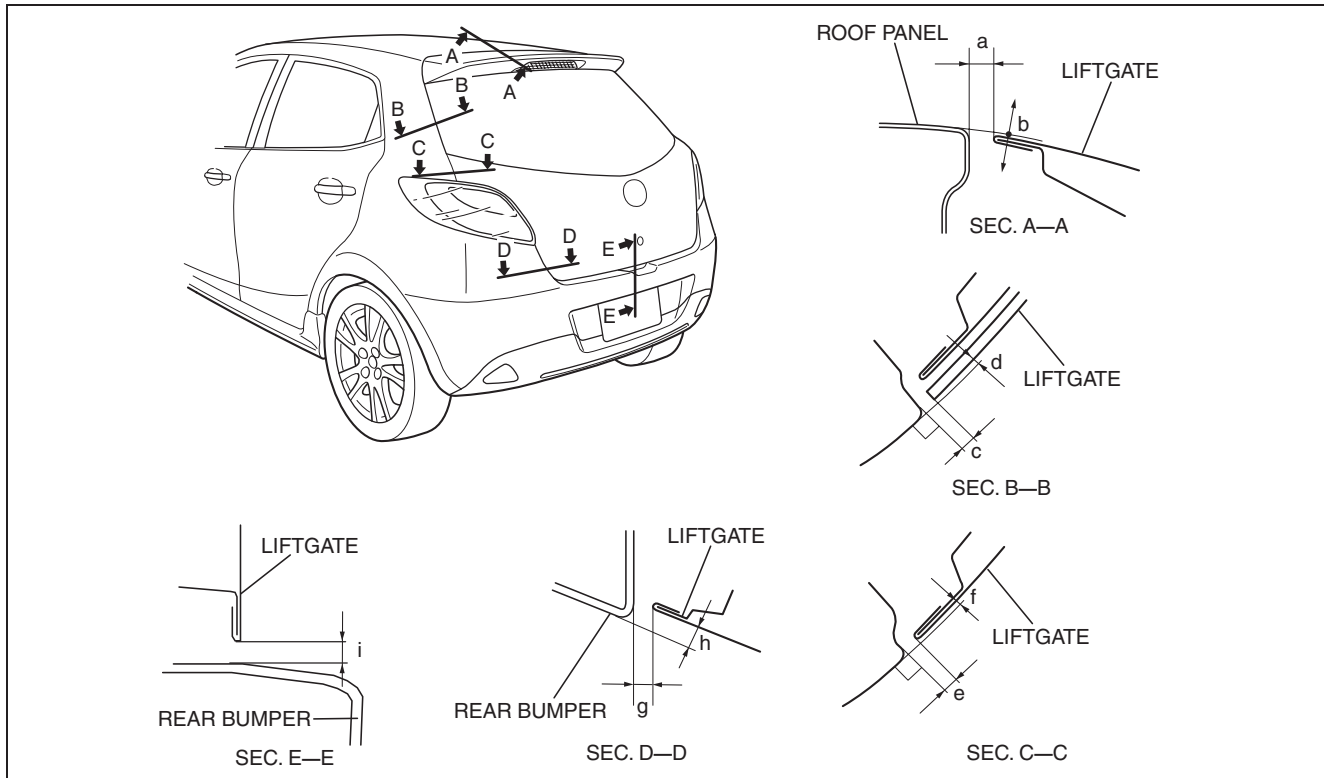


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### LIFTGATE ADJUSTMENT

id091100521400

1. Measure the gap and height difference between the liftgate and the body.
2. Loosen the liftgate hinge installation bolts and adjust the gap by moving the liftgate.



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#### Standard clearance

- a: 5.0—7.0 mm {0.20—0.27 in}
- b: -2.0—0.0 mm {0.078—0.000 in}
- c: 2.5—6.5 mm {0.10—0.25 in}
- d: -0.2—4.2 mm {0.00—0.16 in}
- e: 2.8—5.2 mm {0.12—0.20 in}
- f: -0.7—1.7 mm {0.02—0.06 in}
- g: 2.0—6.0 mm {0.08—0.23 in}
- h: -1.5—2.5 mm {0.059—0.098 in}
- i: 4.0—8.0 mm {0.16—0.31 in}

3. Tighten the bolts.

## 09-12 GLASS/WINDOWS/MIRRORS

### GLASS/WINDOWS/MIRRORS

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## GLASS/WINDOWS/MIRRORS

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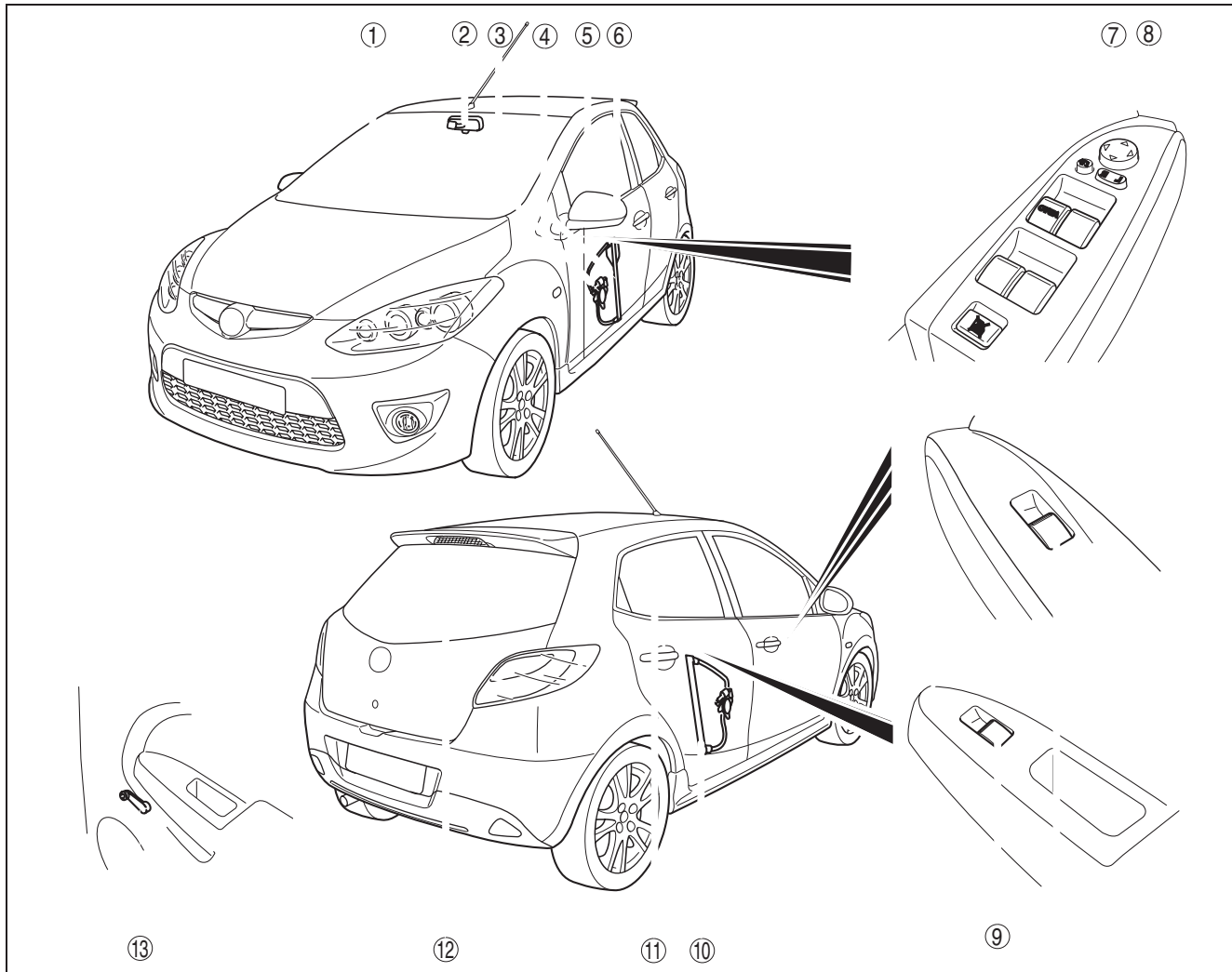
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## GLASS/WINDOWS/MIRRORS

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| 2 | Rearview mirror<br>(See 09-12-54 REARVIEW MIRROR REMOVAL.)<br>(See 09-12-57 REARVIEW MIRROR INSTALLATION.)<br>(See 09-12-57 BASE REMOVAL.)<br>(See 09-12-57 BASE INSTALLATION.) |
| 3 | Power window motor<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)<br>(See 09-12-19 POWER WINDOW MOTOR INSPECTION.)                                                  |
| 4 | Front power window regulator<br>(See 09-12-12 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)                                                                               |

|   |                                                                                                                                                                                                                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5 | Front door glass<br>(See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                             |
| 6 | Power outer mirror<br>(See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)<br>(See 09-12-45 POWER OUTER MIRROR INSPECTION.)<br>(See 09-12-46 OUTER MIRROR GLASS REMOVAL.)<br>(See 09-12-46 OUTER MIRROR GLASS INSTALLATION.)<br>(See 09-12-47 OUTER MIRROR GARNISH REMOVAL.)<br>(See 09-12-48 OUTER MIRROR GARNISH INSTALLATION.) |

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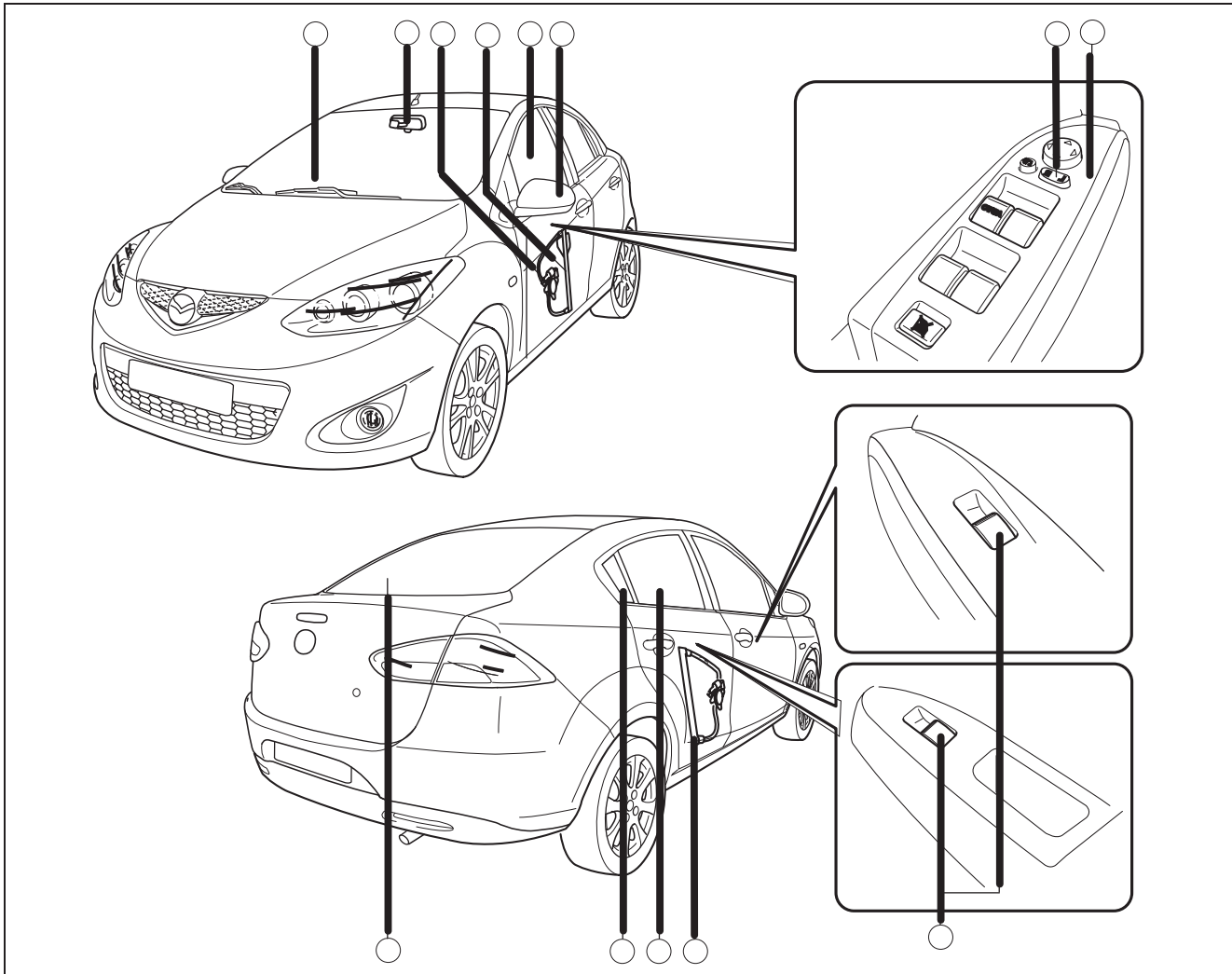
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| 7  | Power outer mirror switch<br>(See 09-12-48 POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION.)<br>(See 09-12-48 POWER OUTER MIRROR SWITCH INSPECTION.)                                                                                                                                                                                                            |
| 8  | Power window main switch<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)<br>(See 09-12-21 POWER WINDOW MAIN SWITCH INSPECTION.)<br>(See 09-12-27 POWER WINDOW SYSTEM INITIALIZATION PROCEDURE.)<br>(See 09-12-27 TWO-STEP DOWN FUNCTION OPERATIVE/NON-OPERATIVE SWITCHING PROCEDURE.)<br>(See 09-12-28 DOOR GLASS POSITION CHANGE PROCEDURE.) |
| 9  | Power window subswitch<br>(See 09-12-24 POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION.)<br>(See 09-12-24 POWER WINDOW SUBSWITCH INSPECTION.)                                                                                                                                                                                                                     |
| 10 | Rear power window regulator<br>(See 09-12-15 REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                |
| 11 | Rear door glass<br>(See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                         |
| 12 | Rear window glass<br>(See 09-12-32 REAR WINDOW GLASS REMOVAL.)<br>(See 09-12-36 REAR WINDOW GLASS INSTALLATION.)<br>(See 09-12-53 FILAMENT INSPECTION.)<br>(See 09-12-53 FILAMENT REPAIR.)                                                                                                                                                                     |
| 13 | Regulator handle<br>(See 09-12-12 REGULATOR HANDLE REMOVAL.)<br>(See 09-12-12 REGULATOR HANDLE INSTALLATION.)                                                                                                                                                                                                                                                  |

## GLASS/WINDOWS/MIRRORS

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id09120000081



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|   |                                                                                                                                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Windshield<br>(See 09-12-29 WINDSHIELD REMOVAL.)<br>(See 09-12-30 WINDSHIELD INSTALLATION.)                                                                                     |
| 2 | Rearview mirror<br>(See 09-12-54 REARVIEW MIRROR REMOVAL.)<br>(See 09-12-57 REARVIEW MIRROR INSTALLATION.)<br>(See 09-12-57 BASE REMOVAL.)<br>(See 09-12-57 BASE INSTALLATION.) |
| 3 | Power window motor<br>(See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)<br>(See 09-12-19 POWER WINDOW MOTOR INSPECTION.)                                                  |
| 4 | Front power window regulator<br>(See 09-12-12 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)                                                                               |
| 5 | Front door glass<br>(See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)                                                                                                        |

|   |                                                                                                                                                                                                                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Power outer mirror<br>(See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)<br>(See 09-12-45 POWER OUTER MIRROR INSPECTION.)<br>(See 09-12-46 OUTER MIRROR GLASS REMOVAL.)<br>(See 09-12-46 OUTER MIRROR GLASS INSTALLATION.)<br>(See 09-12-47 OUTER MIRROR GARNISH REMOVAL.)<br>(See 09-12-48 OUTER MIRROR GARNISH INSTALLATION.) |
| 7 | Power outer mirror switch<br>(See 09-12-48 POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION.)<br>(See 09-12-48 POWER OUTER MIRROR SWITCH INSPECTION.)                                                                                                                                                                                  |



## GLASS/WINDOWS/MIRRORS

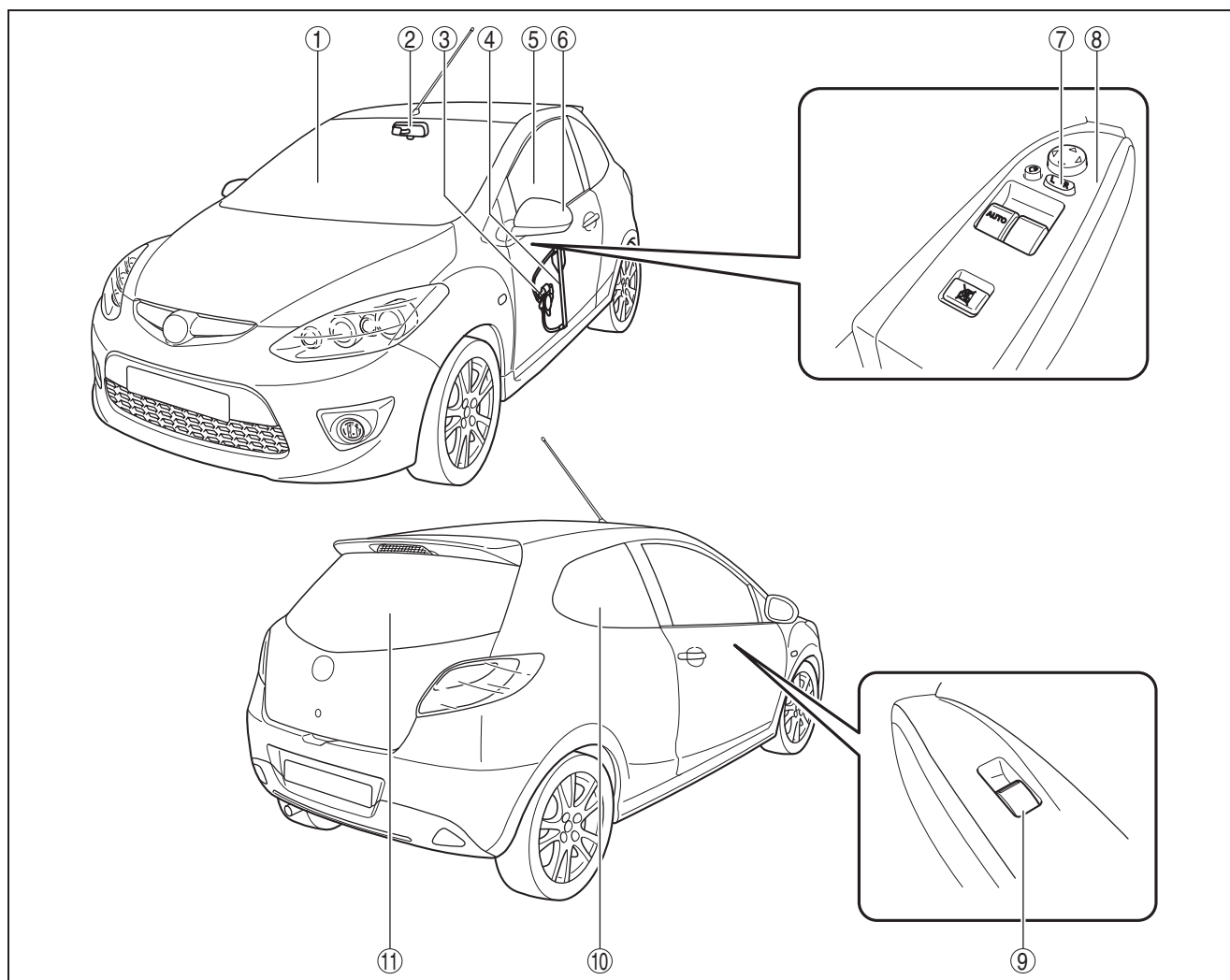
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| 8  | Power window main switch<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)<br>(See 09-12-21 POWER WINDOW MAIN SWITCH INSPECTION.)<br>(See 09-12-27 POWER WINDOW SYSTEM INITIALIZATION PROCEDURE.)<br>(See 09-12-27 TWO-STEP DOWN FUNCTION OPERATIVE/NON-OPERATIVE SWITCHING PROCEDURE.)<br>(See 09-12-28 DOOR GLASS POSITION CHANGE PROCEDURE.) |
| 9  | Power window subswitch<br>(See 09-12-24 POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION [4SD].)<br>(See 09-12-25 POWER WINDOW SUBSWITCH INSPECTION [4SD].)                                                                                                                                                                                                         |
| 10 | Rear power window regulator<br>(See 09-12-16 REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION [4SD].)                                                                                                                                                                                                                                                          |
| 11 | Rear door glass<br>(See 09-12-10 REAR DOOR GLASS REMOVAL/INSTALLATION [4SD].)                                                                                                                                                                                                                                                                                  |
| 12 | Rear door quarter glass<br>(See 09-12-11 REAR DOOR QUARTER GLASS REMOVAL/INSTALLATION [4SD].)                                                                                                                                                                                                                                                                  |
| 13 | Rear window glass<br>(See 09-12-34 REAR WINDOW GLASS REMOVAL [4SD].)<br>(See 09-12-39 REAR WINDOW GLASS INSTALLATION [4SD].)<br>(See 09-12-53 FILAMENT INSPECTION.)<br>(See 09-12-53 FILAMENT REPAIR.)                                                                                                                                                         |

## GLASS/WINDOWS/MIRRORS

### GLASS/WINDOWS/MIRRORS LOCATION INDEX [3HB]

id091200000z3



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| 1 | Windshield<br>(See 09-12-29 WINDSHIELD REMOVAL.)<br>(See 09-12-30 WINDSHIELD INSTALLATION.)                                                                                     |
| 2 | Rearview mirror<br>(See 09-12-54 REARVIEW MIRROR REMOVAL.)<br>(See 09-12-57 REARVIEW MIRROR INSTALLATION.)<br>(See 09-12-57 BASE REMOVAL.)<br>(See 09-12-57 BASE INSTALLATION.) |
| 3 | Power window motor<br>(See 09-12-18 POWER WINDOW MOTOR REMOVAL/INSTALLATION [3HB].)<br>(See 09-12-20 POWER WINDOW MOTOR INSPECTION [3HB].)                                      |
| 4 | Front power window regulator<br>(See 09-12-14 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION [3HB].)                                                                         |
| 5 | Front door glass<br>(See 09-12-8 FRONT DOOR GLASS REMOVAL/INSTALLATION [3HB].)                                                                                                  |

|   |                                                                                                                                                                                                                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Power outer mirror<br>(See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)<br>(See 09-12-45 POWER OUTER MIRROR INSPECTION.)<br>(See 09-12-46 OUTER MIRROR GLASS REMOVAL.)<br>(See 09-12-46 OUTER MIRROR GLASS INSTALLATION.)<br>(See 09-12-47 OUTER MIRROR GARNISH REMOVAL.)<br>(See 09-12-48 OUTER MIRROR GARNISH INSTALLATION.) |
| 7 | Power outer mirror switch<br>(See 09-12-48 POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION.)<br>(See 09-12-48 POWER OUTER MIRROR SWITCH INSPECTION.)                                                                                                                                                                                  |

## GLASS/WINDOWS/MIRRORS

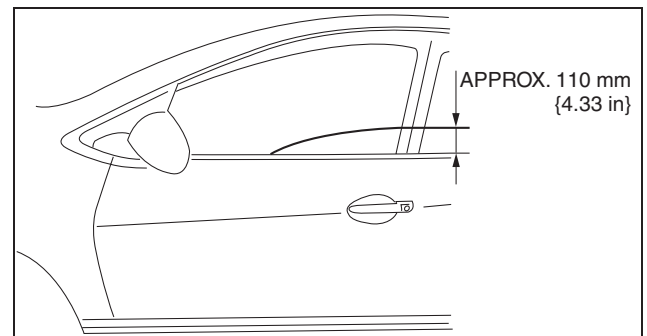
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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | Power window main switch<br>(See 09-12-21 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION [3HB].)<br>(See 09-12-22 POWER WINDOW MAIN SWITCH INSPECTION [3HB].)<br>(See 09-12-27 POWER WINDOW SYSTEM INITIALIZATION PROCEDURE.)<br>(See 09-12-27 TWO-STEP DOWN FUNCTION OPERATIVE/NON-OPERATIVE SWITCHING PROCEDURE.)<br>(See 09-12-28 DOOR GLASS POSITION CHANGE PROCEDURE.) |
| 9  | Power window subswitch<br>(See 09-12-24 POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION [3HB].)<br>(See 09-12-26 POWER WINDOW SUBSWITCH INSPECTION [3HB].)                                                                                                                                                                                                                     |
| 10 | Quarter window glass<br>(See 09-12-41 QUARTER WINDOW GLASS REMOVAL [3HB].)<br>(See 09-12-42 QUARTER WINDOW GLASS INSTALLATION [3HB].)                                                                                                                                                                                                                                      |
| 11 | Rear window glass<br>(See 09-12-32 REAR WINDOW GLASS REMOVAL.)<br>(See 09-12-36 REAR WINDOW GLASS INSTALLATION.)<br>(See 09-12-53 FILAMENT INSPECTION.)<br>(See 09-12-53 FILAMENT REPAIR.)                                                                                                                                                                                 |

### FRONT DOOR GLASS REMOVAL/INSTALLATION

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the front door speaker. (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
6. Remove the hole cover.
7. Remove the bolts.

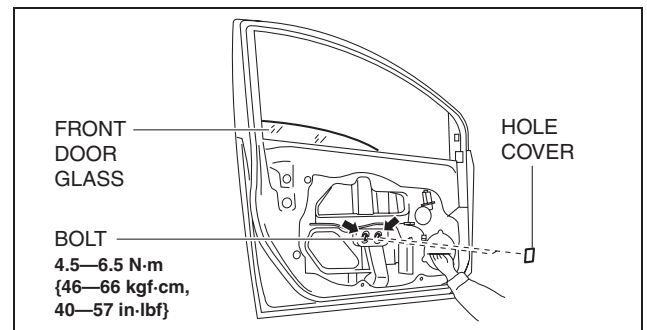
#### Caution

- If the bolts are removed without supporting the front door glass, the front door glass may fall off and be damaged. Remove the bolts while inserting your hand into the front door speaker installation hole to support the front door glass.



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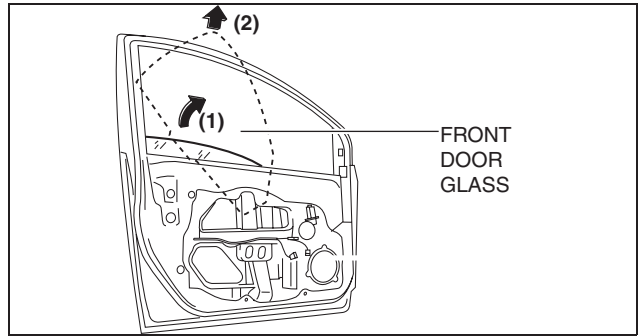
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## GLASS/WINDOWS/MIRRORS

8. Lift up the front door glass, tilt it in the direction of arrow (1) shown in the figure, then remove it in the direction of arrow (2).
9. Install in the reverse order of removal.

### Caution

- If the bolts are installed without supporting the front door glass, the front door glass may fall off and be damaged. When installing the front door glass, align the glass edge with the front door glass guide by hand through the speaker installation hole, and then install the bolts.

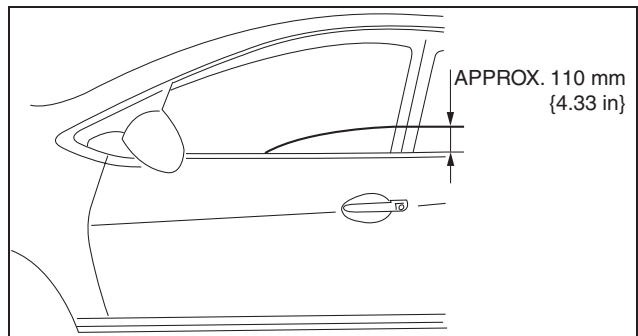


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### FRONT DOOR GLASS REMOVAL/INSTALLATION [3HB]

id091200001z3

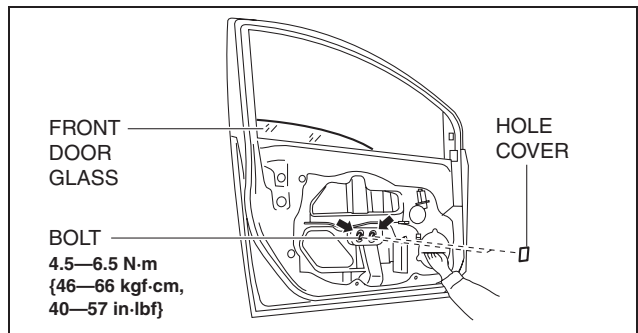
1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
5. Remove the front door speaker. (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
6. Remove the hole cover.
7. Remove the bolts.



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### Caution

- If the bolts are removed without supporting the front door glass, the front door glass may fall off and be damaged. Remove the bolts while inserting your hand into the front door speaker installation hole to support the front door glass.

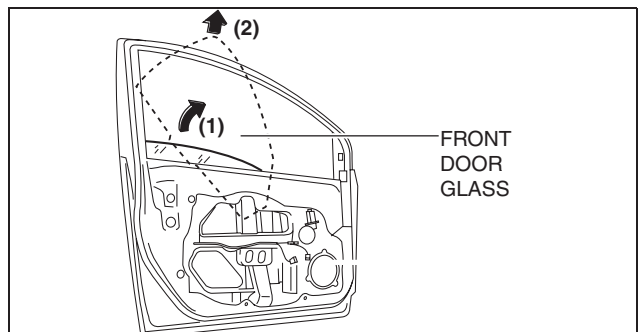


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8. Lift up the front door glass, tilt it in the direction of arrow (1) shown in the figure, then remove it in the direction of arrow (2).
9. Install in the reverse order of removal.

### Caution

- If the bolts are installed without supporting the front door glass, the front door glass may fall off and be damaged. When installing the front door glass, align the glass edge with the front door glass guide by hand through the speaker installation hole, and then install the bolts.



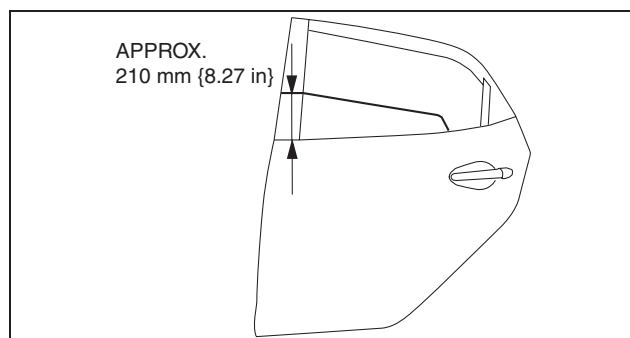
am2zzw000046

## GLASS/WINDOWS/MIRRORS

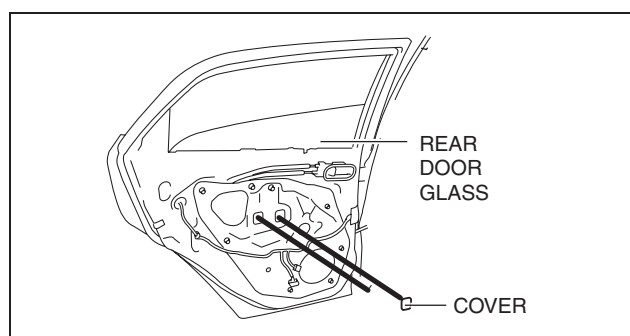
### REAR DOOR GLASS REMOVAL/INSTALLATION

id09120000300

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the rear door garnish. (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
5. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
6. Remove the rear door speaker. (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
7. Remove the rear door glass guide and glass run channel as a single unit. (See 09-12-10 Rear Door Glass Guide Removal Note.)
8. Remove the hole cover.



am2zzw0000439

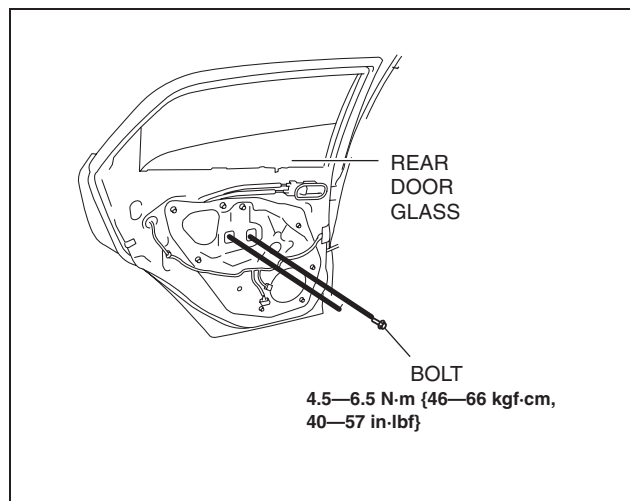


am2zzw0000434

9. Remove the bolts.

#### Caution

- If the bolts are removed without supporting the rear door glass, the rear door glass may fall off and be damaged. Remove the bolts while inserting your hand into the rear door speaker installation hole to support the rear door glass.

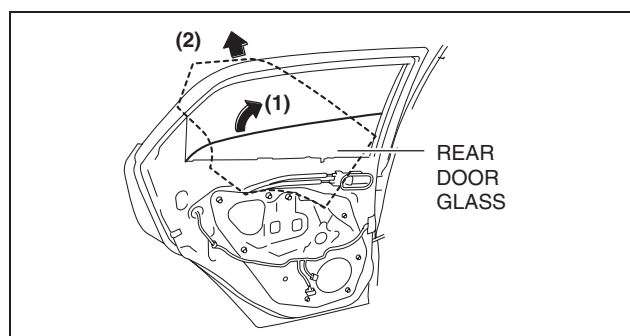


am2zzw0000434

10. Lift up the rear door glass, tilt it in the direction of arrow (1) shown in the figure, then remove it in the direction of arrow (2).
11. Install in the reverse order of removal.

#### Caution

- If the bolts are installed without supporting the rear door glass, the rear door glass may fall off and be damaged. When installing the rear door glass, align the glass edge with the rear door glass guide by hand through the speaker installation hole, and then install the bolts.

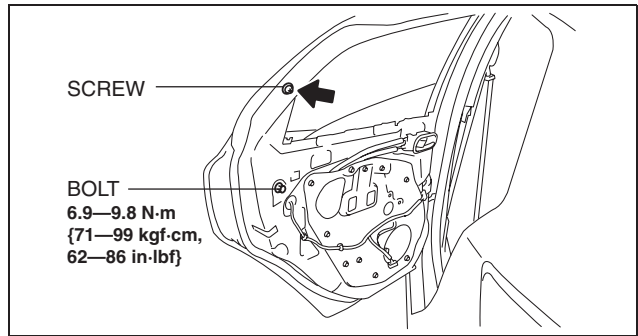


am2zzw000047

## GLASS/WINDOWS/MIRRORS

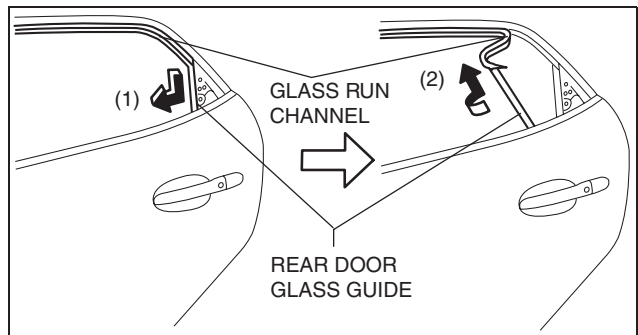
### Rear Door Glass Guide Removal Note

1. Pull up the rear door weatherstrip and remove the screw.
2. Remove the bolt.



am2zzw0000047

3. Slide the rear door glass guide in the direction of the arrow shown in the figure.
4. While rotating the rear door glass guide in the direction of the arrow shown in the figure, pull out the rear door glass guide and the glass run channel as a single unit from the rear door.

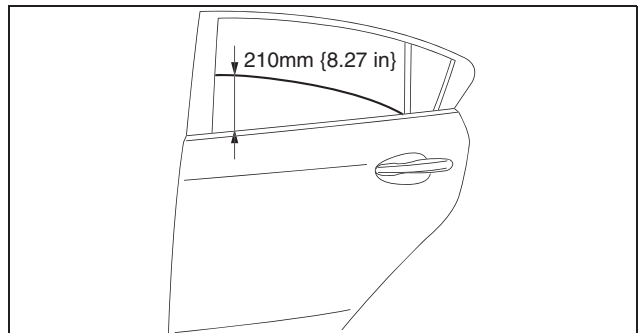


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### REAR DOOR GLASS REMOVAL/INSTALLATION [4SD]

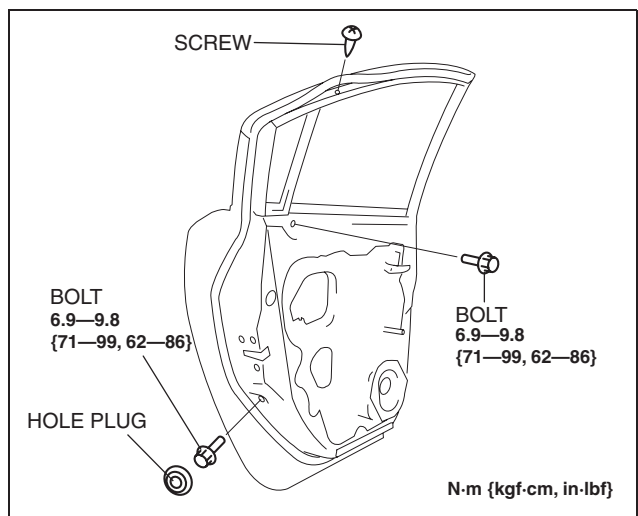
id091200000381

1. Fully lower the rear door glass.
2. Remove the rear beltline molding. (See 09-16-10 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)
3. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
4. Disconnect the negative battery cable.
5. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
6. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)



am2ccw0000020

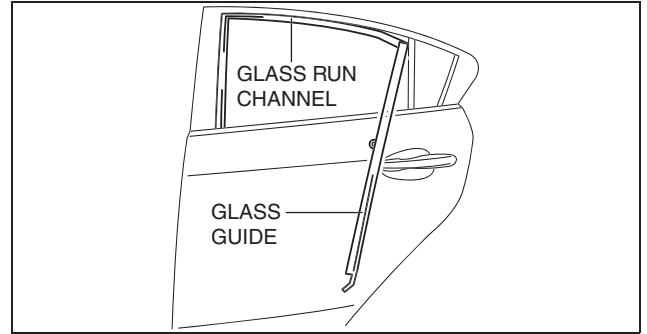
7. Remove the bolts and screw.



am3zzw0000191

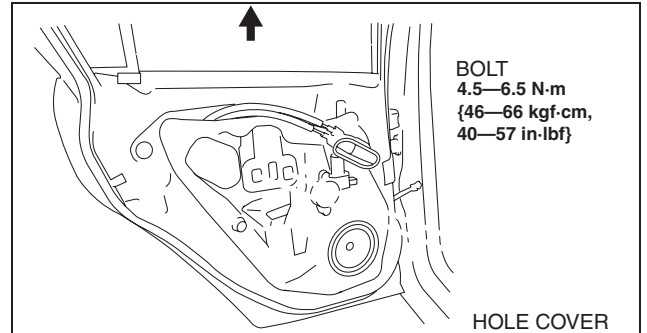
## GLASS/WINDOWS/MIRRORS

8. Remove the rear door glass guide and glass run channel as a single unit.
9. Remove the hole cover.



am2ccw0000020

10. Remove the screw.
11. Lift the rear door glass up and remove while tilting it.
12. Install in the reverse order of removal.

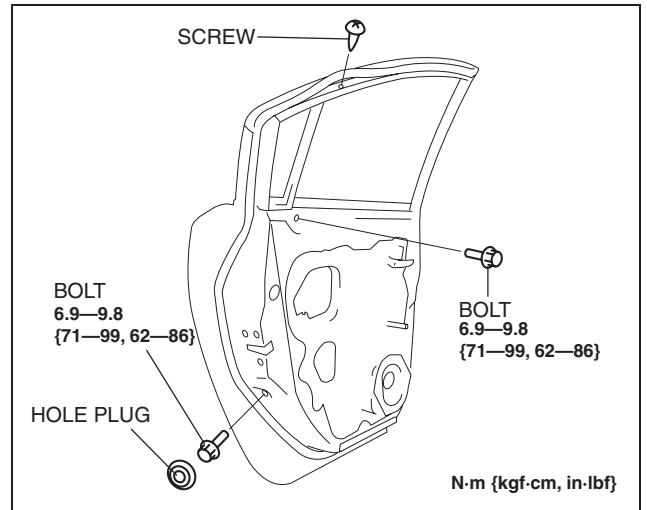


am2zzw0000501

### REAR DOOR QUARTER GLASS REMOVAL/INSTALLATION [4SD]

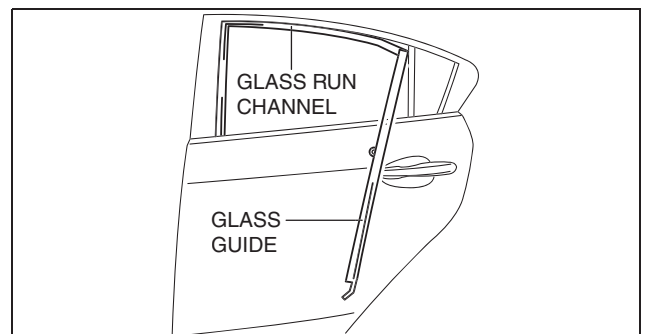
id091200005681

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear beltline molding. (See 09-16-10 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)
4. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the bolts and screw.



am3zzw0000275

6. Remove the rear door glass guide and glass run channel as a single unit.

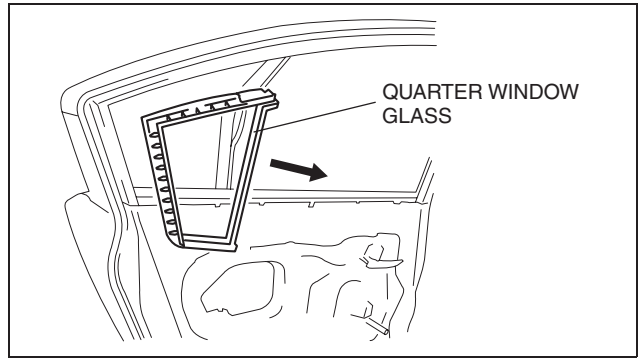


am2ccw0000020



## GLASS/WINDOWS/MIRRORS

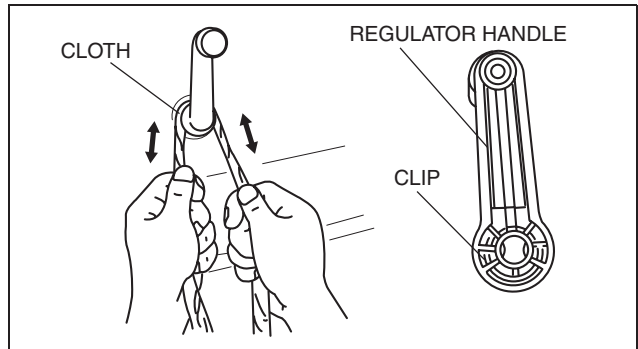
7. Remove the rear door quarter glass.
8. Install in the reverse order of removal.



am3zzw0000275

### REGULATOR HANDLE REMOVAL

1. Using a cloth, remove the regulator handle installation clip and remove the regulator handle.

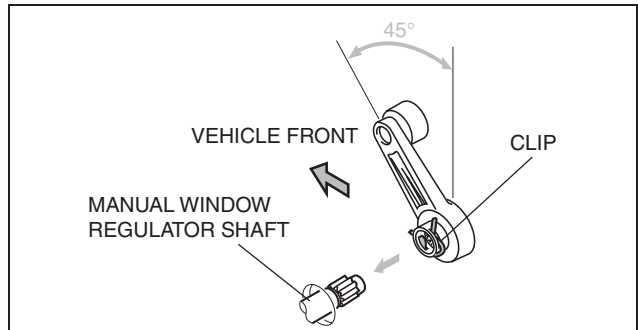


id091200009600

am2zzw0000426

### REGULATOR HANDLE INSTALLATION

1. Fully raise the door glass.
2. Install the clip to the regulator handle.
3. Install the regulator handle while tilting it as shown in the figure and press it onto the shaft.

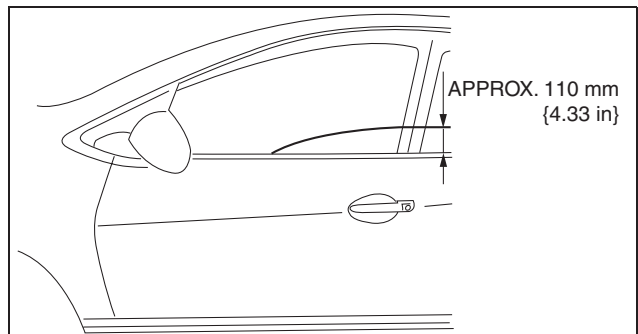


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am2zzw0000347

### FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front power window motor (See 09-12-17 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)



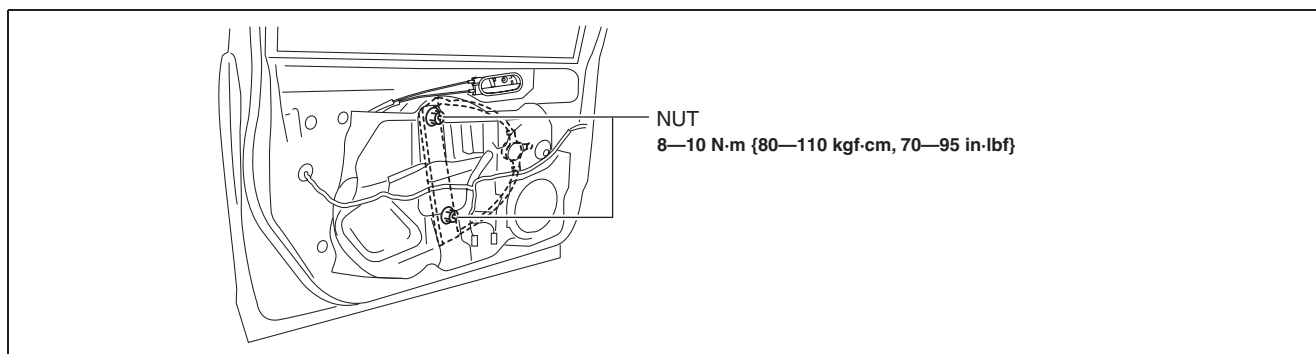
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am2zzw0000440



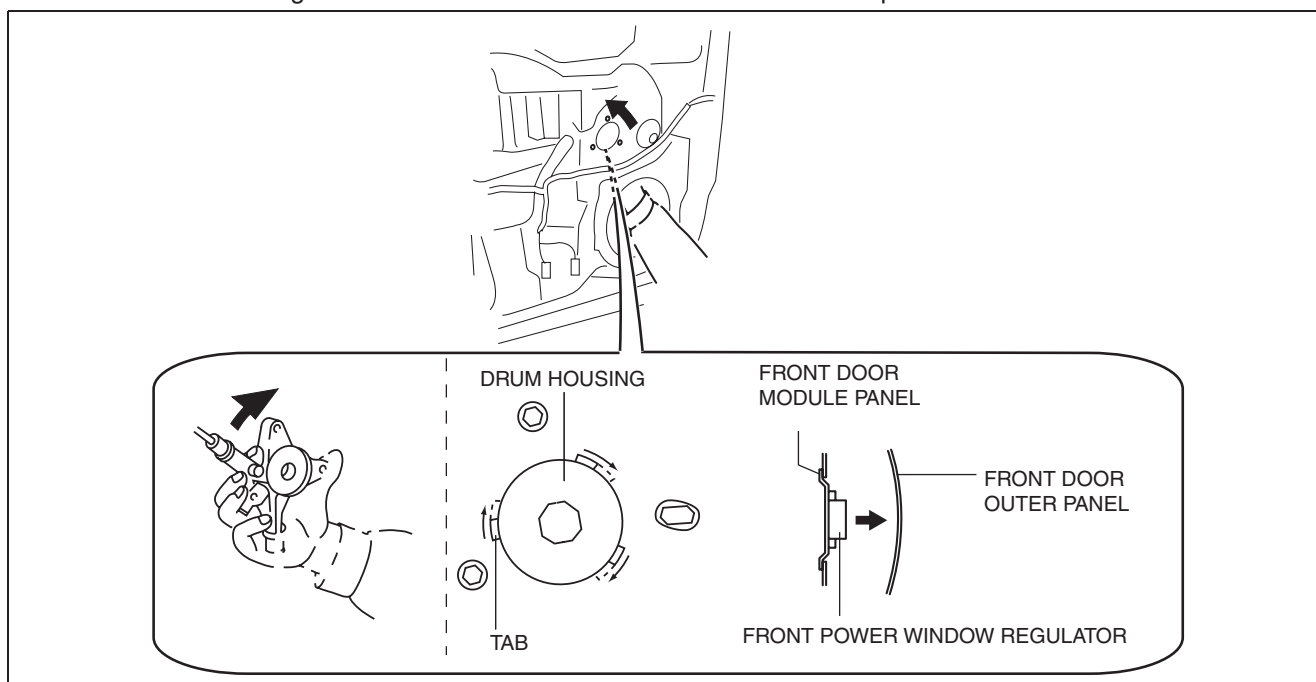
## GLASS/WINDOWS/MIRRORS

4. Remove the nuts.



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5. Insert a hand through the front door speaker installation hole and rotate the drum housing in the direction of the arrow shown in the figure to detach the tabs from the front door module panel.

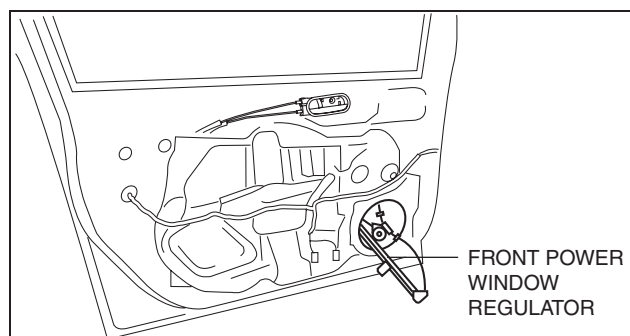


am2zzw0000501

6. Remove the front power window regulator from the speaker installation hole.  
7. Install in the reverse order of removal.

### Caution

- When installing, do not allow the cable to come out from the drum housing.



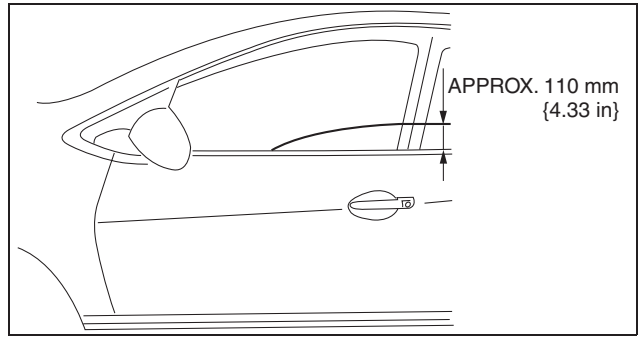
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## GLASS/WINDOWS/MIRRORS

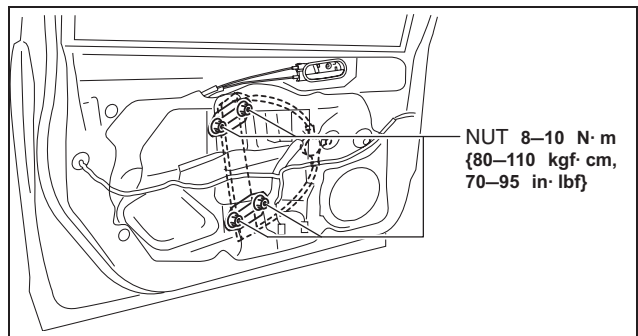
### FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION [3HB]

id0912000011z3

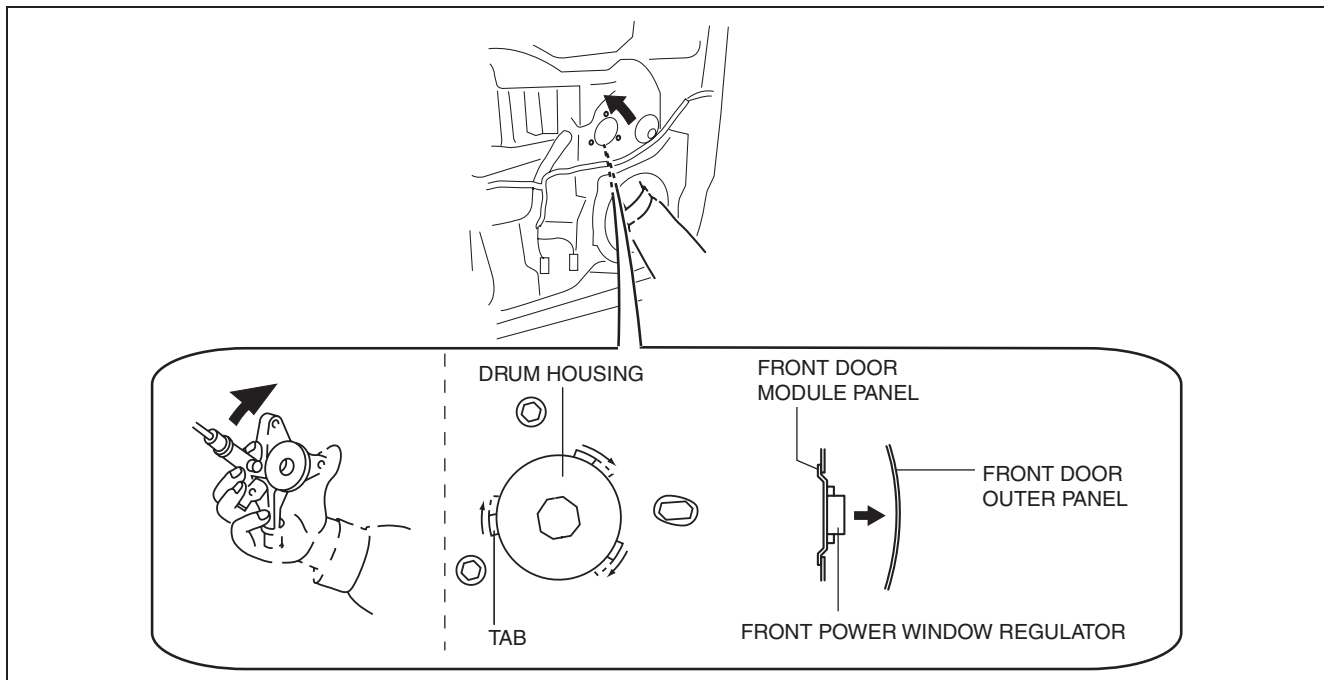
1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-8 FRONT DOOR GLASS REMOVAL/INSTALLATION [3HB].)
  - (5) Front power window motor (See 09-12-18 POWER WINDOW MOTOR REMOVAL/INSTALLATION [3HB].)
4. Remove the nuts.
5. Insert a hand through the front door speaker installation hole and rotate the drum housing in the direction of the arrow shown in the figure to detach the tabs from the front door module panel.



am2zzw0000440



am2zzw0000338



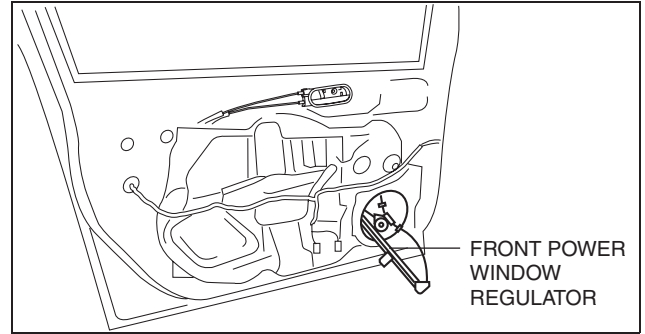
am2zzw0000502

## GLASS/WINDOWS/MIRRORS

6. Remove the front power window regulator from the speaker installation hole.
7. Install in the reverse order of removal.

### Caution

- When installing, do not allow the cable to come out from the drum housing.

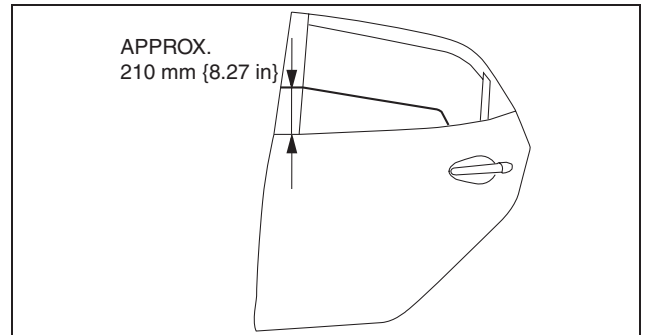


am2zzw000047

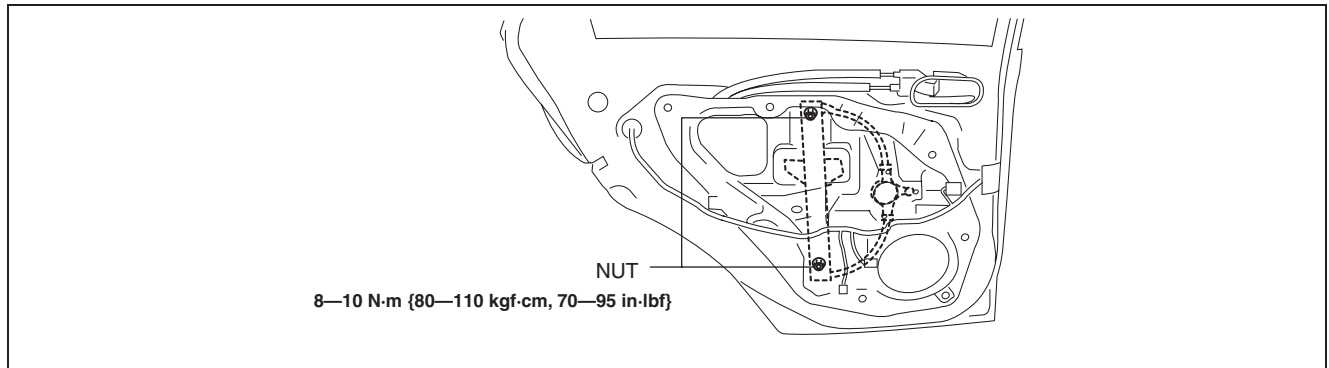
## REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION

id091200001200

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (3) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (4) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)
4. Remove the nuts.



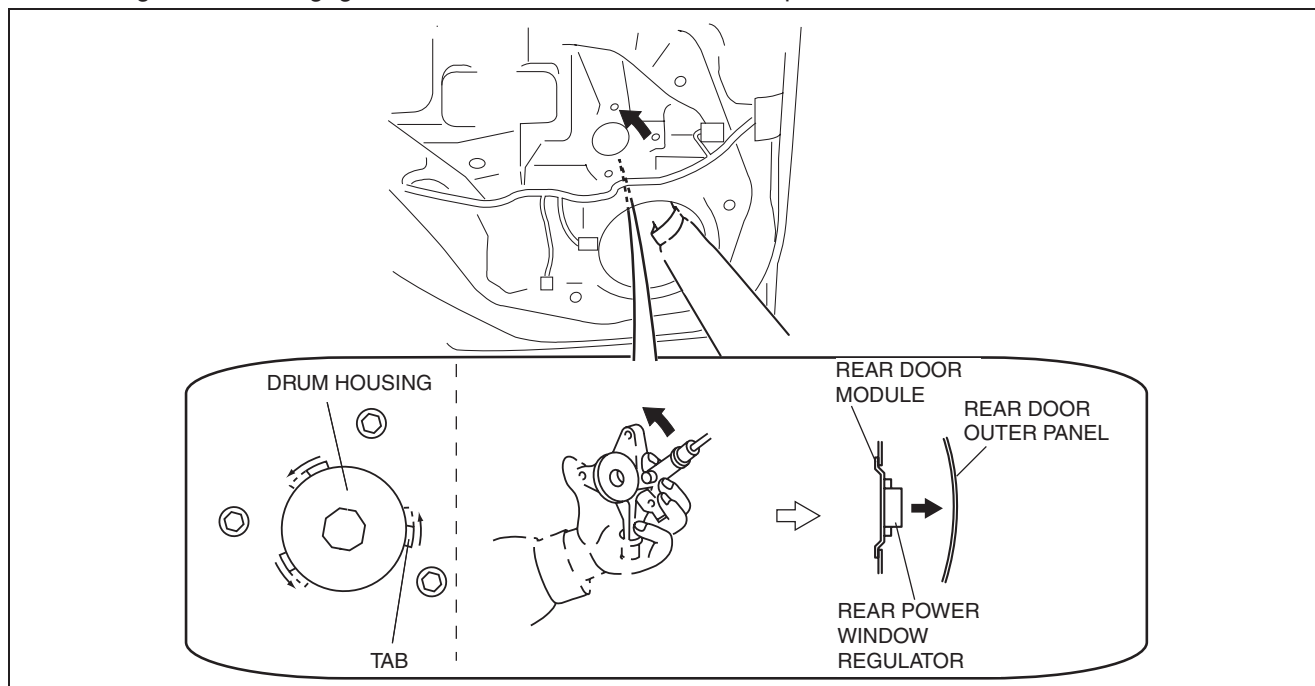
am2zzw0000440



am2zzw0000481

## GLASS/WINDOWS/MIRRORS

5. Insert your hand through the rear door speaker installation hole, rotate the drum housing in the direction shown in the figure and disengage the tabs from the rear door module panel.

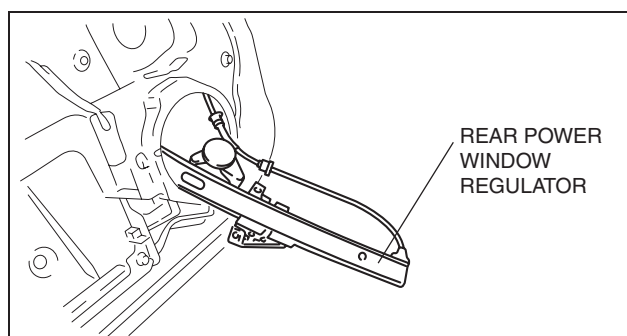


am2zzw0000232

6. Remove the rear power window regulator from the rear speaker installation hole.
7. Install in the reverse order of removal.

### Caution

- When installing, do not allow the cable to come out from the drum housing.

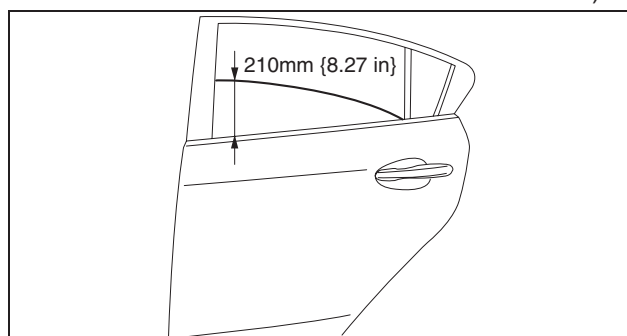


am2zzw0000047

## REAR POWER WINDOW REGULATOR REMOVAL/INSTALLATION [4SD]

id091200001281

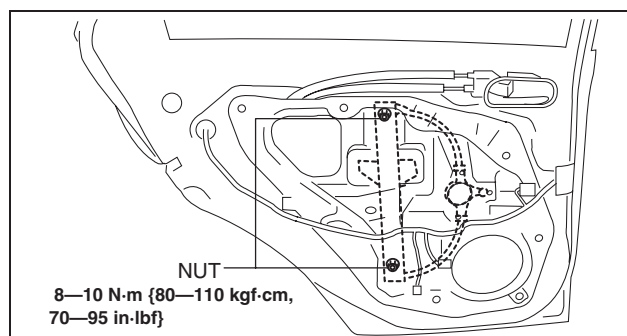
1. Fully lower the rear door glass.
2. Remove the rear beltline molding. (See 09-16-10 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)
3. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
4. Remove the sail garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
5. Disconnect the negative battery cable.
6. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
7. Remove the rear door speaker. (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
8. Remove the rear door glass. (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)



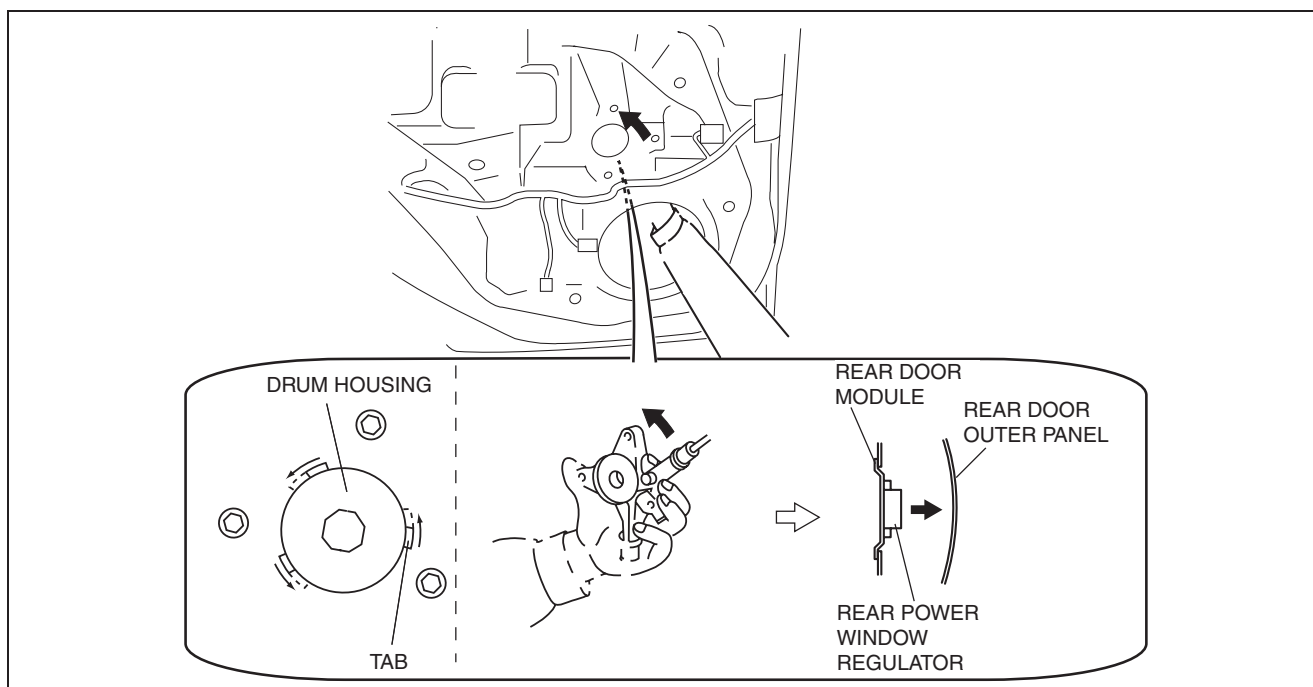
am2zzw0000496

## GLASS/WINDOWS/MIRRORS

9. Remove the nuts.
10. Insert your hand through the rear door speaker installation hole, rotate the drum housing in the direction shown in the figure and disengage the tabs from the rear door module panel.



am2zzw0000491

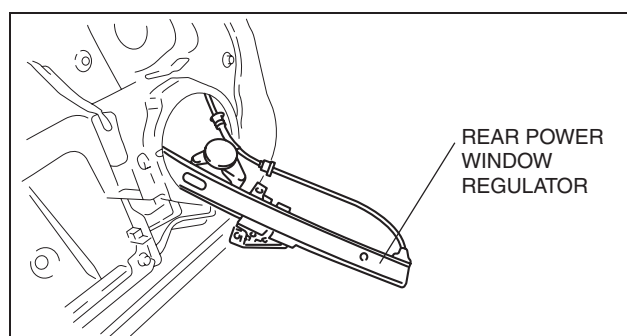


am2zzw0000232

11. Remove the rear power window regulator from the rear speaker installation hole.
12. Install in the reverse order of removal.

### Caution

- When installing, do not allow the cable to come out from the drum housing.



am2zzw0000047

## POWER WINDOW MOTOR REMOVAL/INSTALLATION

id091200001400

### Front Power Window Motor

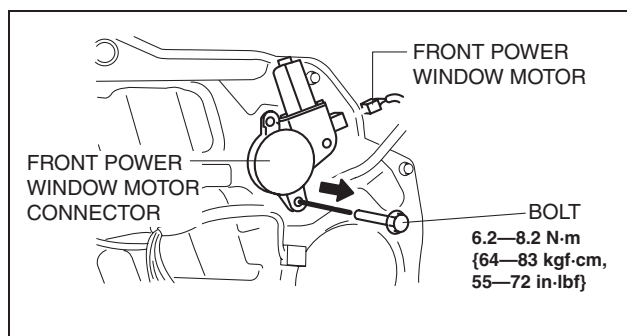
1. Disconnect the negative battery cable.
2. Remove the inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)

## GLASS/WINDOWS/MIRRORS

4. Disconnect the front power window motor connector, remove the bolt, then remove the front power window motor from the front power window regulator drum in the direction of the arrow shown in the figure.
5. Install in the reverse order of removal.

### Note

- When installing the front power window motor to the front power window regulator drum, the drum housing hooks may detach from the door module panel. If this happens, remove the front door speaker, insert your hand in the speaker installation hole, connect the drum housing hooks, and while supporting the drum housing, install the front power window motor to the drum.



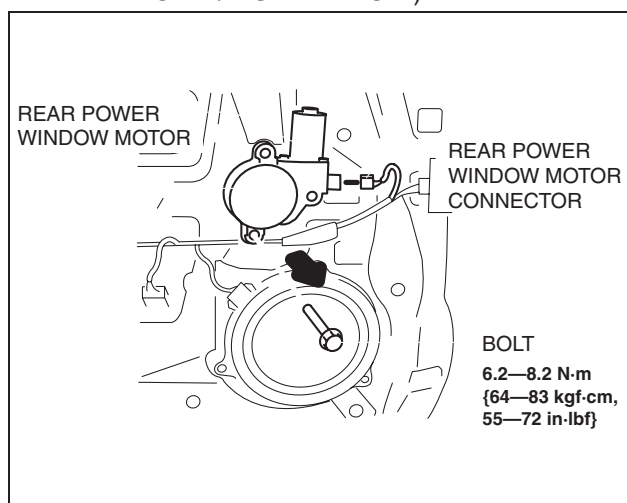
am2zzw0000247

### Rear Power Window Motor

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Disconnect the rear power window motor connector, remove the bolt, then remove the power window motor from the power window regulator drum.
5. Install in the reverse order of removal.

### Note

- When installing the rear power window motor to the rear power window regulator drum, the drum housing hooks may detach from the door module panel. If this happens, remove the door speaker, insert your hand in the speaker installation hole, connect the drum housing hooks, and while supporting the drum housing, install the rear power window motor to the drum.



am2zzw0000506

### POWER WINDOW MOTOR REMOVAL/INSTALLATION [3HB]

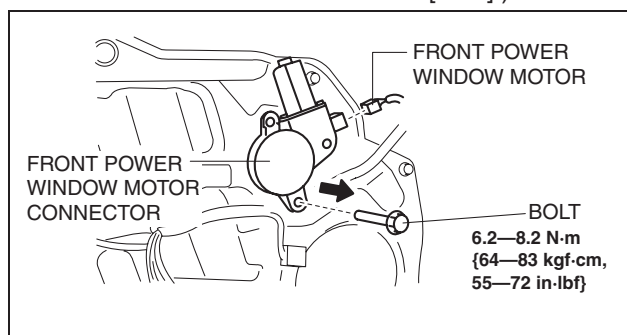
id0912000014z3

#### Front Power Window Motor

1. Disconnect the negative battery cable.
2. Remove the inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Disconnect the front power window motor connector, remove the bolt, then remove the front power window motor from the front power window regulator drum in the direction of the arrow shown in the figure.
5. Install in the reverse order of removal.

### Note

- When installing the front power window motor to the front power window regulator drum, the drum housing hooks may detach from the door module panel. If this happens, remove the front door speaker, insert your hand in the speaker installation hole, connect the drum housing hooks, and while supporting the drum housing, install the front power window motor to the drum.



am2zzw0000338

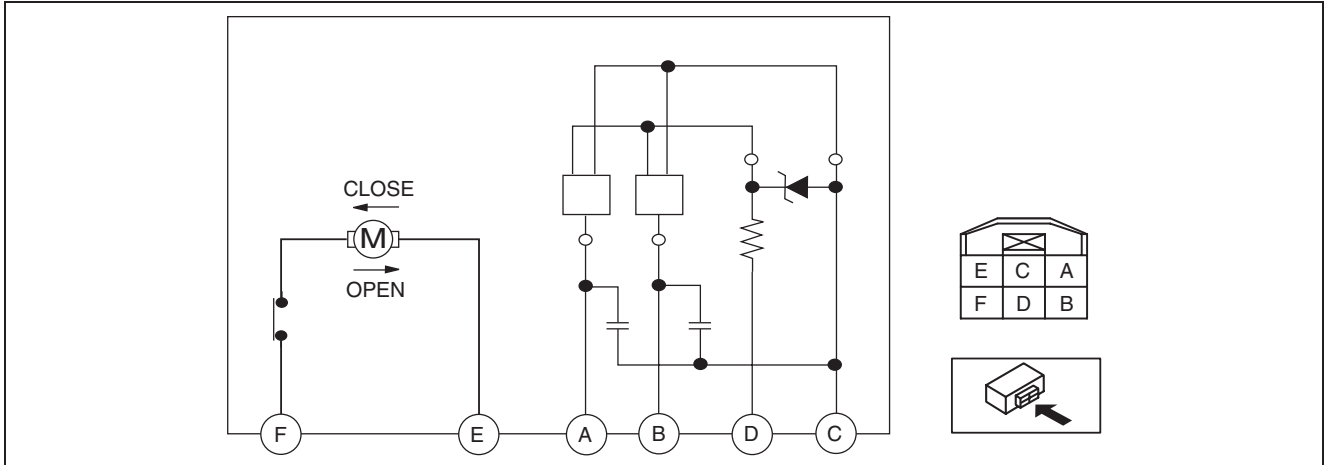
## GLASS/WINDOWS/MIRRORS

### POWER WINDOW MOTOR INSPECTION

id091200001700

#### Driver's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Disconnect the power window motor connector.
5. Apply battery positive voltage and connect the ground to power window motor terminals E and F, and then inspect the power window motor operation.



am2zzw0000446

- If the power window motor does not operate as indicated in the table, replace it.

| Operation | Terminal |        |
|-----------|----------|--------|
|           | E        | F      |
| Open      | Ground   | B+     |
| Close     | B+       | Ground |

6. Connect the battery positive voltage to power window motor terminal D and connect terminal C to ground.
7. Operate the power window motor and measure the voltage at terminals A and B.
  - If there is any malfunction, replace the power window motor.

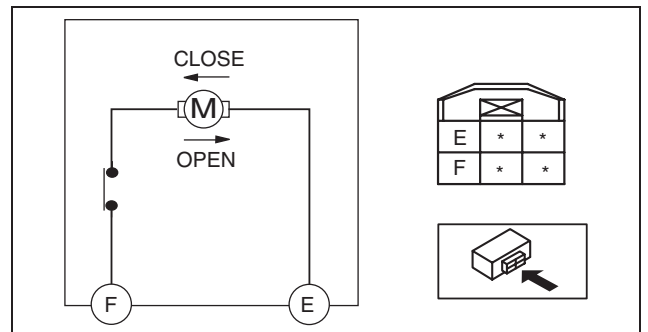
#### Voltage

Pulse: max. 5 V/min. 0 V

#### Passenger's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Disconnect the power window motor connector.
5. Apply battery positive voltage and connect the ground to the power window motor terminals, and then inspect the power window motor operation.
  - If the power window motor does not operate as indicated in the table, replace it.

| Operation | Terminal |        |
|-----------|----------|--------|
|           | E        | F      |
| Open      | Ground   | B+     |
| Close     | B+       | Ground |



am2zzw0000447

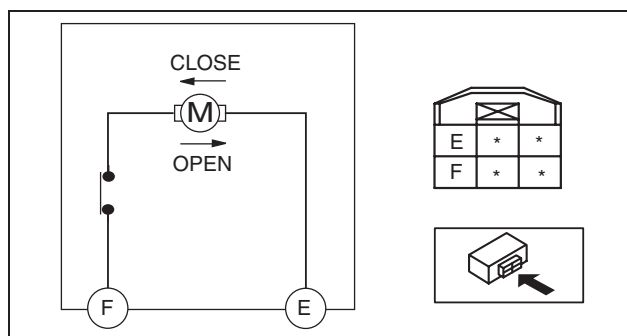
#### Rear Side

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the Rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Disconnect the power window motor connector.

## GLASS/WINDOWS/MIRRORS

5. Apply battery positive voltage and connect the ground to the power window motor terminals, and then inspect the power window motor operation.
  - If the power window motor does not operate as indicated in the table, replace it.

| Operation | Terminal |        |
|-----------|----------|--------|
|           | E        | F      |
| Open      | Ground   | B+     |
| Close     | B+       | Ground |



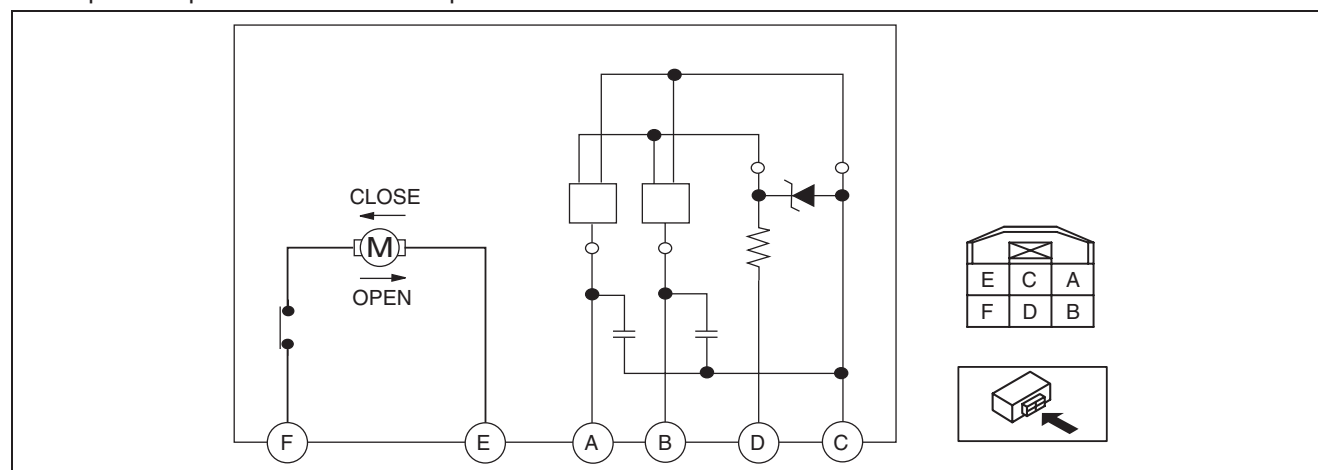
am2zzw0000447

### POWER WINDOW MOTOR INSPECTION [3HB]

id0912000017z3

#### Driver's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Disconnect the power window motor connector.
5. Apply battery positive voltage and connect the ground to power window motor terminals E and F, and then inspect the power window motor operation.



am2zzw0000447

- If the power window motor does not operate as indicated in the table, replace it.

| Operation | Terminal |        |
|-----------|----------|--------|
|           | E        | F      |
| Open      | Ground   | B+     |
| Close     | B+       | Ground |

6. Connect the battery positive voltage to power window motor terminal D and connect terminal C to ground.
7. Operate the power window motor and measure the voltage at terminals A and B.
  - If there is any malfunction, replace the power window motor.

#### Voltage

Pulse: max. 5 V/min. 0 V

#### Passenger's Side

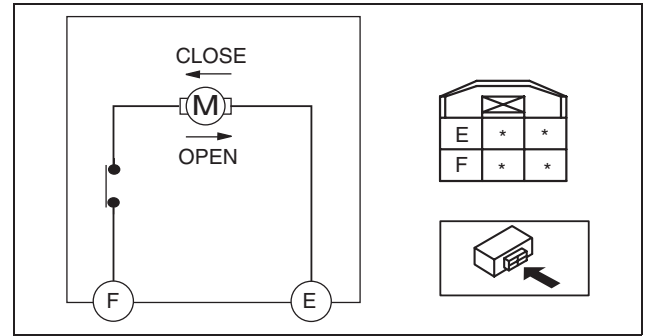
1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Disconnect the power window motor connector.



## GLASS/WINDOWS/MIRRORS

- Apply battery positive voltage and connect the ground to the power window motor terminals, and then inspect the power window motor operation.
  - If the power window motor does not operate as indicated in the table, replace it.

| Operation | Terminal |        |
|-----------|----------|--------|
|           | E        | F      |
| Open      | Ground   | B+     |
| Close     | B+       | Ground |



am2zzw0000447

### POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION

id091200002000

- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
- Remove the driver's side front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
- Remove the power window main switch. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
- Install in the reverse order of removal.

### POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION [3HB]

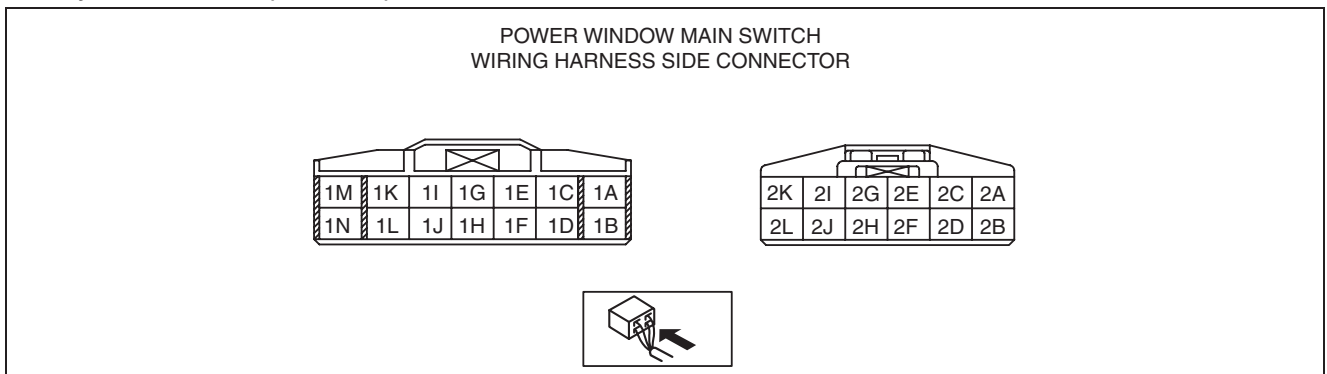
id0912000020z3

- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
- Remove the driver's side front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
- Remove the power window main switch. (See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].)
- Install in the reverse order of removal.

### POWER WINDOW MAIN SWITCH INSPECTION

id091200002100

- Turn the ignition switch to the ON position.
- Verify that the door glass (driver's side) can be operated for **approx. 43 s** after the ignition switch is turned to the LOCK position.
  - If the door glass (driver's side) cannot be operated for **approx. 43 s** after the ignition switch is turned to the LOCK position, or if the door glass (driver's side) can still be operated after **approx. 43 s**, replace the power window main switch.
- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
- Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
- Remove the switch panel. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
- Connect the power window main switch connector.
- Connect the negative battery cable.
- Measure the voltage at each terminal.
  - If the voltage is not as specified in the terminal voltage table, inspect the parts under Inspection item(s) and related wiring harnesses.
- If the system does not work normally even though the inspection items or related wiring harnesses do not have any malfunction, replace the power window main switch.



am2zzw0000510

## GLASS/WINDOWS/MIRRORS

**Terminal Voltage Table (Reference)**

| Terminal | Signal name            | Connected to                          | Measurement condition                                                                                      | Voltage (V)                          | Inspection item (s)                                                                                                     |
|----------|------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1A       | Sensor ground          | Power window motor (driver's side)    | Under any condition                                                                                        | 1.0 or less                          | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
| 1B       | GND                    | Body ground                           | Under any condition                                                                                        | 1.0 or less                          | <ul style="list-style-type: none"> <li>Related wiring harness</li> </ul>                                                |
| 1C       | Window close signal    | Power window motor (RR)               | Door glass (RR) closing                                                                                    | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (RR)</li> <li>Related wiring harness</li> </ul>               |
|          |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1D       | Pulse 1                | Power window motor (driver's side)    | Door glass (driver's side) operating                                                                       | Alternates between 1.0 or less and 5 | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
| 1E       | Window open signal     | Power window motor (RR)               | Door glass (RR) opening                                                                                    | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (RR)</li> <li>Related wiring harness</li> </ul>               |
|          |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1F       | Sensor power supply    | Power window motor (driver's side)    | Switch the ignition to ON                                                                                  | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
|          |                        |                                       | Switch the ignition to off                                                                                 | 1.0 or less                          |                                                                                                                         |
| 1G       | Window open signal     | Power window motor (LR)               | Door glass (LR) opening                                                                                    | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (LR)</li> <li>Related wiring harness</li> </ul>               |
|          |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1H       | Pulse 2                | Power window motor (driver's side)    | Door glass (driver's side) operating                                                                       | Alternates between 1.0 or less and 5 | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
| 1I       | Window close signal    | Power window motor (LR)               | Door glass (LR) closing                                                                                    | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (LR)</li> <li>Related wiring harness</li> </ul>               |
|          |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1J       | Window close signal    | Power window motor (driver's side)    | Door glass (driver's side) closing                                                                         | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
|          |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1K       | Door open/close signal | BCM                                   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                      | <ul style="list-style-type: none"> <li>BCM</li> <li>Related wiring harness</li> </ul>                                   |
| 1L       | Window open signal     | Power window motor (driver's side)    | Door glass (driver's side) opening                                                                         | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
|          |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1M       | IG1                    | P.WIND 30 A fuse                      | Switch the ignition to ON                                                                                  | B+                                   | <ul style="list-style-type: none"> <li>P.WIND 30 A fuse</li> <li>Related wiring harness</li> </ul>                      |
|          |                        |                                       | Switch the ignition to off                                                                                 | 1.0 or less                          |                                                                                                                         |
| 1N       | Power supply           | P.WIND 20 A fuse                      | Under any condition                                                                                        | B+                                   | <ul style="list-style-type: none"> <li>P.WIND 20 A fuse</li> <li>Related wiring harness</li> </ul>                      |
| 2A*1     | Window open signal     | Power window motor (passenger's side) | Door glass (passenger's side) opening                                                                      | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (passenger's side)</li> <li>Related wiring harness</li> </ul> |
| 2B*1     |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 2K*2     | Window open signal     | Power window motor (passenger's side) | Door glass (passenger's side) opening                                                                      | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (passenger's side)</li> <li>Related wiring harness</li> </ul> |
| 2L*2     |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |

\*1 : L.H.D.

\*2 : R.H.D.

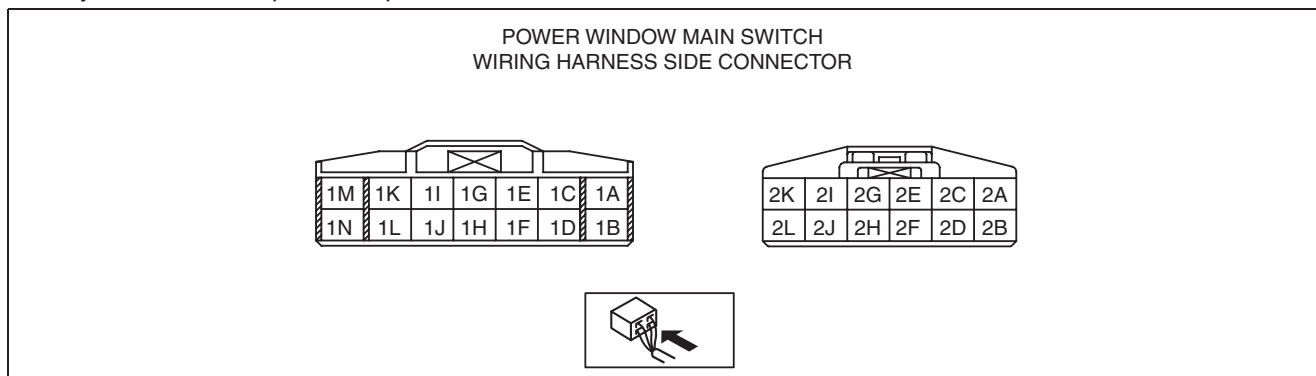
### POWER WINDOW MAIN SWITCH INSPECTION [3HB]

id0912000021z3

- Turn the ignition switch to the ON position.
- Verify that the door glass (driver's side) can be operated for **approx. 43 s** after the ignition switch is turned to the LOCK position.
  - If the door glass (driver's side) cannot be operated for **approx. 43 s** after the ignition switch is turned to the LOCK position, or if the door glass (driver's side) can still be operated after **approx. 43 s**, replace the power window main switch.
- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
- Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
- Remove the switch panel. (See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].)
- Connect the power window main switch connector.

## GLASS/WINDOWS/MIRRORS

8. Connect the negative battery cable.
9. Measure the voltage at each terminal.
  - If the voltage is not as specified in the terminal voltage table, inspect the parts under Inspection item(s) and related wiring harnesses.
10. If the system does not work normally even though the inspection items or related wiring harnesses do not have any malfunction, replace the power window main switch.



am2zzw0000510

**Terminal Voltage Table (Reference)**

| Terminal         | Signal name            | Connected to                          | Measurement condition                                                                                      | Voltage (V)                          | Inspection item (s)                                                                                                     |
|------------------|------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1A               | Sensor ground          | Power window motor (driver's side)    | Under any condition                                                                                        | 1.0 or less                          | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
| 1B               | GND                    | Body ground                           | Under any condition                                                                                        | 1.0 or less                          | <ul style="list-style-type: none"> <li>Related wiring harness</li> </ul>                                                |
| 1D               | Pulse 1                | Power window motor (driver's side)    | Door glass (driver's side) operating                                                                       | Alternates between 1.0 or less and 5 | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
| 1F               | Sensor power supply    | Power window motor (driver's side)    | Switch the ignition to ON                                                                                  | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
|                  |                        |                                       | Switch the ignition to off                                                                                 | 1.0 or less                          |                                                                                                                         |
| 1H               | Pulse 2                | Power window motor (driver's side)    | Door glass (driver's side) operating                                                                       | Alternates between 1.0 or less and 5 | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
| 1J               | Window close signal    | Power window motor (driver's side)    | Door glass (driver's side) closing                                                                         | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
|                  |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1K               | Door open/close signal | BCM                                   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                      | <ul style="list-style-type: none"> <li>BCM</li> <li>Related wiring harness</li> </ul>                                   |
| 1L               | Window open signal     | Power window motor (driver's side)    | Door glass (driver's side) opening                                                                         | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (driver's side)</li> <li>Related wiring harness</li> </ul>    |
|                  |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 1M               | IG1                    | P.WIND 30 A fuse                      | Switch the ignition to ON                                                                                  | B+                                   | <ul style="list-style-type: none"> <li>P.WIND 30 A fuse</li> <li>Related wiring harness</li> </ul>                      |
|                  |                        |                                       | Switch the ignition to off                                                                                 | 1.0 or less                          |                                                                                                                         |
| 1N               | Power supply           | P.WIND 20 A fuse                      | Under any condition                                                                                        | B+                                   | <ul style="list-style-type: none"> <li>P.WIND 20 A fuse</li> <li>Related wiring harness</li> </ul>                      |
| 2A <sup>*1</sup> | Window open signal     | Power window motor (passenger's side) | Door glass (passenger's side) opening                                                                      | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (passenger's side)</li> <li>Related wiring harness</li> </ul> |
| 2B <sup>*1</sup> |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |
| 2K <sup>*2</sup> | Window open signal     | Power window motor (passenger's side) | Door glass (passenger's side) opening                                                                      | B+                                   | <ul style="list-style-type: none"> <li>Power window motor (passenger's side)</li> <li>Related wiring harness</li> </ul> |
| 2L <sup>*2</sup> |                        |                                       | Other                                                                                                      | 1.0 or less                          |                                                                                                                         |

\*1 : L.H.D.

\*2 : R.H.D.

## GLASS/WINDOWS/MIRRORS

### POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION

id091200002200

#### Passenger's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power window subswitch. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Install in the reverse order of removal.

#### Rear

1. Disconnect the negative battery cable.
2. Remove the sail garnish. (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door garnish. (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
4. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the power window subswitch. (See 09-17-66 REAR DOOR TRIM DISASSEMBLY/ASSEMBLY.)
6. Install in the reverse order of removal.

### POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION [4SD]

id091200002281

#### Passenger's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power window subswitch. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Install in the reverse order of removal.

#### Rear

1. Disconnect the negative battery cable.
2. Remove the sail garnish. (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power window subswitch. (See 09-17-66 REAR DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Install in the reverse order of removal.

### POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION [3HB]

id0912000022z3

#### Passenger's Side

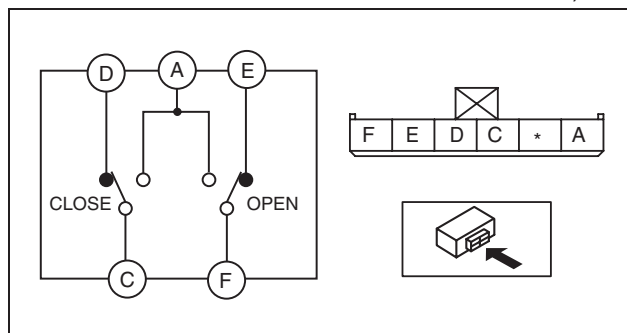
1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Remove the power window subswitch. (See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].)
5. Install in the reverse order of removal.

### POWER WINDOW SUBSWITCH INSPECTION

id091200002300

#### Passenger's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power window subswitch. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Verify that the continuity is as indicated in the table using a tester.
  - If not as indicated in the table, replace the power window subswitch.



am2zzw0000247

## GLASS/WINDOWS/MIRRORS

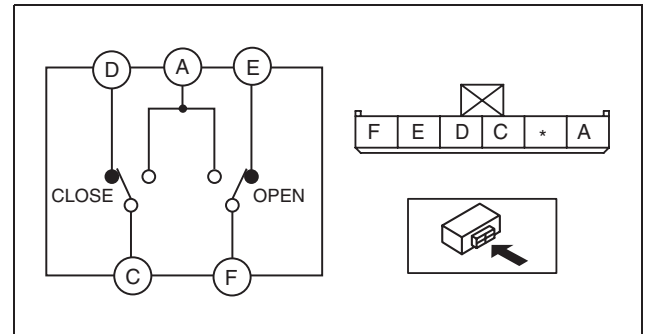
○—○ : Continuity

| Switch Position | Terminal |     |   |     |     |
|-----------------|----------|-----|---|-----|-----|
|                 | A        | C   | D | E   | F   |
| CLOSE           | ○—○      |     |   | ○—○ |     |
| OFF             |          | ○—○ |   | ○—○ |     |
| OPEN            | ○—○      | ○—○ |   |     | ○—○ |

am2zzw0000213

### Rear

1. Disconnect the negative battery cable.
2. Remove the sail garnish. (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door garnish. (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
4. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the power window subswitch. (See 09-17-66 REAR DOOR TRIM DISASSEMBLY/ASSEMBLY.)
6. Verify that the continuity is as indicated in the table using a tester.
  - If not as indicated in the table, replace the power window subswitch.



am2zzw0000247

○—○ : Continuity

| Switch Position | Terminal |     |   |     |     |
|-----------------|----------|-----|---|-----|-----|
|                 | A        | C   | D | E   | F   |
| CLOSE           | ○—○      |     |   | ○—○ |     |
| OFF             |          | ○—○ |   | ○—○ |     |
| OPEN            | ○—○      | ○—○ |   |     | ○—○ |

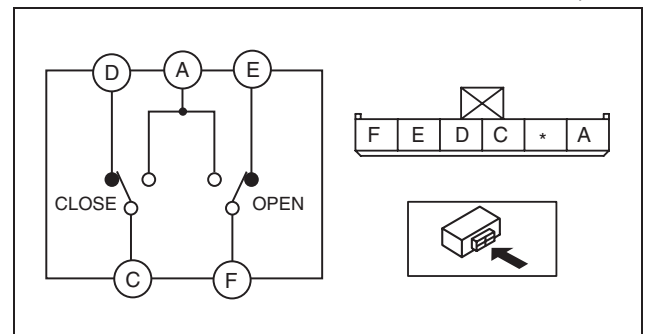
am2zzw0000213

### POWER WINDOW SUBSWITCH INSPECTION [4SD]

id091200002381

#### Passenger's Side

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power window subswitch. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Verify that the continuity is as indicated in the table using a tester.
  - If not as indicated in the table, replace the power window subswitch.



am2zzw0000247

## GLASS/WINDOWS/MIRRORS

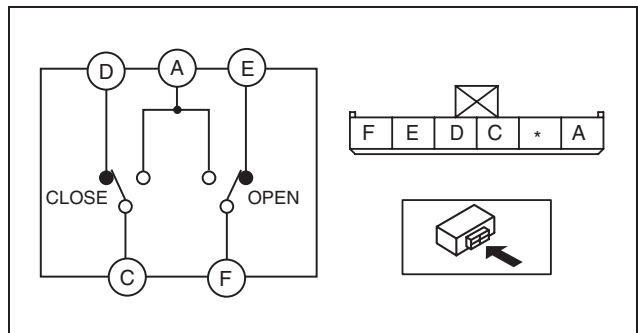
○—○ : Continuity

| Switch Position | Terminal |     |   |     |     |
|-----------------|----------|-----|---|-----|-----|
|                 | A        | C   | D | E   | F   |
| CLOSE           | ○—○      |     |   | ○—○ |     |
| OFF             |          | ○—○ |   | ○—○ |     |
| OPEN            | ○—○      | ○—○ |   |     | ○—○ |

am2zzw0000213

### Rear

1. Disconnect the negative battery cable.
2. Remove the sail garnish. (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power window subswitch. (See 09-17-66 REAR DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Verify that the continuity is as indicated in the table using a tester.
  - If not as indicated in the table, replace the power window subswitch.



am2zzw0000247

○—○ : Continuity

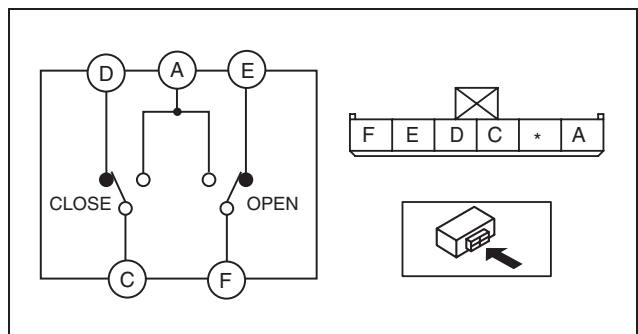
| Switch Position | Terminal |     |   |     |     |
|-----------------|----------|-----|---|-----|-----|
|                 | A        | C   | D | E   | F   |
| CLOSE           | ○—○      |     |   | ○—○ |     |
| OFF             |          | ○—○ |   | ○—○ |     |
| OPEN            | ○—○      | ○—○ |   |     | ○—○ |

am2zzw0000213

### POWER WINDOW SUBSWITCH INSPECTION [3HB]

id0912000023z3

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Remove the power window subswitch. (See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].)
5. Verify that the continuity is as indicated in the table using a tester.
  - If not as indicated in the table, replace the power window subswitch.



am2zzw0000247

## GLASS/WINDOWS/MIRRORS

○—○ : Continuity

| Switch Position | Terminal |     |     |     |     |
|-----------------|----------|-----|-----|-----|-----|
|                 | A        | C   | D   | E   | F   |
| CLOSE           | ○—○      | ○—○ |     | ○—○ | ○—○ |
| OFF             |          | ○—○ | ○—○ | ○—○ | ○—○ |
| OPEN            | ○—○      | ○—○ | ○—○ |     | ○—○ |

am2zzw0000213

### POWER WINDOW SYSTEM INITIALIZATION PROCEDURE

id091200004100

#### Note

- If the following operations have been performed, initial setting is reset, and auto up/down and two-step down operation are disabled. Therefore, performing initial setting is necessary.
  - Negative battery cable is disconnected.
  - Power window main switch connector is disconnected.
  - Power window system power supply fuse is removed.

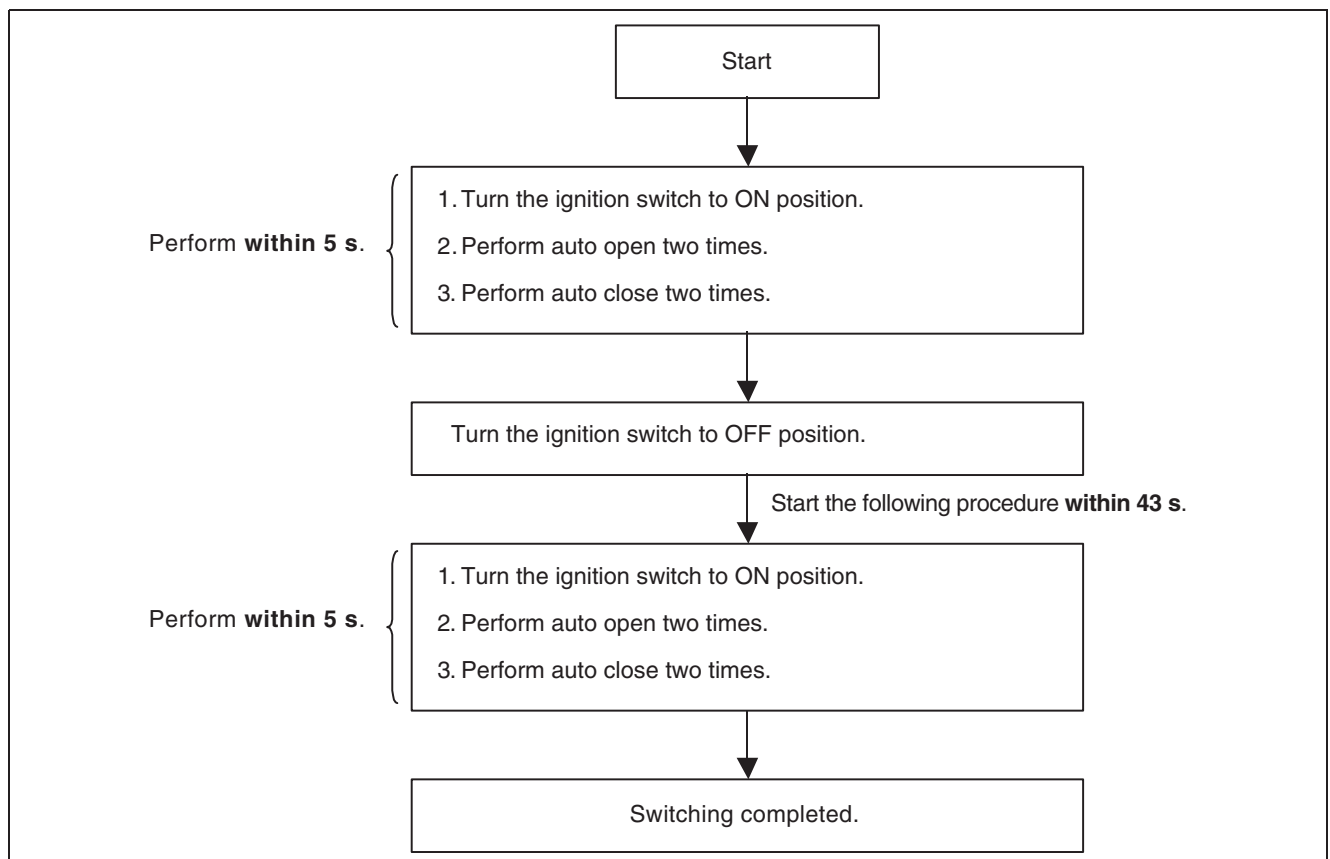
1. Turn the ignition switch to the ON position.
2. Press the driver's seat switch to fully open the door glass.
3. Pull up the driver's seat switch to the manual-up position to fully close the door glass and keep holding the switch up at the position for **approx. 2 s**.

### TWO-STEP DOWN FUNCTION OPERATIVE/NON-OPERATIVE SWITCHING PROCEDURE

id091200004200

#### Note

- By following the procedure below, the two-step down function is switched to non-operative when it is operative, and to operative when it is non-operative.



acxuww00001670

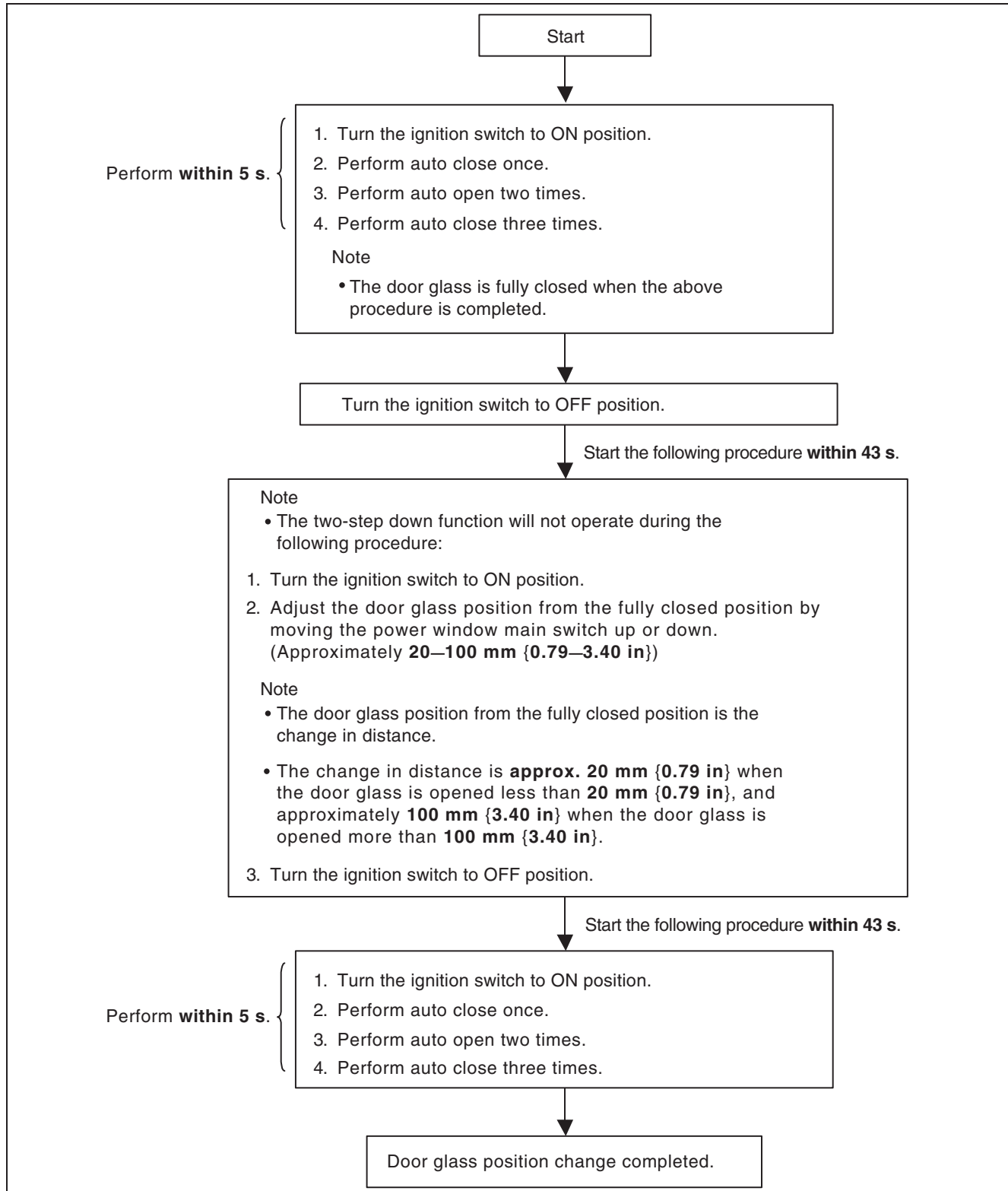
## GLASS/WINDOWS/MIRRORS

### DOOR GLASS POSITION CHANGE PROCEDURE

id091200004400

#### Note

- After performing the following procedure, verify that the two-step down function operates normally and the door glass position has changed. If the two-step down function does not operate or the door glass position has not changed, the procedure was not performed properly. Repeat the procedure from the beginning.



acxuuw00001671



## GLASS/WINDOWS/MIRRORS

### WINDSHIELD REMOVAL

id091200000500

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Windshield wiper arm and blade (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
  - (2) Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
  - (3) Cowl panel (See 09-10-23 COWL PANEL REMOVAL/INSTALLATION.)
  - (4) Rain sensor (vehicles with rain sensor) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (5) Rear view mirror (See 09-12-54 REARVIEW MIRROR REMOVAL.)
  - (6) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (7) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (8) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (9) Interior light (See 09-18-43 INTERIOR LIGHT REMOVAL/INSTALLATION.)
3. Set the headliner out of the way.
4. Apply protective tape along the edge of the body.

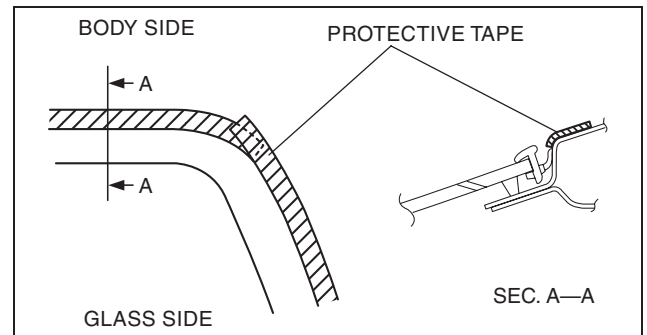
#### Note

- Overlap and adhere the protective tape to the corners to prevent damage.

5. Remove the windshield molding by pulling it outward.

#### Note

- If the windshield molding is difficult to remove, warm the windshield molding using a hot air blower.
- The windshield molding is a replacement part.



### Not Reusing Windshield

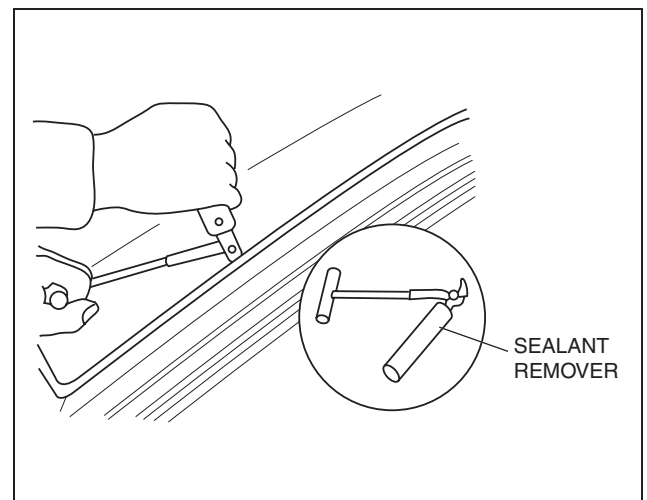
#### Note

- If it is difficult to cut sealant, use piano wire and follow the procedure under “Reusing Windshield”.

#### Warning

- Using piano wire with bare hands can cause injury. Always wear gloves when using piano wire.

1. Cut out the sealant all around the glass using a sealant remover.
2. Remove the windshield.



### Reusing Windshield

#### Warning

- Using piano wire with bare hands can cause injury. Always wear gloves when using piano wire.

#### Caution

- Because the lens for rainfall/illumination level detection is integrated with the windshield, the auto

## GLASS/WINDOWS/MIRRORS

wiper/auto light systems may not operate correctly if the lens is damaged. When removing the windshield, be careful not to damage the lens. If the lens is damaged, replace the windshield.

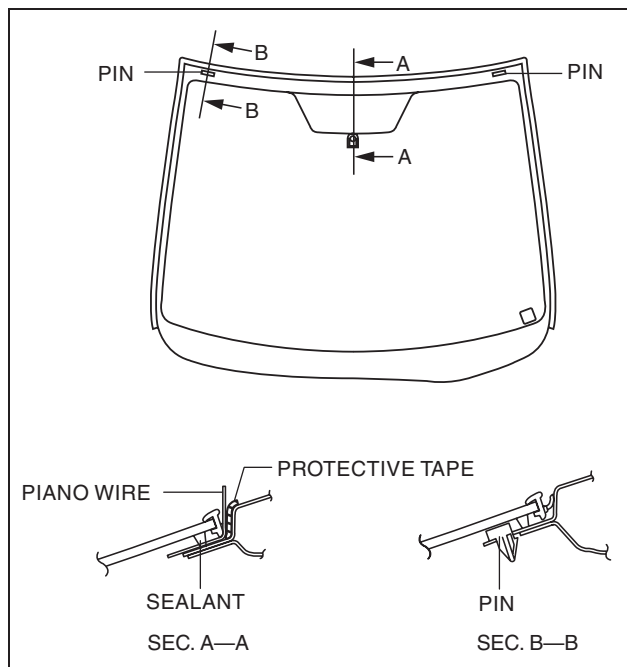
### Note

- Before removing the windshield from the body, mark the position of the windshield by affixing tape to the windshield and body panel.

- Avoiding the pin on the inside of the vehicle, insert piano wire which has been cut to sufficient length.
- Wind each end of piano wire around a bar.

### Note

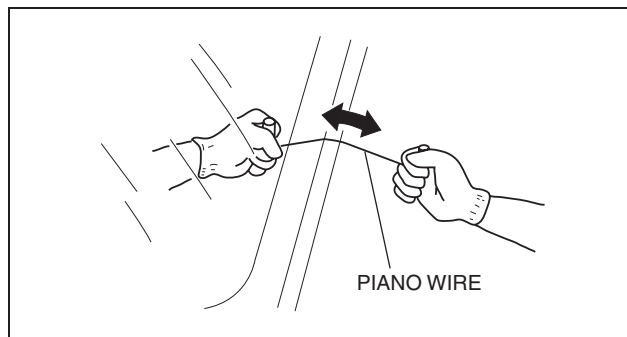
- Use a long sawing action to spread the work over the whole length of piano wire to prevent it from breaking due to localized heating.



- Secure one end of piano wire, and while pulling the other end, cut the sealant around the windshield.
- Pinch the pin from the inside of the vehicle and detach it.
- Remove the windshield.
- If the pin is damaged, remove the pin.

### Note

- Before removing the pin from the windshield glass, place an alignment mark on the windshield.



## WINDSHIELD INSTALLATION

id091200000700

### Warning

- Using a utility knife with bare hands can cause injury. Always wear gloves when using a utility knife.

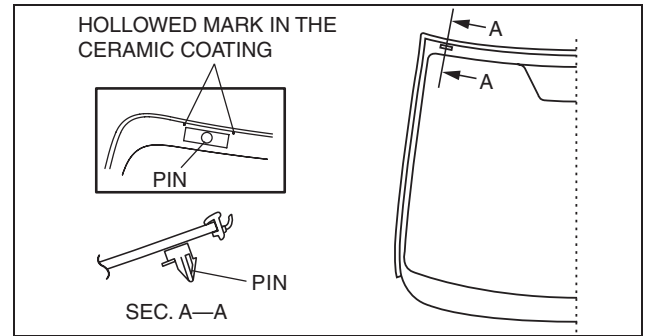
### Caution

- If a door is opened or closed when all the window glass is closed, the resulting change in air pressure could cause the sealant to crack preventing the proper installation of the windshield. Keep the door glass opened until the windshield installation is completed.
- If the rain sensor is replaced with a new one, the reflection rate when the ignition switch is turned to the ON position the first time is memorized as a condition that no rainfall is on the windshield. Therefore, remove water and dirt from the windshield before turning the ignition switch to the ON position. Perform the rain sensor initial setting in the following cases: (See 09-19-31 RAIN SENSOR INITIAL SETTING.)
  - The windshield is replaced and the rain sensor is reused.
  - The auto wiper system does not operate correctly after the windshield is installed.

- Remove the sealant along the perimeter of the glass using a utility knife. (When reusing the glass)

## GLASS/WINDOWS/MIRRORS

- Clean and degrease an **approx. 50 mm {2.0 in}** wide strip along the perimeter of the windshield.
- Inspect the glass for cracks. If it is cracked, chamfer it using sandpaper.
- Align the alignment marks made before removal and install the pin to the windshield referring to the figure. (Reusing glass, pin removed)



am2zzw0000209

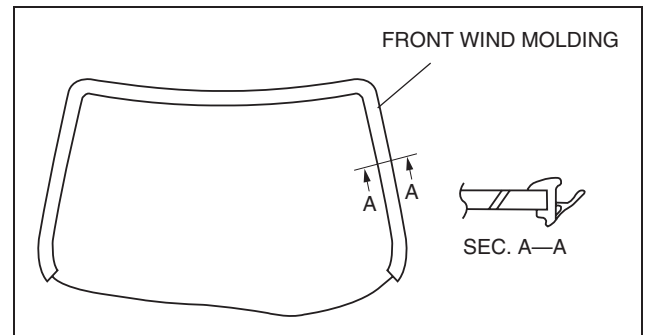
- Install the windshield molding.
- Apply glass primer on the glass as shown in the figure, then allow it to dry for **approx. 30 min.**

### Caution

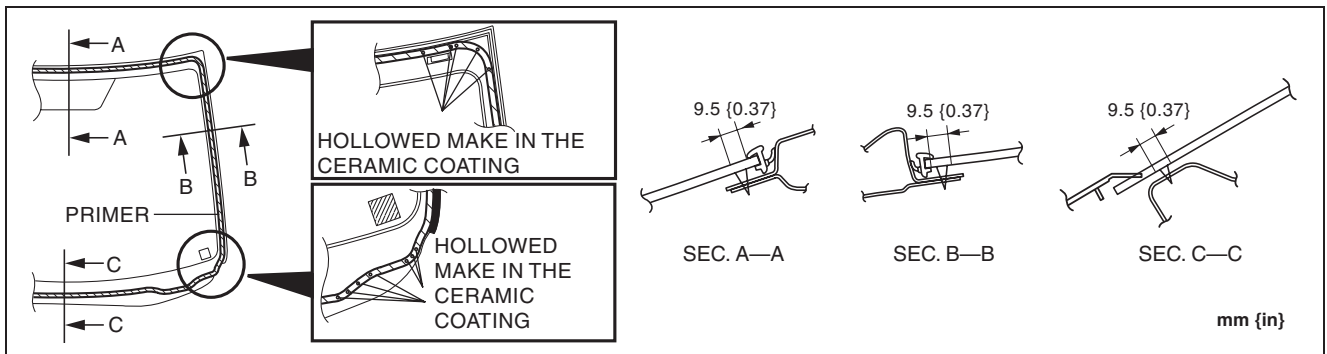
- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.

### Note

- Apply primer to the hollowed marks in the ceramic coating.



am2zzw0000209

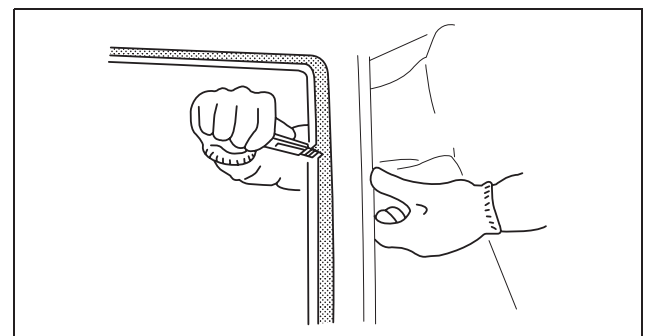


am2zzw0000247

- Cut away the old sealant using a utility knife so that **1—2 mm {0.04—0.07 in}** thickness of sealant remains along the perimeter of the frame.
- If the sealant has come off completely in any one place, apply some primer after degreasing, and allow it **approx. 30 min** to dry. Then apply **2 mm {0.08 in}** thickness of new sealant.

### Caution

- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.



avejiw00001067

- Clean and degrease along the perimeter of the bonding area on the body.
- Apply body primer on the body as shown in the figure, then allow it to dry for **approx. 30 min.**

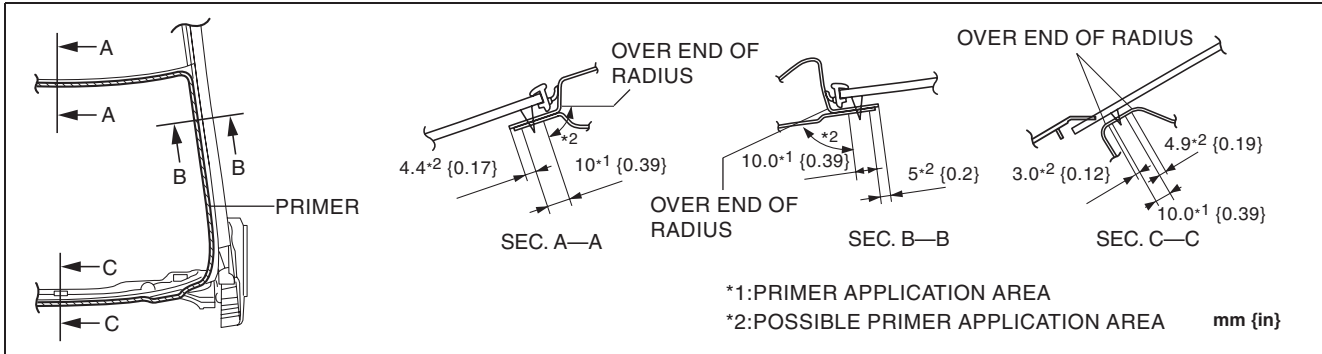
### Caution

- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.

## GLASS/WINDOWS/MIRRORS

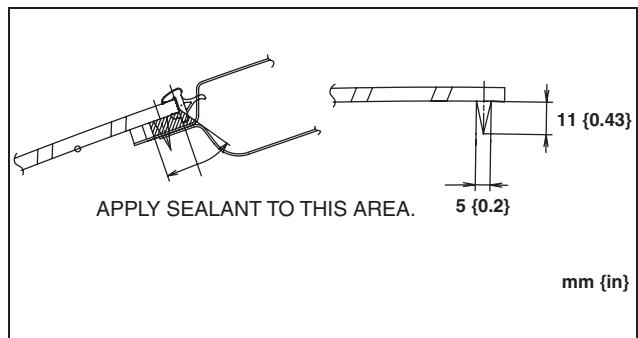
### Note

- Apply primer to the hollowed marks in the ceramic coating.



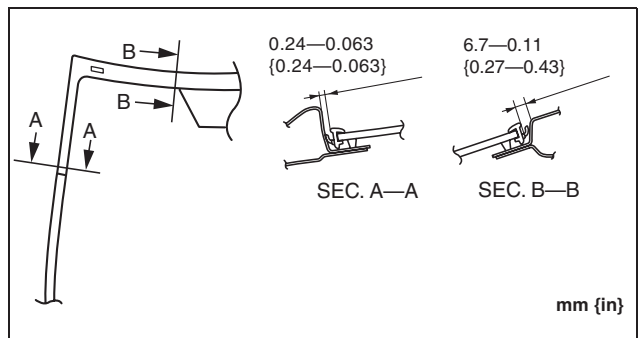
am2zzw0000247

11. Apply sealant to the area of the glass surface as shown in the figure.
12. Insert the positioning pins to the body and install the windshield.



am2zzw0000247

13. Verify that the clearance between the A-pillar and the roof is within the range shown in the figure, and press along the perimeter of the glass.
14. Install the headliner.
15. Install the following parts:
  - (1) Interior light (See 09-18-43 INTERIOR LIGHT REMOVAL/INSTALLATION.)
  - (2) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (3) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (4) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (5) Rearview mirror (See 09-12-57 REARVIEW MIRROR INSTALLATION.)
  - (6) Rain sensor (vehicles with rain sensor) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (7) Cowl panel (See 09-10-23 COWL PANEL REMOVAL/INSTALLATION.)
  - (8) Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
  - (9) Windshield wiper arm and blade (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
16. Allow the sealant to harden completely.



am2zzw0000347

**Sealant hardening time: 24 h**

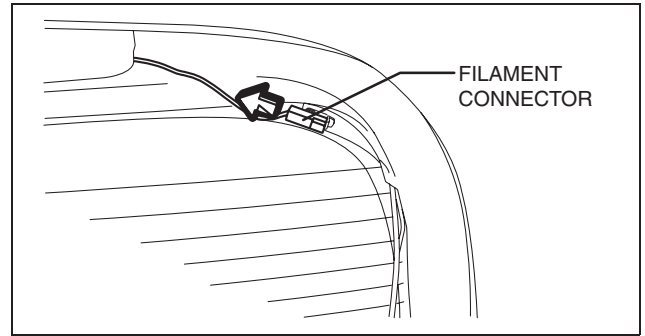
### REAR WINDOW GLASS REMOVAL

id091200000600

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Rear wiper arm and blade (See 09-19-17 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
  - (2) Liftgate lower trim (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
  - (3) Rear spoiler (See 09-16-17 REAR SPOILER REMOVAL.)
  - (4) High-mount brake light (See 09-18-28 HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION.)

## GLASS/WINDOWS/MIRRORS

3. Disconnect the filament connector.

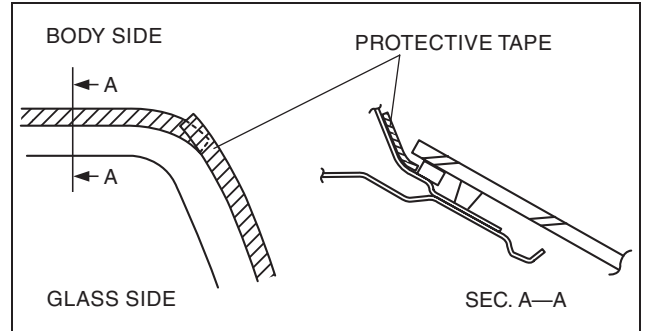


am2zzw0000439

4. Apply protective tape along the edge of the body.

**Note**

- Overlap and adhere the protective tape to the corners to prevent damage.



am2zzw0000210

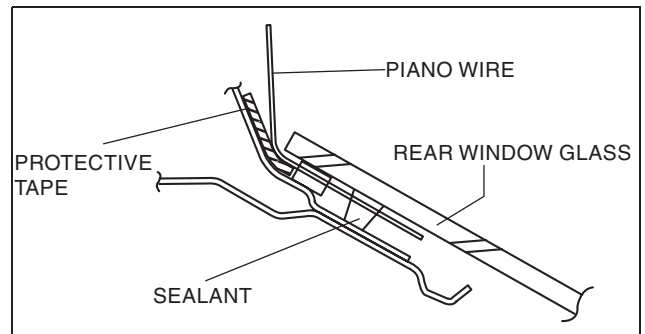
5. Avoiding the pin on the inside of the vehicle, insert piano wire which has been cut to sufficient length.

**Warning**

- **Using piano wire with bare hands can cause injury. Always wear gloves when using piano wire.**

**Note**

- Before removing the rear window glass from the body, mark the position of the glass by affixing tape to the glass and body panel.



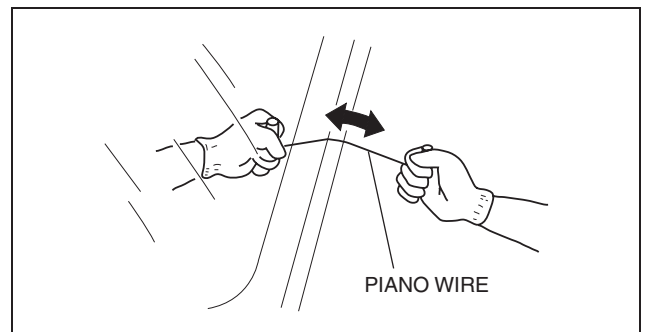
am2zzw0000439

6. Wind each end of piano wire around a bar.

**Note**

- Use a long sawing action to spread the work over the whole length of piano wire to prevent it from breaking due to localized heating.

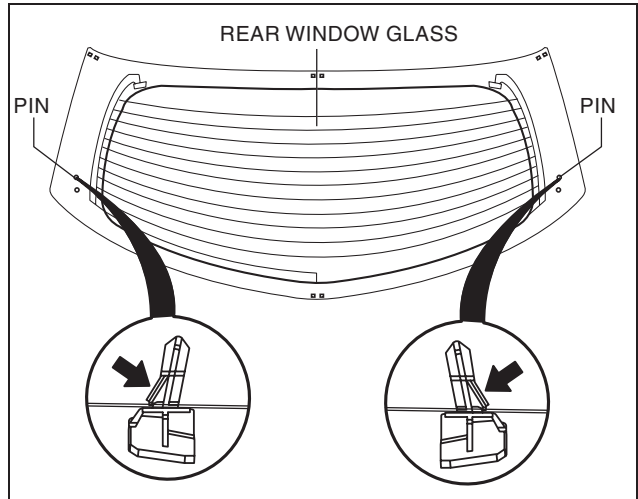
7. Secure one end of piano wire, and while pulling the other end, cut the sealant around the rear window glass.



am2zzw0000210

## GLASS/WINDOWS/MIRRORS

8. Pinch the pin from the inside of the vehicle and detach it.
9. Remove the rear window glass.

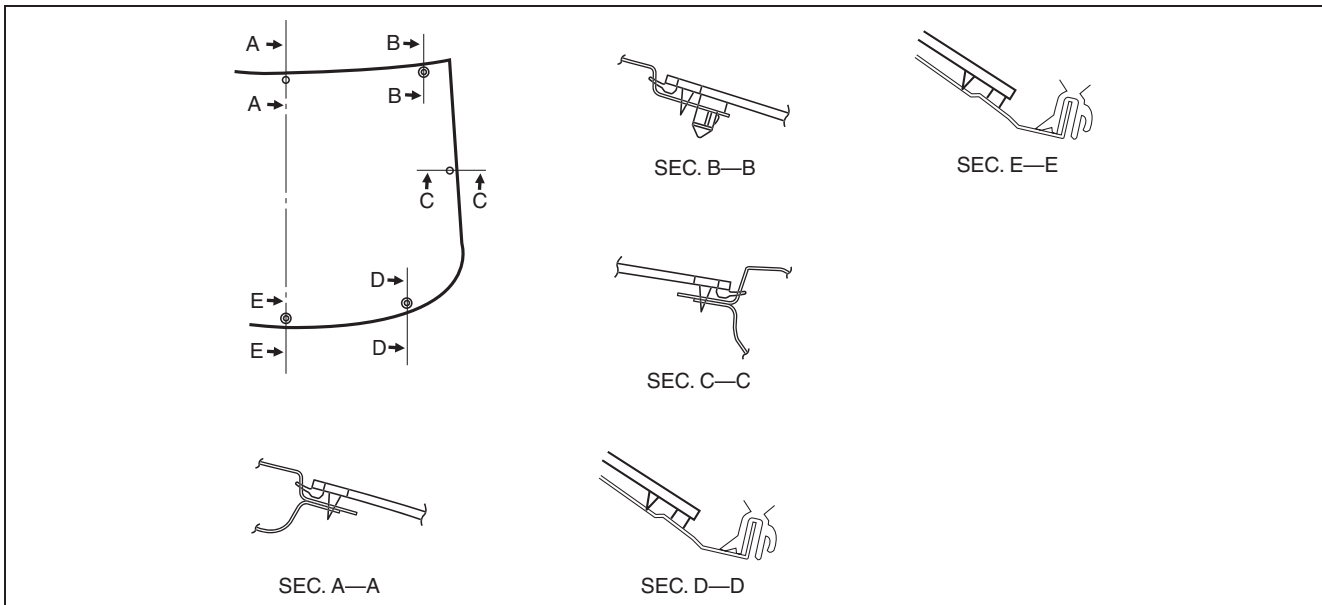


am2zzw0000439

id091200000681

### REAR WINDOW GLASS REMOVAL [4SD]

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (2) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
  - (4) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (5) Rear package trim (See 09-17-68 REAR PACKAGE TRIM REMOVAL/INSTALLATION [4SD].)
3. Disconnect the filament connector.
4. Set the headliner out of the way.
5. Apply protective tape along the edge of the body.
6. Cut the rear window glass molding lip using a razor.



am2ccw0000021

#### Warning

- Using a razor with bare hands can cause injury. Always wear gloves when using a razor.

#### Note

- The rear window glass molding is a replacement part.

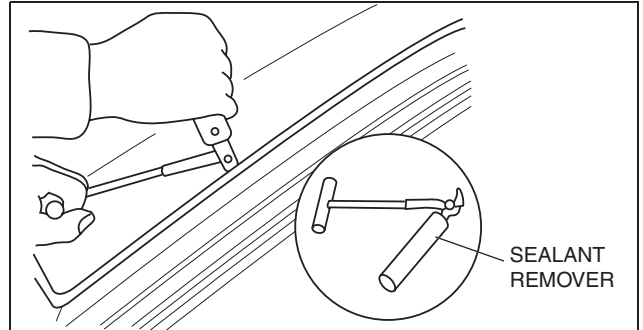
## GLASS/WINDOWS/MIRRORS

### Not Reusing Rear Window Glass

#### Note

- For the areas of the sealant that are difficult to cut, use the piano wire and follow the procedure under "Reusing Rear Window Glass".

1. Cut out the sealant all around the glass using a sealant remover.
2. Remove the sealant by pulling it off.
3. Remove the rear window glass.



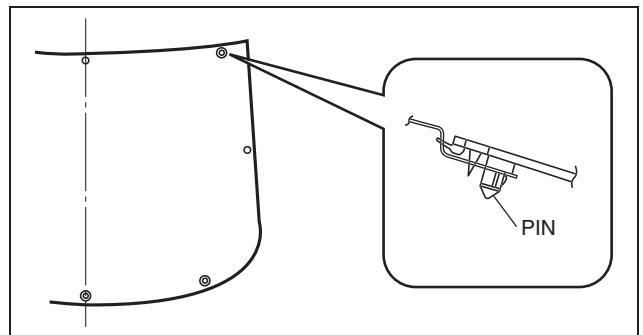
am3zzw0000282

### Reusing Rear Window Glass

#### Note

- Before removing the rear window glass from the body, mark the position of the glass by affixing tape to the glass and body panel.

1. Make a hole through the sealant from the inside of the vehicle using an awl, avoiding the pins.



am2ccw0000021

2. Pass the piano wire, cut to sufficient length, through the hole.

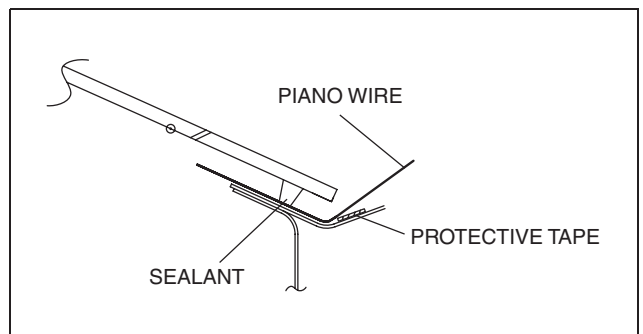
#### Warning

- Using the piano wire with bare hands can cause injury. Always wear gloves when using the piano wire.**

3. Wind each end of the piano wire around a bar.

#### Note

- Use a long sawing action to spread the work over the whole length of the piano wire to prevent it from breaking due to localized heating.



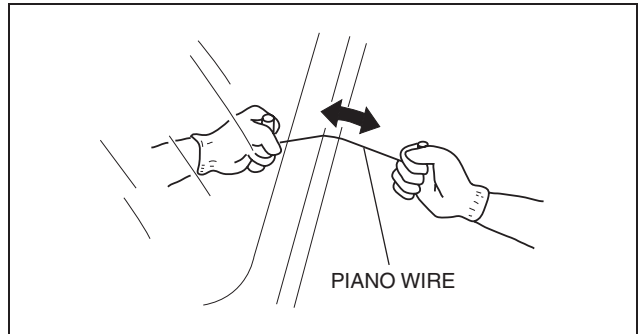
am2ccw0000027

## GLASS/WINDOWS/MIRRORS

- Fix one end of the piano wire, and while pulling the other end, cut the sealant around the rear window glass.

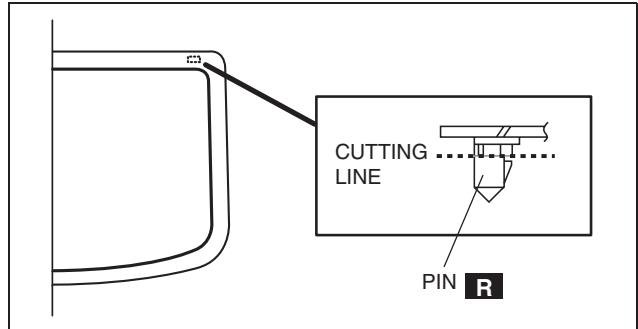
### Note

- As the upper part of the pin adheres to the sealant, cut it using the piano wire.



am2ccw0000027

- Cut the pins out.
- Remove the rear window glass.
- Mark the seating positions of the pins and remove the pins from the rear window glass.
- Remove the rear window glass molding from the rear window glass.



am3zzw0000283

## REAR WINDOW GLASS INSTALLATION

id091200000800

### Warning

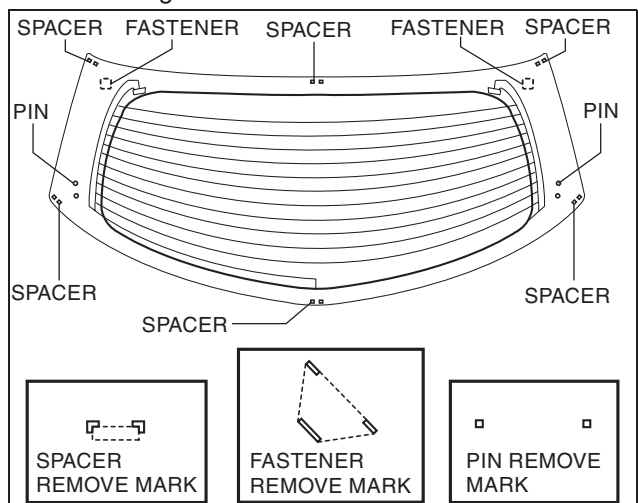
- Using a utility knife with bare hands can cause injury. Always wear gloves when using a utility knife.

### Caution

- Proper installation of the glass may be difficult if sealant is cracked or the glass is pushed out by air pressure when a door is opened/closed with all the window glass closed. Keep the door glass open until the rear window glass installation is completed.

- Remove sealant along the perimeter of the glass using a utility knife or scraper. (When reusing the glass)
- Clean and degrease an **approx. 50 mm {2.0 in}** wide strip along the perimeter of the glass.
- Inspect the glass for cracks. If it is cracked, chamfer it using sandpaper.
- Install the spacers, fasteners, and pins to the glass as shown in the figure.

When reusing the glass, align it with the alignment mark placed before the glass was removed.



am2zzw0000211



## GLASS/WINDOWS/MIRRORS

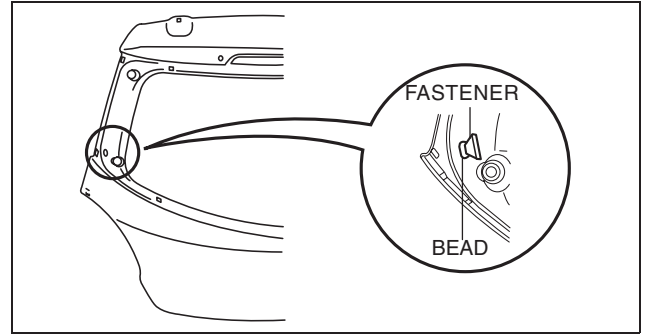
5. Install the fastener to the bead on the body side.
6. Apply glass primer on the glass as shown in the figure then allow it to dry for **approx. 30 min.**

### Caution

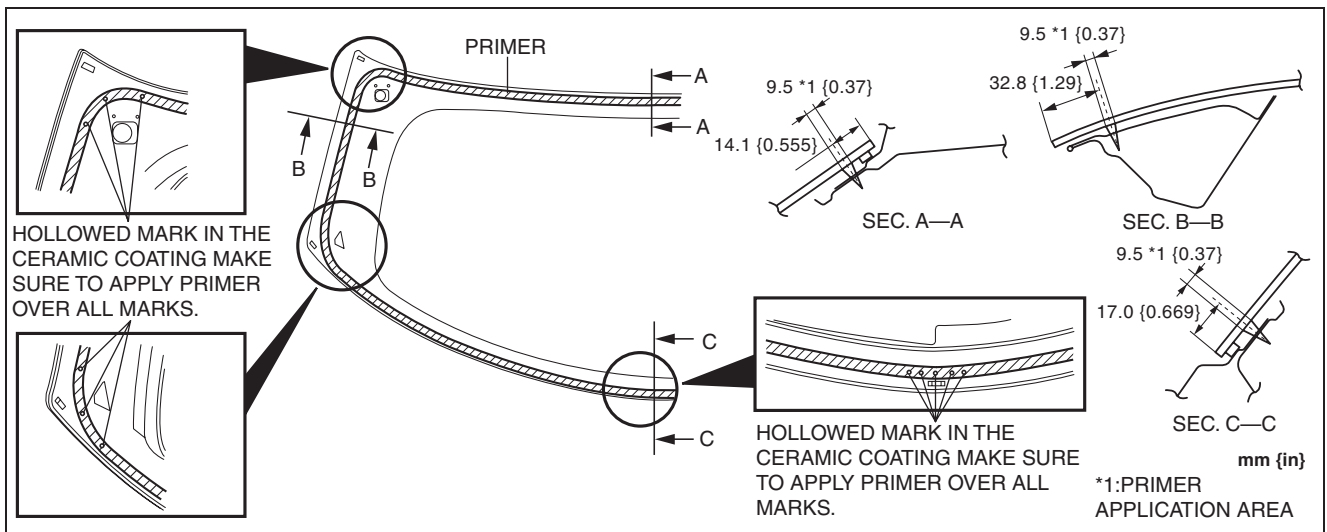
- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.

### Note

- Apply primer to the hollowed marks in the ceramic coating.



am2zzw0000211

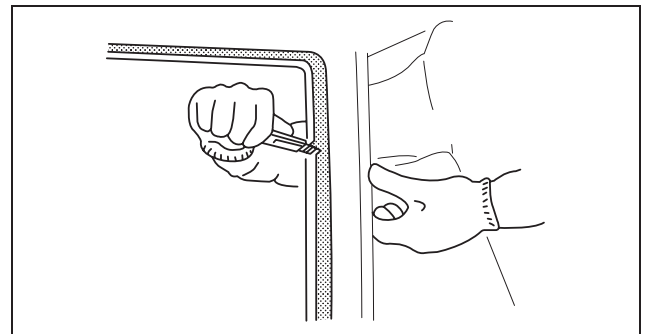


am2zzw0000247

7. Cut away the old sealant using a utility knife or scraper so that **1—2 mm {0.04—0.07 in}** thickness of sealant remains along the perimeter of the frame.
8. Clean and degrease along the perimeter of the bonding area on the body.
9. If the sealant has come off completely in any one place, apply some primer, and allow it to dry for **approx. 30 min.**

### Caution

- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.



am2zzw0000424

10. Apply body primer on the body as shown in the figure, then allow it to dry for **approx. 30 min.**

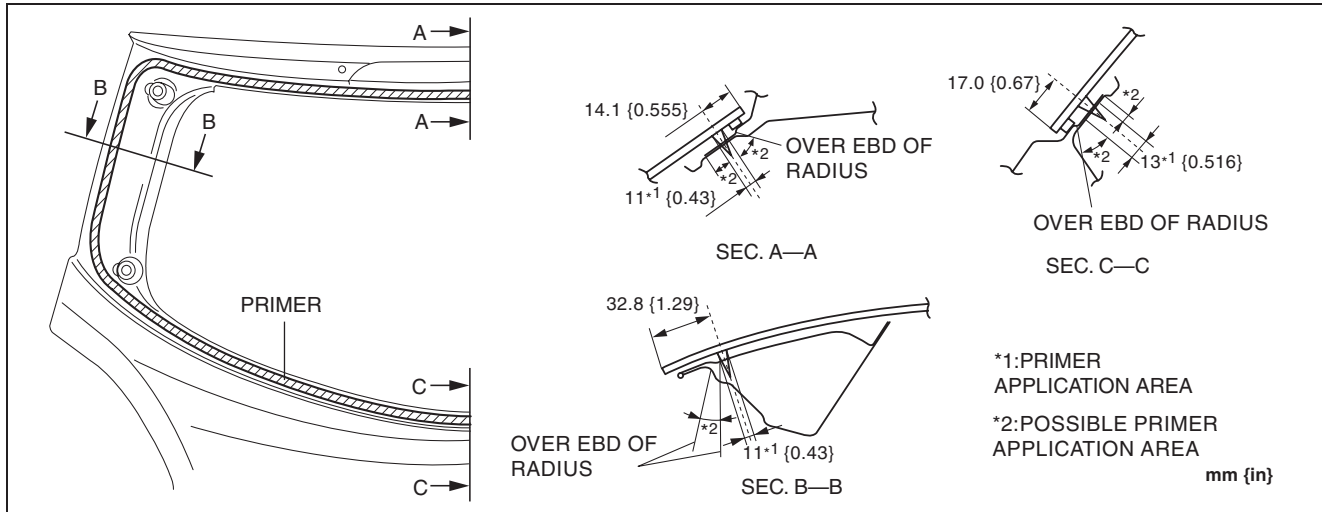
### Caution

- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.

### Note

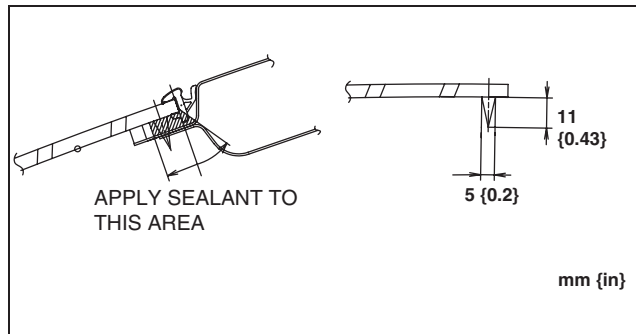
- Apply primer to the hollowed marks in the ceramic coating.

## GLASS/WINDOWS/MIRRORS

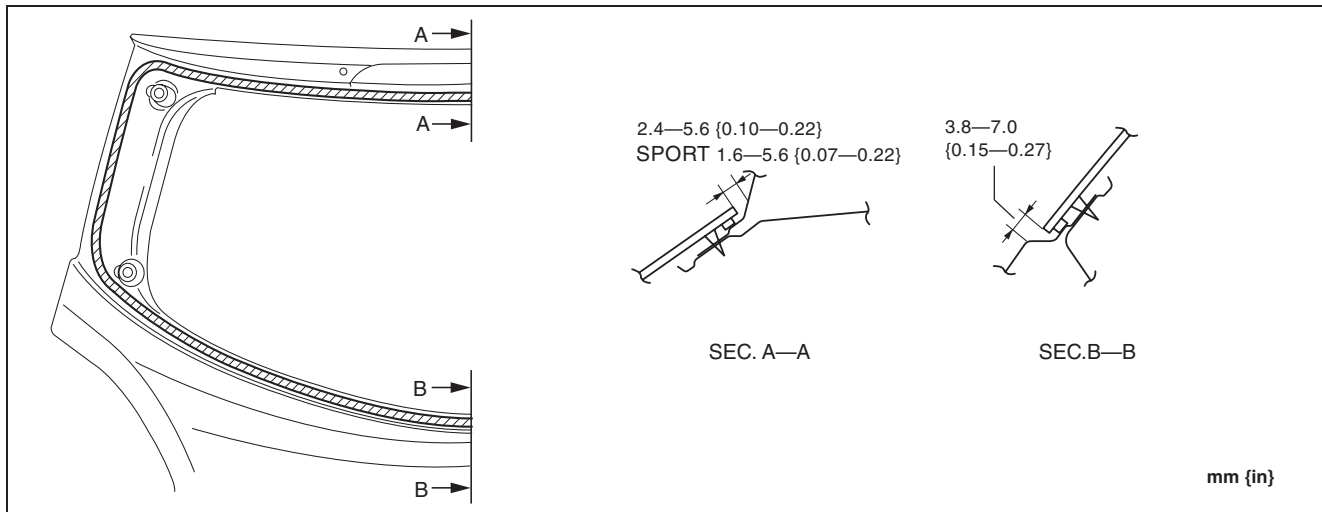


am2zzw0000247

11. Apply sealant to the area of the glass surface as shown in the figure.
12. Install the rear window glass.
13. Verify that the gap at the upper and lower parts of the glass is within the specification shown in the figure, then press along the perimeter of the glass.



am2zzw0000248



am2zzw0000248

14. Connect the filament connector.
15. Install the following parts:
  - (1) High-mount brake light (See 09-18-28 HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION.)
  - (2) Rear spoiler (See 09-16-19 REAR SPOILER INSTALLATION.)
  - (3) Liftgate lower trim (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
  - (4) Rear wiper arm and blade (See 09-19-17 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
16. Allow the sealant to harden completely.

**Sealant hardening time: 24 h**

## GLASS/WINDOWS/MIRRORS

### REAR WINDOW GLASS INSTALLATION [4SD]

id09120000881

#### Caution

- Proper installation of the rear window glass may be difficult if sealant is cracked or the glass is pushed out by air pressure when a door is opened/closed with all the window glass closed. Leave all the windows open until the rear window glass is installed completely.

1. Cut away the old sealant using a razor so that a 1—2 mm {0.04—0.07 in} thickness of sealant remains along the perimeter of the frame.

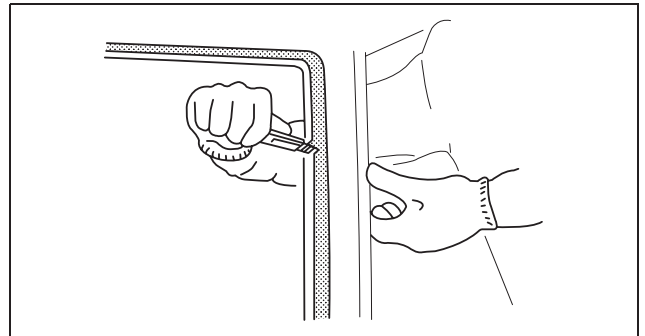
#### Warning

- Using a razor with bare hands can cause injury. Always wear gloves when using a razor.

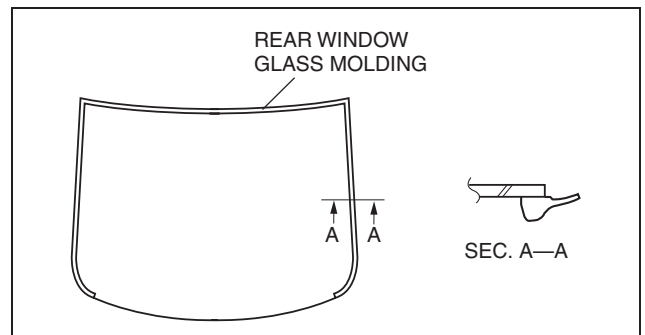
2. If the sealant has come off completely in any one place, apply some primer after degreasing, and allow it to dry for **approx. 30 min.** Then apply a **2 mm {0.08 in}** thickness of sealant.
3. Clean and degrease the perimeter **approx. 50 mm {1.97 in}** from the glass end and the bonding area on the body.
4. If installing a reused rear window glass, install the rear window glass molding according to the following procedure.
  - (1) Clean and degrease the rear window glass molding installation area of the rear window glass.
  - (2) Apply the glass primer to the rear window glass molding installation area of the rear window glass.
5. Apply glass primer on the rear window glass, and body primer on the rear window glass molding as shown in the figure. Allow it to dry for **approx. 30 min.**

#### Caution

- Keep the area free of dirt and grease, and do not touch the surface. Otherwise, the primer may not properly bond to the surface of the glass and body, which may cause leakage.

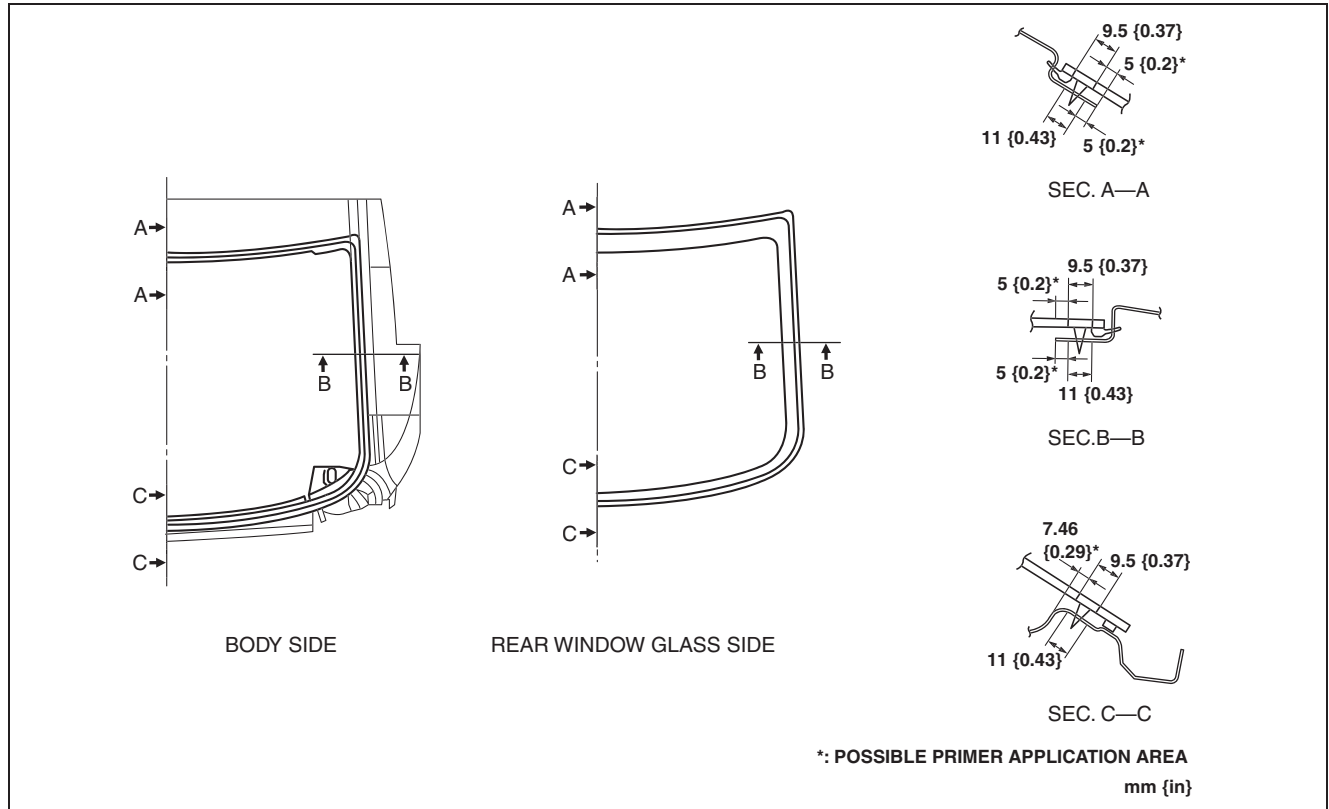


am3zzw0000283



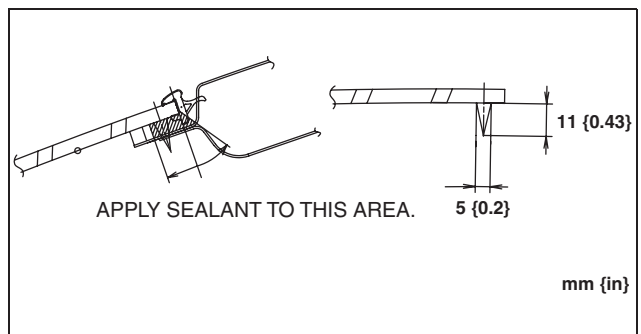
am2ccw0000020

## GLASS/WINDOWS/MIRRORS



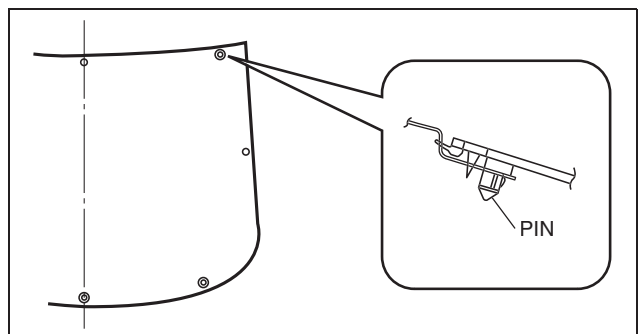
am2ccw0000020

6. Apply sealant to the glass surface as shown in the figure.
7. Insert the positioning pins into the body, then install the rear window.



am2zzw0000247

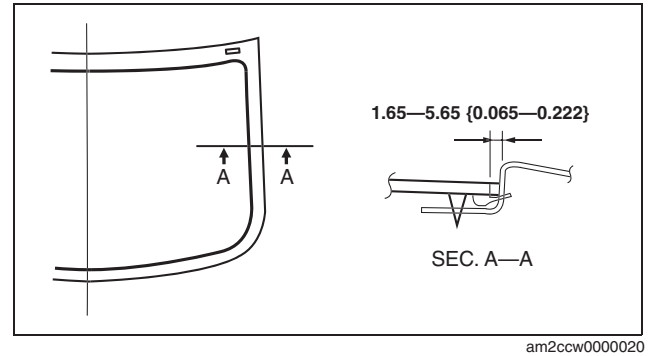
8. Press the rear window pins to engage the tabs to the body.



am2ccw0000020

## GLASS/WINDOWS/MIRRORS

9. Press completely along the perimeter of the glass so that the measurement of the molding lip gap is within the specification.
10. Connect the filament connector.
11. Install the following parts:
  - (1) Rear package trim (See 09-17-68 REAR PACKAGE TRIM REMOVAL/INSTALLATION [4SD].)
  - (2) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (3) Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
  - (4) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (5) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)
12. Allow the sealant to harden completely.



### Sealant hardening time: 24 h

13. Apply soapy water to the rear window glass molding side and blow air from the interior, then verify that there are no bubbles or air leakage.
  - If there are any bubbles or air leakage, repair the damaged part of the sealant and verify it again.

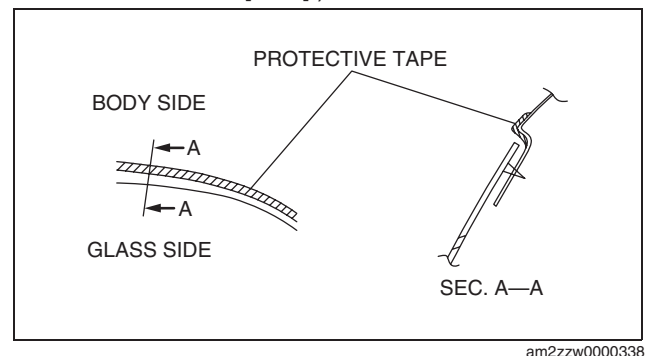
## QUARTER WINDOW GLASS REMOVAL [3HB]

id0912000025z3

### Warning

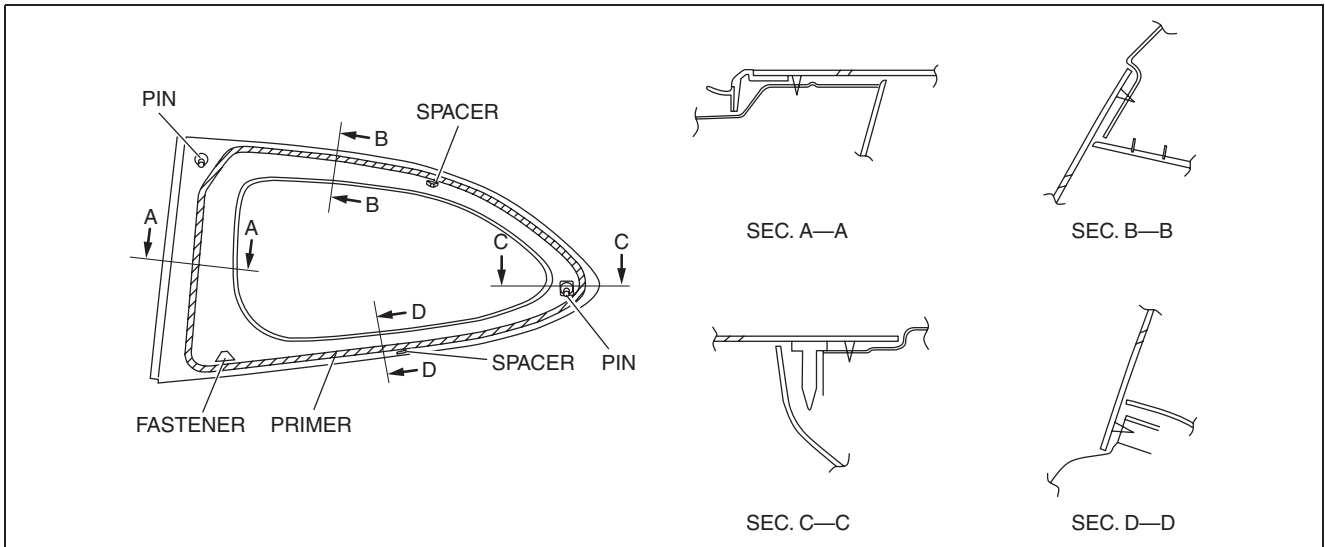
- Using a razor with bare hands can cause injury. Always wear gloves when using a razor.
- Using the piano wire with bare hands can cause injury. Always wear gloves when using the piano wire.

1. Remove the following parts:
  - (1) Partially peel back the seaming welt.
  - (2) Rear seat cushion (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (3) Rear seat back (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Lower anchor installation bolts on the rear seat belt. (See 08-11-7 REAR SEAT BELT REMOVAL/INSTALLATION [3HB].)
  - (5) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (6) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (7) B-pillar upper trim (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (8) C-pillar trim (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
2. Apply protective tape along the edge of the body and the quarter window glass.



## GLASS/WINDOWS/MIRRORS

- Cut out the sealant all around the glass from inside the vehicle using a sealant remover and the piano wire.



am2zzw0000338

- Pull the quarter window glass outward and detach the pins from the body.

### Note

- The pin is a replacement part.

## QUARTER WINDOW GLASS INSTALLATION [3HB]

id0912000026z3

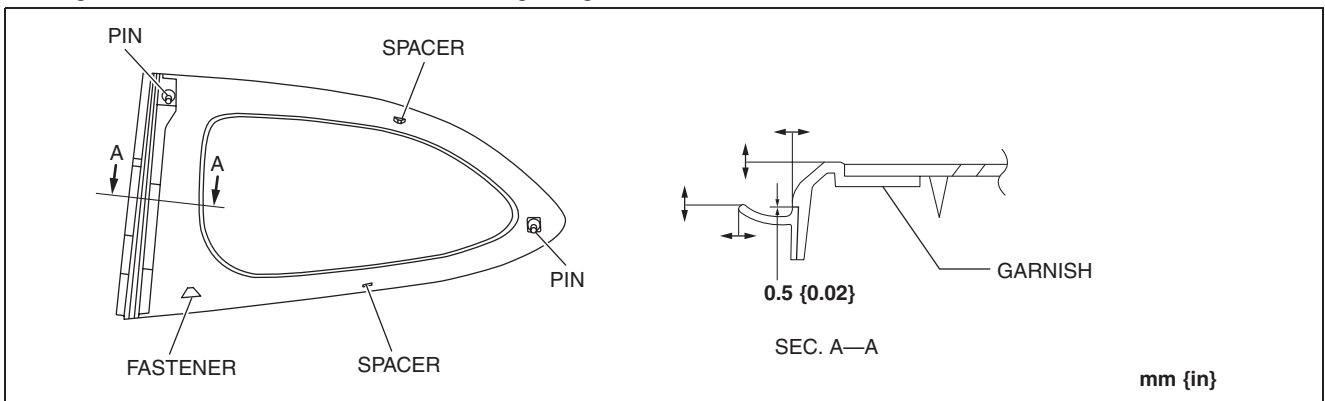
### Warning

- Using a razor with bare hands can cause injury. Always wear gloves when using a razor.

### Caution

- If a door is opened or closed when all the window glass is closed, the resulting change in air pressure could cause the sealant to crack preventing the proper installation of the glass. Keep the door glass open until the quarter window glass installation is completed.

- Remove sealant along the perimeter of the glass using a razor or scraper. (when reusing the glass)
- Clean and degrease the ceramic part along the perimeter of the glass.
- Inspect the glass for cracks. If it is cracked, chamfer it using sandpaper.
- If the glass is reused, attach the pins, spacers and garnish to the glass as shown in the figure. Align with the alignment marks marked before removing the glass.



am2zzw0000347

- Apply glass primer along the hollowed marks in the ceramic coating on the new glass, along the sealant tracks on the reused glass, then allow it to dry for **approx. 30 min.**

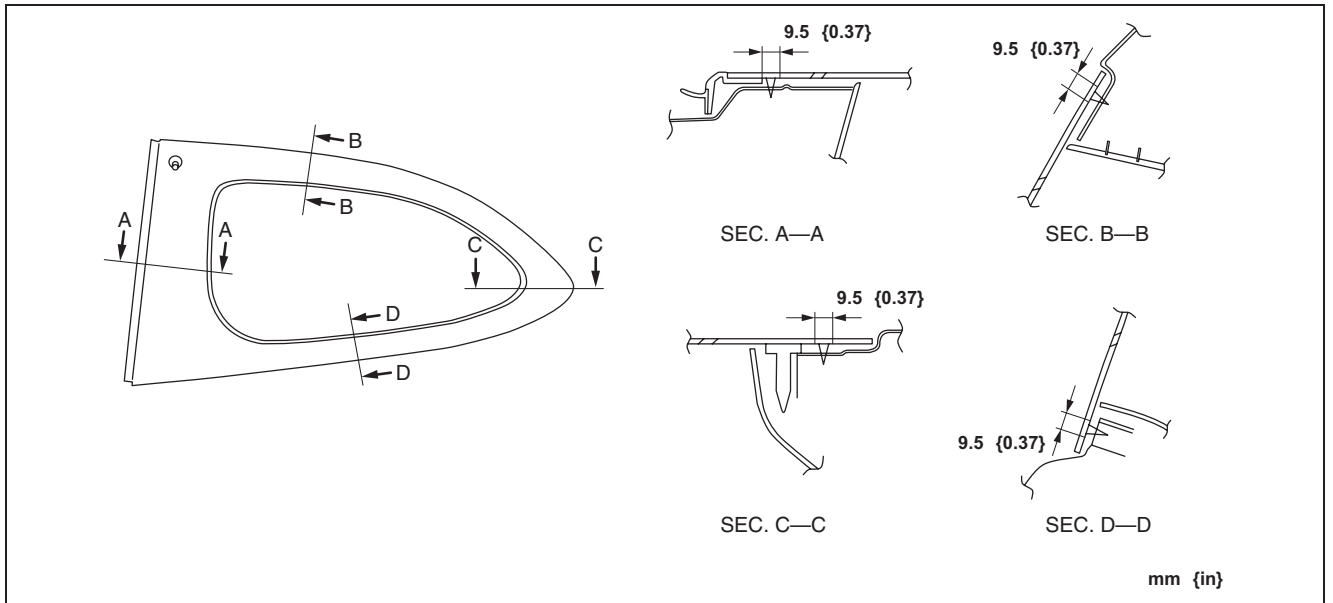
### Caution

- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.

## GLASS/WINDOWS/MIRRORS

### Note

- Apply primer to the hollowed marks in the ceramic coating.

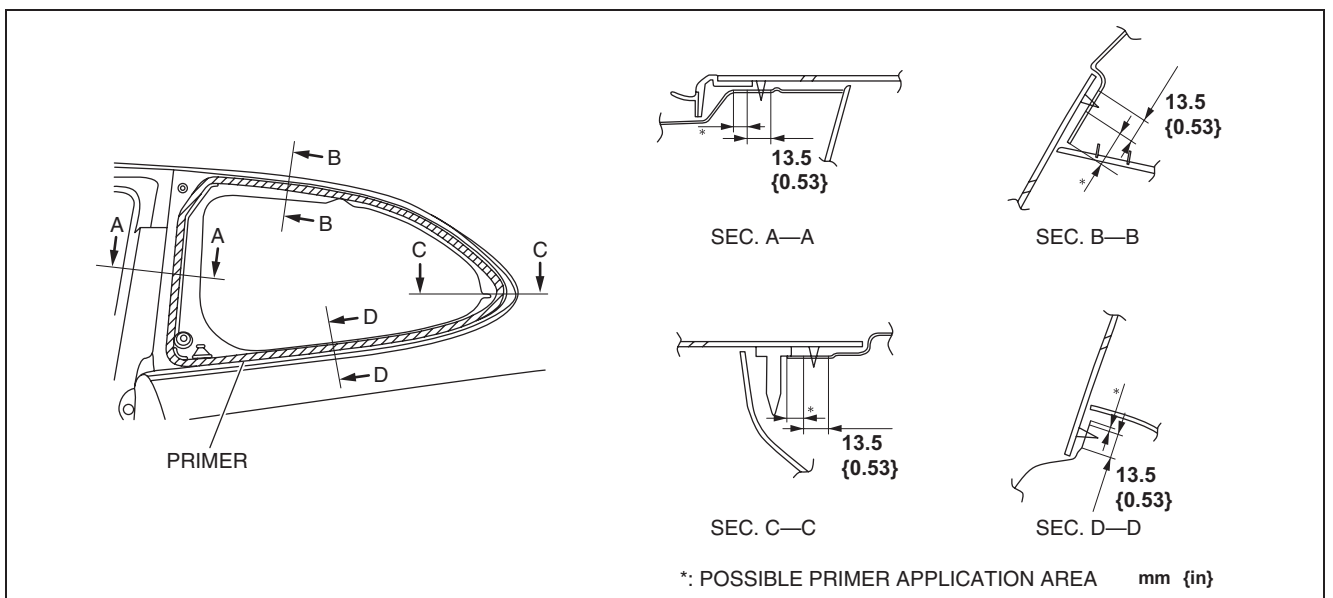


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6. Cut away the old sealant using a razor or scraper so that **1—2 mm {0.04—0.07 in}** thickness of sealant remains along the perimeter of the frame.
7. If the sealant has come off completely in any one place, apply some primer after degreasing, and allow it **approx. 30 min** to dry. Then apply **2 mm** thickness of new sealant.
8. Clean and degrease the bonding surface along the perimeter of the body.
9. Apply body primer on the body as shown in the figure, then allow it to dry for **approx. 30 min**.

### Caution

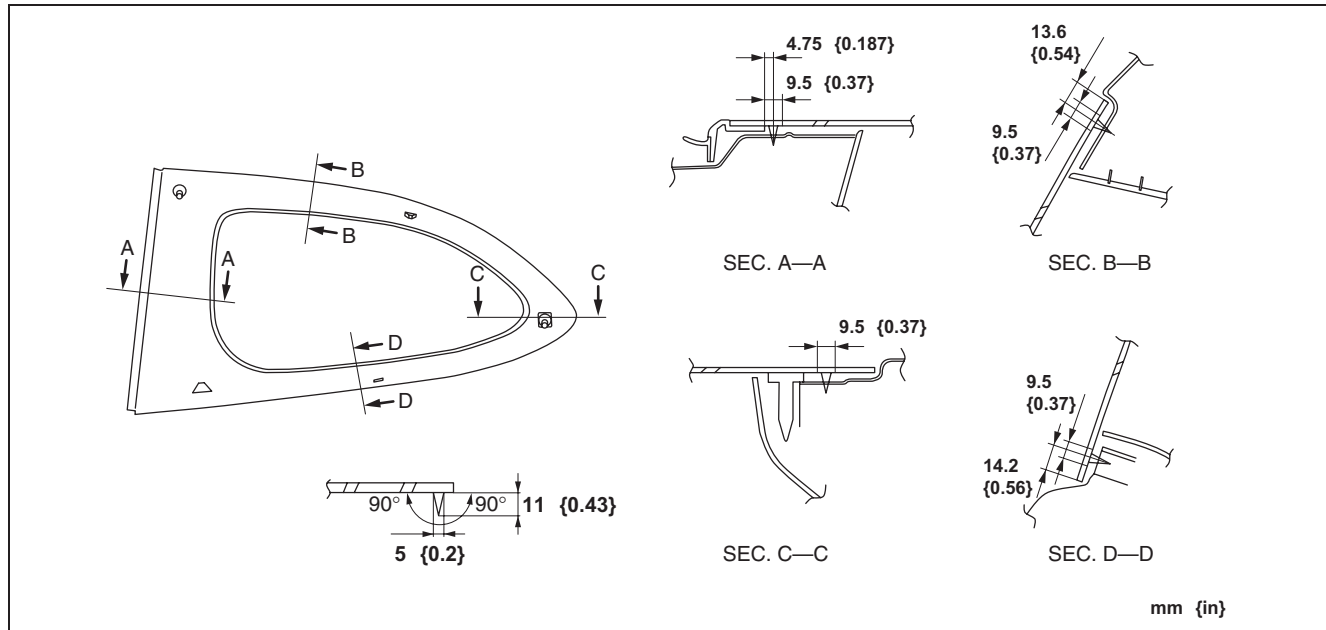
- To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.



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## GLASS/WINDOWS/MIRRORS

10. After the primer has dried, apply **13.5 mm {0.53 in}** in thickness, **5 mm {0.2 in}** in width of sealant using a sealant gun. Where it is not applied properly, correctly apply it using a spatula.



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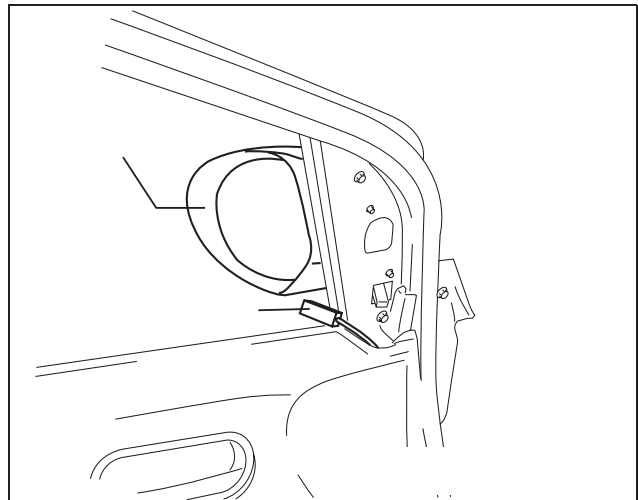
11. Insert the positioning pins to the body and install the quarter window glass.
12. Install the following parts:
- (1) B-pillar upper trim (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (2) C-pillar trim (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (3) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (4) Lower anchor installation bolts on the rear seat belt. (See 08-11-7 REAR SEAT BELT REMOVAL/INSTALLATION [3HB].)
  - (5) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (6) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (7) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Partially peel back the seaming welt.
13. Allow the sealant to harden completely.

**Sealant hardening time: 24 h**

## POWER OUTER MIRROR REMOVAL/INSTALLATION

id091200002400

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Disconnect the power outer mirror connector.

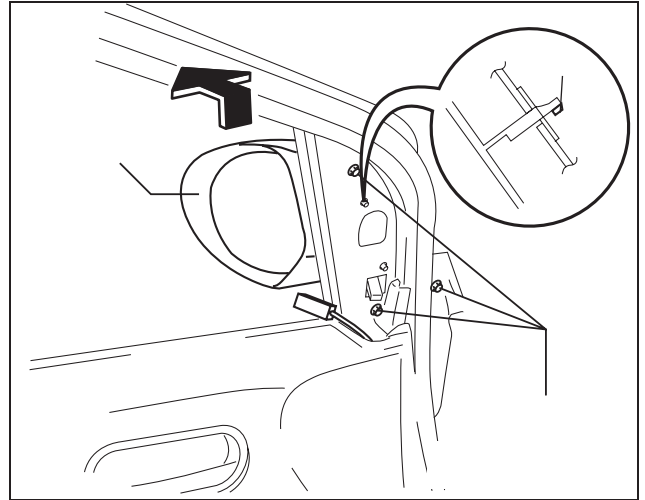


am2zzw0000498



## GLASS/WINDOWS/MIRRORS

4. Remove the bolts.
5. Remove the power outer mirror by pulling it in the direction of the arrow shown in the figure to release the tab.
6. Install in the reverse order of removal.



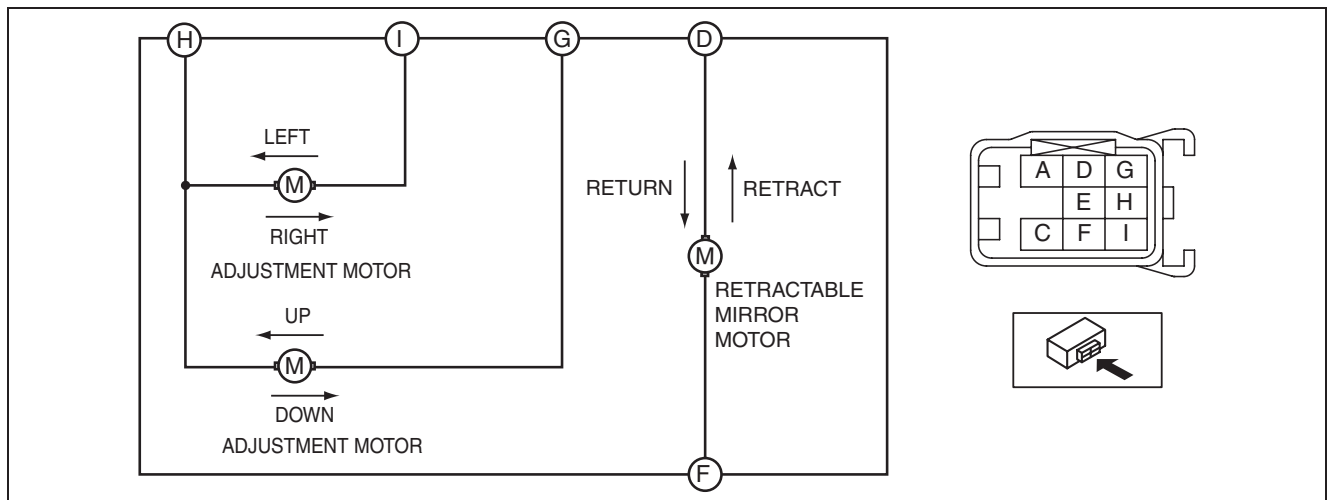
am2zzw0000498

### POWER OUTER MIRROR INSPECTION

id091200002700

#### Mirror glass adjustment, retract/return

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.) (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Remove the power outer mirror. (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
5. Apply battery positive voltage to the power outer mirror terminals and inspect the operation of the power outer mirror.



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- If not as specified, replace the power outer mirror.

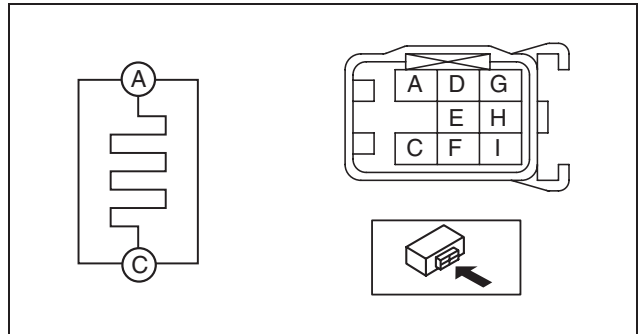
| Mirror operation direction | terminal |        |
|----------------------------|----------|--------|
|                            | B+       | Ground |
| Up                         | G        | H      |
| Down                       | H        | G      |
| Left                       | I        | H      |
| Right                      | H        | I      |
| Retract                    | F        | D      |
| Return                     | D        | F      |

#### Heated outer mirror

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.) (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Remove the power outer mirror. (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)

## GLASS/WINDOWS/MIRRORS

5. Apply battery voltage to power outer mirror connector terminal A, and connect terminal C to ground.



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- If not as indicated in the table, or if the resistance is not within the specification, replace the power outer mirror.

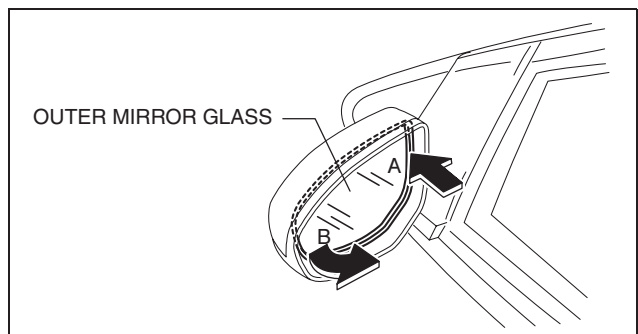
|                  | $\text{O} \text{---} \text{W} \text{---} \text{O}$ : Resistance |   |
|------------------|-----------------------------------------------------------------|---|
| Mirror operation | Terminal                                                        |   |
|                  | A                                                               | C |
| Heater           |                                                                 |   |
|                  | Resistance : 9—15 ohm                                           |   |

acxwzw0000082

### OUTER MIRROR GLASS REMOVAL

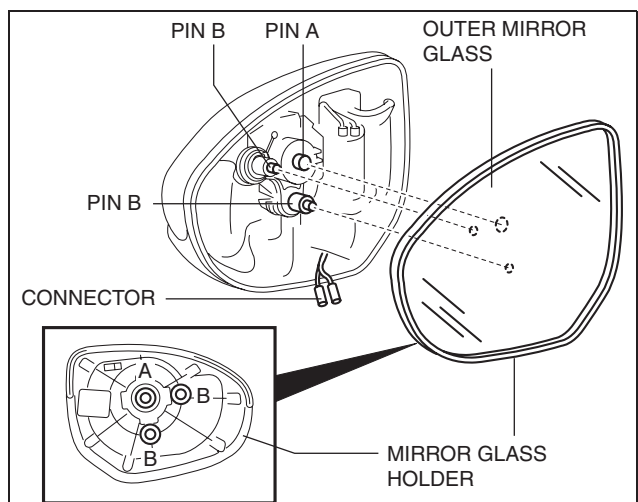
id091200002800

1. Disconnect the negative battery cable.
2. Press area A of the outer mirror glass so that area B moves outward.



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3. Detach pin A while lifting up the inside of the mirror glass holder.
4. Pull the outer mirror glass and remove pins B.
5. Disconnect the connector. (Vehicles with heated outer mirror)
6. Remove the outer mirror glass.



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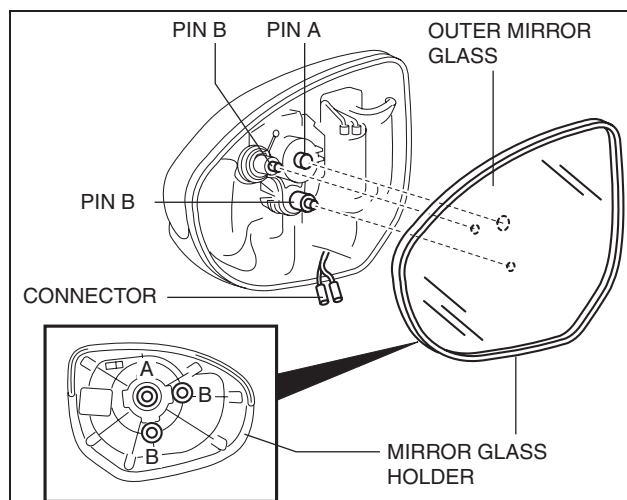
### OUTER MIRROR GLASS INSTALLATION

id091200002900

1. Connect the connector to the outer mirror glass. (Vehicles with heated outer mirror)

## GLASS/WINDOWS/MIRRORS

2. Press part A on the outer mirror glass and install pin A.
3. Press part B on the outer mirror glass and install pins B.

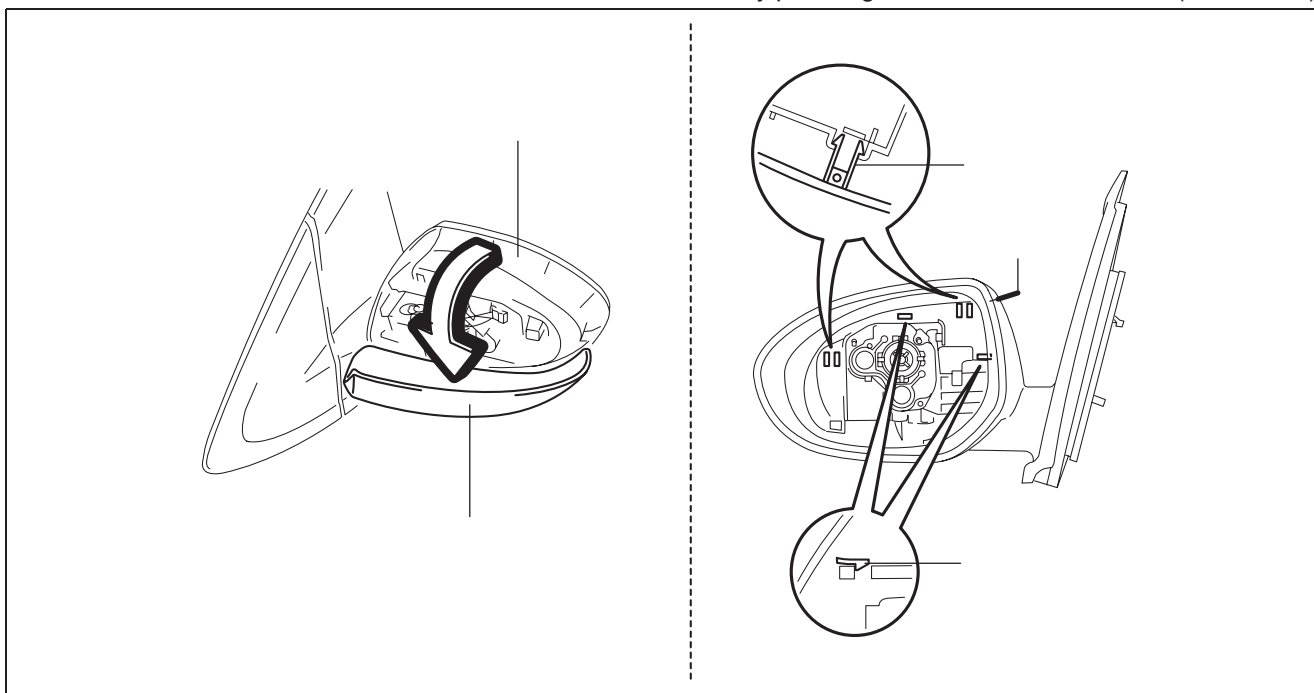


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### OUTER MIRROR GARNISH REMOVAL

id091200003100

1. Disconnect the negative battery cable.
2. Remove the outer mirror glass from the power outer mirror. (See 09-12-46 OUTER MIRROR GLASS REMOVAL.)
3. Pinch the end of the tab which is visible, and release the tab by pressing it toward the vehicle front (4 locations).



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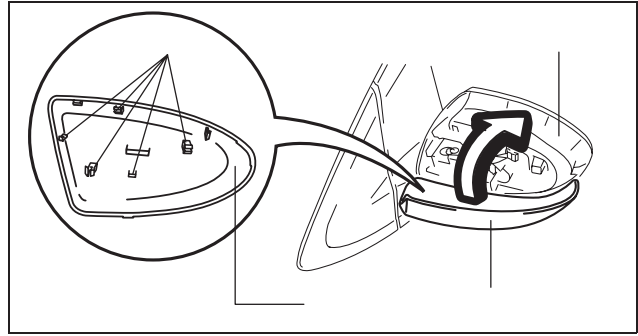
4. Grasp the upper side of the outer mirror garnish and remove it by pulling it in the direction of the arrow.

## GLASS/WINDOWS/MIRRORS

### OUTER MIRROR GARNISH INSTALLATION

id091200003200

1. Position the outer mirror garnish against the mirror body in the direction of the arrow shown in the figure, and insert the outer mirror garnish tabs (5 locations) into the mirror body.
2. Install the outer mirror garnish so that there are no gaps around the component.
3. Install the outer mirror glass. (See 09-12-46 OUTER MIRROR GLASS INSTALLATION.)



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### POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION

id091200003500

#### Note

- The power outer mirror switch is integrated with the power window main switch.

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (driver-side) (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the power outer mirror switch. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
5. Install in the reverse order of removal.

### POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION [3HB]

id0912000035z3

#### Note

- The power outer mirror switch is integrated with the power window main switch.

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (driver-side) (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
4. Remove the power outer mirror switch. (See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].)
5. Install in the reverse order of removal.

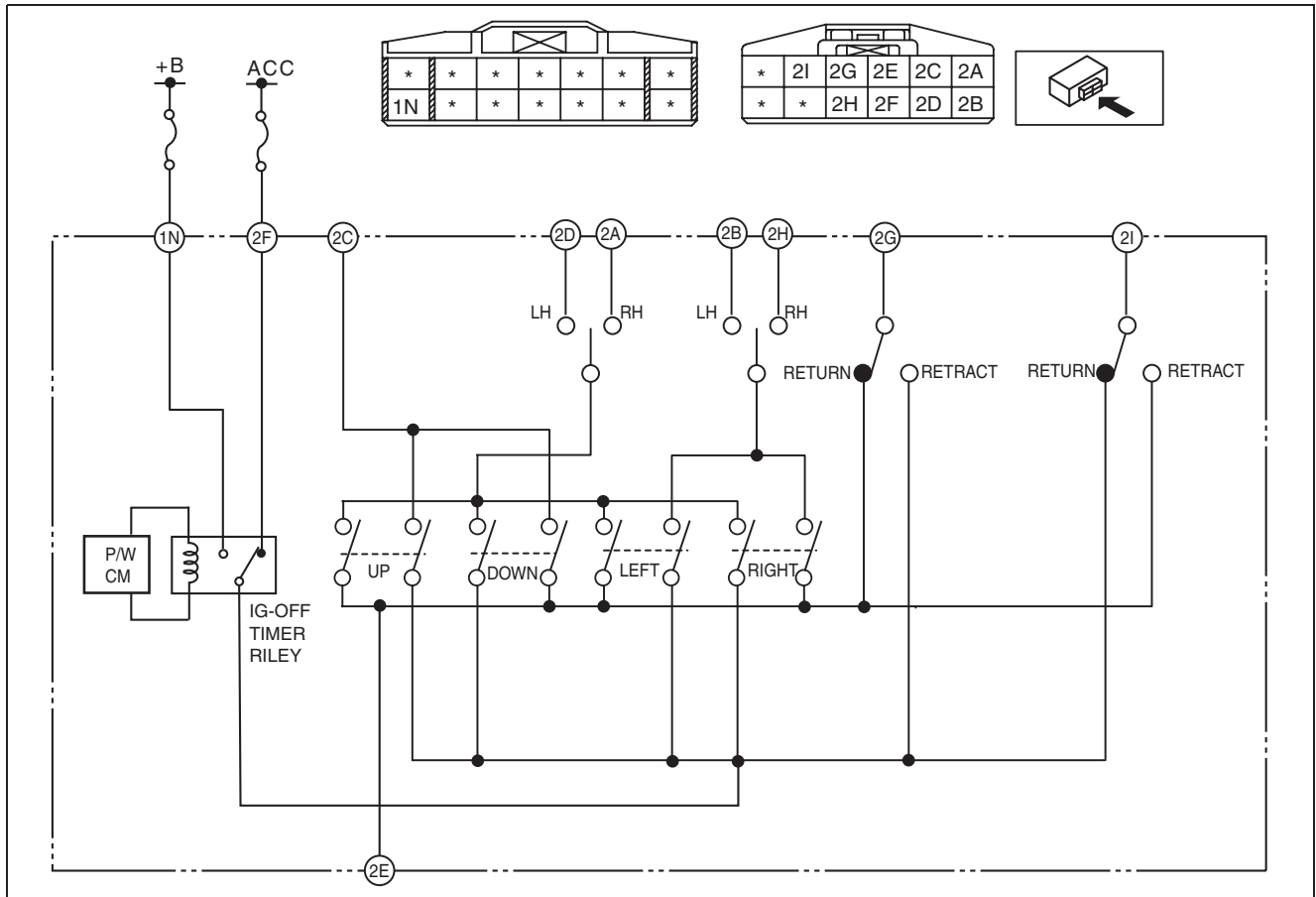
### POWER OUTER MIRROR SWITCH INSPECTION

id091200003400

1. Turn the ignition switch to the ON position.
2. Turn the ignition switch to the LOCK position and verify that the power outer mirror switch can be operated for **approx. 43 s**.
  - If the power outer mirror switch cannot be operated for **approx. 43 s** after the ignition switch is turned to the LOCK position, or if the switch can still be operated after **approx. 43 s**, replace the power outer mirror switch.
3. Disconnect the negative battery cable.
4. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
5. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
6. Remove the switch panel. (See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.)
7. Using a tester, verify that the continuity between the power outer mirror switch terminals is as indicated in the table.
  - If not as indicated in the table, replace the power outer mirror switch.

## GLASS/WINDOWS/MIRRORS

R.H.D.



am2zzw0000502

|                |         | Continuity |    |    |    |    |    |    |    |    |
|----------------|---------|------------|----|----|----|----|----|----|----|----|
| OPERATION      |         | 2A         | 2B | 2C | 2D | 2E | 2F | 2G | 2H | 2I |
| LH             | UP      |            |    |    |    |    |    |    |    |    |
|                | DOWN    |            |    |    |    |    |    |    |    |    |
|                | LEFT    |            |    |    |    |    |    |    |    |    |
|                | RIGHT   |            |    |    |    |    |    |    |    |    |
| RH             | UP      |            |    |    |    |    |    |    |    |    |
|                | DOWN    |            |    |    |    |    |    |    |    |    |
|                | LEFT    |            |    |    |    |    |    |    |    |    |
|                | RIGHT   |            |    |    |    |    |    |    |    |    |
| RETRACT SWITCH | RETRACT |            |    |    |    |    |    |    |    |    |
|                | RETURN  |            |    |    |    |    |    |    |    |    |

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### POWER OUTER MIRROR SWITCH INSPECTION [3HB]

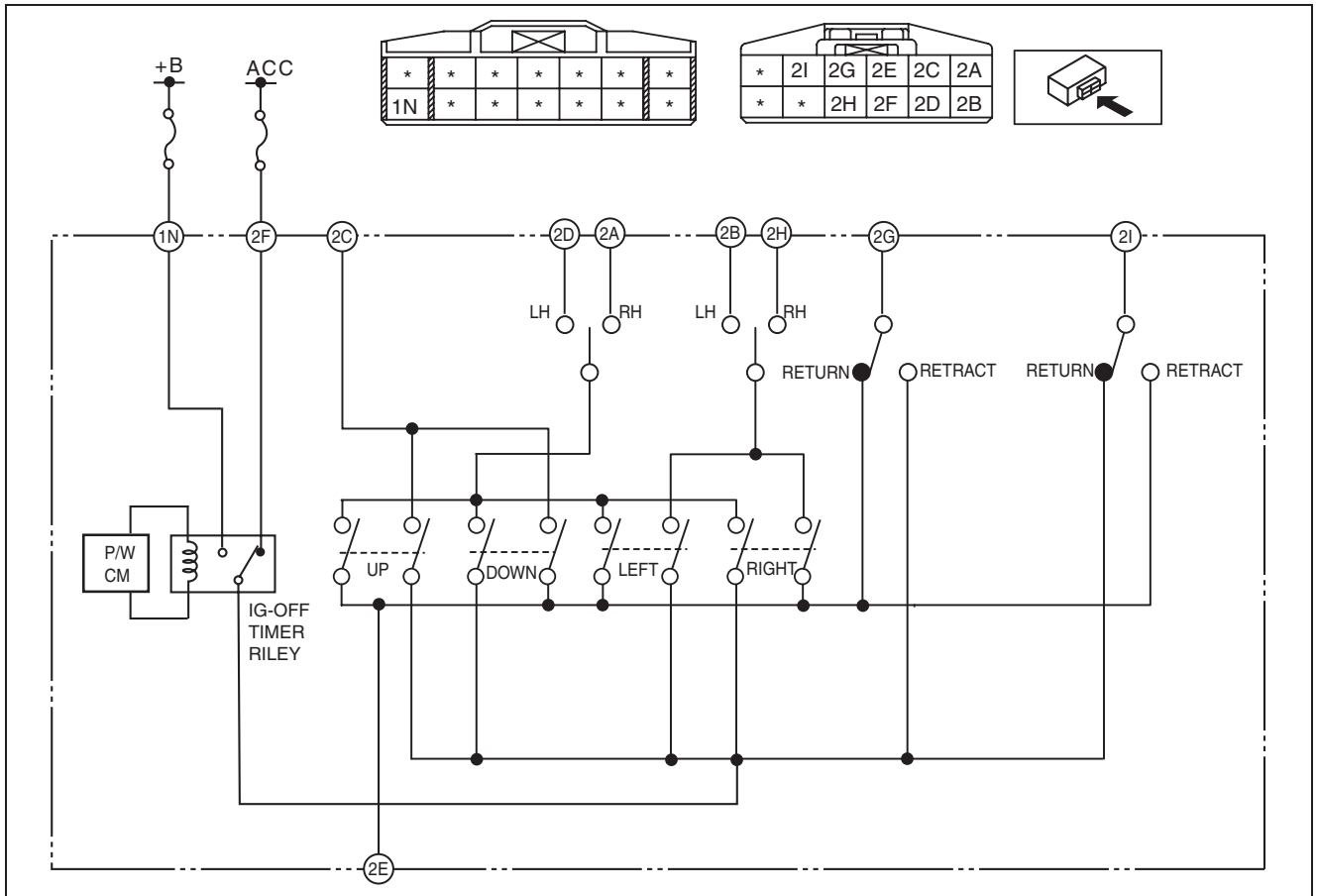
id0912000034z3

1. Turn the ignition switch to the ON position.
2. Turn the ignition switch to the LOCK position and verify that the power outer mirror switch can be operated for approx. 43 s.

## GLASS/WINDOWS/MIRRORS

- If the power outer mirror switch cannot be operated for **approx. 43 s** after the ignition switch is turned to the LOCK position, or if the switch can still be operated after **approx. 43 s**, replace the power outer mirror switch.
3. Disconnect the negative battery cable.
  4. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  5. Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
  6. Remove the switch panel. (See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].)
  7. Using a tester, verify that the continuity between the power outer mirror switch terminals is as indicated in the table.
- If not as indicated in the table, replace the power outer mirror switch.

### R.H.D.



am2zzw0000502

## GLASS/WINDOWS/MIRRORS

|                |         | :Continuity |    |    |    |    |    |    |    |    |
|----------------|---------|-------------|----|----|----|----|----|----|----|----|
| OPERATION      |         | 2A          | 2B | 2C | 2D | 2E | 2F | 2G | 2H | 2I |
| LH             | UP      |             |    |    |    |    |    |    |    |    |
|                | DOWN    |             |    |    |    |    |    |    |    |    |
|                | LEFT    |             |    |    |    |    |    |    |    |    |
|                | RIGHT   |             |    |    |    |    |    |    |    |    |
| RH             | UP      |             |    |    |    |    |    |    |    |    |
|                | DOWN    |             |    |    |    |    |    |    |    |    |
|                | LEFT    |             |    |    |    |    |    |    |    |    |
|                | RIGHT   |             |    |    |    |    |    |    |    |    |
| RETRACT SWITCH | RETRACT |             |    |    |    |    |    |    |    |    |
|                | RETURN  |             |    |    |    |    |    |    |    |    |

am2zzw0000383

### FILAMENT INSPECTION

id091200003600

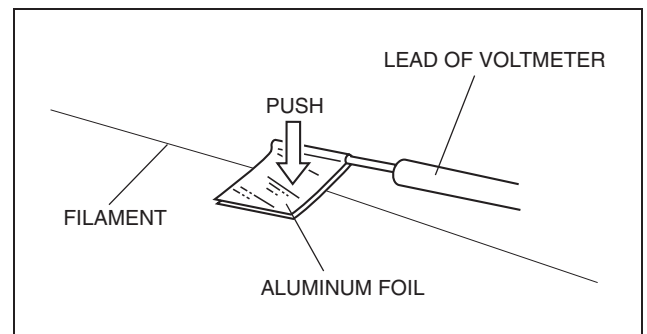
1. Turn the ignition switch to the ON position.
2. Turn the rear window defroster switch on.

#### Caution

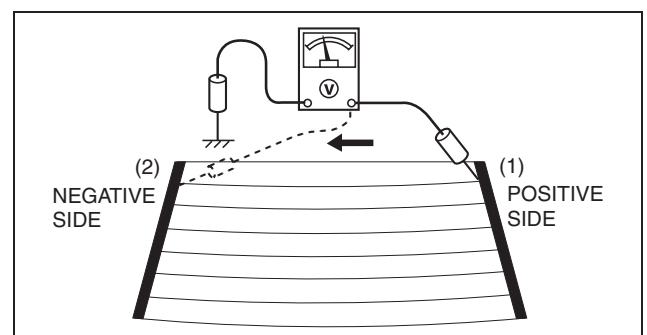
- Directly touching the rear window defroster filament with the lead of the tester could damage it. Wrap aluminum foil around the end of the lead and inspect the filament by touching it with the foil.

3. Connect the positive lead of the tester to the positive side of each filament and the negative lead to ground.
4. Gradually slide the positive lead from the positive side to the negative side and verify that the voltage decreases accordingly.
  - If the voltage changes rapidly, the filament has a malfunction. Repair the filament.

| Measured part | Voltage (Reference) |
|---------------|---------------------|
| (1) to (2)    | Approx. 11 V to 0 V |



acxuuv00001514



acxuuv00001515

### FILAMENT REPAIR

id091200003700

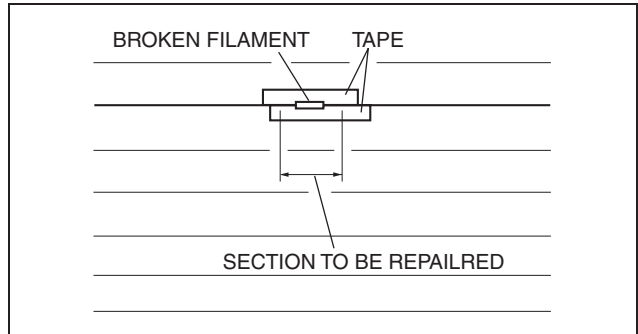
1. Clean the filaments using isopropyl alcohol.

## GLASS/WINDOWS/MIRRORS

2. Affix tape along both sides of the filament to be repaired.
3. Apply commercially available silver paint using a fine-tipped tool such as a small brush or a drawing pen.
4. **After 2—3 min**, peel off the tape being careful not to damage the painted area.

### Caution

- **Do not operate the rear window defroster until the repaired area is completely dried to prevent a malfunction.**



am2zzw0000502

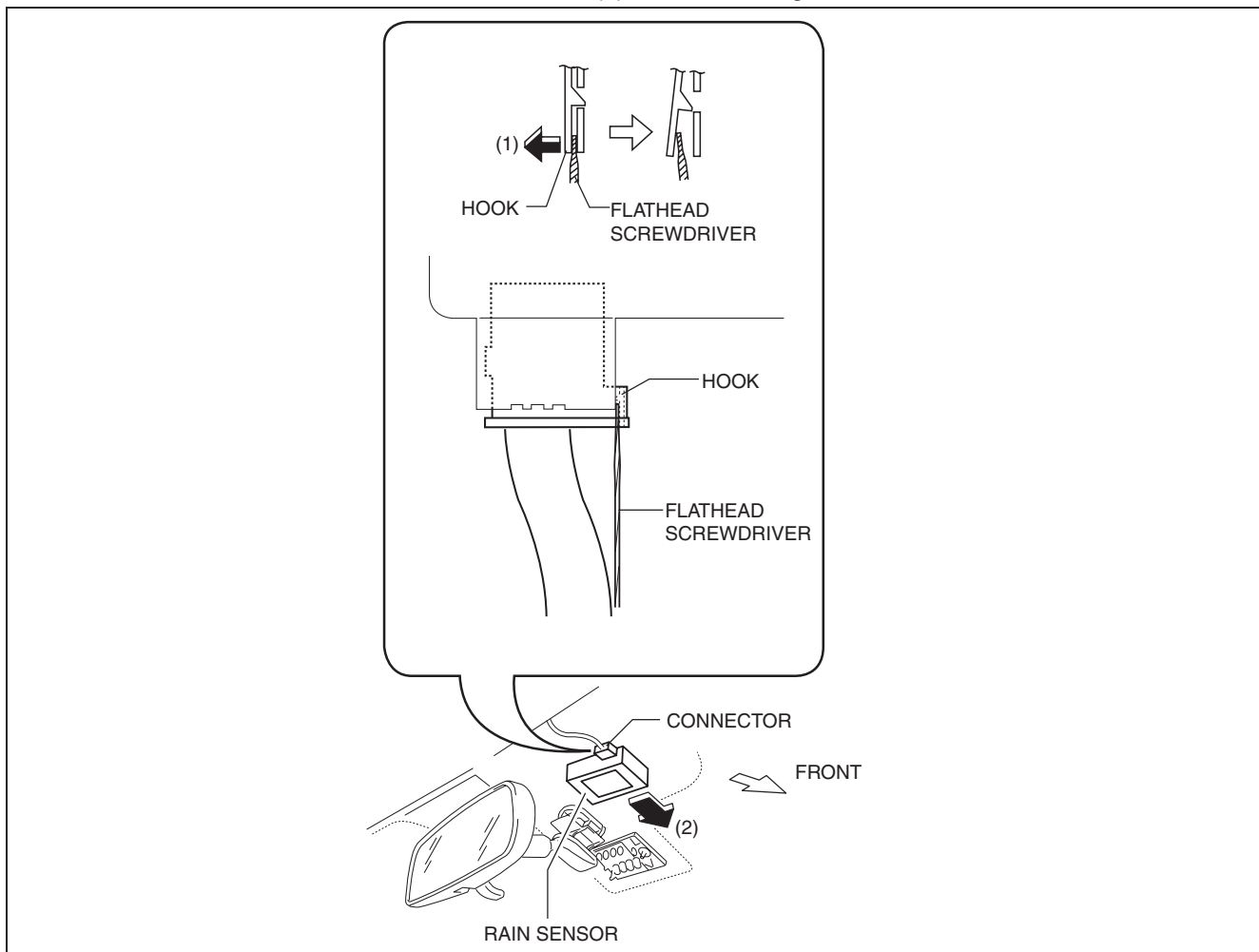
5. Completely dry the repaired area referring the followings:
  - If the room temperature is **25 °C {77 °F}**, leave it for **24 h**.
  - When using a hot air blower, dry for **30 min** at **150 °C {302 °F}**.

## REARVIEW MIRROR REMOVAL

id091200004900

### Vehicles With Rain Sensor

1. Disconnect the negative battery cable.
2. Remove the rain sensor from the windshield. (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
3. Detach the hook in the direction of arrows (1) shown in the figure using a flathead screwdriver.
4. Remove the rain sensor in the direction of arrows (2) shown in the figure.



am2zzw0000363



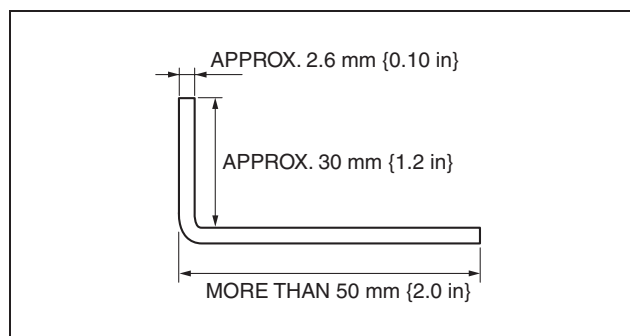
## GLASS/WINDOWS/MIRRORS

5. Make a tool as shown in the figure using wire.

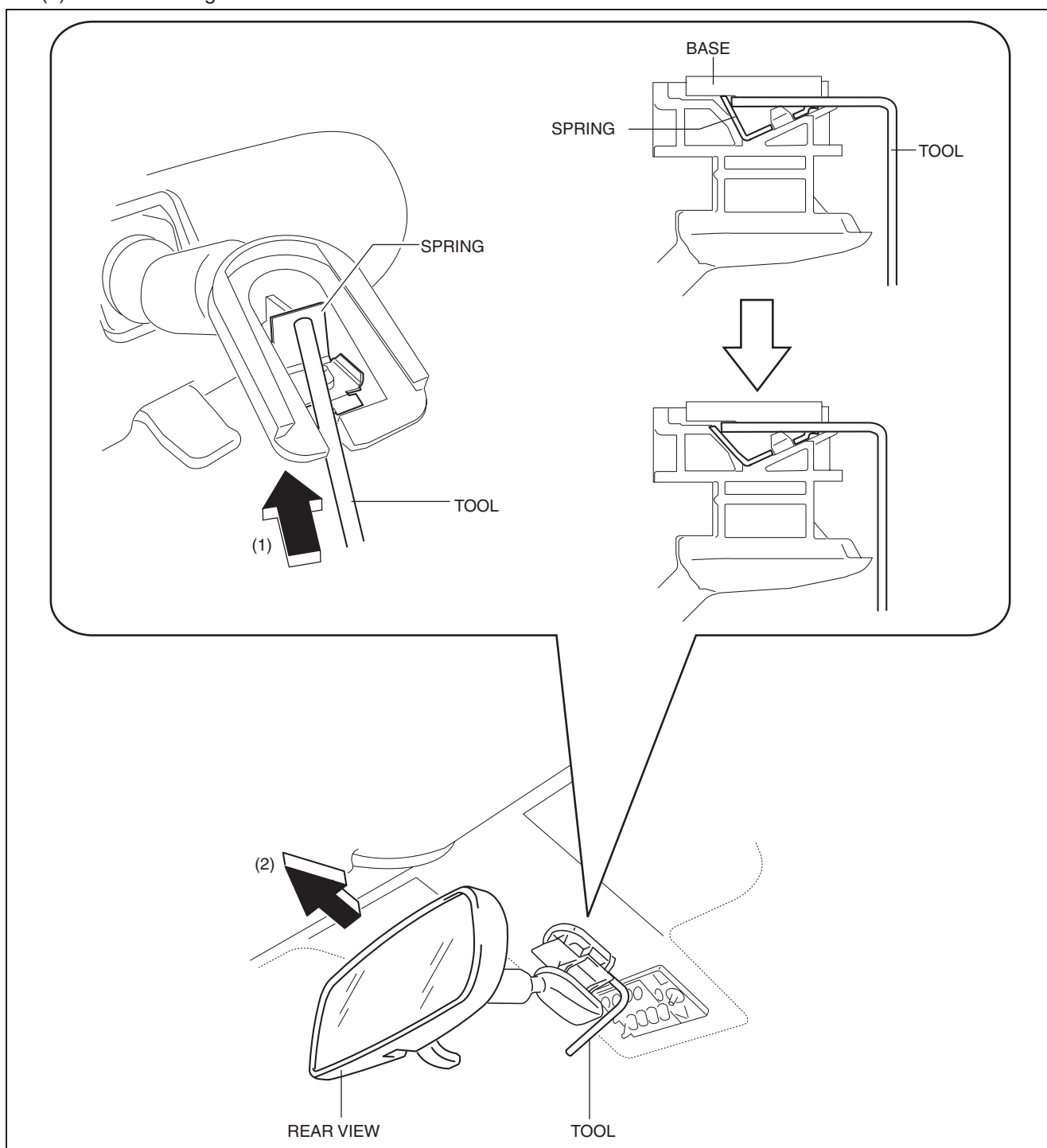
### Caution

- Using the tool with bare hands can cause injury. Always wear gloves when using the tool.
- To prevent damage to the lens, do not use a flathead screwdriver.

6. Insert the tool to the position shown in the figure and press the center part of the spring in the direction of arrows (1), and then pull out the rearview mirror toward in the direction of arrows (2) shown in the figure.



am2zzw0000449



am2zzw0000502

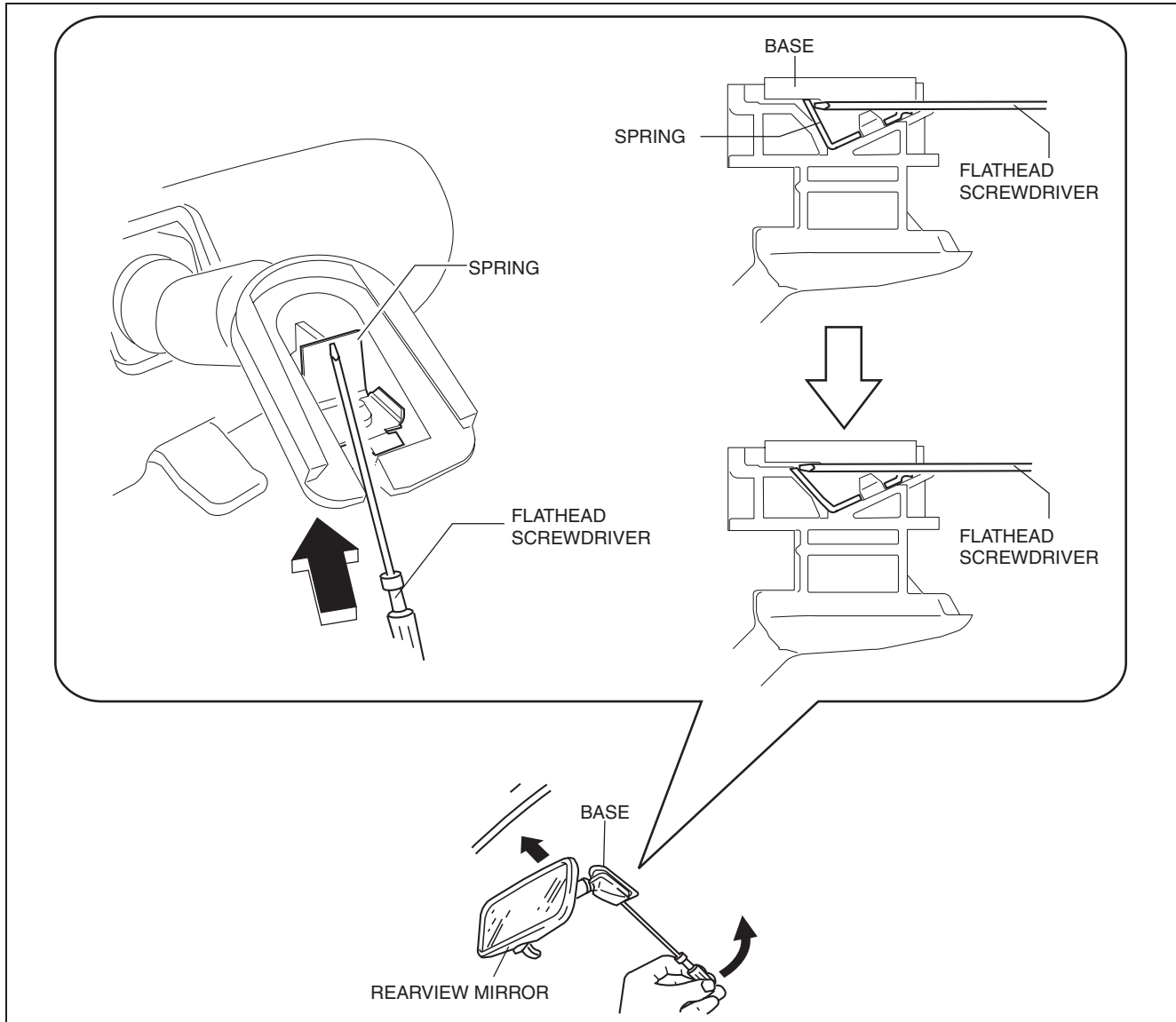
## GLASS/WINDOWS/MIRRORS

### Caution

- Perform the procedure while being careful not to damage the lens.
- When removing the rearview mirror, it may hit the headliner and cause a damage. Hold the rearview mirror with hands and be careful not to contact it with the headliner.

### Vehicles Without Rain Sensor

1. Insert a flathead screwdriver between the rearview mirror and base.
2. Insert a tape-wrapped flathead screwdriver to the position shown in the figure and press the center part of the spring.



am2zzw0000441

3. Pull out the rearview mirror toward the vehicle rear.

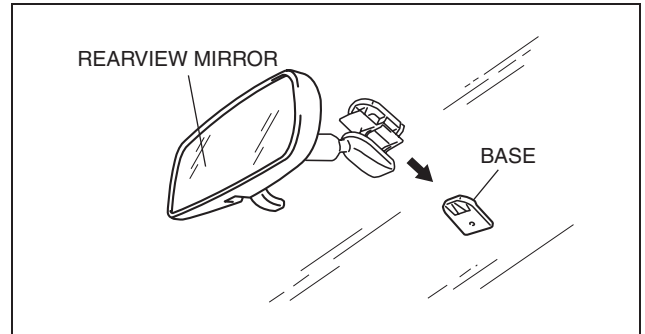
## GLASS/WINDOWS/MIRRORS

### REARVIEW MIRROR INSTALLATION

id091200005000

#### Vehicles With Rain Sensor

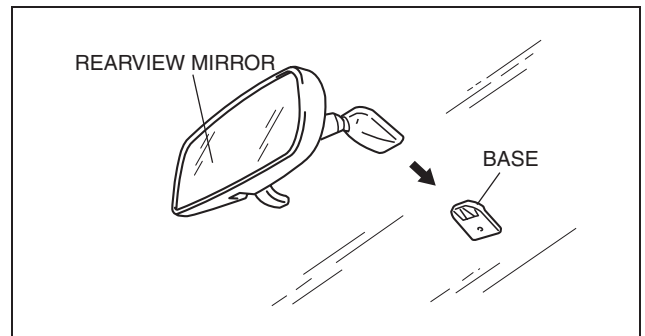
1. Install the rearview mirror to the base.
2. Install the rain sensor. (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)



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#### Vehicles Without Rain Sensor

1. Install the rearview mirror to the base.



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### BASE REMOVAL

id091200005300

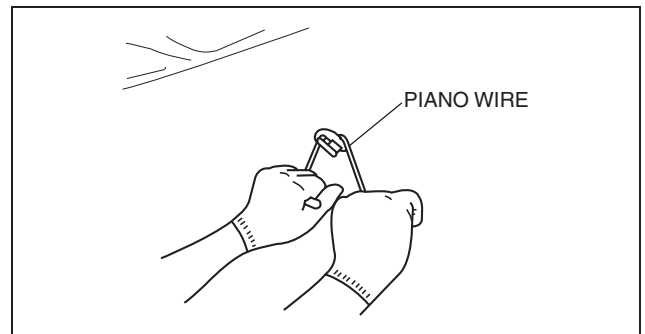
1. Disconnect the negative battery cable.
2. Remove the rain sensor. (Vehicles with rain sensor.) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
3. Remove the rearview mirror. (See 09-12-54 REARVIEW MIRROR REMOVAL)
4. Wind each end of a piano wire around a bar.

#### Warning

- Using the piano wire with bare hands can cause injury. Always wear gloves when using the piano wire.

#### Note

- Use a long sawing action to spread the work over the whole length of the piano wire to prevent it from breaking.



acxuuw00001981

5. Fix one end of the piano wire, and while pulling the other end, cut the sealant to remove the base.

### BASE INSTALLATION

id091200005400

1. Cut away all of the original sealant using a razor.

#### Warning

- Using a razor with bare hands can cause injury. Always wear gloves when using a razor.

2. Clean and degrease the ceramic coating on the glass and the base.

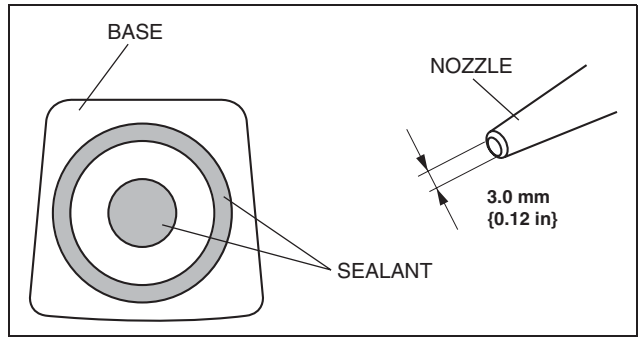
#### Caution

- Keep the area free of dirt and grease, and do not touch the surface. Otherwise, the primer may not properly bond to the surface of the glass.

3. Apply primer to the bonding area of the glass and the base.

## GLASS/WINDOWS/MIRRORS

4. Use only glass primer on the glass, and body primer on the base. Allow the primer to dry for **approx. 30 min.**
5. Apply **3.0 mm {0.12 in}** layer of sealant to the base.

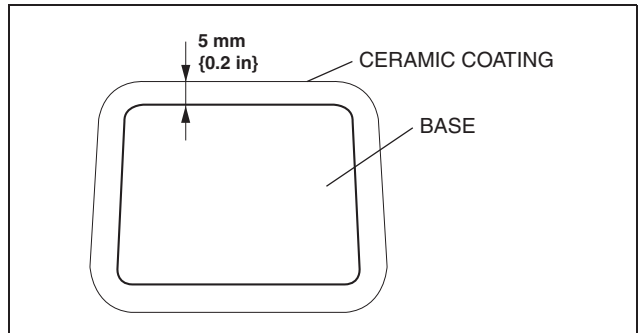


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6. Center the base in the ceramic coating and press it onto the glass.
7. Use isopropyl alcohol to remove any excess repair sealant.

### Hardening time of sealant

| Temperature   | Surface hardening time | Time required until car can be put into service |
|---------------|------------------------|-------------------------------------------------|
| 5 °C {41 °F}  | Approx. 1.5 h          | Approx. 12 h                                    |
| 20 °C {68 °F} | Approx. 1 h            | Approx. 4 h                                     |
| 35 °C {95 °F} | Approx. 10 min         | Approx. 2 h                                     |



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8. Install the rearview mirror.

## 09-13 SEATS

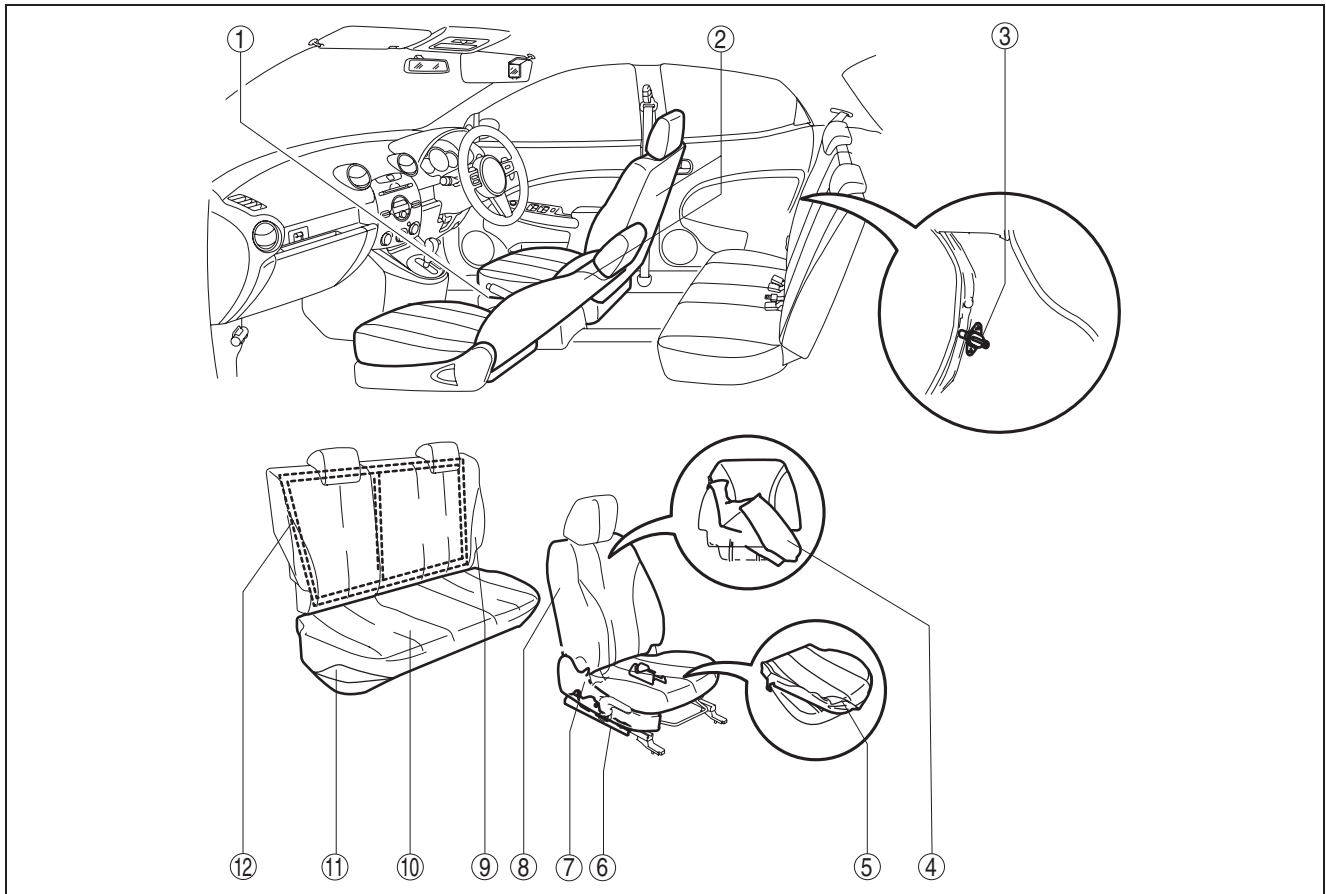
|                                        |          |                                   |          |
|----------------------------------------|----------|-----------------------------------|----------|
| SEAT LOCATION INDEX .....              | 09-13-2  | FRONT SEAT CUSHION TRIM           |          |
| R.H.D. ....                            | 09-13-3  | REMOVAL/INSTALLATION .....        | 09-13-22 |
| FRONT SEAT REMOVAL/INSTALLATION        |          | FRONT SEAT SIDE COVER             |          |
| [AutoAlliance (AAT) Thailand           |          | REMOVAL/INSTALLATION .....        | 09-13-22 |
| manufactured vehicles] .....           | 09-13-4  | R.H.D. ....                       | 09-13-24 |
| R.H.D. ....                            | 09-13-5  | FRONT SEAT RAIL COVER             |          |
| FRONT SEAT REMOVAL/INSTALLATION        |          | REMOVAL/INSTALLATION .....        | 09-13-26 |
| [Except AutoAlliance (AAT) Thailand    |          | R.H.D. ....                       | 09-13-26 |
| manufactured vehicles] .....           | 09-13-6  | REAR SEAT BACK                    |          |
| R.H.D. ....                            | 09-13-8  | REMOVAL/INSTALLATION              |          |
| FRONT SEAT BACK COMPONENT              |          | [AutoAlliance (AAT) Thailand      |          |
| REMOVAL/INSTALLATION [VEHICLES         |          | manufactured vehicles] .....      | 09-13-26 |
| WITH SIDE AIR BAGS] .....              | 09-13-9  | REAR SEAT BACK                    |          |
| Band Installation Note .....           | 09-13-10 | REMOVAL/INSTALLATION [Except      |          |
| FRONT SEAT BACK COMPONENT              |          | AutoAlliance (AAT) Thailand       |          |
| REMOVAL/INSTALLATION [VEHICLES         |          | manufactured vehicles] .....      | 09-13-27 |
| WITHOUT SIDE AIR BAGS] .....           | 09-13-10 | REAR SEAT BACK FRAME              |          |
| FRONT SEAT BACK TRIM                   |          | REMOVAL/INSTALLATION .....        | 09-13-28 |
| REMOVAL/INSTALLATION [VEHICLES         |          | REAR SEAT CUSHION                 |          |
| WITH SIDE AIR BAGS] .....              | 09-13-11 | REMOVAL/INSTALLATION .....        | 09-13-31 |
| R.H.D. ....                            | 09-13-13 | REAR SEAT CUSHION TRIM            |          |
| Band Installation Note .....           | 09-13-16 | REMOVAL/INSTALLATION .....        | 09-13-31 |
| Holder Bracket Installation Note ..... | 09-13-16 | REAR SEAT BACK STRIKER            |          |
| FRONT SEAT BACK TRIM                   |          | REMOVAL/INSTALLATION .....        | 09-13-31 |
| REMOVAL/INSTALLATION [VEHICLES         |          | SEAT WARMER SWITCH                |          |
| WITHOUT SIDE AIR BAGS] .....           | 09-13-19 | REMOVAL/INSTALLATION .....        | 09-13-32 |
| R.H.D. ....                            | 09-13-20 | SEAT WARMER SWITCH                |          |
|                                        |          | INSPECTION .....                  | 09-13-32 |
|                                        |          | SEAT WARMER UNIT INSPECTION ..... | 09-13-33 |

## SEATS

### SEAT LOCATION INDEX

R.H.D.

id091300424300



am2zzw0000511

|   |                                                                                                                                                                                                                               |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Seat warmer switch<br>(See 09-13-32 SEAT WARMER SWITCH REMOVAL/INSTALLATION.)<br>(See 09-13-32 SEAT WARMER SWITCH INSPECTION.)                                                                                                |
| 2 | Front seat<br>(See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)<br>(See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].) |
| 3 | Rear seat back striker<br>(See 09-13-31 REAR SEAT BACK STRIKER REMOVAL/INSTALLATION.)                                                                                                                                         |
| 4 | Front seat back trim<br>(See 09-13-11 FRONT SEAT BACK TRIM REMOVAL/INSTALLATION [VEHICLES WITH SIDE AIR BAGS].)<br>(See 09-13-19 FRONT SEAT BACK TRIM REMOVAL/INSTALLATION [VEHICLES WITHOUT SIDE AIR BAGS].)                 |
| 5 | Front seat cushion trim<br>(See 09-13-22 FRONT SEAT CUSHION TRIM REMOVAL/INSTALLATION.)                                                                                                                                       |
| 6 | Front seat rail cover<br>(See 09-13-26 FRONT SEAT RAIL COVER REMOVAL/INSTALLATION.)                                                                                                                                           |

|    |                                                                                                                                                                                                                                             |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7  | Front seat side cover<br>(See 09-13-22 FRONT SEAT SIDE COVER REMOVAL/INSTALLATION.)                                                                                                                                                         |
| 8  | Front seat back component<br>(See 09-13-9 FRONT SEAT BACK COMPONENT REMOVAL/INSTALLATION [VEHICLES WITH SIDE AIR BAGS].)<br>(See 09-13-10 FRONT SEAT BACK COMPONENT REMOVAL/INSTALLATION [VEHICLES WITHOUT SIDE AIR BAGS].)                 |
| 9  | Rear seat back<br>(See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)<br>(See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].) |
| 10 | Rear seat cushion<br>(See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)                                                                                                                                                                 |
| 11 | Rear seat cushion trim<br>(See 09-13-31 REAR SEAT CUSHION TRIM REMOVAL/INSTALLATION.)                                                                                                                                                       |
| 12 | Rear seat back frame<br>(See 09-13-28 REAR SEAT BACK FRAME REMOVAL/INSTALLATION.)                                                                                                                                                           |

## SEATS

### FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles]

id0913004244z3

#### Warning

- Handling a front seat (with built-in side air bag) improperly can accidentally operate (deploy) the air bag, which may seriously injure you. Read the service warnings before handling a front seat (with built-in side air bag).

#### Caution

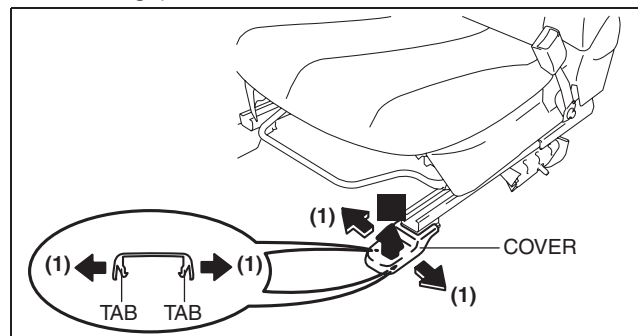
- After removing a front seat, do not operate the slider lever. If the slider lever is operated, the left and right slide positions will deviate, and the slide adjuster may be damaged after the front seat is installed.
- Verify that there are no malfunctions in the sliding mechanism after installing a front seat.
- When performing the procedure with a front seat removed from the vehicle, perform the procedure on a clean rag so as not to damage or soil the seat.

#### Note

- When removing the front seat out of the vehicle or putting it back in, it can be performed smoothly by removing the headrest.

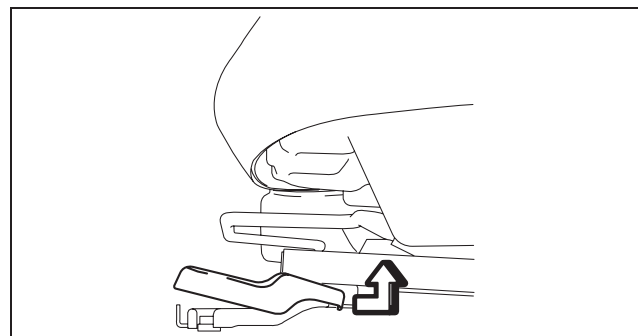
#### R.H.D.

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**. (Vehicles with side air bags)
3. Disconnect the negative battery cable. (Vehicles without side air bags)
4. Using a fastener remover, widen the front cover in the direction of arrow (1) shown in the figure to release the tabs, then raise the cover in the direction of arrow (2).



am2zzw0000243

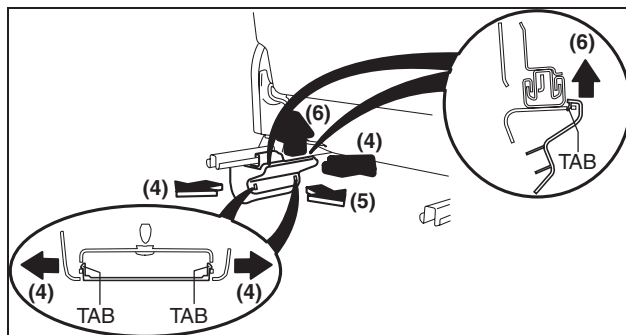
5. Remove the front cover in the direction of arrow (3) shown in the figure.



adejjw00003315

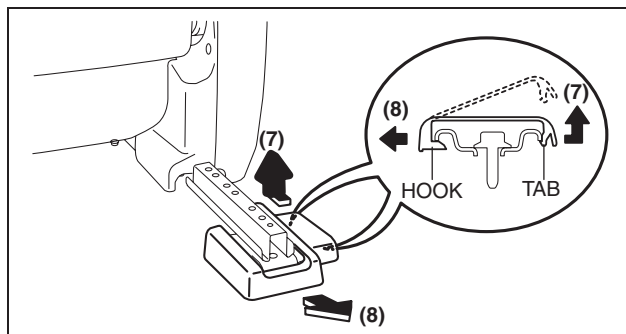
## SEATS

6. Using a fastener remover, widen the rear inner cover in the direction of arrow (4) shown in the figure to release the tabs, then pull the cover in the direction of arrow (5).
7. Remove the rear inner cover in the direction of arrow (6) shown in the figure.



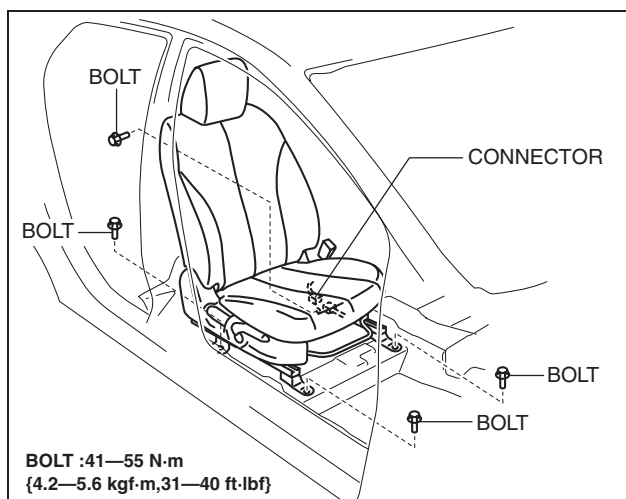
am2zzw0000243

8. Using a fastener remover, widen the rear outer cover in the direction of arrow (7) shown in the figure to release the tab, then remove the cover by pulling it in the direction of arrow (8).



am2zzw0000243

9. Disconnect the connector.
10. Remove the bolts, then remove the front seat.
11. Install in the reverse order of removal.



am2zzw0000444

### FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles]

id0913004244z4

#### Warning

- Handling a front seat (with built-in side air bag) improperly can accidentally operate (deploy) the air bag, which may seriously injure you. Read the service warnings before handling a front seat (with built-in side air bag).

#### Caution

- After removing a front seat, do not operate the slider lever. If the slider lever is operated, the left and right slide positions will deviate, and the slide adjuster may be damaged after the front seat is installed.
- Verify that there are no malfunctions in the sliding mechanism after installing a front seat.
- When performing the procedure with a front seat removed from the vehicle, perform the procedure on a clean rag so as not to damage or soil the seat.

#### Note

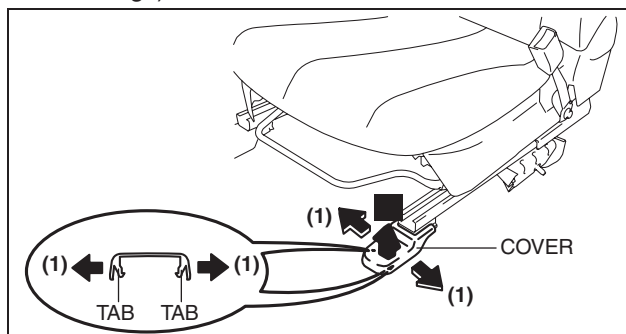
- When removing the front seat out of the vehicle or putting it back in, it can be performed smoothly by removing the headrest.



## SEATS

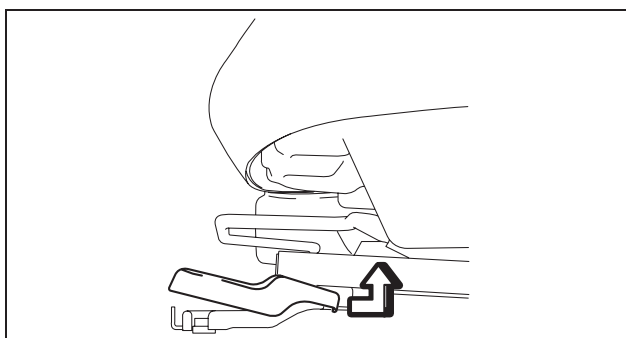
### R.H.D.

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**. (Vehicles with side air bags)
3. Disconnect the negative battery cable. (Vehicles without side air bags)
4. Using a fastener remover, widen the front cover in the direction of arrow (1) shown in the figure to release the tabs, then raise the cover in the direction of arrow (2).



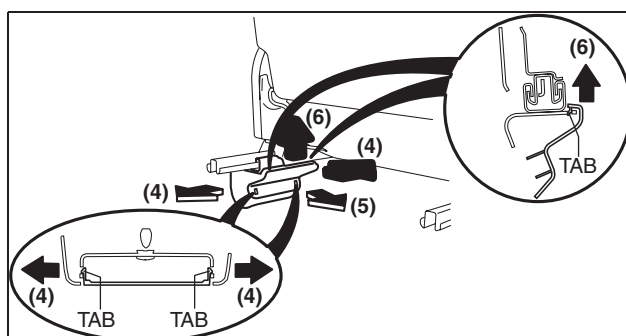
am2zzw0000243

5. Remove the front cover in the direction of arrow (3) shown in the figure.



adejjw00003315

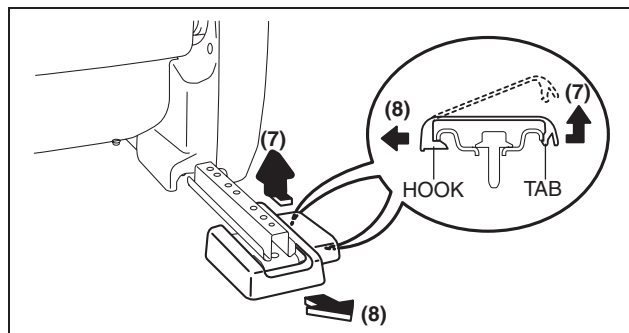
6. Using a fastener remover, widen the rear inner cover in the direction of arrow (4) shown in the figure to release the tabs, then pull the cover in the direction of arrow (5).
7. Remove the rear inner cover in the direction of arrow (6) shown in the figure.



am2zzw0000243

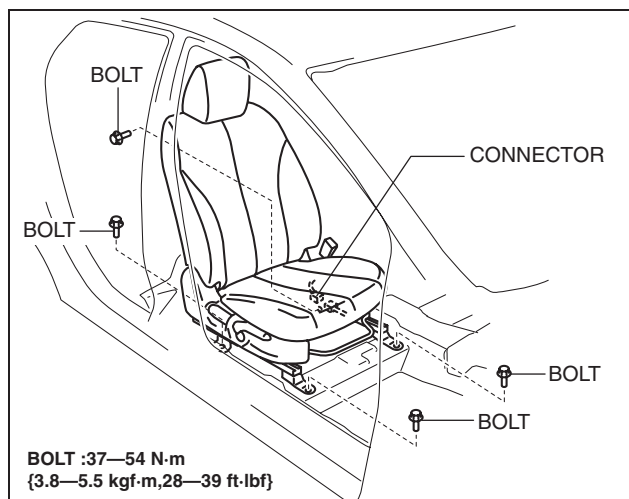
## SEATS

8. Using a fastener remover, widen the rear outer cover in the direction of arrow (7) shown in the figure to release the tab, then remove the cover by pulling it in the direction of arrow (8).



am2zzw0000243

9. Disconnect the connector.
10. Remove the bolts, then remove the front seat.
11. Install in the reverse order of removal.



am2zzw0000444

### FRONT SEAT BACK COMPONENT REMOVAL/INSTALLATION [VEHICLES WITH SIDE AIR BAGS]

id091300428837

#### Warning

- Handling a front seat improperly can accidentally operate (deploy) the air bag, which may seriously injure you. Read the service warnings before handling a front seat (with built-in side air bag).

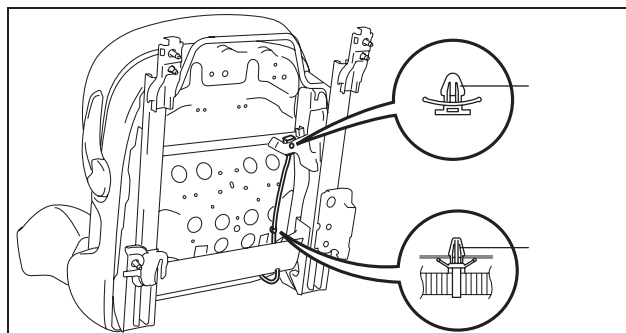
#### Caution

- After removing a front seat, do not operate the slider lever. If the slider lever is operated, the left and right slide positions will deviate, and the slide adjuster may be damaged after the front seat is installed.
- Verify that there are no malfunctions in the sliding mechanism after installing a front seat.
- When performing the procedure with a front seat removed from the vehicle, perform the procedure on a clean rag so as not to damage or soil the seat.

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**.
3. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
4. Remove the headrest.
5. Remove the front seat side cover. (See 09-13-22 FRONT SEAT SIDE COVER REMOVAL/INSTALLATION.)

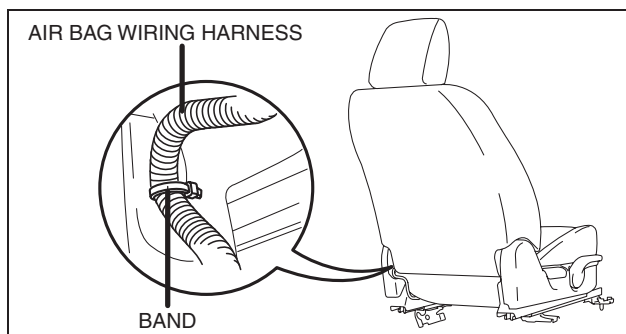
## SEATS

6. Detach clip A shown in the figure.
7. Cut clip B shown in the figure.



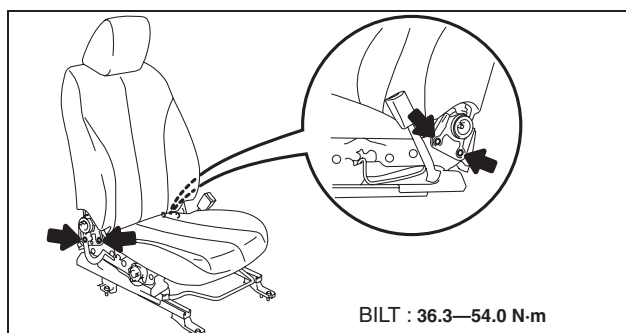
am2zzw0000244

8. Cut the band securing the side air bag wiring harness. (See 09-13-10 Band Installation Note.)



am2zzw0000244

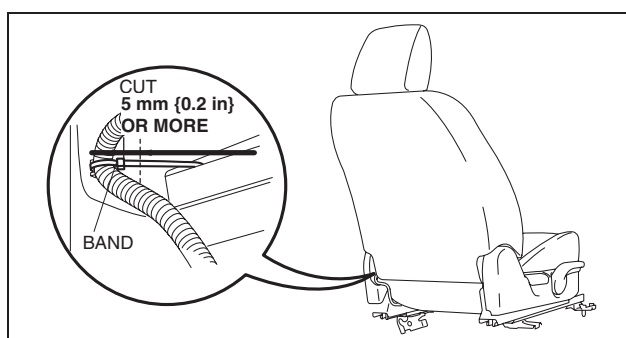
9. Remove the bolts, then remove the front seat back component.
10. Install in the reverse order of removal.



am2zzw0000244

### Band Installation Note

1. Install the band with the end pointed to the front.
2. Cut off the end of the band at the position shown in the figure.



am2zzw0000244

### FRONT SEAT BACK COMPONENT REMOVAL/INSTALLATION [VEHICLES WITHOUT SIDE AIR BAGS]

id091300428838

#### Caution

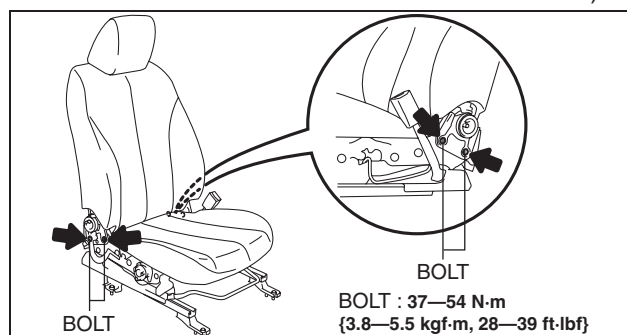
- After removing a front seat, do not operate the slider lever. If the slider lever is operated, the left and right slide positions will deviate, and the slide adjuster may be damaged after the front seat is installed.
- Verify that there are no malfunctions in the sliding mechanism after installing a front seat.
- When performing the procedure with a front seat removed from the vehicle, perform the procedure on a clean rag so as not to damage or soil the seat.

1. Disconnect the negative battery cable.

## 09-13-10

## SEATS

2. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
3. Remove the headrest.
4. Remove the front seat side cover. (See 09-13-22 FRONT SEAT SIDE COVER REMOVAL/INSTALLATION.)
5. Remove the bolts, then remove the front seat back component.
6. Install in the reverse order of removal.



am2zzw0000515

### FRONT SEAT BACK TRIM REMOVAL/INSTALLATION [VEHICLES WITH SIDE AIR BAGS]

id091300487737

#### Warning

- Handling a front seat (with built-in side air bag) improperly can accidentally operate (deploy) the air bag, which may seriously injure you. Read the service warnings before handling a front seat (with built-in side air bag).

#### Caution

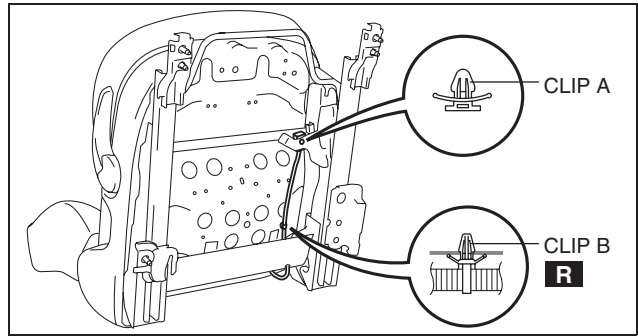
- After removing a front seat, do not operate the slider lever. If the slider lever is operated, the left and right slide positions will deviate, and the slide adjuster may be damaged after the front seat is installed.
- Verify that there are no malfunctions in the sliding mechanism after installing a front seat.
- When performing the procedure with a front seat removed from the vehicle, perform the procedure on a clean rag so as not to damage or soil the seat.

#### R.H.D.

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**.
3. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
4. Remove the headrest.

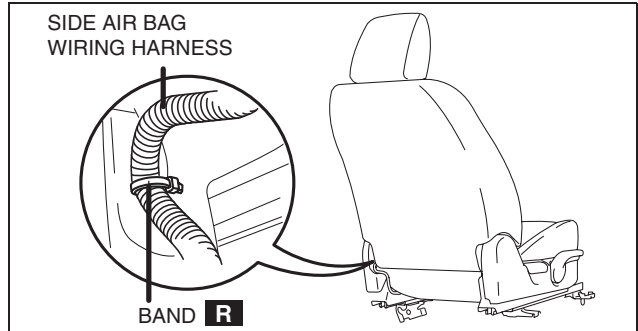
## SEATS

5. Detach clip A shown in the figure.
6. Cut clip B shown in the figure.



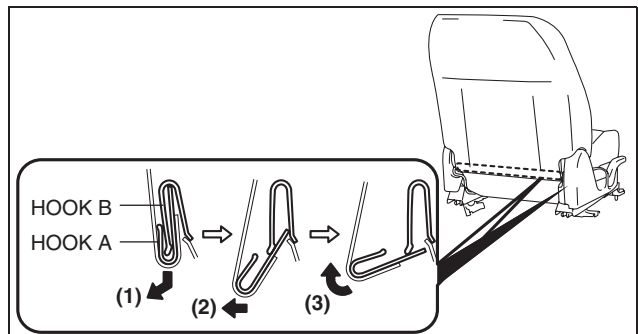
adejjw00001860

7. Cut the band securing the side air bag wiring harness. (See 09-13-16 Band Installation Note.)



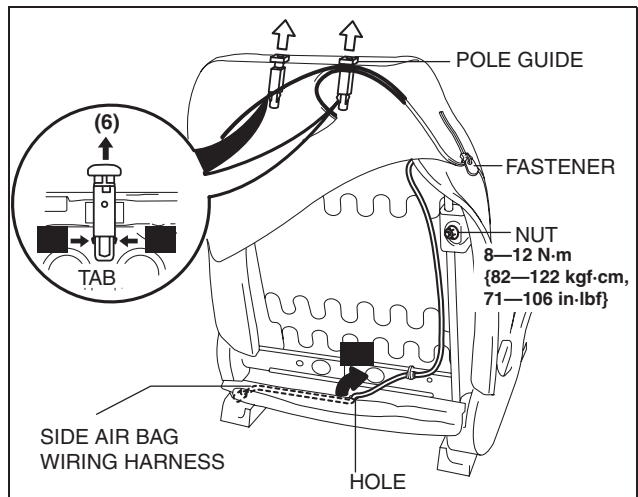
am2zzw0000375

8. Slide hook A in the order shown in the figure to detach it from hook B.



am2zzw0000207

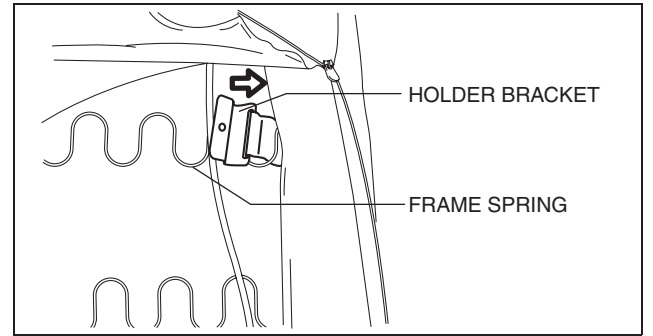
9. Open the fastener.
10. Pull out the side air bag wiring harness from the hole of the seat back trim and seat back pad by pulling it in the direction of arrow (4) shown in the figure.
11. Partially peel back the front seat back trim, release the pole guide tabs in the direction of arrow (5) shown in the figure, then pull the pole guide out in the direction of arrow (6).
12. Remove the nut.



am2zzw0000375

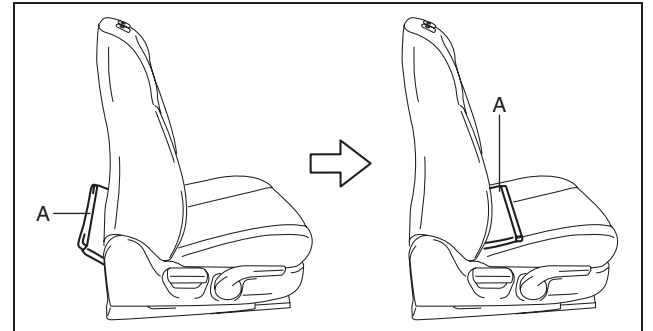
## SEATS

13. Press in the holder bracket to the seat back pad being careful not to catch the frame spring. (See 09-13-16 Holder Bracket Installation Note.)



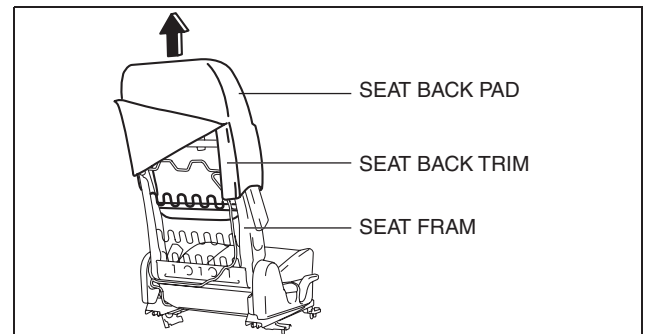
am2zzw0000207

14. Pull out part A shown in the figure to the front.



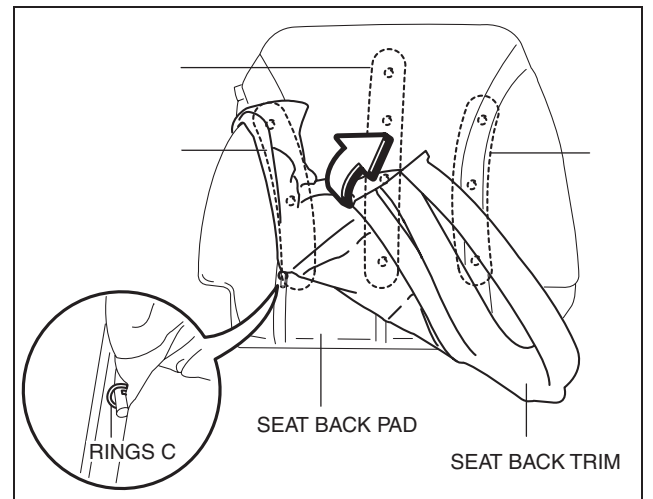
adejjw00001864

15. Remove the seat back trim and the seat back pad as a single unit from the seat frame by pulling them in the direction of the arrow.



am2zzw0000207

16. Partially peel back the seat back trim from the seat back pad, remove rings C in the order of (7), (8), (9) shown in the figure, then remove the seat back trim.  
17. Install in the reverse order of removal.



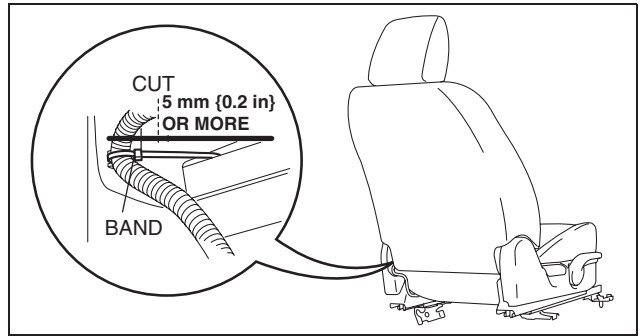
am2zzw0000207

## SEATS

### Band Installation Note

#### R.H.D.

1. Install the band with the end pointed to the front.
2. Cut the band end so that the length of the band end is **5 mm or less** from the securing point.



adejjw00003319

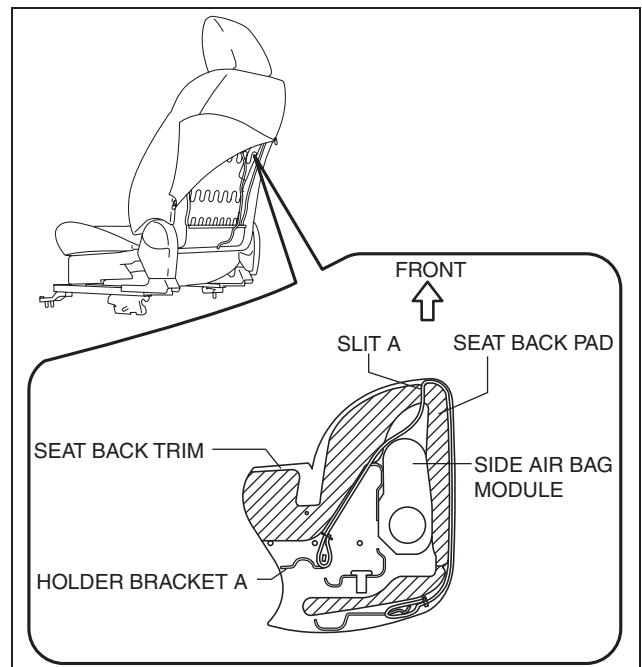
### Holder Bracket Installation Note

#### R.H.D.

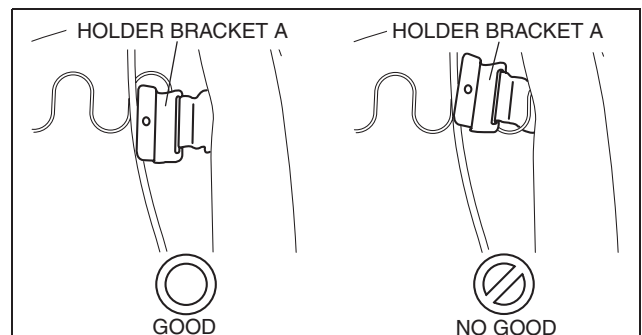
1. Pass holder bracket A through slit A of the seat back pad.

#### Caution

- Set the holder bracket A with the sleeve not caught in the seat frame spring.



am2zzw0000245



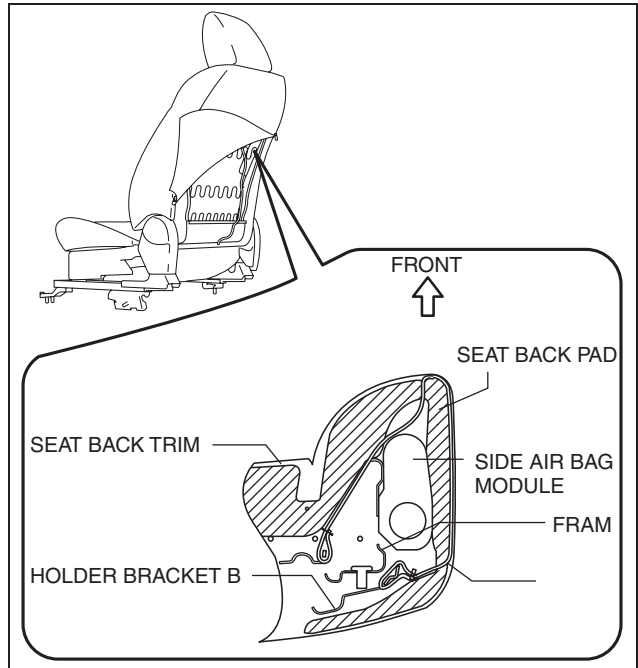
am2zzw0000498

## SEATS

- Pass holder bracket B through slit B of the seat back pad.

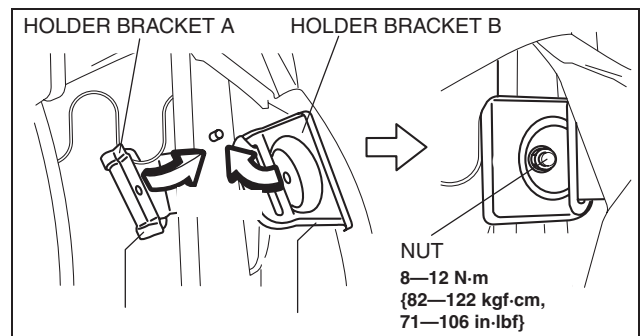
### Caution

- Install it without twisting the sleeve.



am2zzw0000245

- Assemble the holder bracket A to the frame.(1)
- Assemble the holder bracket B to the frame.(2)
- Install holder bracket A and B to the frame using the nut.(3)



am2zzw0000208

## FRONT SEAT BACK TRIM REMOVAL/INSTALLATION [VEHICLES WITHOUT SIDE AIR BAGS]

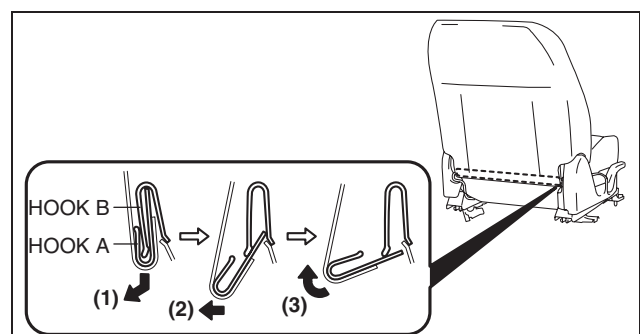
id091300487738

### Caution

- After removing a front seat, do not operate the slider lever. If the slider lever is operated, the left and right slide positions will deviate, and the slide adjuster may be damaged after the front seat is installed.
- Verify that there are no malfunctions in the sliding mechanism after installing a front seat.
- When performing the procedure with a front seat removed from the vehicle, perform the procedure on a clean rag so as not to damage or soil the seat.

### R.H.D.

- Disconnect the negative battery cable.
- Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
- Remove the headrest.
- Slide hook A in the order of (1), (2), (3) shown in the figure to detach it from hook B.

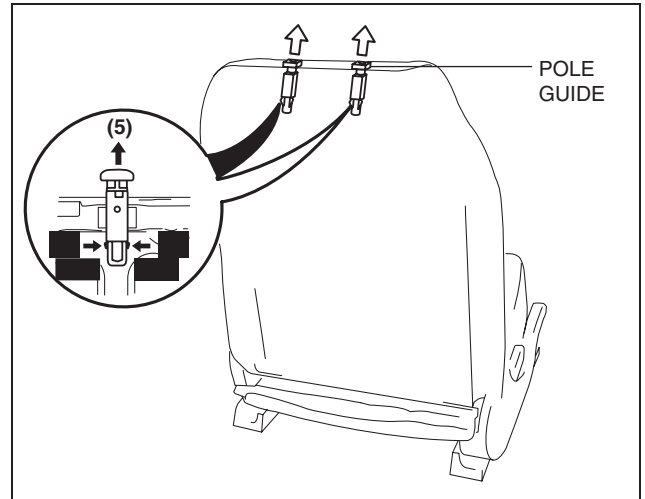


am2zzw0000246



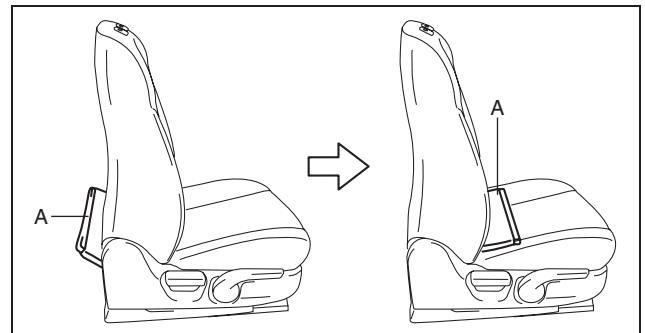
## SEATS

5. Partially peel back the front seat back pad, release the pole guide tabs in the direction of arrow (4) shown in the figure, then pull the pole guide out in the direction of arrow (5).



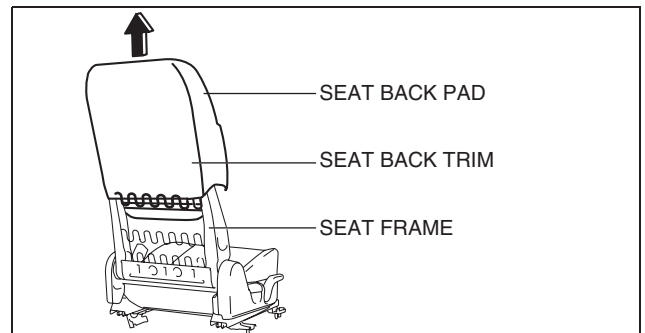
am2zzw0000246

6. Pull out part A of the seat back pad to the front of the seat.



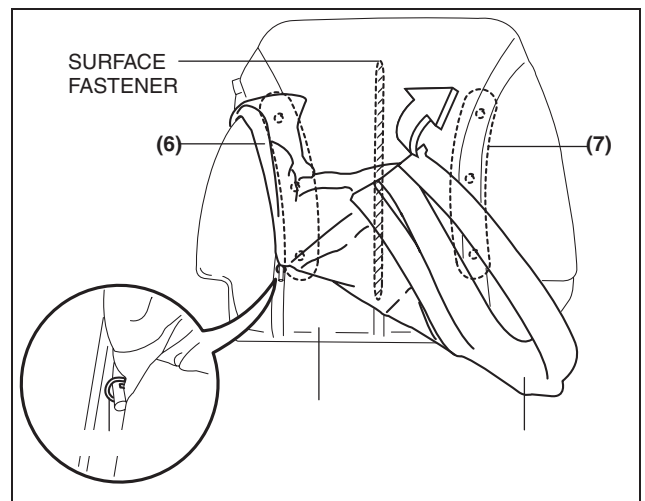
adejjw00001864

7. Remove the seat back trim and the seat back pad as a single unit from the seat frame by pulling them in the direction of the arrow.



am2zzw0000378

8. Partially peel back the seat back trim from the seat back pad, remove rings C in the order of (6), (7) shown in the figure, remove the surface fastener, then remove the seat back trim.
9. Install in the reverse order of removal.



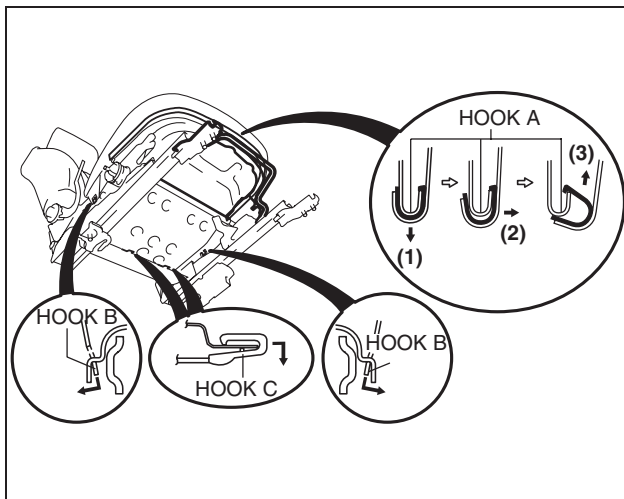
am2zzw0000375

## SEATS

### FRONT SEAT CUSHION TRIM REMOVAL/INSTALLATION

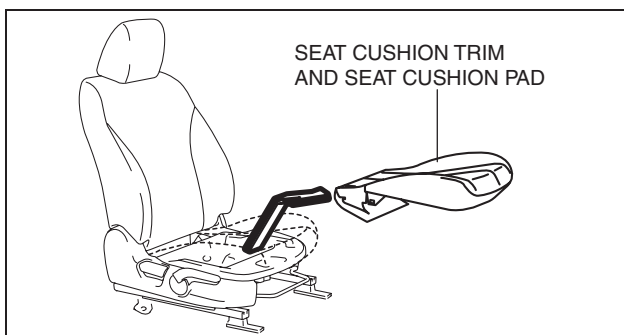
id091300487800

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**. (Vehicles with side air bags)
3. Disconnect the negative battery cable. (Vehicles without side air bags)
4. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
5. Remove the front seat side cover. (See 09-13-22 FRONT SEAT SIDE COVER REMOVAL/INSTALLATION.)
6. Detach hook A by sliding it in the order of (1), (2), and (3) as shown in the figure.
7. Detach hook B and C in the direction of the arrow shown in the figure.



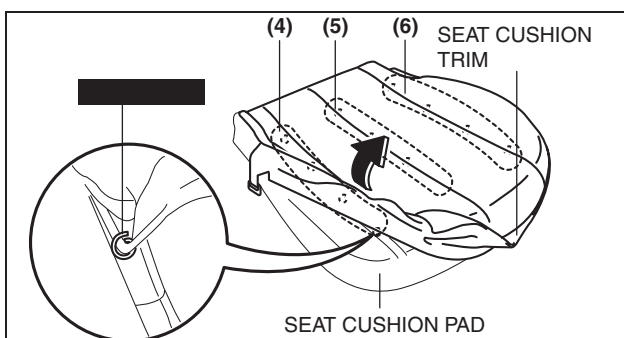
am2zzw0000246

8. Remove the seat cushion trim and the seat cushion pad from the seat frame as a single unit.



am2zzw0000498

9. Remove rings C in the order of (4), (5), and (6) as shown in the figure, then remove the seat cushion trim from the seat cushion pad in the direction of the arrow shown in the figure.
10. Install in the reverse order of removal.



am2zzw0000375

### FRONT SEAT SIDE COVER REMOVAL/INSTALLATION

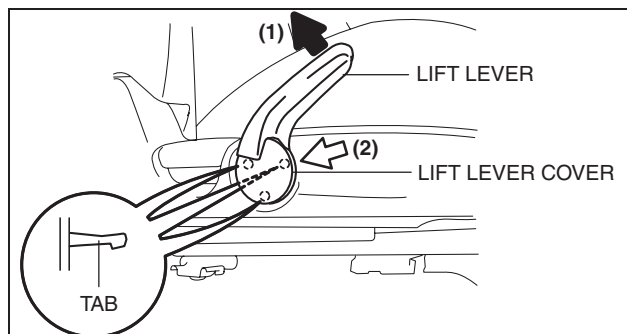
id091300433300

#### R.H.D.

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**. (Vehicles with side air bags)
3. Disconnect the negative battery cable. (Vehicles without side air bags)
4. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)

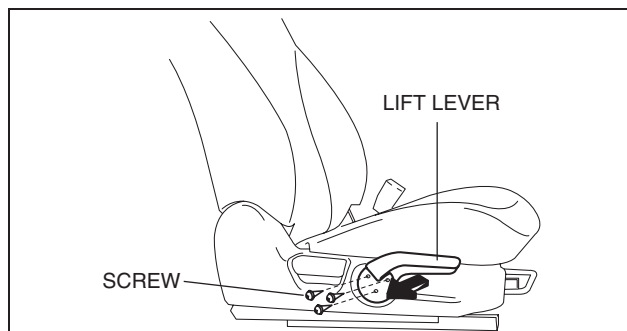
## SEATS

5. Operate the lift lever in the direction of arrow (1) shown in the figure. (Right side of the driver's seat) (Vehicles with seat lifter)
6. Insert a fastener remover from the position of arrow (2) shown in the figure, and remove the lift lever cover by disengaging the tab. (Right side of the driver's seat) (Vehicles with seat lifter)



am2zzw0000213

7. Remove the screws, then remove the lift lever in the direction of the arrow. (Right side of the driver's seat) (Vehicles with seat lifter)

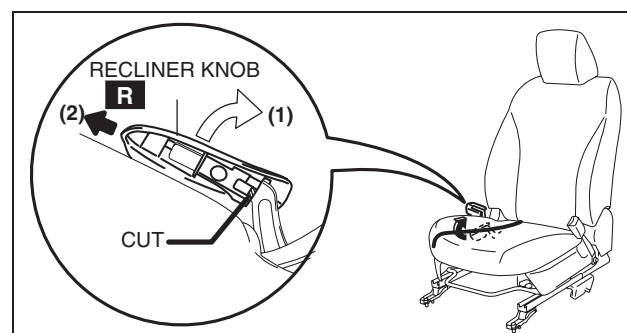


am2zzw0000377

8. After operating the recliner knob in the upward direction (1), cut the area indicated in the figure, then remove the recliner knob in the direction of arrow (2).

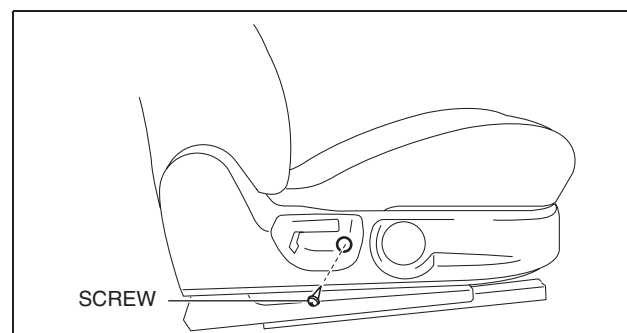
### Caution

- The seat back folds forward when the recliner knob is operated. Be careful when operating the recliner knob.



adejjw00002335

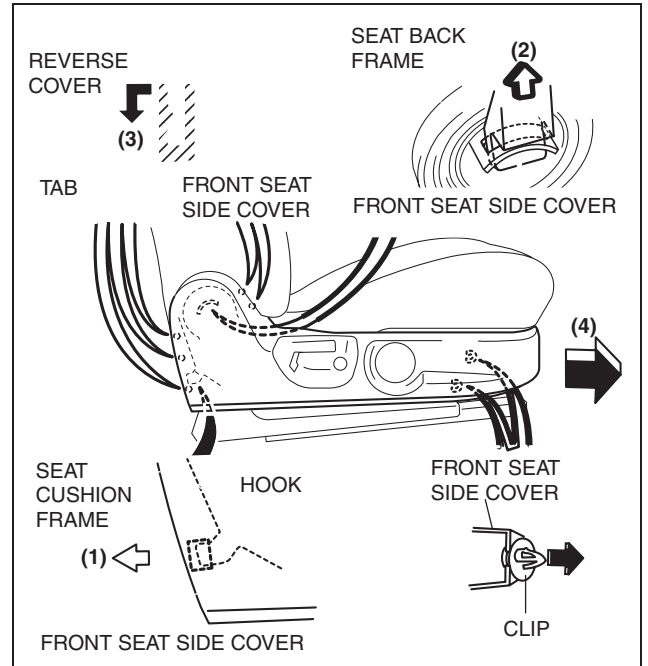
9. Remove the screw.



am2zzw0000377

## SEATS

10. Pull the front seat side cover in the order of (1), (2), (3) shown in the figure to disengage the clip, hook and tab.
11. Remove the front seat side cover from the hook by sliding the front seat side cover in the direction of arrow (4) shown in the figure.
12. Install in the reverse order of removal.



am2zzw0000377

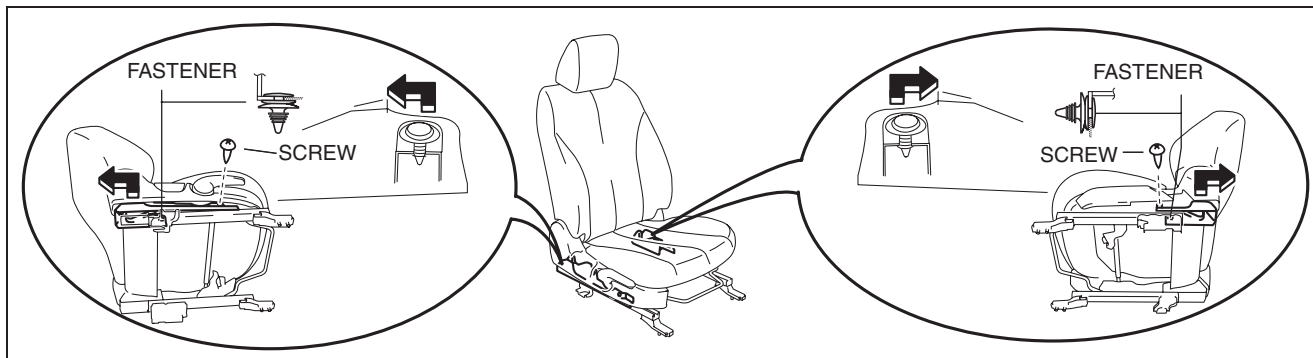
## SEATS

### FRONT SEAT RAIL COVER REMOVAL/INSTALLATION

id091300555500

#### R.H.D.

1. Remove the screws.



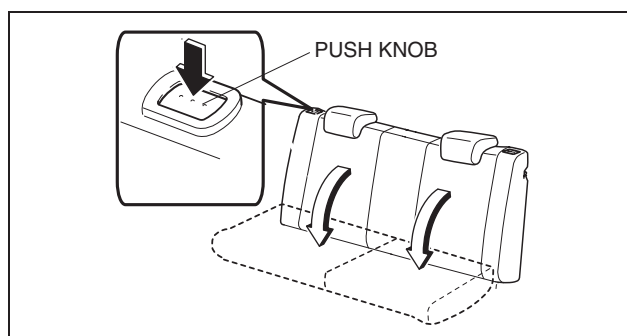
am2zzw0000377

2. Slide the front seat rail cover in the direction of the arrow shown in the figure to remove it from the fasteners.
3. Remove the front seat rail cover.
4. Install in the reverse order of removal.

### REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles]

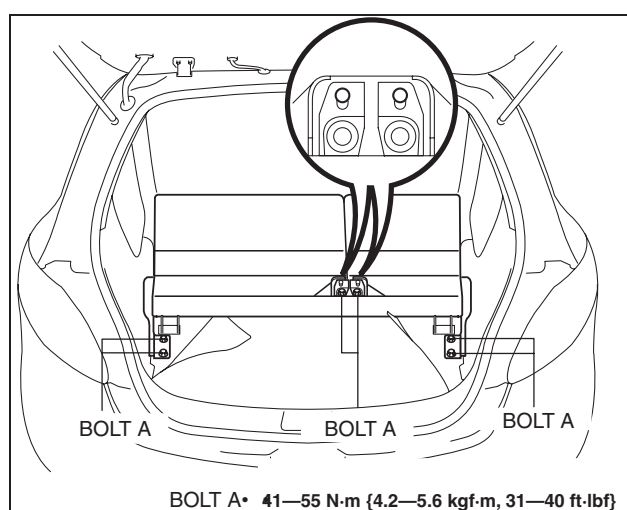
id0913004260z3

1. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
2. Remove the rear buckle installation bolt.
3. Press the push knob to fold the rear seat back.



am2zzw0000058

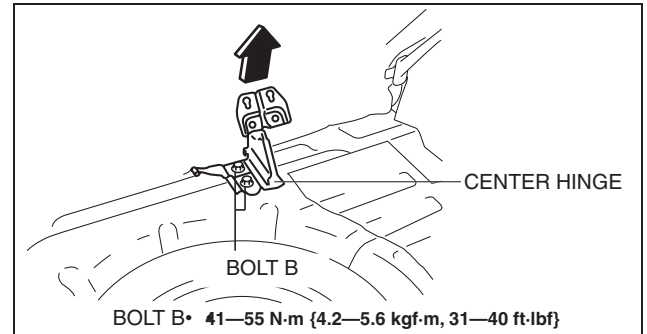
4. Remove bolts A.
5. Remove the rear seat back from the rear seat bracket by pulling the rear seat back in the direction of the arrow shown in the figure.



am2zzw0000445

## SEATS

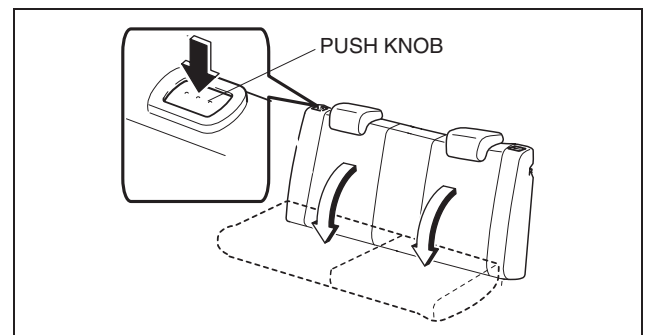
6. Remove bolts B and remove the center hinge.
7. Install in the reverse order of removal.



### REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles]

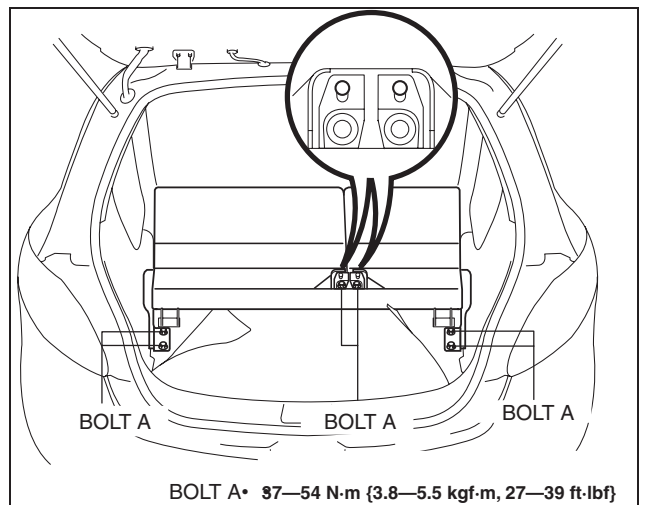
id0913004260z4

1. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
2. Remove the rear buckle installation bolt.
3. Press the push knob to fold the rear seat back.



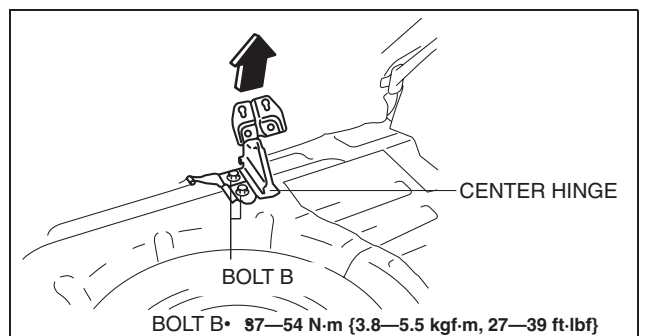
am2zzw0000058

4. Remove bolts A.
5. Remove the rear seat back from the rear seat bracket by pulling the rear seat back in the direction of the arrow shown in the figure.



am2zzw0000445

6. Remove bolts B and remove the center hinge.
7. Install in the reverse order of removal.



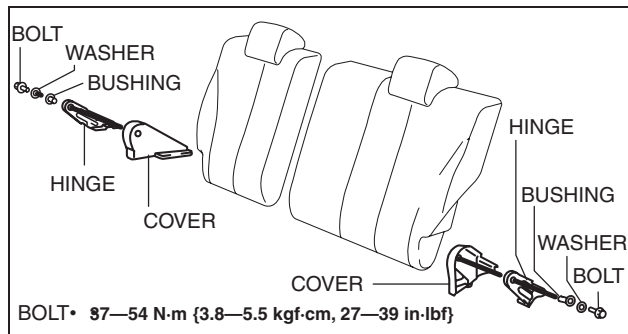
am2zzw0000445

## SEATS

### REAR SEAT BACK FRAME REMOVAL/INSTALLATION

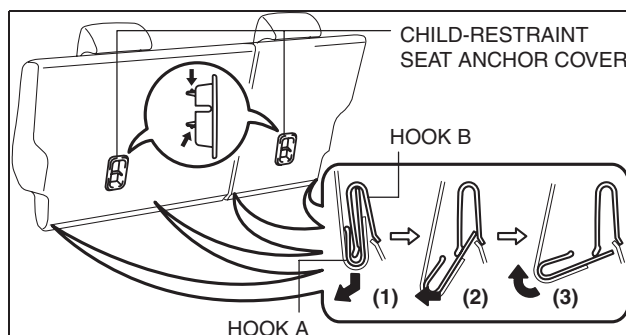
id091300450000

1. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
2. Remove the rear buckle installation bolt.
3. Remove the rear seat back. (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
4. Remove the bolt, then remove the bushing, washer, hinge, and the cover.



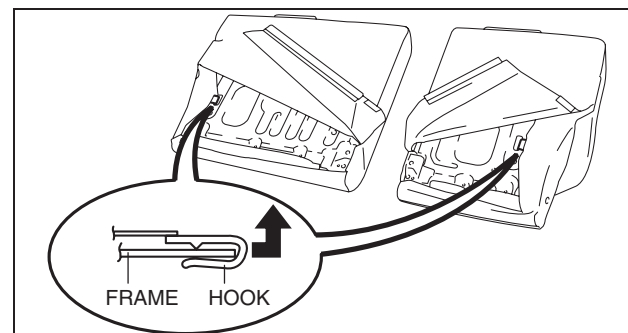
adejjw00001878

5. Remove the child-restraint seat anchor covers.
6. Slide hooks A in the order of (1), (2), (3) shown in the figure to detach them from hooks B.



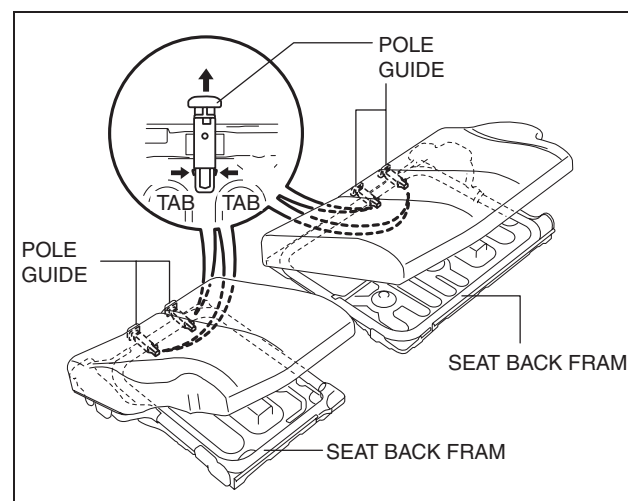
adejjw00003478

7. Move the hooks in the direction of the arrow shown in the figure to remove them from the frame.



am2zzw0000220

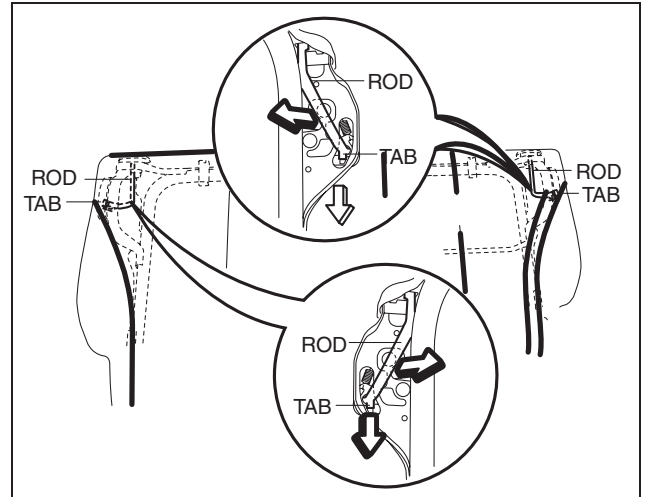
8. Peel back the rear seat trim, release the pole guide tabs in the direction of arrow (4) shown in the figure, then pull out the pole guides in the direction of arrow (5).



am2zzw0000221

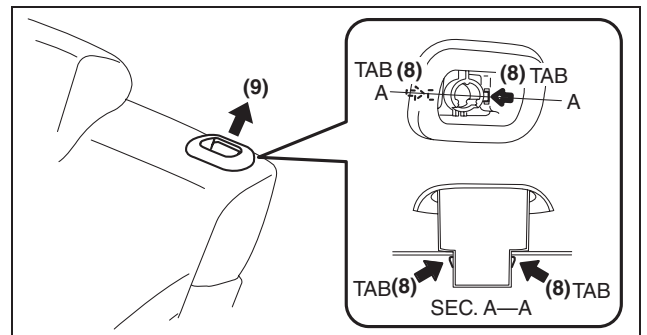
## SEATS

9. Release the tab of the rod by pulling it in the direction of arrow (6) shown in the figure.
10. Release the rod from the frame by pulling it in the direction of arrow (7) shown in the figure.



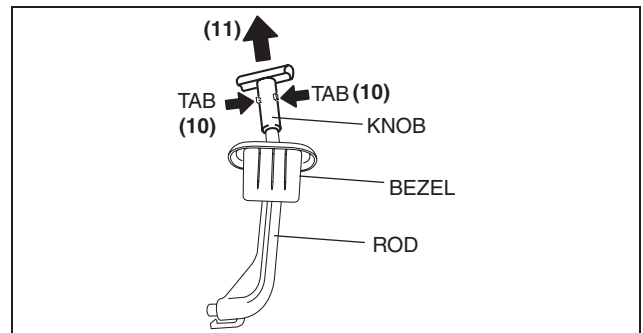
am2zzw0000377

11. While releasing the tabs of the bezel in the direction of arrow (8) shown in the figure, remove the bezel, recliner knob, and rod as a single unit by pulling them in the direction of arrow (9).



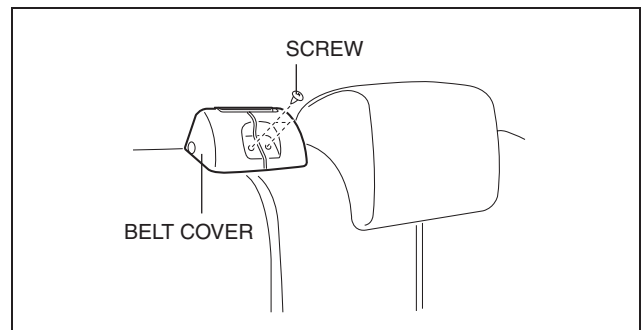
am2zzw0000377

12. While releasing the tabs of the recliner knob in the direction of arrow (10) shown in the figure, pull the recliner knob in the direction of arrow (11) to disassemble the recliner knob, bezel, and the rod.



am2zzw0000221

13. Remove the screws, then remove the belt cover.

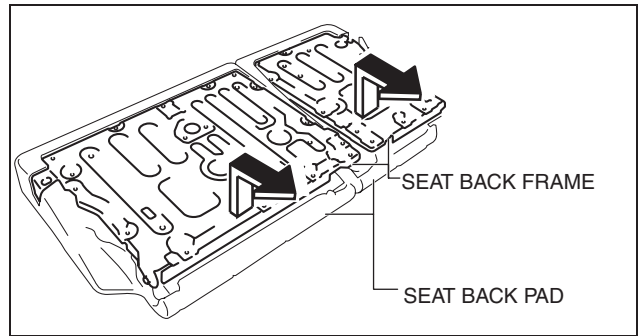


am2zzw0000059



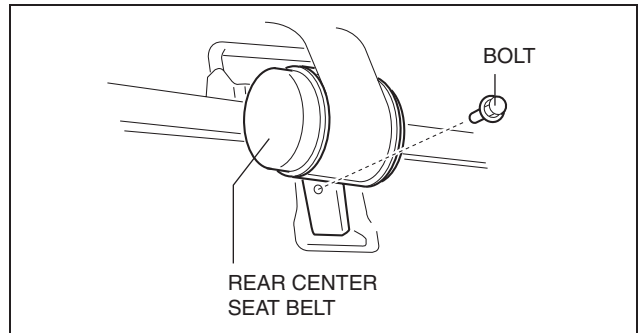
## SEATS

14. Remove the seat back frame from the seat back pad by pulling it in the direction of the arrow.



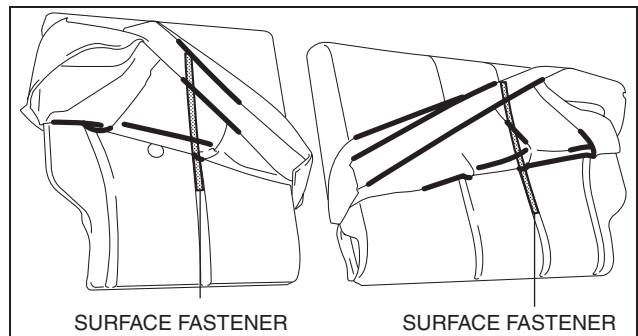
am2zzw0000377

15. Remove the bolt, then remove the rear center seat belt.



am2zzw0000059

16. Remove the seat back trim from the seat back pad by peeling off the surface fastener while opening the seat back trim.  
17. Install in the reverse order of removal.



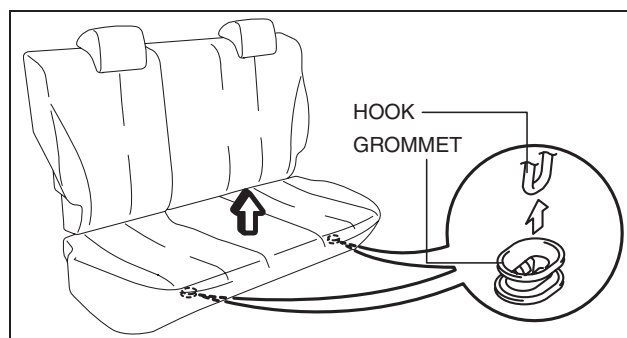
adejjw00001886

## SEATS

### REAR SEAT CUSHION REMOVAL/INSTALLATION

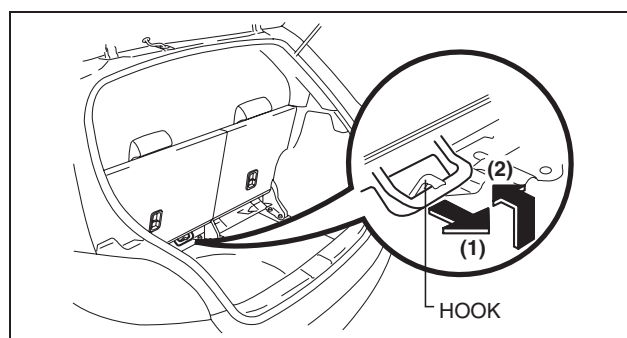
id091300555800

1. Detach the hooks from the grommets by pulling the rear seat cushion in the direction of the arrow shown in the figure.



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2. From the backside of the seat, detach the hook in the direction of arrow (1) shown in the figure, then remove the rear seat cushion by pulling it in the direction of arrow (2).
3. Install in the reverse order of removal.

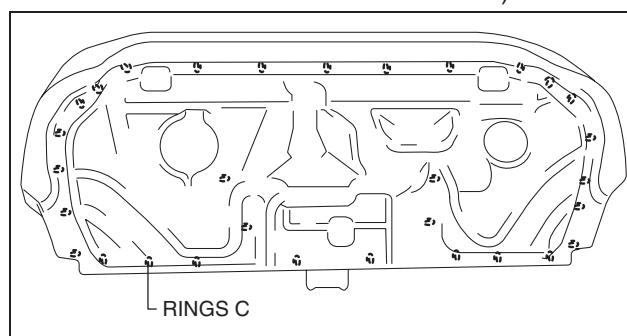


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### REAR SEAT CUSHION TRIM REMOVAL/INSTALLATION

id091300455800

1. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
2. Remove rings C, then remove the seat cushion trim from the seat cushion pad.
3. Install in the reverse order of removal.



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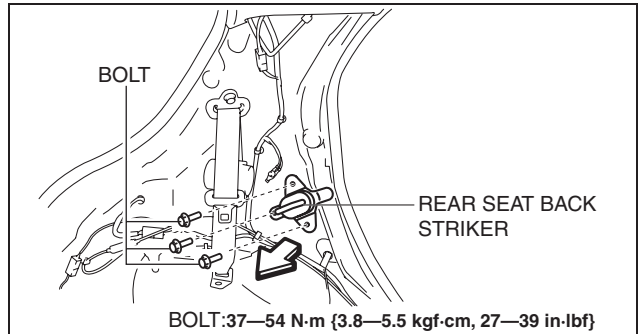
### REAR SEAT BACK STRIKER REMOVAL/INSTALLATION

id091300426400

1. Disconnect the negative battery cable.
2. Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
3. Remove the rear seat back. (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
4. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
5. Remove the trunk end trim. (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
6. Remove the trunk side trim. (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.) (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB])
7. C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION) (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB])

## SEATS

8. Remove the bolts, then remove the rear seat back striker in the direction of the arrow shown in the figure.
9. Install in the reverse order of removal.

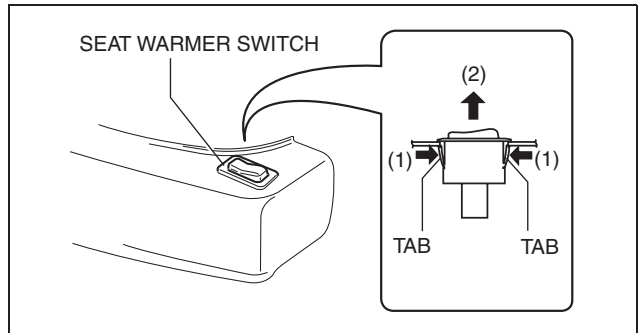


am2zzw0000449

### SEAT WARMER SWITCH REMOVAL/INSTALLATION

id091300716000

1. Disconnect the negative battery cable.
2. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
3. Remove the front seat side cover. (See 09-13-22 FRONT SEAT SIDE COVER REMOVAL/INSTALLATION.)
4. While pressing the tab of the arrow (1) shown in the figure, remove the seat warmer switch in the direction of the arrow (2).
5. Install in the reverse order of removal.



am2zzw0000201

### SEAT WARMER SWITCH INSPECTION

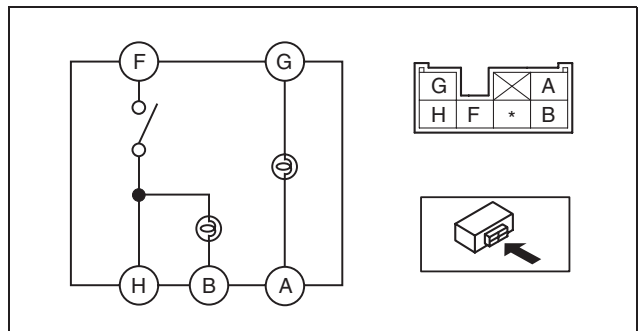
id091300716100

1. Disconnect the negative battery cable.
2. Remove the seat warmer switch. (See 09-13-32 SEAT WARMER SWITCH REMOVAL/INSTALLATION.)
3. Inspect for continuity between the seat warmer switch terminals using an ohmmeter.
  - If not as specified, replace the seat warmer switch.

○—○ : Continuity    ○⊗○ : Bulb

| Switch position | Terminal |     |     |     |     |
|-----------------|----------|-----|-----|-----|-----|
|                 | B        | H   | F   | A   | G   |
| ON              | ○⊗○      | ○—○ | ○—○ | ○⊗○ | ○—○ |
| OFF             | ○⊗○      | ○—○ |     | ○⊗○ | ○—○ |

am2zzw0000201



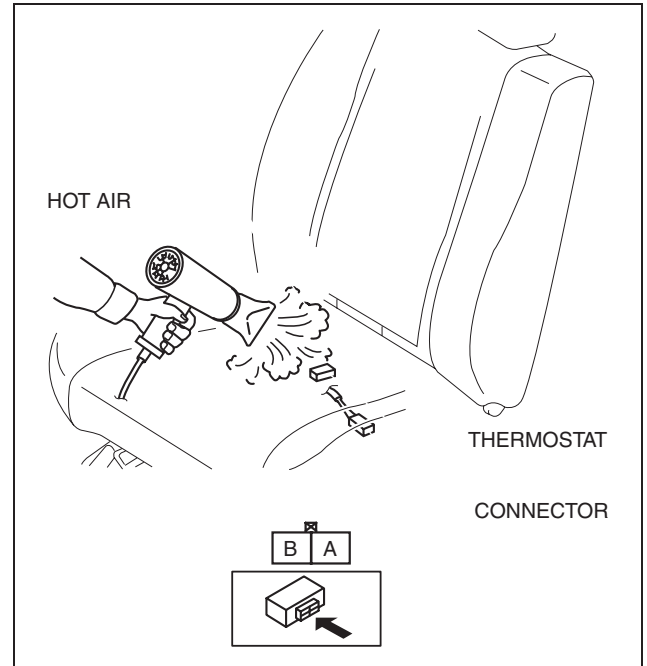
am2zzw0000203

## SEATS

### SEAT WARMER UNIT INSPECTION

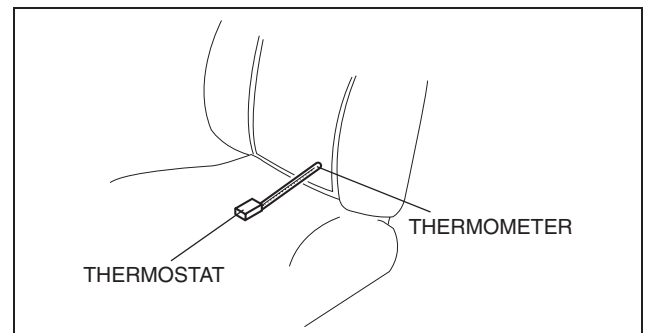
id091300716200

1. Turn the ignition to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**. (Vehicles with side air bags)
3. Disconnect the negative battery cable. (Vehicles without side air bags)
4. Remove the front seat. (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
5. Remove the front seat cushion trim. (See 09-13-22 FRONT SEAT CUSHION TRIM REMOVAL/INSTALLATION.)
6. While inspecting for continuity between the connector terminals A and B, use a dryer to warm the thermostat of the seat warmer unit on seat cushion.



am2zzw0000202

7. When the indication on the ohmmeter is no continuity, turn off the dryer, then use a thermometer to measure the temperature of the thermostat.
8. Verify that the temperature is **approx. 29 °C {84 °F}**.



am2zzw0000202

9. Verify that there is continuity between terminals of the seat warmer unit's connector using an ohmmeter when temperature drops to **approx. 20 °C {68 °F}**.

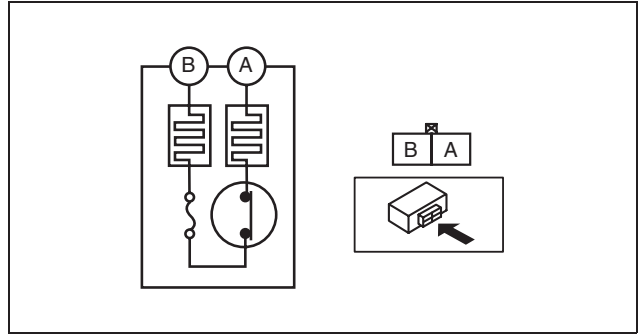
| Thermostat temperature          | Terminal |     |
|---------------------------------|----------|-----|
|                                 | A        | B   |
| More than approx. 29 °C {84 °F} |          |     |
| Less than approx. 20 °C {68 °F} | ○—○      | ○—○ |

○—○ : Continuity

am2zzw0000202

## SEATS

- If not as indicated in the table, replace the front seat cushion.



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## 09-14 SECURITY AND LOCKS

### SECURITY AND LOCKS LOCATION

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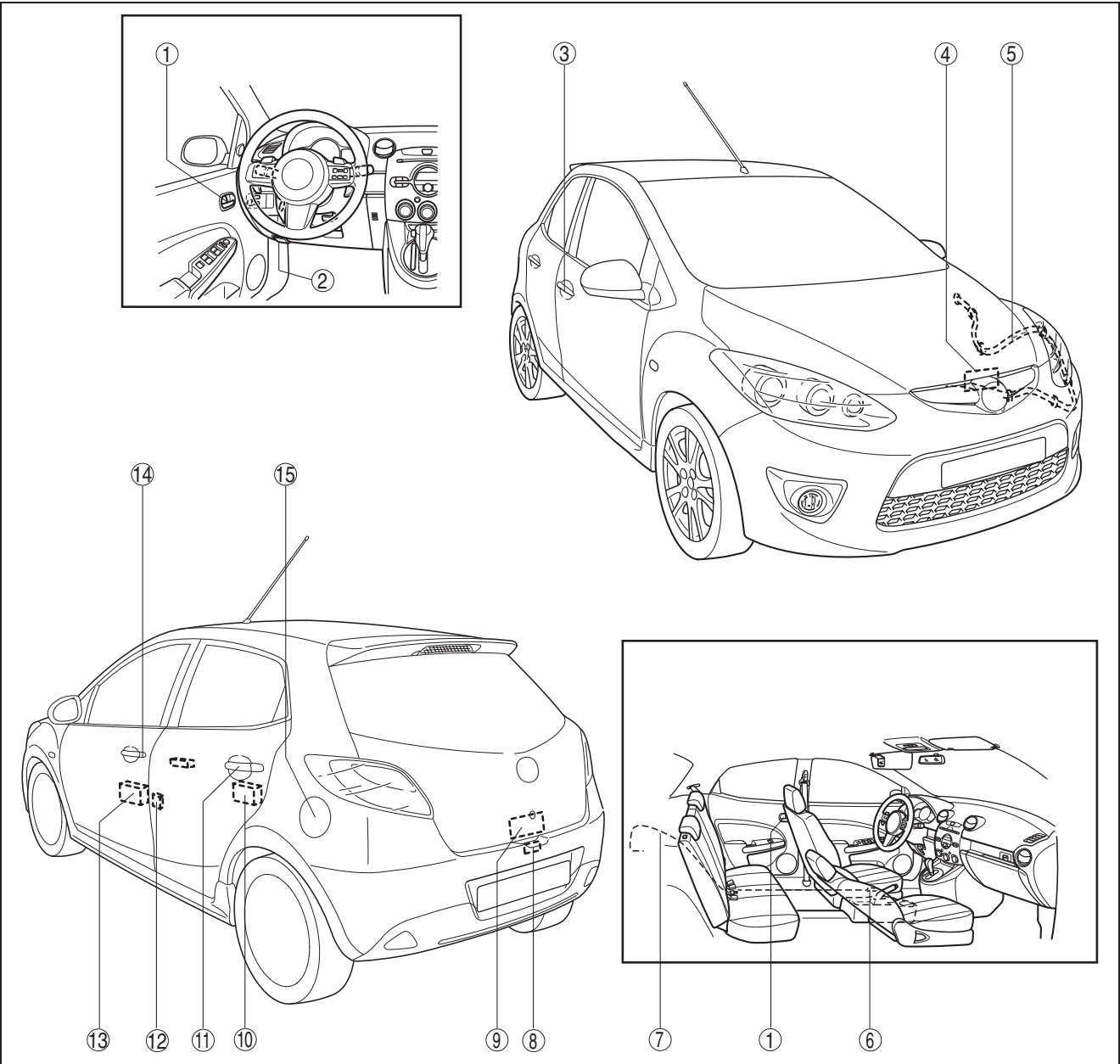


# SECURITY AND LOCKS

## SECURITY AND LOCKS LOCATION INDEX

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### Locks and Openers 5HB



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|   |                                                                       |
|---|-----------------------------------------------------------------------|
| 1 | Inner handle<br>(See 09-14-27 INNER HANDLE REMOVAL/<br>INSTALLATION.) |
|---|-----------------------------------------------------------------------|

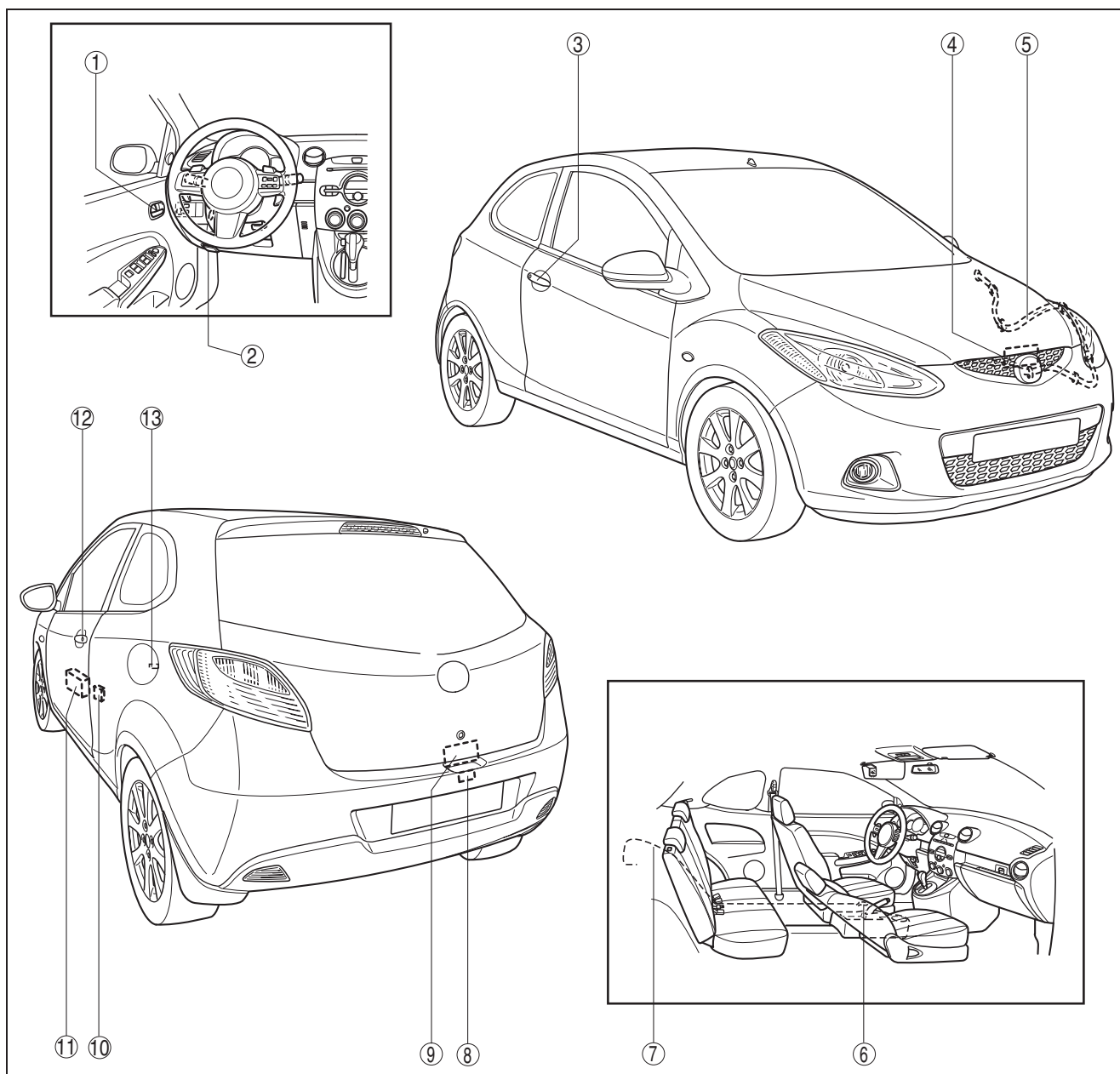
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|    |                                                                                                                                                                                                                                                                                                                                                                                                              |
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| 2  | Bonnet release lever<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                  |
| 3  | Front outer handle<br>(See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                |
| 4  | Bonnet latch<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                          |
| 5  | Bonnet release cable<br>(See 09-14-30 BONNET RELEASE CABLE REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                            |
| 6  | Fuel-filler lid opener lever<br>(See 09-14-43 FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [5HB].)                                                                                                                                                                                                                                                                                                  |
| 7  | Fuel-filler lid opener cable<br>(See 09-14-40 FUEL-FILLER LID OPENER CABLE REMOVAL/INSTALLATION [5HB].)                                                                                                                                                                                                                                                                                                      |
| 8  | Liftgate lock striker<br>(See 09-14-93 LIFTGATE LOCK STRIKER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                          |
| 9  | Liftgate latch and lock actuator<br>(See 09-14-88 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-89 LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION.)<br>(See 09-14-90 LIFTGATE LATCH SWITCH INSPECTION.)<br>(See 09-14-89 LIFTGATE LOCK ACTUATOR INSPECTION.)                                                                                                                            |
| 10 | Rear door latch and lock actuator<br>(See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-80 REAR DOOR LATCH AND LOCK ACTUATOR INSPECTION.)<br>(See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)                                                                                                                                                                             |
| 11 | Rear outer handle<br>(See 09-14-23 REAR OUTER HANDLE REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                  |
| 12 | Door lock striker<br>(See 09-14-78 DOOR LOCK STRIKER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                  |
| 13 | Front door latch and lock actuator<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-67 FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION.)<br>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)<br>(See 09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.)<br>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)<br>(See 09-14-62 FRONT DOOR KEY CYLINDER SWITCH INSPECTION.) |
| 14 | Front door key cylinder<br>(See 09-14-55 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                      |

|    |                                                                                                       |
|----|-------------------------------------------------------------------------------------------------------|
| 15 | Fuel-filler lid opener<br>(See 09-14-43 FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [5HB].) |
|----|-------------------------------------------------------------------------------------------------------|

## SECURITY AND LOCKS

3HB



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|   |                                                                                             |
|---|---------------------------------------------------------------------------------------------|
| 1 | Inner handle<br>(See 09-14-27 INNER HANDLE REMOVAL/INSTALLATION.)                           |
| 2 | Bonnet release lever<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.) |
| 3 | Front outer handle<br>(See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)               |
| 4 | Bonnet latch<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)         |
| 5 | Bonnet release cable<br>(See 09-14-30 BONNET RELEASE CABLE REMOVAL/INSTALLATION.)           |

|   |                                                                                                                                                                                                                                                                                   |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Fuel-filler lid opener lever<br>(See 09-14-51 FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [3HB].)                                                                                                                                                                       |
| 7 | Fuel-filler lid opener cable<br>(See 09-14-47 FUEL-FILLER LID OPENER CABLE REMOVAL/INSTALLATION [3HB].)                                                                                                                                                                           |
| 8 | Liftgate lock striker<br>(See 09-14-93 LIFTGATE LOCK STRIKER REMOVAL/INSTALLATION.)                                                                                                                                                                                               |
| 9 | Liftgate latch and lock actuator<br>(See 09-14-88 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-89 LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION.)<br>(See 09-14-90 LIFTGATE LATCH SWITCH INSPECTION.)<br>(See 09-14-89 LIFTGATE LOCK ACTUATOR INSPECTION.) |

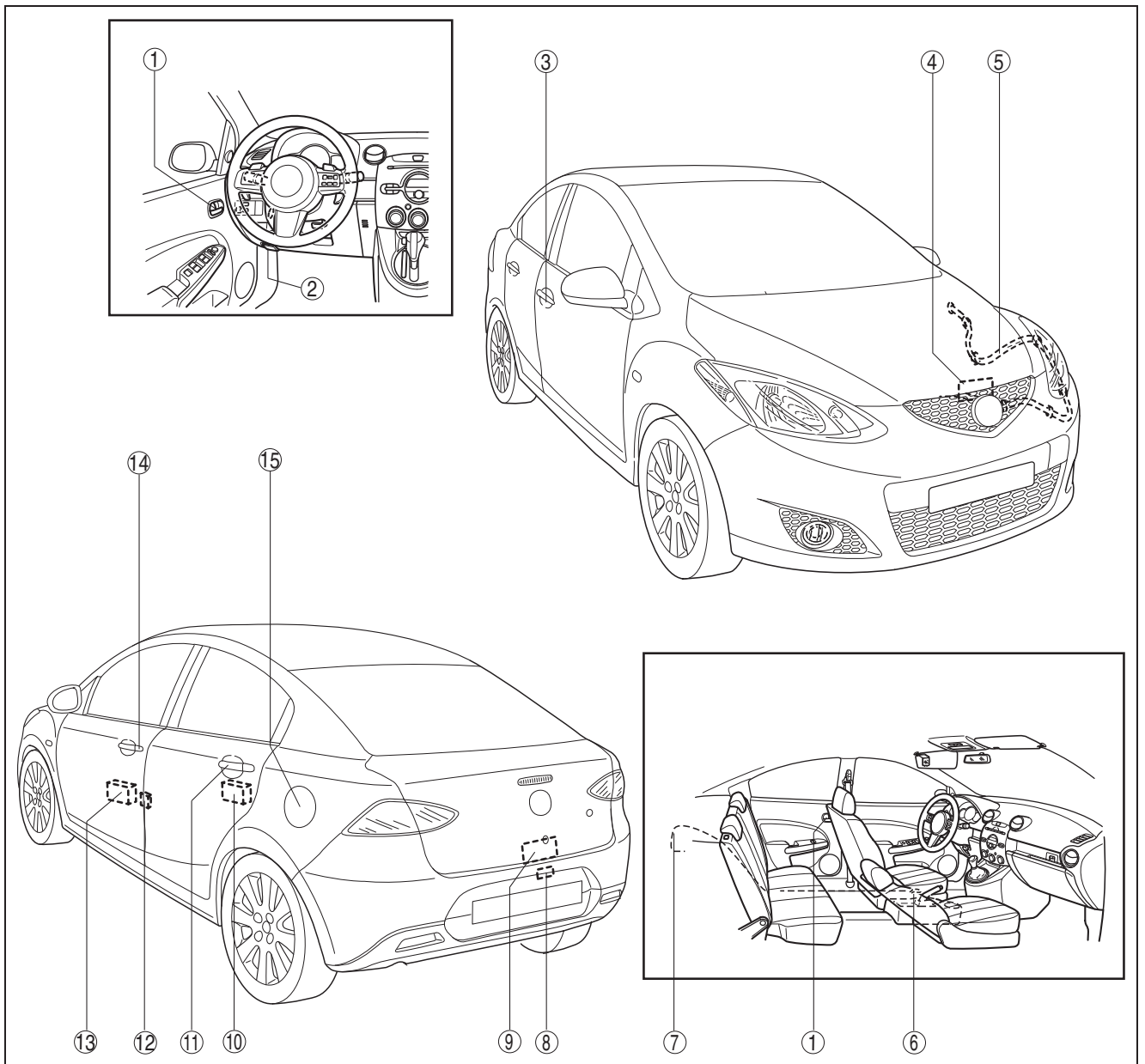
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| 10 | Door lock striker<br>(See 09-14-78 DOOR LOCK STRIKER<br>REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                                     |
| 11 | Front door latch and lock actuator<br>(See 09-14-63 FRONT DOOR LATCH AND<br>LOCK ACTUATOR REMOVAL/<br>INSTALLATION.)<br>(See 09-14-67 FRONT DOOR LATCH AND<br>LOCK ACTUATOR INSPECTION.)<br>(See 09-14-74 FRONT DOOR LATCH<br>SWITCH INSPECTION.)<br>(See 09-14-72 FRONT DOOR LOCK<br>ACTUATOR INSPECTION.)<br>(See 09-14-75 DOOR LOCK-LINK SWITCH<br>INSPECTION.)<br>(See 09-14-62 FRONT DOOR KEY<br>CYLINDER SWITCH INSPECTION.) |
| 12 | Front door key cylinder<br>(See 09-14-55 FRONT DOOR KEY<br>CYLINDER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                         |
| 13 | Fuel-filler lid opener<br>(See 09-14-51 FUEL-FILLER LID OPENER<br>AND LEVER REMOVAL/INSTALLATION<br>[3HB].)                                                                                                                                                                                                                                                                                                                        |

## SECURITY AND LOCKS

4SD



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|   |                                                                                             |
|---|---------------------------------------------------------------------------------------------|
| 1 | Inner handle<br>(See 09-14-27 INNER HANDLE REMOVAL/INSTALLATION.)                           |
| 2 | Bonnet release lever<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.) |
| 3 | Front outer handle<br>(See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)               |
| 4 | Bonnet latch<br>(See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)         |
| 5 | Bonnet release cable<br>(See 09-14-30 BONNET RELEASE CABLE REMOVAL/INSTALLATION.)           |

|   |                                                                                                                                                                                                                                                                                                   |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Fuel-filler lid opener lever<br>(See 09-14-36 FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [4SD].)                                                                                                                                                                                       |
| 7 | Fuel-filler lid opener cable<br>(See 09-14-32 FUEL-FILLER LID OPENER CABLE REMOVAL/INSTALLATION [4SD].)                                                                                                                                                                                           |
| 8 | Trunk lid lock striker<br>(See 09-14-98 TRUNK LID LOCK STRIKER REMOVAL/INSTALLATION.)                                                                                                                                                                                                             |
| 9 | Trunk lid latch and release actuator<br>(See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR INSPECTION.)<br>(See 09-14-90 LIFTGATE LATCH SWITCH INSPECTION.)<br>(See 09-14-95 TRUNK LID RELEASE ACTUATOR INSPECTION.) |

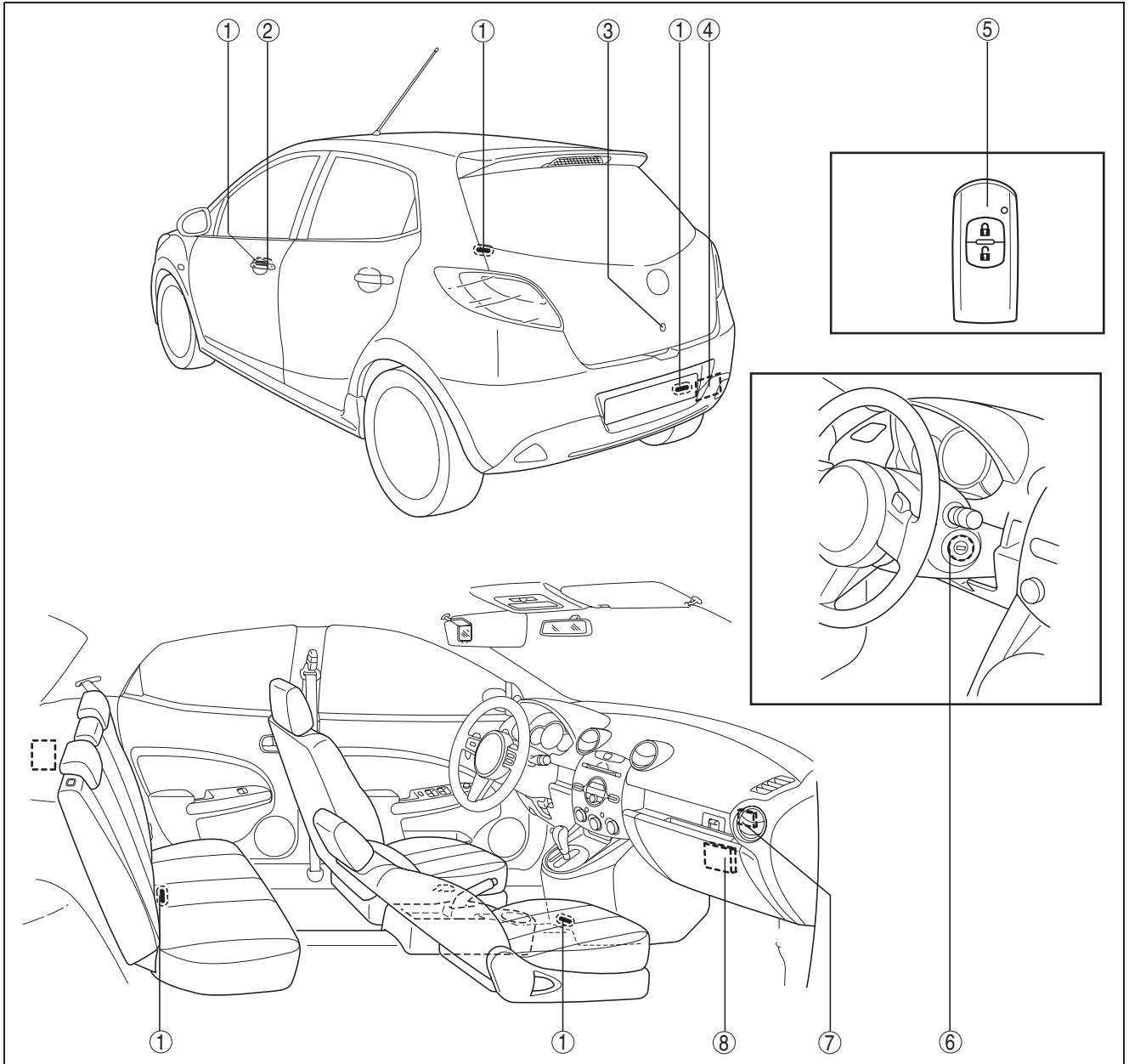
## SECURITY AND LOCKS

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|    |                                                                                                                                                                                                                                                                                                                                                                                                              |
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| 10 | Rear door latch and lock actuator<br>(See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-80 REAR DOOR LATCH AND LOCK ACTUATOR INSPECTION.)<br>(See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)                                                                                                                                                                             |
| 11 | Rear outer handle<br>(See 09-14-23 REAR OUTER HANDLE REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                  |
| 12 | Door lock striker<br>(See 09-14-78 DOOR LOCK STRIKER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                                  |
| 13 | Front door latch and lock actuator<br>(See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)<br>(See 09-14-67 FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION.)<br>(See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)<br>(See 09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.)<br>(See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)<br>(See 09-14-62 FRONT DOOR KEY CYLINDER SWITCH INSPECTION.) |
| 14 | Front door key cylinder<br>(See 09-14-55 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                                                                      |
| 15 | Fuel-filler lid opener<br>(See 09-14-36 FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [4SD].)                                                                                                                                                                                                                                                                                                        |

## SECURITY AND LOCKS

### Keyless Entry System and Immobilizer System [Advanced Keyless and Start System] 5HB



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|   |                                                                                                                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Keyless antenna<br>(See 09-14-125 KEYLESS ANTENNA<br>REMOVAL/INSTALLATION [ADVANCED<br>KEYLESS AND START SYSTEM].)                                                                                       |
| 2 | Request switch<br>(See 09-14-132 REQUEST SWITCH<br>REMOVAL/INSTALLATION [ADVANCED<br>KEYLESS AND START SYSTEM].)<br>(See 09-14-132 REQUEST SWITCH<br>INSPECTION [ADVANCED KEYLESS AND<br>START SYSTEM].) |
| 3 | Liftgate opener switch<br>(See 09-14-91 LIFTGATE OPENER<br>SWITCH REMOVAL/INSTALLATION.)<br>(See 09-14-92 LIFTGATE OPENER<br>SWITCH INSPECTION.)                                                         |

|   |                                                                                                                                                                                                                                                                                                 |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Keyless beeper<br>(See 09-14-130 KEYLESS BEEPER<br>REMOVAL/INSTALLATION [ADVANCED<br>KEYLESS AND START SYSTEM].)<br>(See 09-14-131 KEYLESS BEEPER<br>INSPECTION [ADVANCED KEYLESS AND<br>START SYSTEM].)                                                                                        |
| 5 | Advanced key<br>(See 09-14-123 ADVANCED KEY ID CODE<br>REGISTRATION [ADVANCED KEYLESS<br>AND START SYSTEM].)<br>(See 09-14-124 CLEARING ADVANCED<br>KEY [ADVANCED KEYLESS AND START<br>SYSTEM].)<br>(See 09-14-122 ADVANCED KEY BATTERY<br>REPLACEMENT [ADVANCED KEYLESS<br>AND START SYSTEM].) |

## SECURITY AND LOCKS

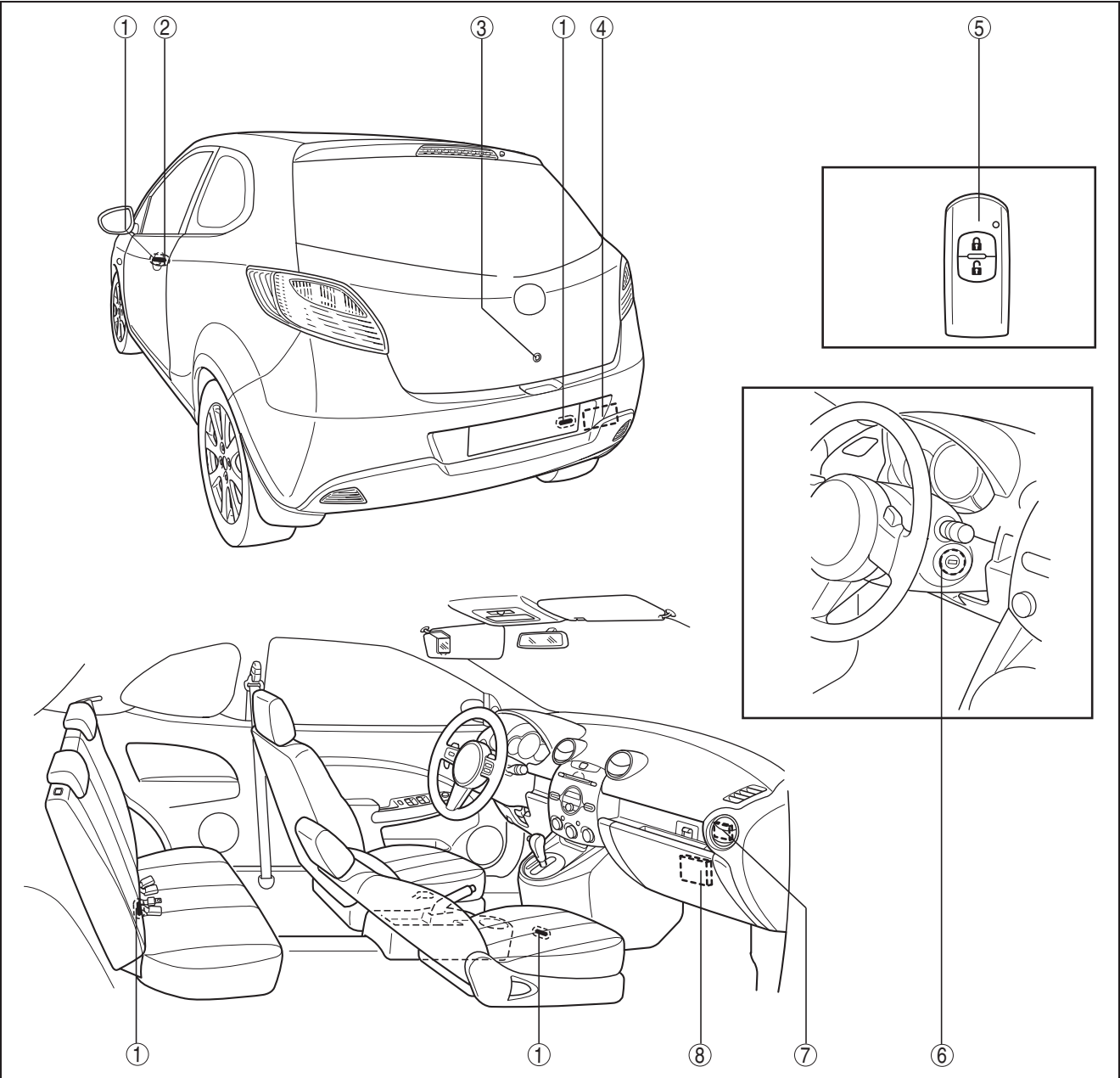
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|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Coil antenna<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7 | Keyless receiver<br>(See 09-14-108 KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 8 | Keyless control module<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-99 KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-102 KEYLESS CONTROL MODULE CONFIGURATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-125 CUSTOMIZED FUNCTION SETTING PROCEDURE [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-158 SECURITY ACCESS PROCEDURE.) |



# SECURITY AND LOCKS

3HB



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|   |                                                                                                                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Keyless antenna<br>(See 09-14-125 KEYLESS ANTENNA<br>REMOVAL/INSTALLATION [ADVANCED<br>KEYLESS AND START SYSTEM].)                                                                                       |
| 2 | Request switch<br>(See 09-14-132 REQUEST SWITCH<br>REMOVAL/INSTALLATION [ADVANCED<br>KEYLESS AND START SYSTEM].)<br>(See 09-14-132 REQUEST SWITCH<br>INSPECTION [ADVANCED KEYLESS AND<br>START SYSTEM].) |
| 3 | Liftgate opener switch<br>(See 09-14-91 LIFTGATE OPENER<br>SWITCH REMOVAL/INSTALLATION.)<br>(See 09-14-92 LIFTGATE OPENER<br>SWITCH INSPECTION.)                                                         |

|   |                                                                                                                                                                                                                                                                                                 |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Keyless beeper<br>(See 09-14-130 KEYLESS BEEPER<br>REMOVAL/INSTALLATION [ADVANCED<br>KEYLESS AND START SYSTEM].)<br>(See 09-14-131 KEYLESS BEEPER<br>INSPECTION [ADVANCED KEYLESS AND<br>START SYSTEM].)                                                                                        |
| 5 | Advanced key<br>(See 09-14-123 ADVANCED KEY ID CODE<br>REGISTRATION [ADVANCED KEYLESS<br>AND START SYSTEM].)<br>(See 09-14-124 CLEARING ADVANCED<br>KEY [ADVANCED KEYLESS AND START<br>SYSTEM].)<br>(See 09-14-122 ADVANCED KEY BATTERY<br>REPLACEMENT [ADVANCED KEYLESS<br>AND START SYSTEM].) |

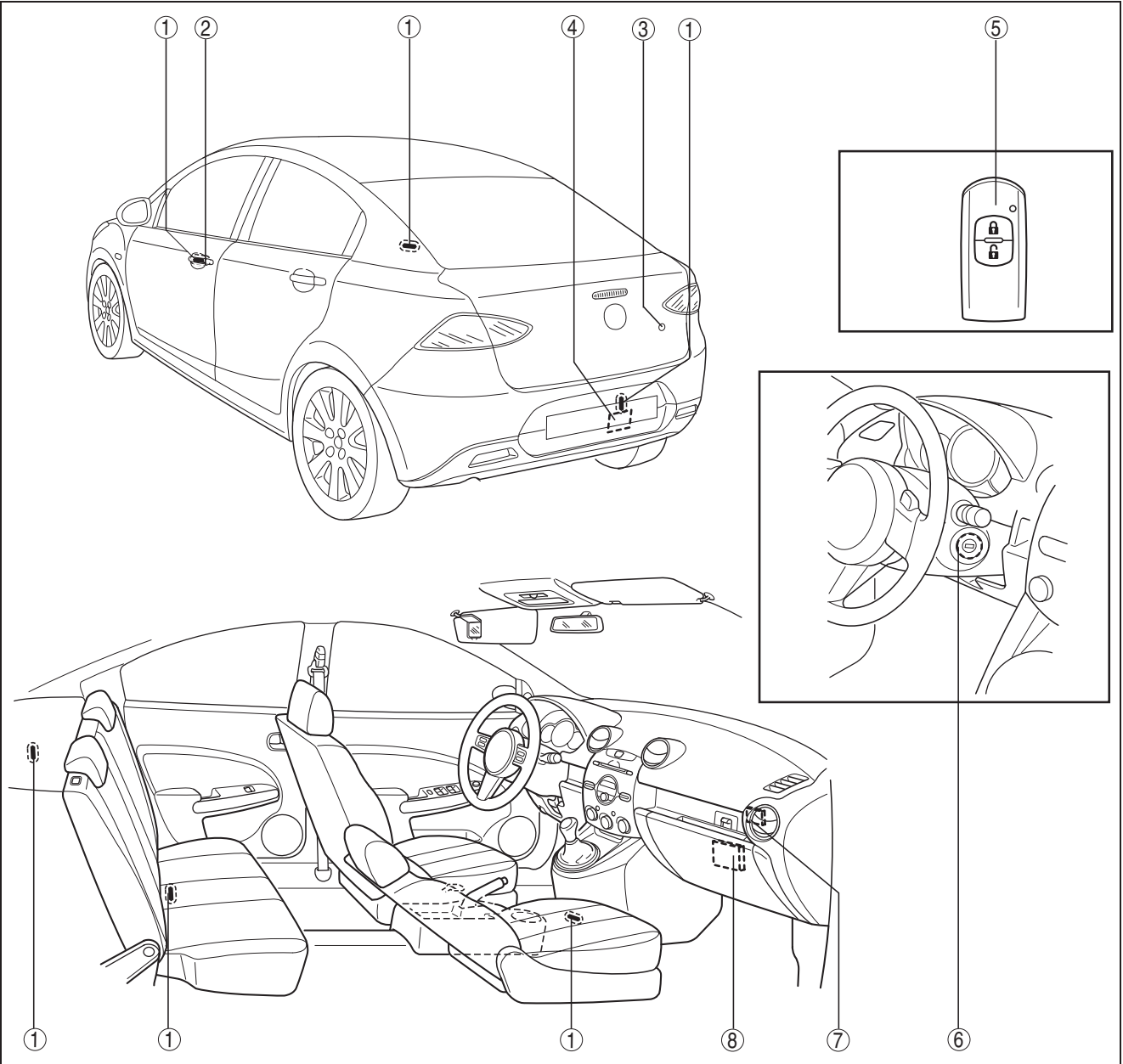
## SECURITY AND LOCKS

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|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Coil antenna<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7 | Keyless receiver<br>(See 09-14-108 KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 8 | Keyless control module<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-99 KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-102 KEYLESS CONTROL MODULE CONFIGURATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-125 CUSTOMIZED FUNCTION SETTING PROCEDURE [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-158 SECURITY ACCESS PROCEDURE.) |

# SECURITY AND LOCKS

4SD



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|   |                                                                                                                                                                                              |   |                                                                                                                                                                                                                                                                               |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Keyless antenna<br>(See 09-14-125 KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                 | 4 | Keyless beeper<br>(See 09-14-130 KEYLESS BEEPER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-131 KEYLESS BEEPER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                  |
| 2 | Request switch<br>(See 09-14-132 REQUEST SWITCH REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-132 REQUEST SWITCH INSPECTION [ADVANCED KEYLESS AND START SYSTEM].) | 5 | Advanced key<br>(See 09-14-123 ADVANCED KEY ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-124 CLEARING ADVANCED KEY [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-122 ADVANCED KEY BATTERY REPLACEMENT [ADVANCED KEYLESS AND START SYSTEM].) |
| 3 | Trunk lid opener switch<br>(See 09-14-97 TRUNK LID OPENER SWITCH REMOVAL/INSTALLATION.)<br>(See 09-14-97 TRUNK LID OPENER SWITCH INSPECTION.)                                                |   |                                                                                                                                                                                                                                                                               |

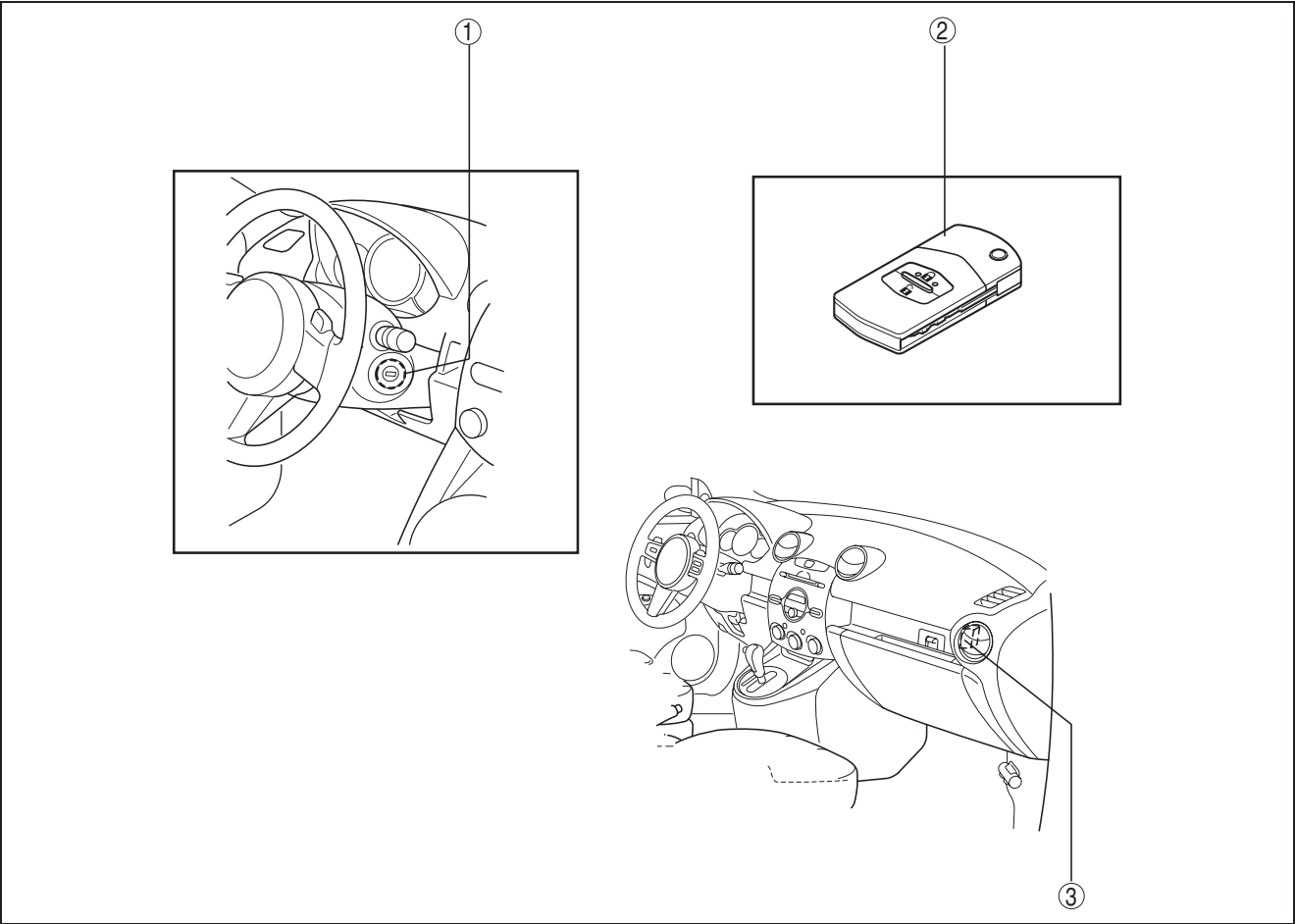
## SECURITY AND LOCKS

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|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Coil antenna<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7 | Keyless receiver<br>(See 09-14-108 KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-109 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 8 | Keyless control module<br>(See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-99 KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-102 KEYLESS CONTROL MODULE CONFIGURATION [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-125 CUSTOMIZED FUNCTION SETTING PROCEDURE [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)<br>(See 09-14-158 SECURITY ACCESS PROCEDURE.) |

# SECURITY AND LOCKS

## Keyless Entry System and Immobilizer System [Keyless Entry System]



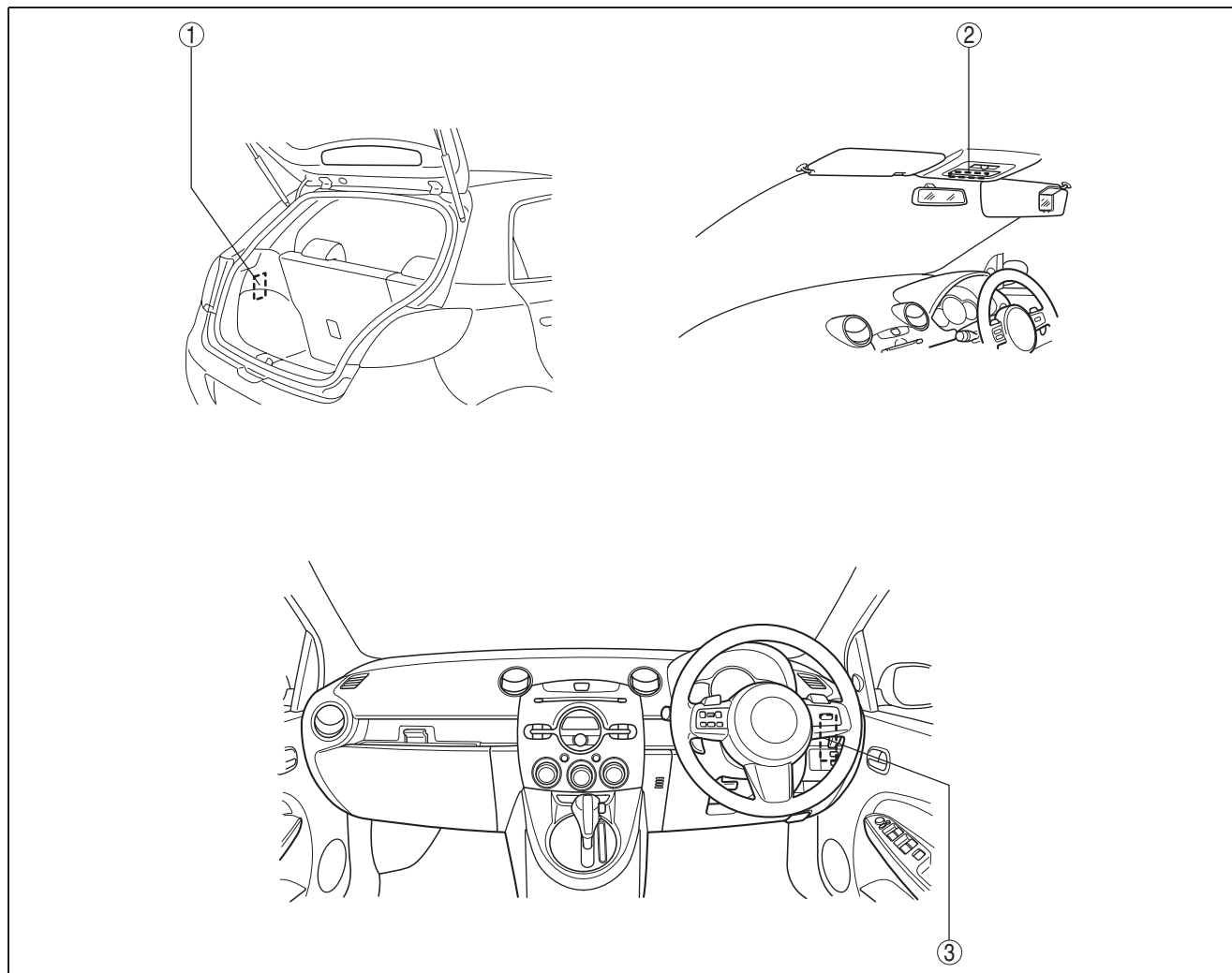
am2zzw0000061

|   |                                                                                                                                                                    |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Coil antenna<br>(See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)                                                                          |
| 2 | Transmitter<br>(See 09-14-118 TRANSMITTER BATTERY REPLACEMENT [KEYLESS ENTRY SYSTEM].)<br>(See 09-14-120 TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM].) |

|   |                                                                                                                                                                          |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | Keyless receiver<br>(See 09-14-109 KEYLESS RECEIVER REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)<br>(See 09-14-110 KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM].) |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECURITY AND LOCKS

### Theft-deterrent System Except AutoAlliance Thailand (AAT) manufactured vehicles



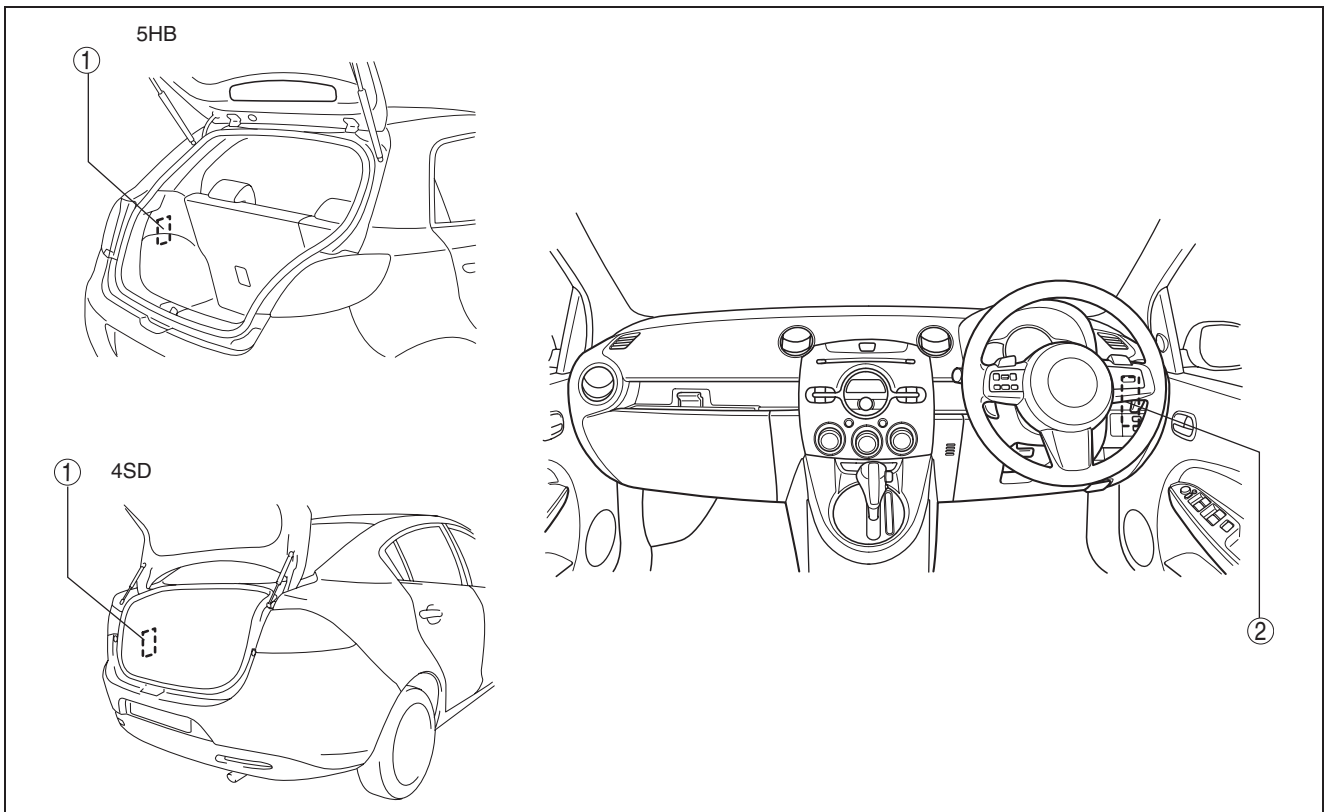
am2zzw0000220

|   |                                                                                                                                           |
|---|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Theft-deterrent siren<br>(See 09-14-102 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION.)<br>(See 09-14-104 THEFT-DETERRENT SIREN INSPECTION.) |
| 2 | Intruder sensor<br>(See 09-14-135 INTRUDER SENSOR REMOVAL/INSTALLATION.)<br>(See 09-14-135 INTRUDER SENSOR INSPECTION.)                   |

|   |                                                                                                                                                                      |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | Theft-deterrent control module<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.)<br>(See 09-14-112 THEFT-DETERRENT CONTROL MODULE INSPECTION.) |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECURITY AND LOCKS

### AutoAlliance Thailand (AAT) manufactured vehicles



am2zzw0000462

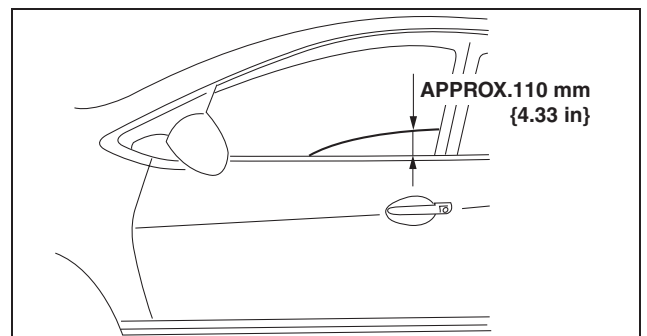
|   |                                                                                                                                                                      |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Theft-deterrent horn<br>(See 09-14-107 THEFT-DETERRENT HORN REMOVAL/INSTALLATION.)                                                                                   |
| 2 | Theft-deterrent control module<br>(See 09-14-111 THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION.)<br>(See 09-14-112 THEFT-DETERRENT CONTROL MODULE INSPECTION.) |

### FRONT OUTER HANDLE REMOVAL/INSTALLATION

id091400432300

#### 5HB, 4SD

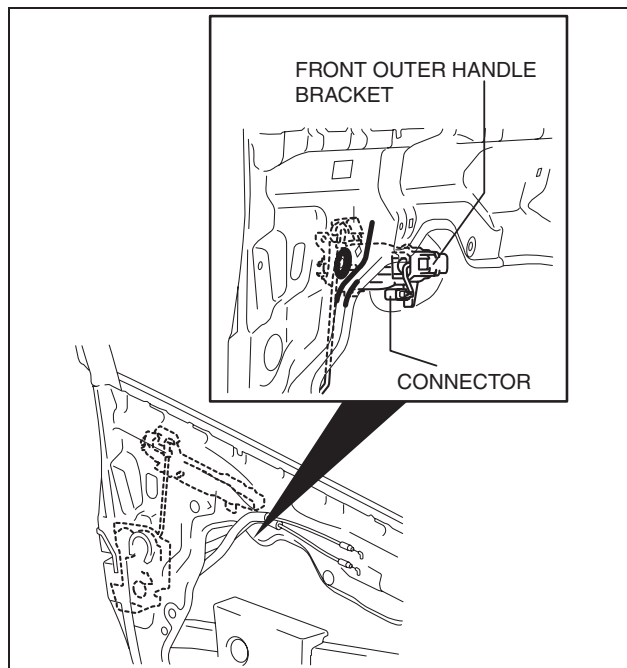
- To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
- Disconnect the negative battery cable.
- Remove the following parts:
  - Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.)
  - Front door key cylinder (See 09-14-55 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION.)



am2zzw0000517

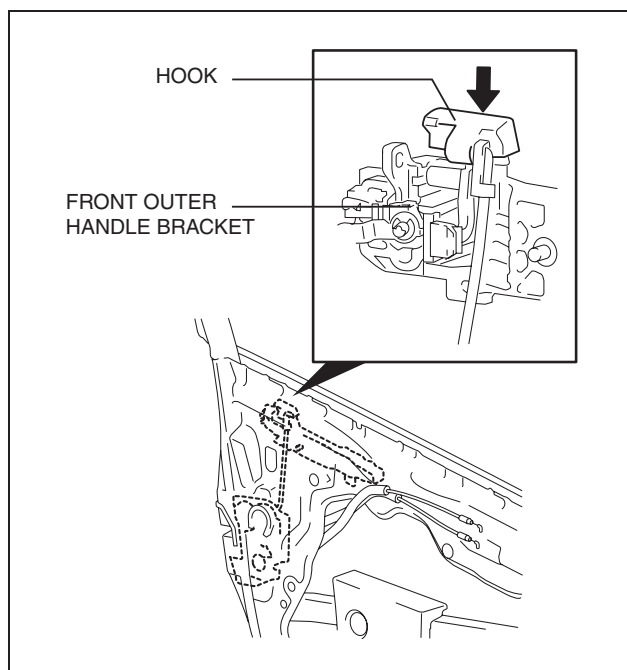
## SECURITY AND LOCKS

4. Disconnect the keyless antenna connector (With advanced keyless entry system).



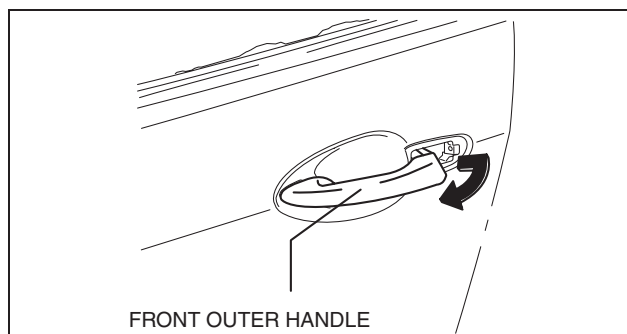
am2zzw0000062

5. Press the hook on the front outer handle bracket in the direction of the arrow.



am2zzw0000062

6. Maintaining the condition in procedure 5, remove the front outer handle.

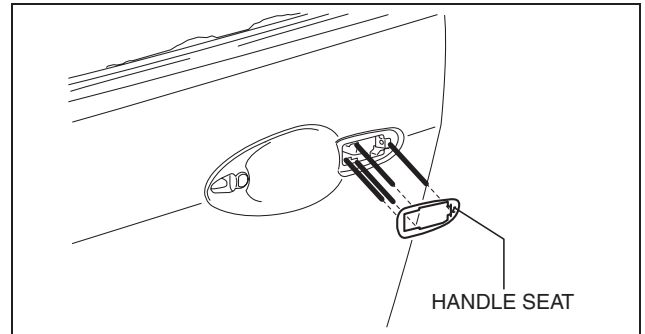


am2zzw0000062



## SECURITY AND LOCKS

7. Remove the handle protector and handle seat.
8. Remove the double-sided adhesive tape from the handle protector and body. (See 09-14-22 Outer handle bracket Installation Note.)

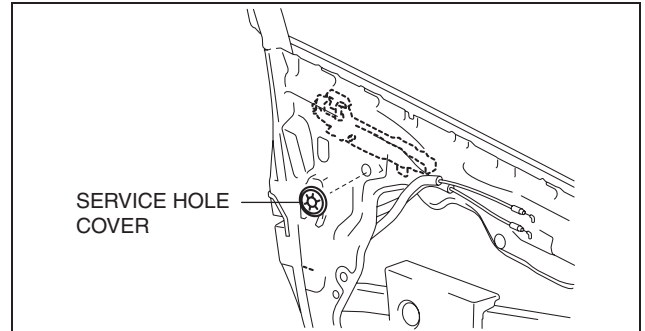


am2zzw0000352

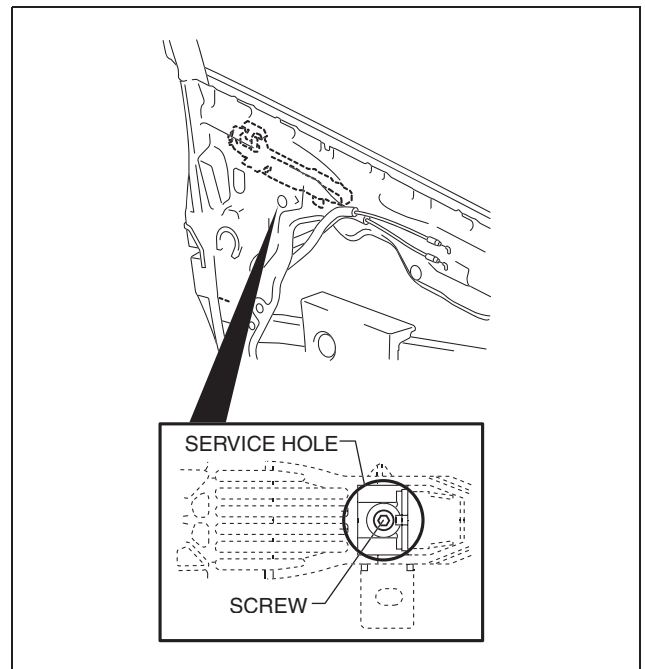
9. Remove the service hole cover.
10. Remove the screw from the service hole.

### Note

- The screw cannot be removed because of the stopper.



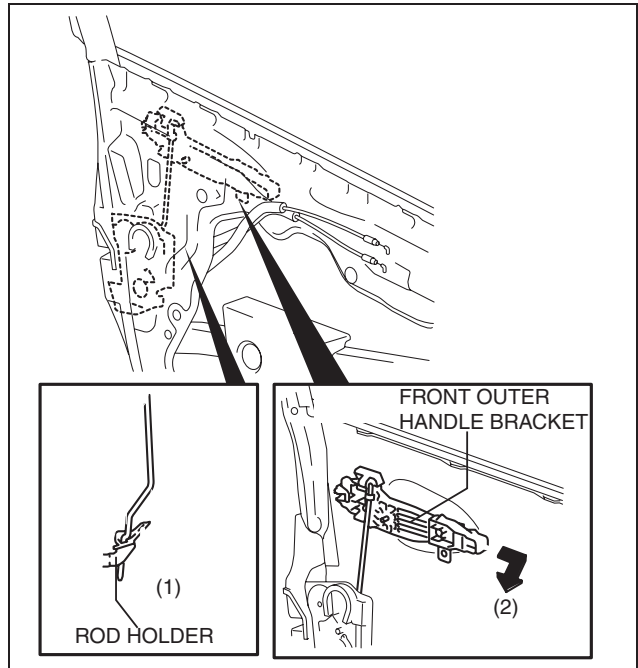
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am2zzw0000062

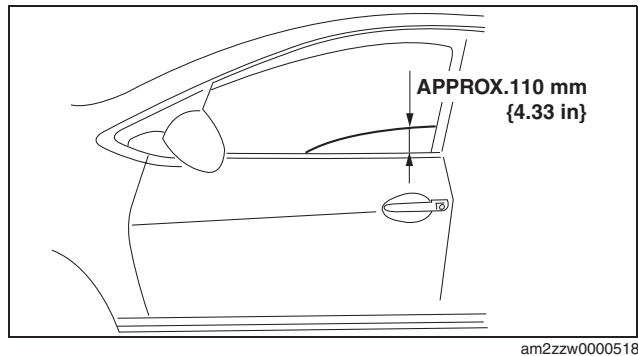
## SECURITY AND LOCKS

11. Press down the rod holder in the direction of arrow (1) and remove the front outer handle bracket in the direction of arrow (2). (See 09-14-22 Outer handle bracket Installation Note.)
12. Install in the reverse order of removal.



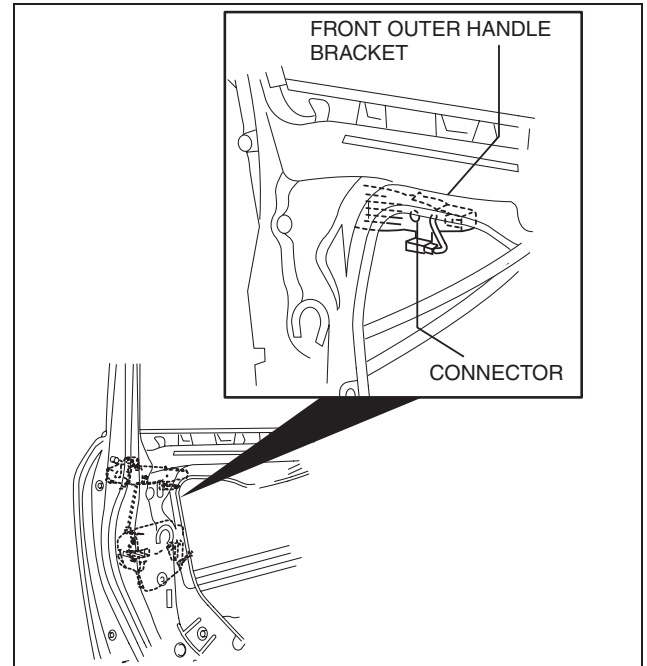
### 3HB

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)
  - (6) Front door key cylinder (See 09-14-55 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION.)



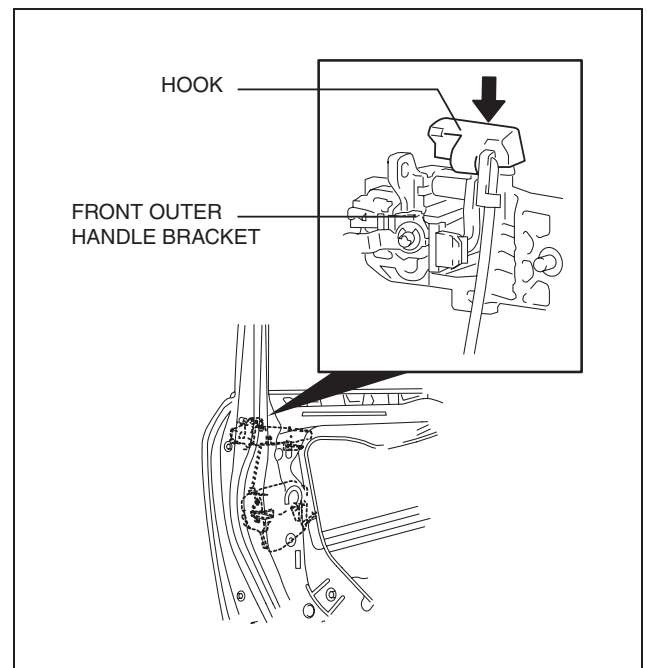
## SECURITY AND LOCKS

4. Disconnect the keyless antenna connector (With advanced keyless entry system).



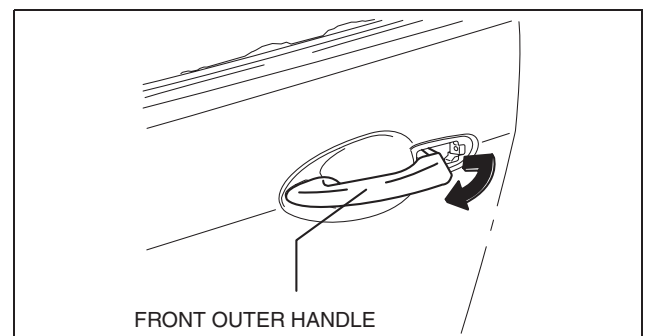
am2zzw0000331

5. Press the hook on the front outer handle bracket in the direction of the arrow.



am2zzw0000331

6. Maintaining the condition in procedure 5, remove the front outer handle.



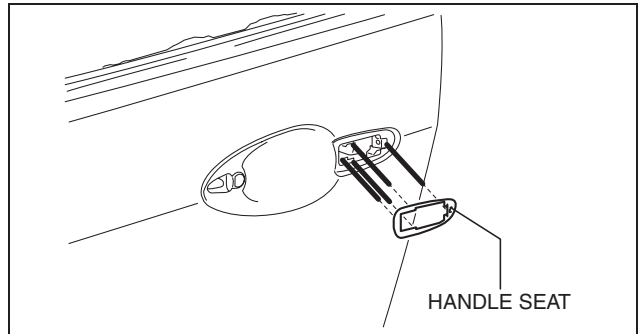
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## SECURITY AND LOCKS

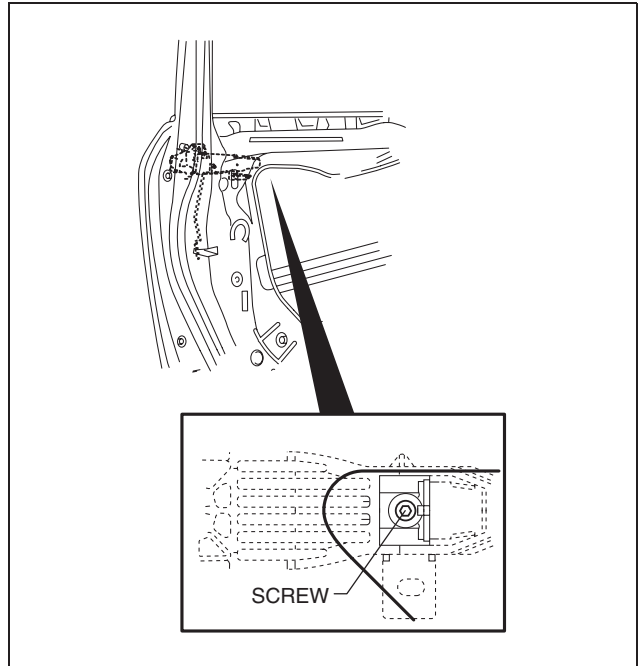
7. Remove the handle seat.
8. Remove the screw from the service hole.

### Note

- The screw cannot be removed because of the stopper.

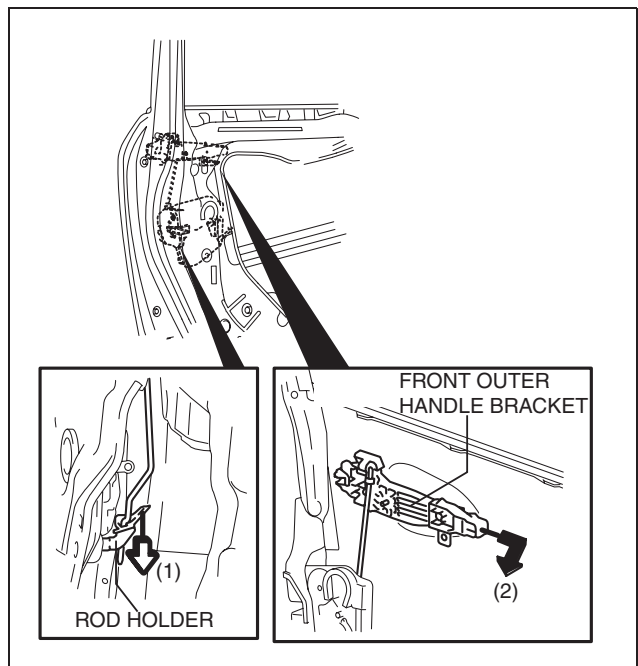


am2zzw0000352



am2zzw0000352

9. Press down the rod holder in the direction of arrow (1) and remove the front outer handle bracket in the direction of arrow (2). (See 09-14-22 Outer handle bracket Installation Note.)
10. Install in the reverse order of removal.

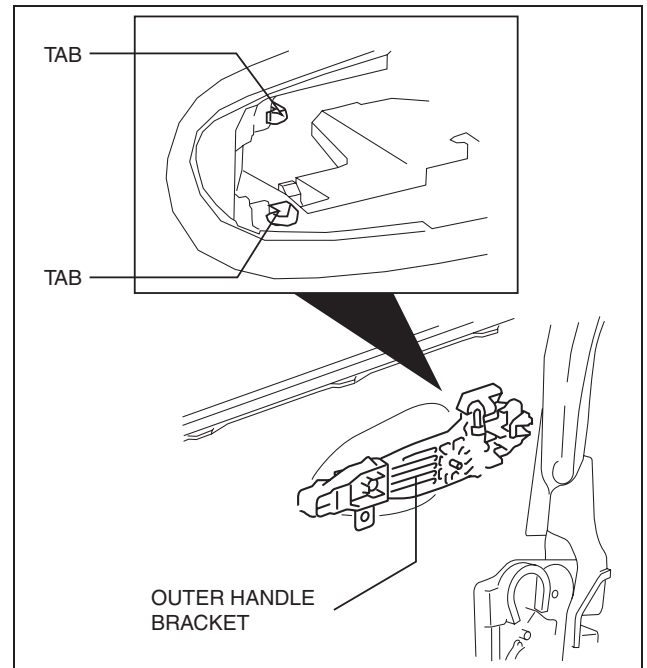


am2zzw0000332

### Outer handle bracket Installation Note

1. Hook the outer handle bracket tabs as shown in the figure.

## SECURITY AND LOCKS

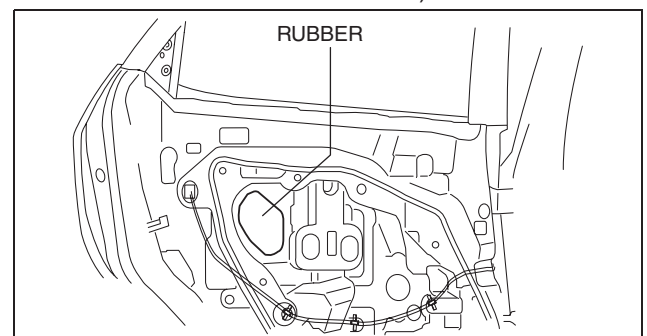


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### REAR OUTER HANDLE REMOVAL/INSTALLATION

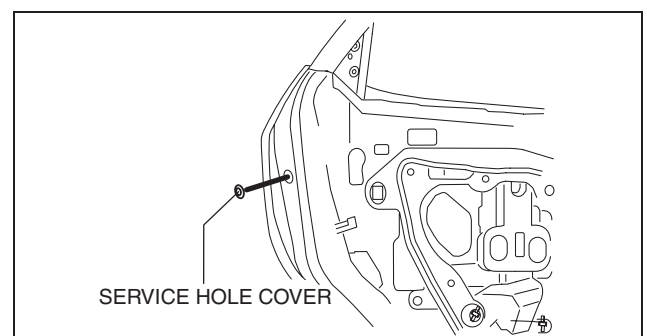
id091400432600

1. Fully close the rear door glass.
2. Disconnect the negative battery cable.
3. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the rubber.



am2zzw0000062

6. Remove the service hole cover.



am2zzw0000063

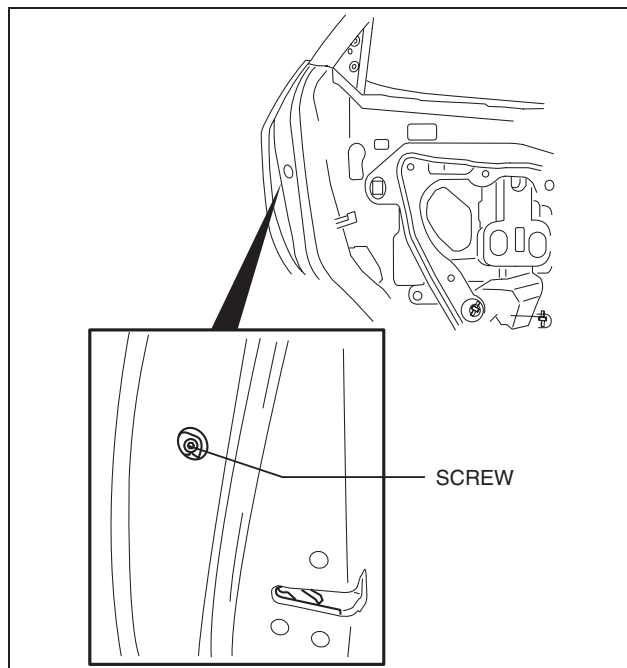
## SECURITY AND LOCKS

7. Remove the screw from the service hole.

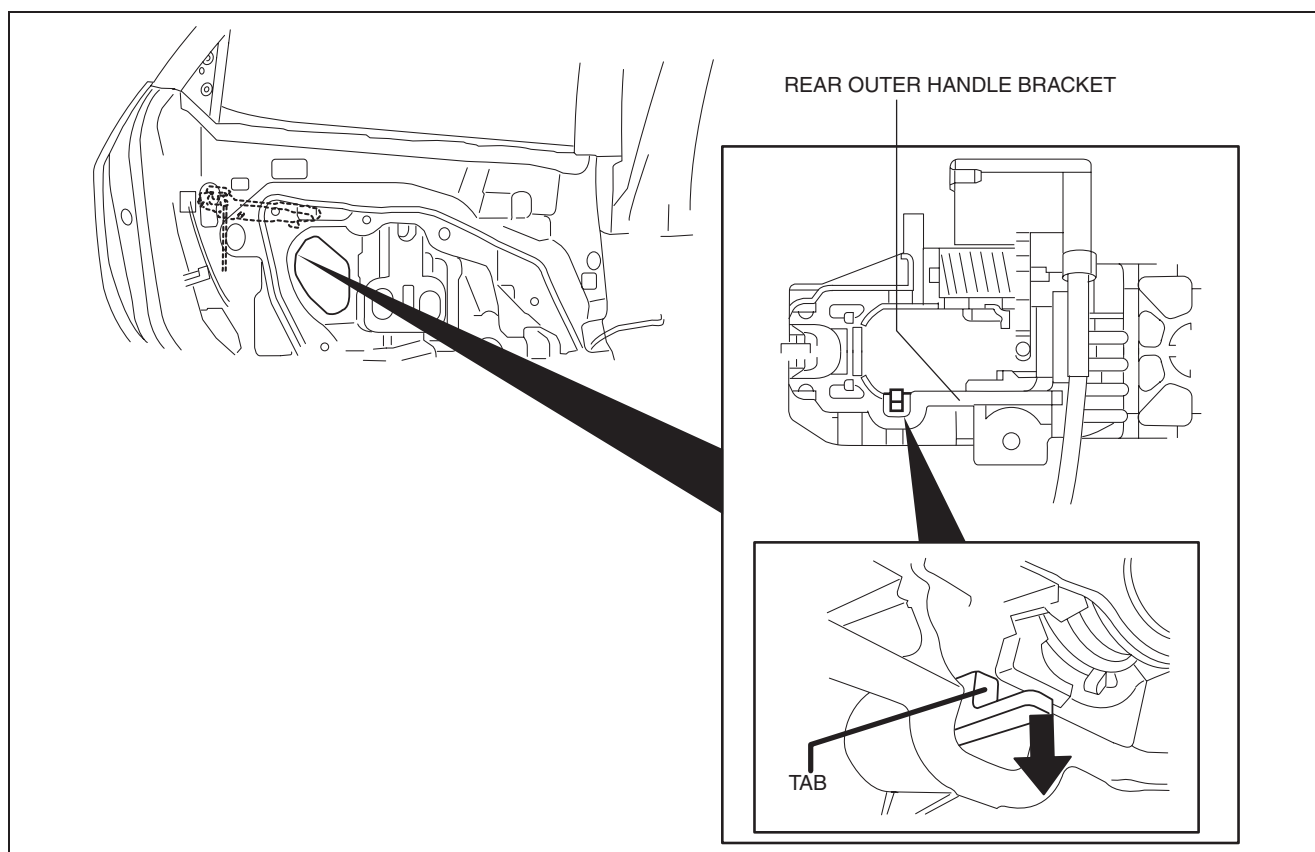
**Note**

- The screw cannot be removed because of the stopper.

8. Press the tab on the rear outer handle bracket in the direction of the arrow.



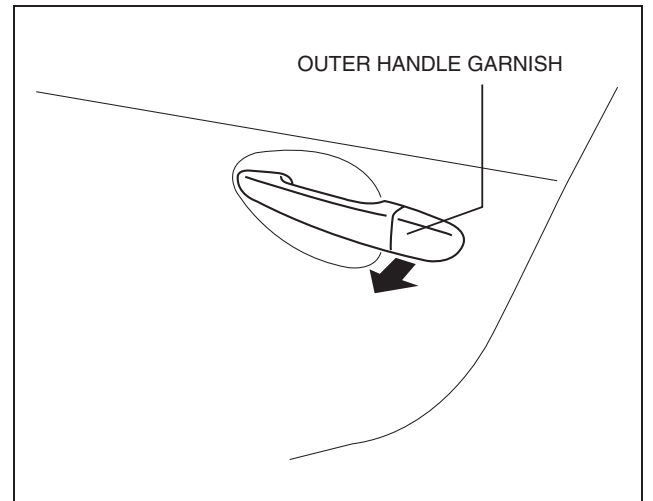
am2zzw0000063



am2zzw0000063

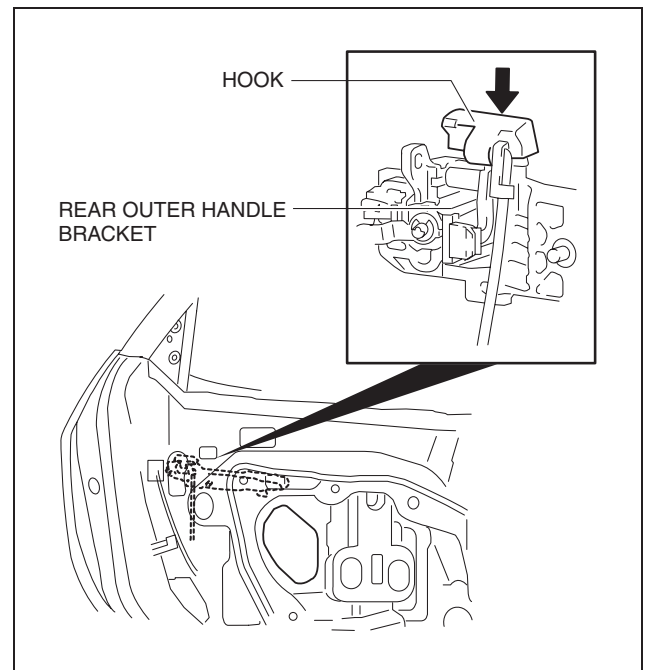
## SECURITY AND LOCKS

9. Maintaining the condition in procedure 8, remove the outer handle garnish.



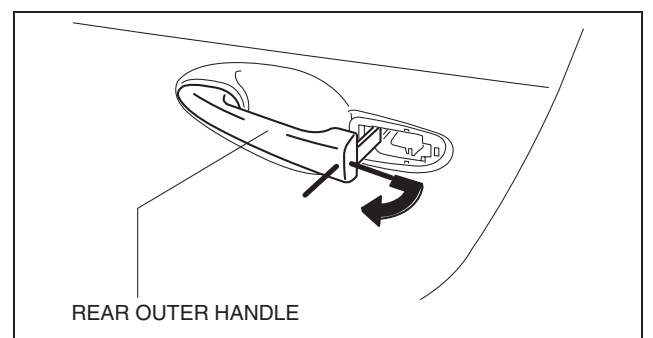
am2zzw0000063

10. Press the hook on the rear outer handle bracket in the direction of the arrow.



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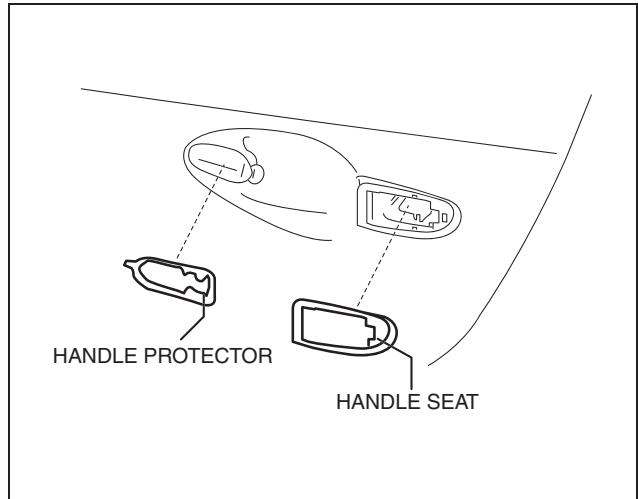
11. Maintaining the condition in procedure 10, remove the rear outer handle.



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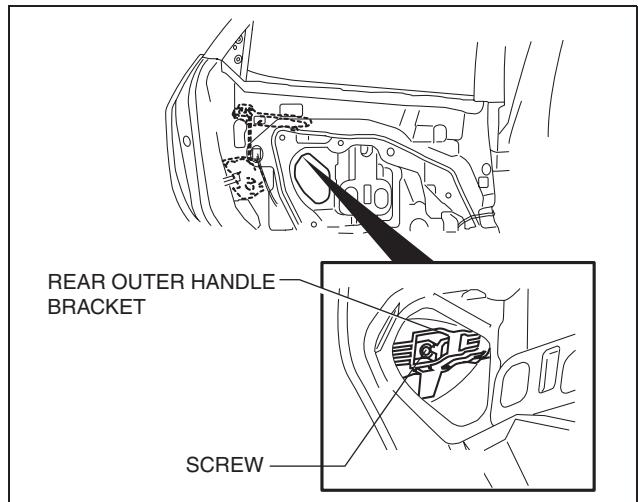
## SECURITY AND LOCKS

12. Remove the handle protector and handle seat.
13. Remove the double-sided adhesive tape from both surfaces of the handle protector and the body. (See 09-14-27 Handle Protector Installation Note.)



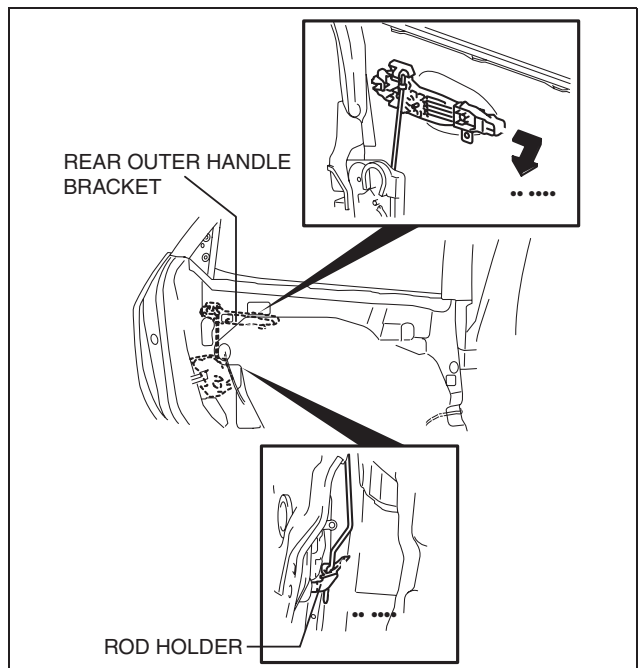
am2zzw0000063

14. Loosen the screw.



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15. Press down the rod holder in the direction of arrow (1) and remove the rear outer handle bracket in the direction of arrow (2). (See 09-14-27 Outer handle bracket Installation Note.)
16. Install in the reverse order of removal.



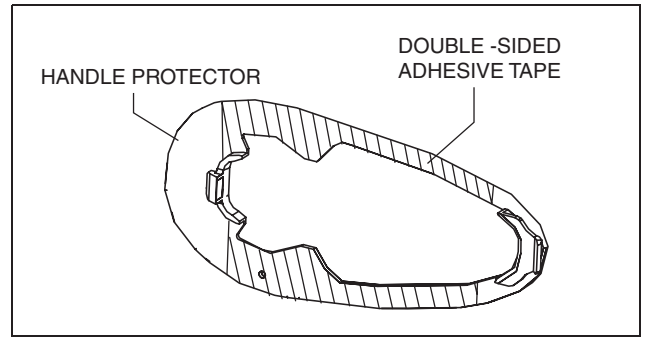
am2zzw0000063



## SECURITY AND LOCKS

### Handle Protector Installation Note

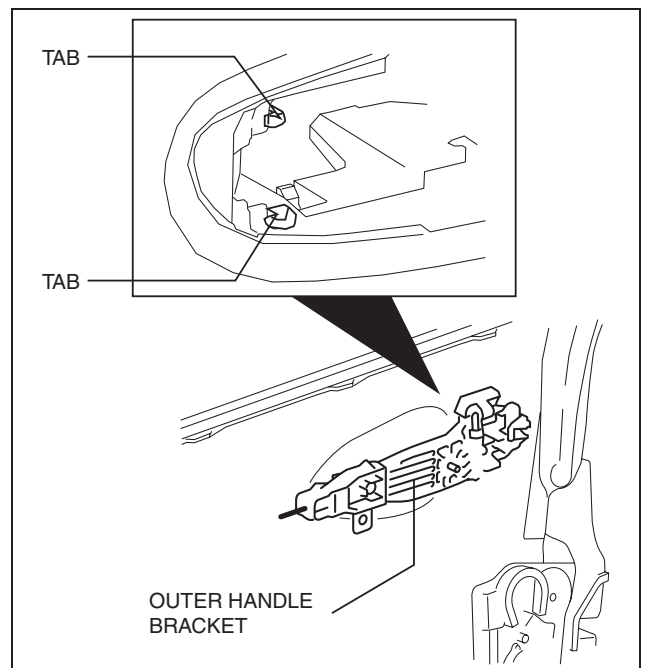
1. If the handle protector is reused, adhere double-adhesive tape to the both surfaces of the handle protector as shown in the figure.



am2zzw0000063

### Outer handle bracket Installation Note

1. Hook the outer handle bracket tabs as shown in the figure.

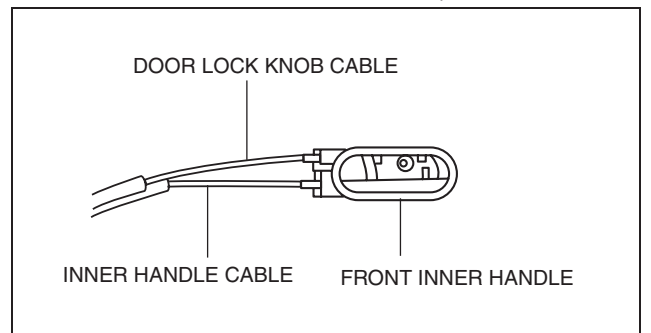


am2zzw0000255

### INNER HANDLE REMOVAL/INSTALLATION

#### Front Inner Handle

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Disconnect each cable and remove the front inner handle.
5. Install in the reverse order of removal.



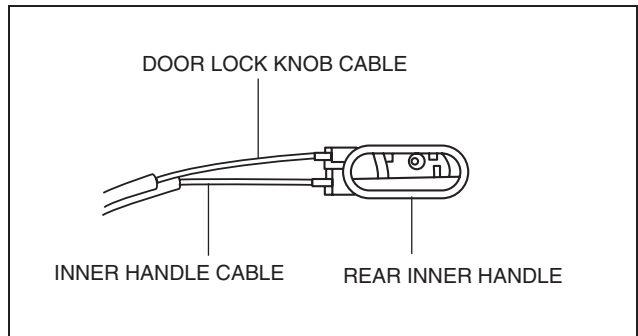
am2zzw0000064

#### Rear inner handle(5HB, 4SD)

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

4. Disconnect each cable and remove the rear inner handle.
5. Install in the reverse order of removal.



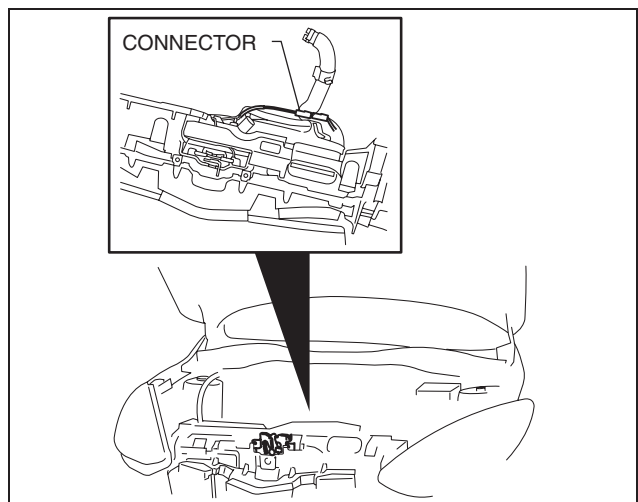
am2zzw0000064

### BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION

id091400436800

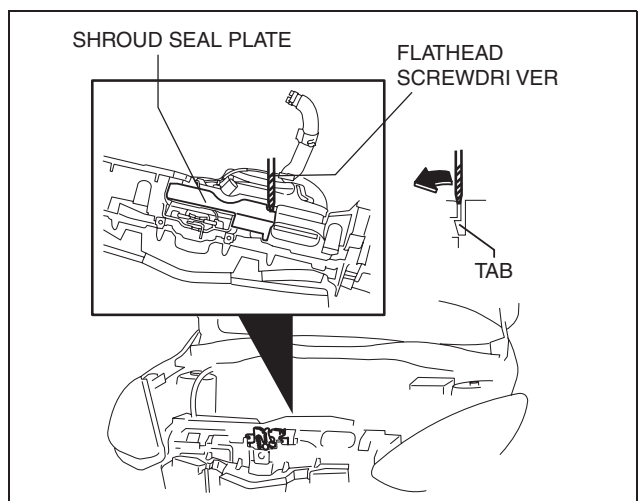
#### Bonnet latch

1. Open the bonnet.
2. Disconnect the negative battery cable.
3. Disconnect the bonnet latch switch connector.  
(vehicles with theft-deterrent system)



am2zzw0000071

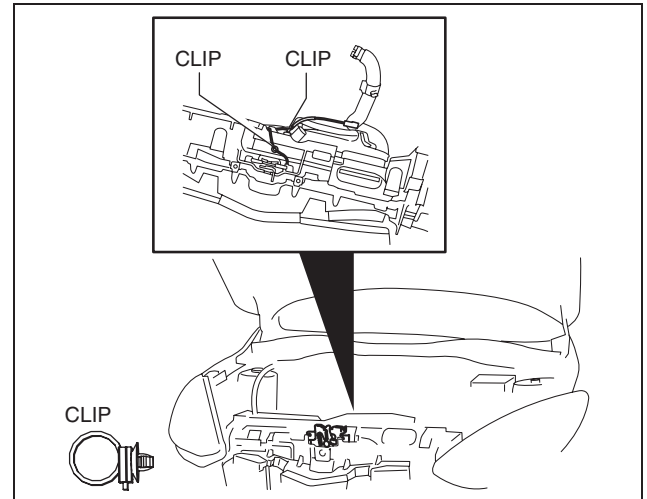
4. Using a tape-wrapped flathead screwdriver, press down the shroud seal plate tab in the direction of the arrows shown in the figure, and remove the shroud seal plate. (vehicles with theft-deterrent system)



am2zzw0000071

## SECURITY AND LOCKS

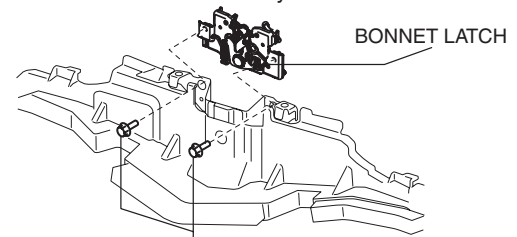
5. Remove the clip. Vehicles with theft-deterrent system



am2zzw0000071

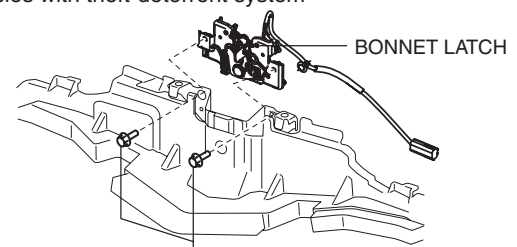
6. Remove the bolts.
7. Remove the bonnet latch.
8. Install in the reverse order of removal.
9. Adjust the bonnet. (See 09-10-4 BONNET ADJUSTMENT.)

Vehicles without theft-deterrent system



BOLT 8—11 N·m {82—112 kgf·cm, 71—97 in·lbf}

Vehicles with theft-deterrent system

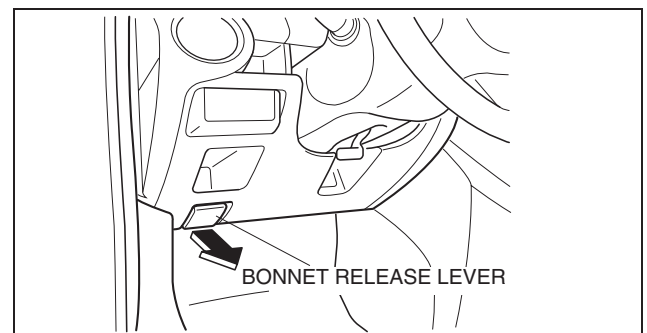


BOLT 8—11 N·m {82—112 kgf·cm, 71—97 in·lbf}

am2zzw0000057

### Bonnet release lever

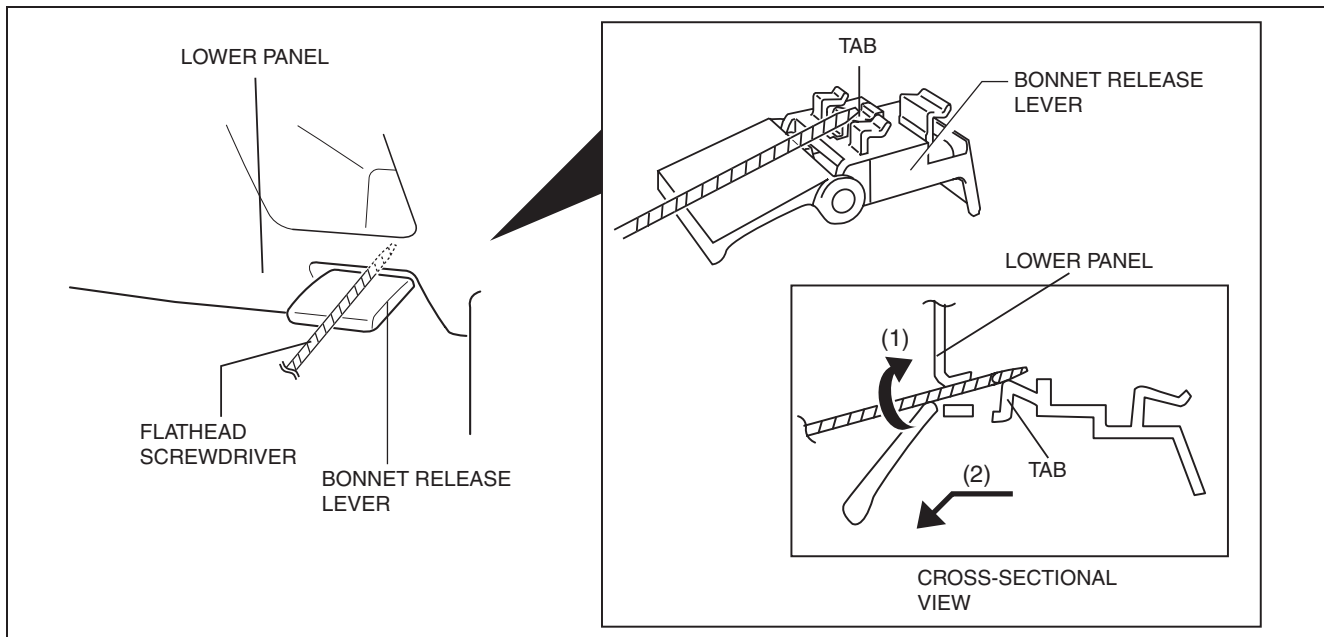
1. Pull the bonnet release lever.



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## SECURITY AND LOCKS

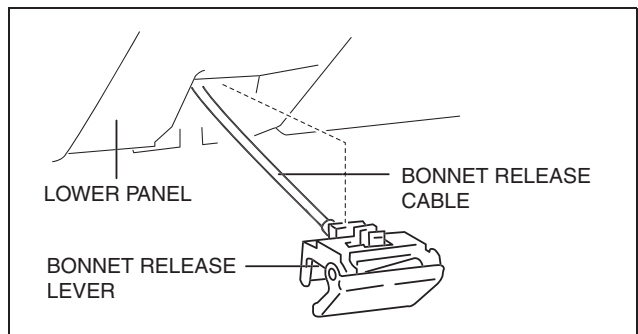
2. While maintaining the condition in procedure 1, insert a tape-wrapped flathead screwdriver as shown in the figure, press the ends of the tabs with the screwdriver in the direction of the arrows (1), pull the bonnet release lever in the direction of arrow (2), and then disconnect the lower panel.



### Caution

- Remove the bonnet release lever while being careful not to damage the bonnet release cable with the flathead screwdriver.

3. Pull the latch release lever outward, remove it from the lower panel, and then disconnect the bonnet release cable.
4. Install in the reverse order of removal.



## BONNET RELEASE CABLE REMOVAL/INSTALLATION

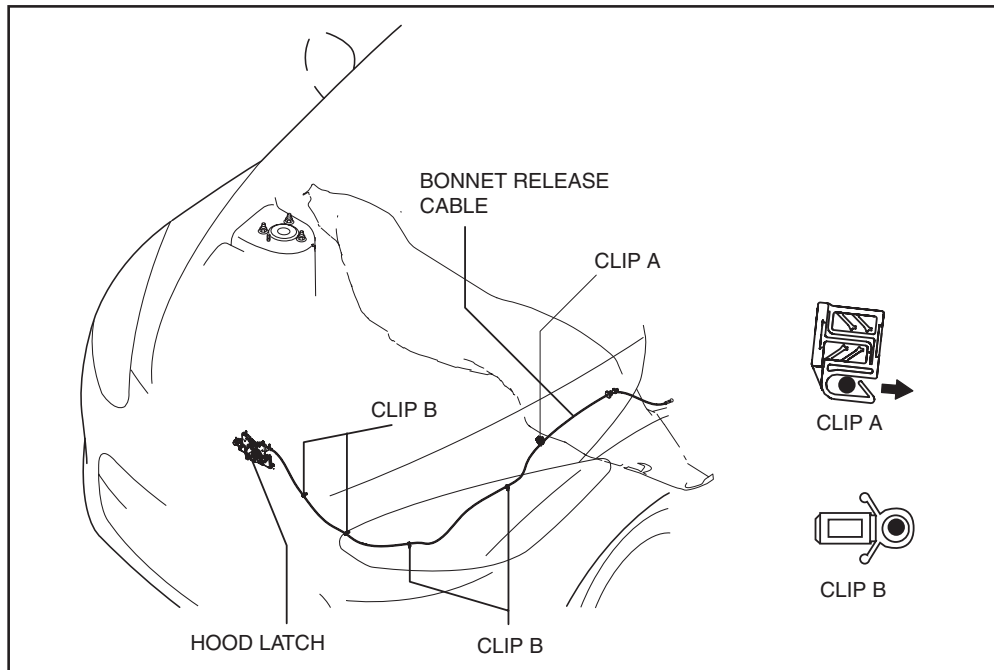
1. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
2. Remove the seal board upper. (See 09-10-18 SEAL BOAD UPPER REMOVAL/INSTALLATION.)
3. Remove the bonnet release lever. (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
4. Remove the bonnet release cable from clips A.
5. Remove the clips B.
6. Disconnect the bonnet latch from the bonnet release cable.

id091400456800

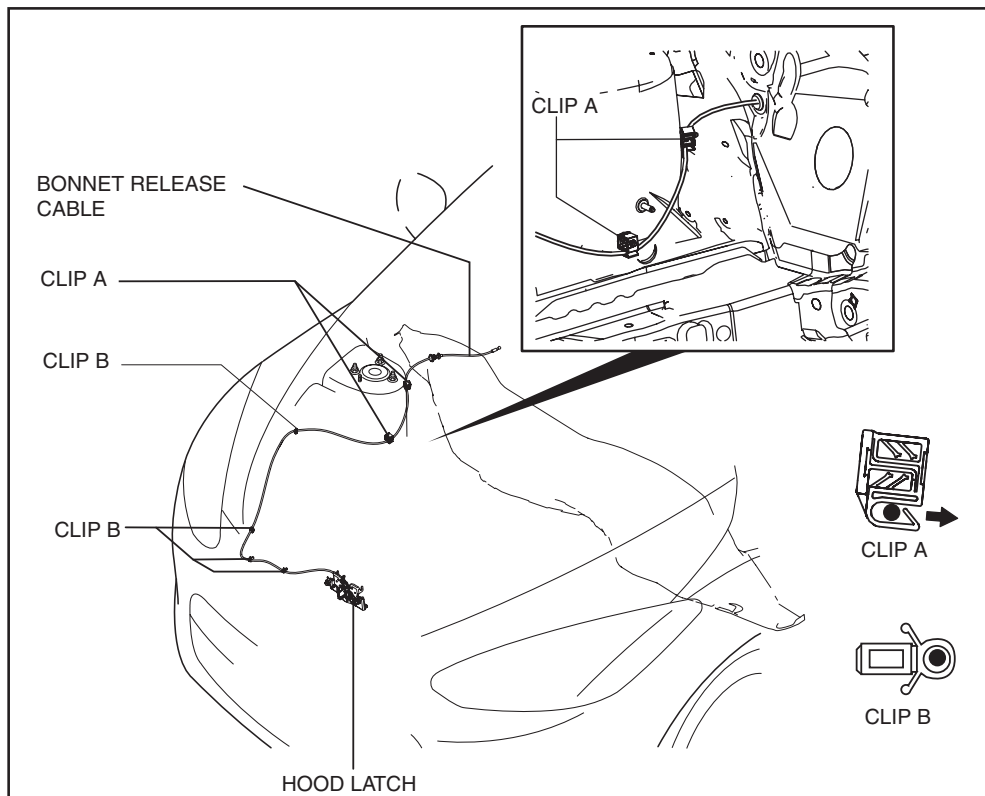
## SECURITY AND LOCKS

7. Remove the bonnet release cable from outside of the vehicle.

L.H.D.



R.H.D.



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8. Install in the reverse order of removal.

### BONNET LATCH SWITCH INSPECTION

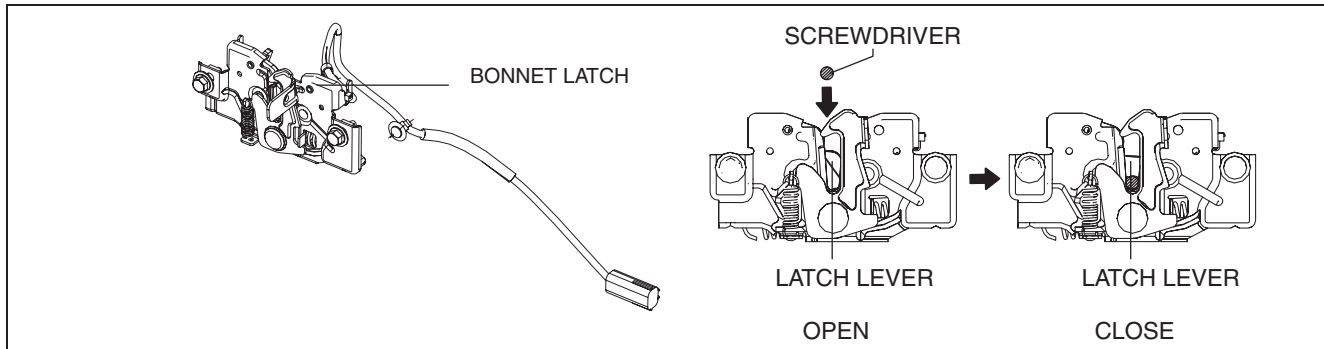
id091400450000

1. Disconnect the negative battery cable.
2. Remove the bonnet latch. (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/

## SECURITY AND LOCKS

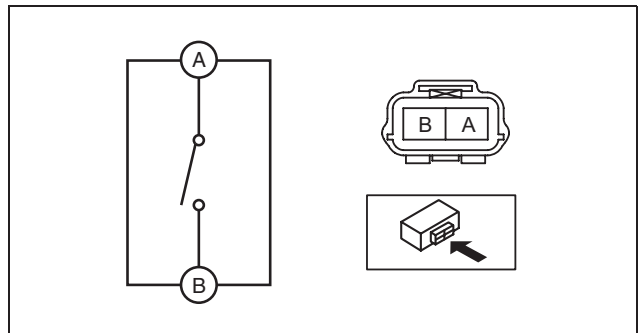
INSTALLATION.)

- Press the latch in using a flathead screwdriver to inspect the latch lever condition.



am2zzw0000045

- Verify that the continuity is as indicated in the table.



am2zzw0000045

- If not as indicated in the table, replace the bonnet latch.

| BONNET LATCH SWITCH | ○—○ CONTINUITY |     |
|---------------------|----------------|-----|
|                     | TERMINAL       |     |
|                     | A              | B   |
| OPEN                |                |     |
| CLOSE               | ○—○            | ○—○ |

am2zzw0000046

### FUEL-FILLER LID OPENER CABLE REMOVAL/INSTALLATION [4SD]

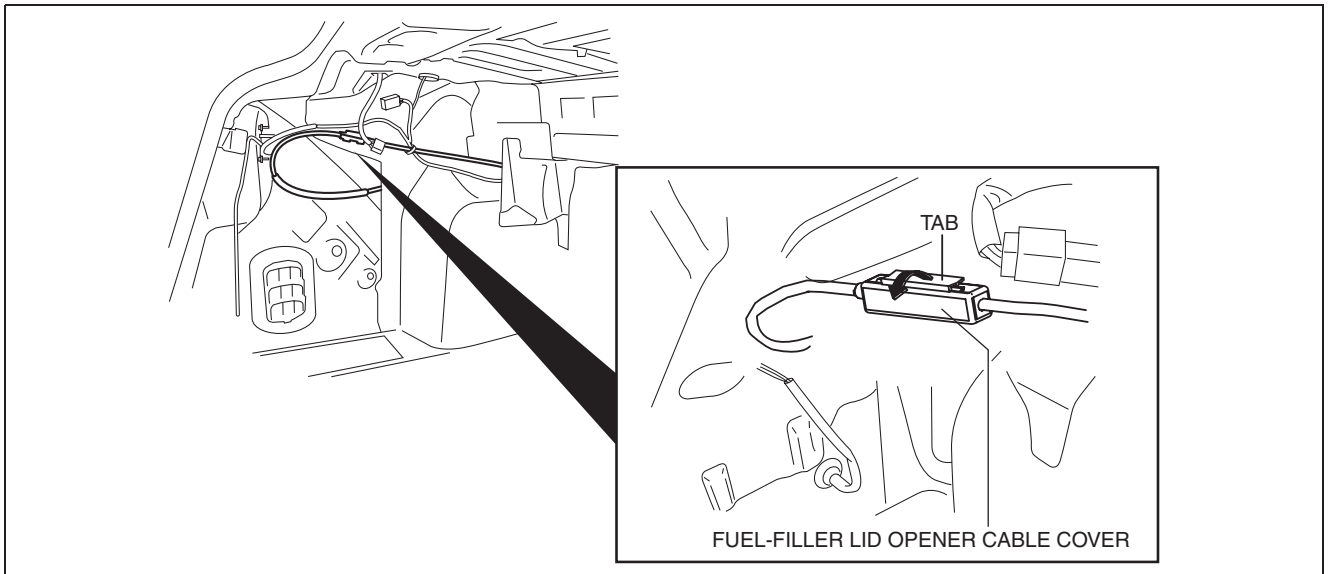
id0914004458d3

#### R.H.D.

- Disconnect the negative battery cable.
- Remove the following parts:
  - Front seat (driver's seat) (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)
  - Front scuff plate (driver's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - Rear scuff plate (driver's side) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)
  - Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
  - Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

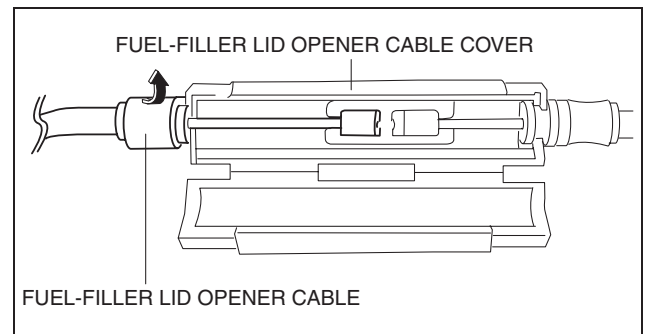
## SECURITY AND LOCKS

3. Open the fuel-filler lid opener cable cover.



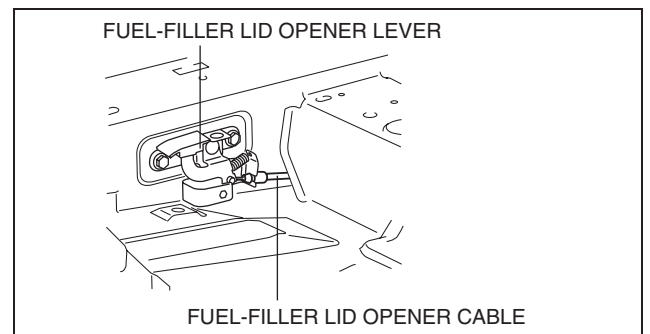
am2ccw0000024

4. Disconnect the fuel-filler lid opener cable from the fuel-filler lid opener cable cover.



am2ccw0000025

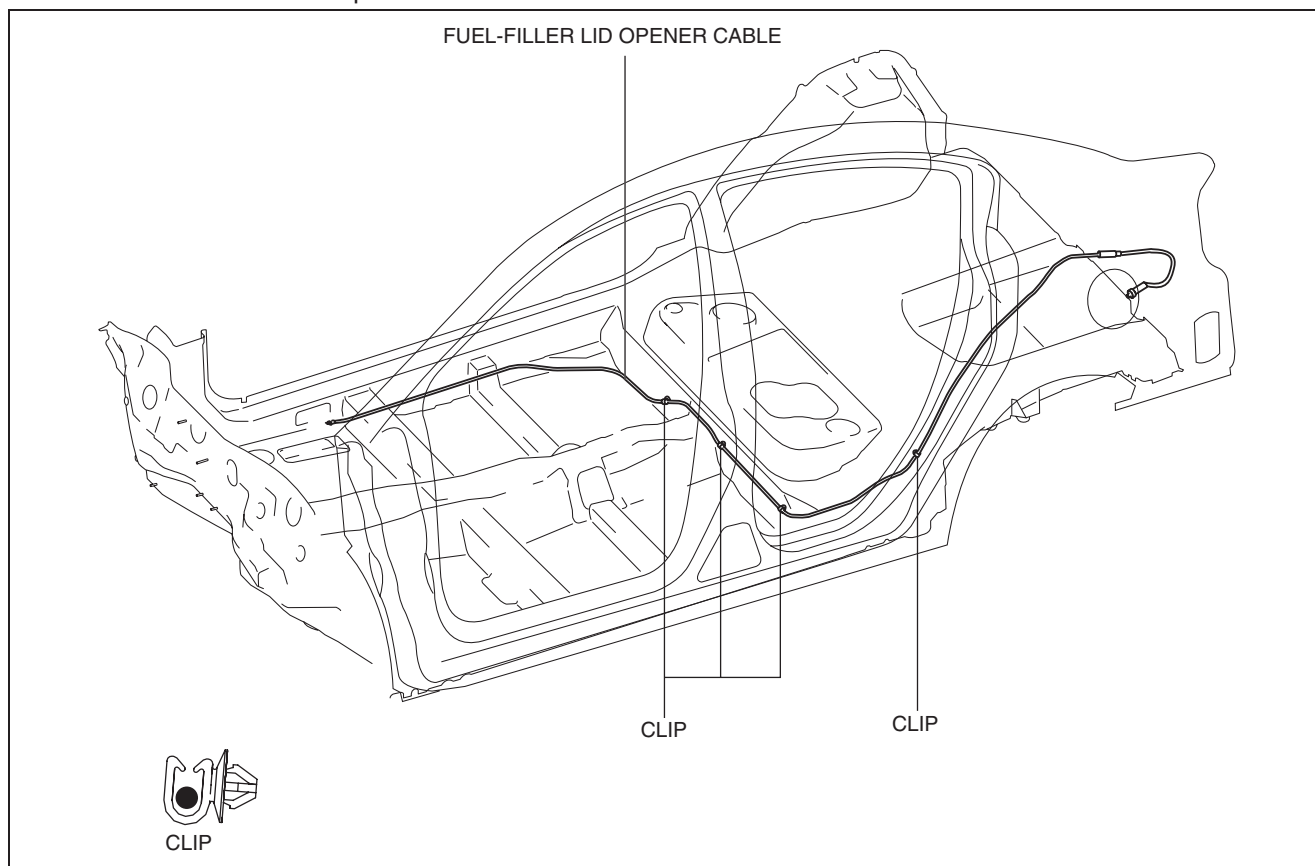
5. Flip over the floor mat and remove the cable from the fuel-filler lid opener lever.



am2zzw0000065

## SECURITY AND LOCKS

6. Remove the fuel-filler lid opener cable.



am2zzw0000509

7. Install in the reverse order of removal.

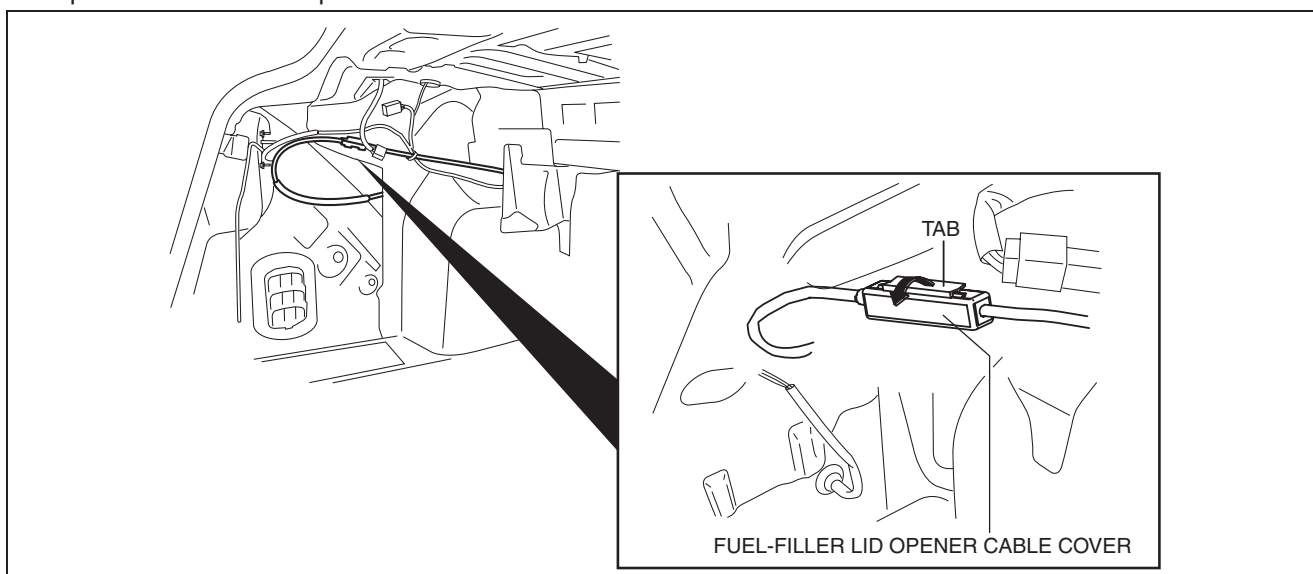
### FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [4SD]

id0914004352d3

#### Fuel-filler Lid Opener

##### R.H.D.

1. Open the fuel-filler lid.
2. Remove the following parts:
  - (1) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (2) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Open the fuel-filler lid opener cable cover.

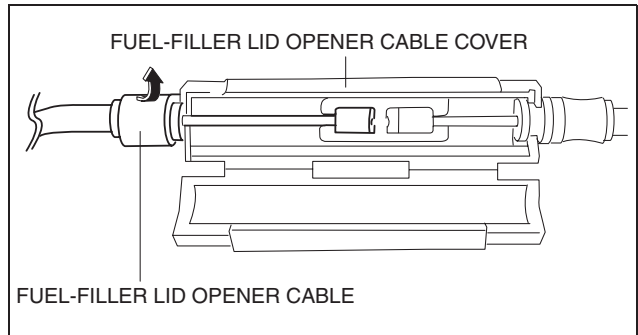


am2ccw0000015

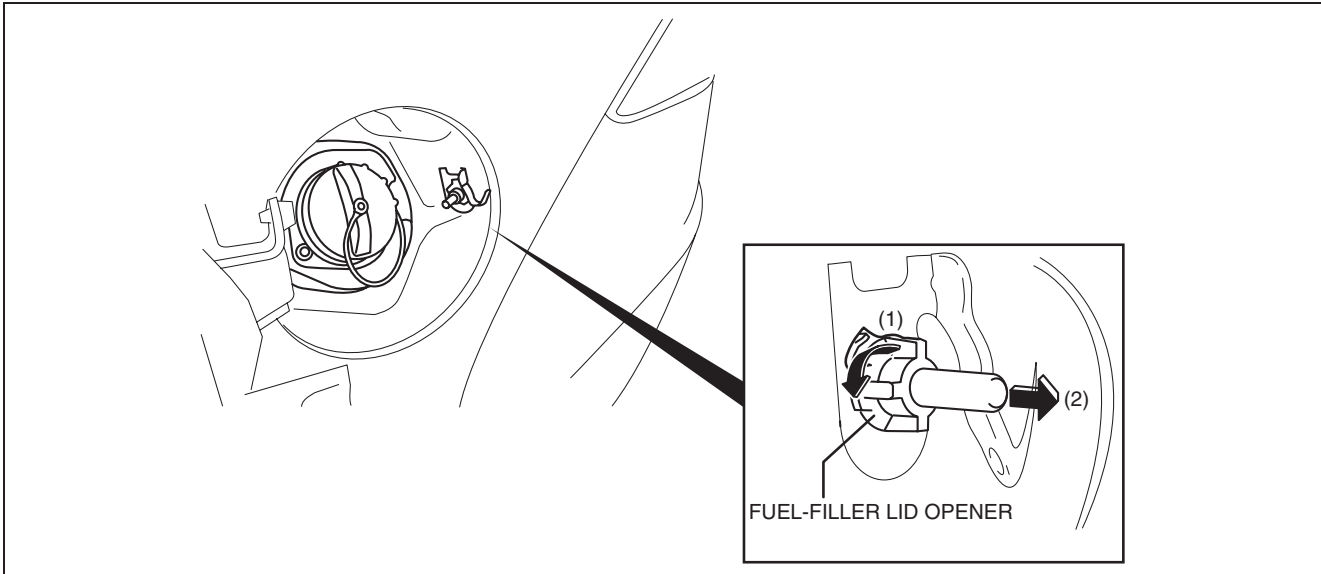


## SECURITY AND LOCKS

4. Disconnect the release cable from the fuel-filler lid opener cable cover.
5. Rotate the fuel-filler lid opener in the direction of the arrow (1) as shown in the figure and pull it out in the direction of the arrow (2).

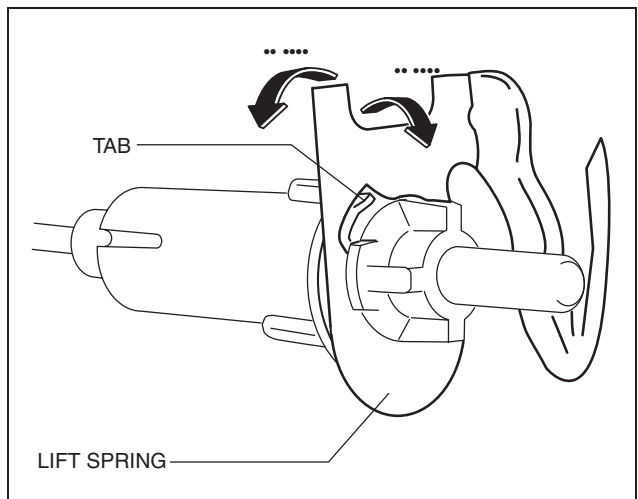


am2ccw0000024



am2ccw0000015

6. Pull the lift spring in the direction of arrow (1) shown in the figure to remove it from the tab.
7. While keeping the lift spring in the condition of Step 6, rotate the lift spring in the direction of arrow (2) shown in the figure to remove it.
8. Install in the reverse order of removal.

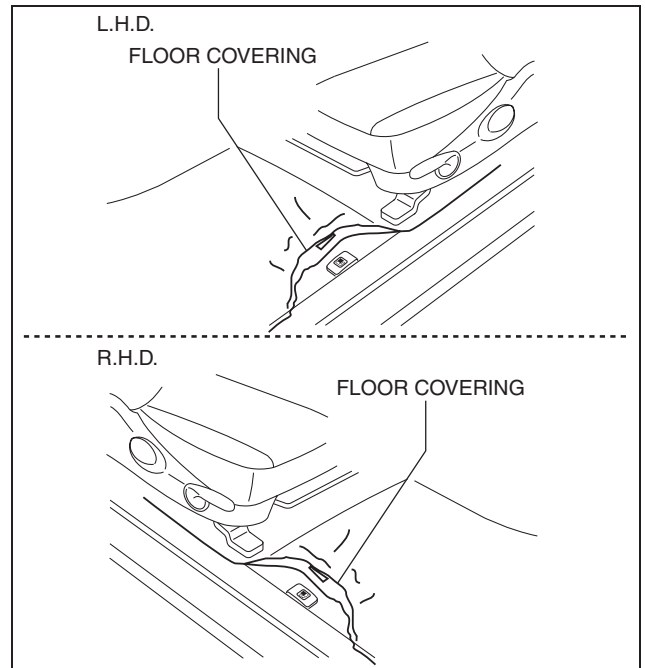


am2ccw0000015

## SECURITY AND LOCKS

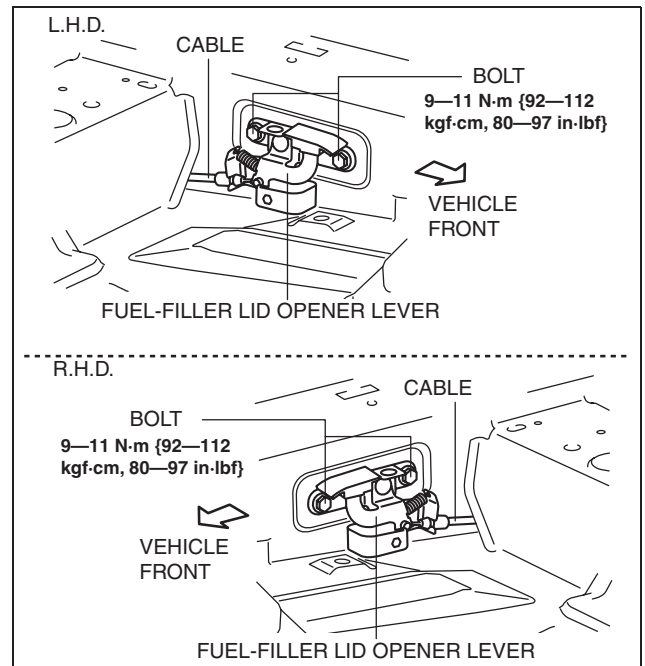
### Fuel-filler Lid Opener Lever

1. Remove the front scuff plate. (Driver's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
2. Remove the front side trim. (Driver's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
3. Partially peel back the floor covering.



am2zzw0000071

4. Remove the bolts.
5. Disconnect the cable and fuel-filler lid opener lever.
6. Install in the reverse order of removal.



am2zzw00000512

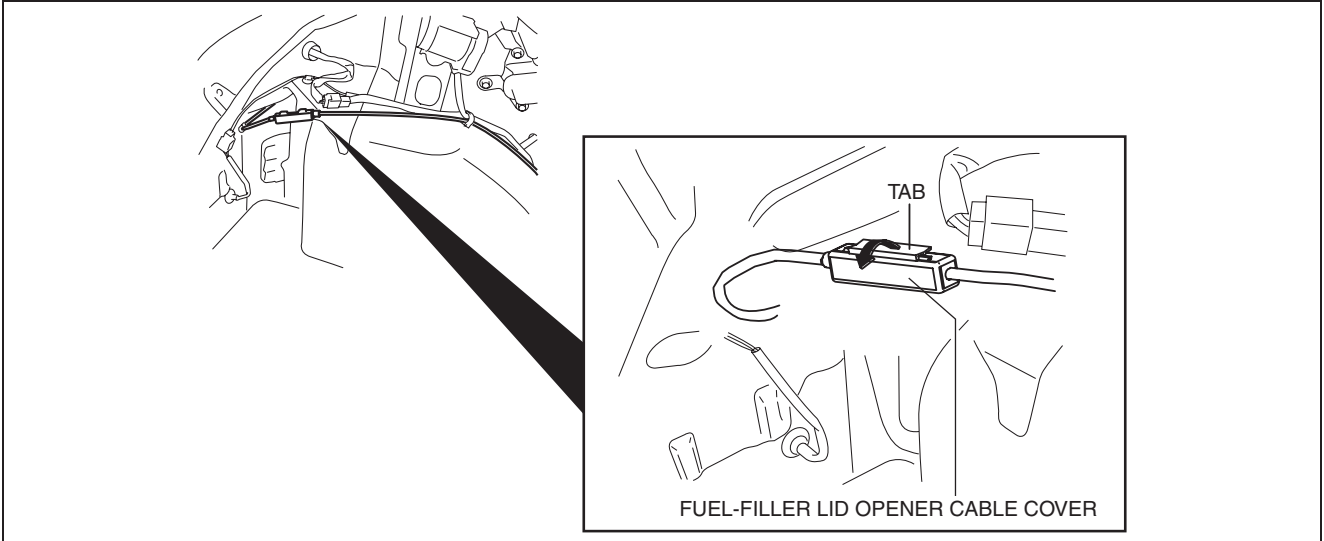
### FUEL-FILLER LID OPENER CABLE REMOVAL/INSTALLATION [5HB]

#### R.H.D.

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front seat (Driver's seat) (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (2) Front scuff plate (driver's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (4) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)

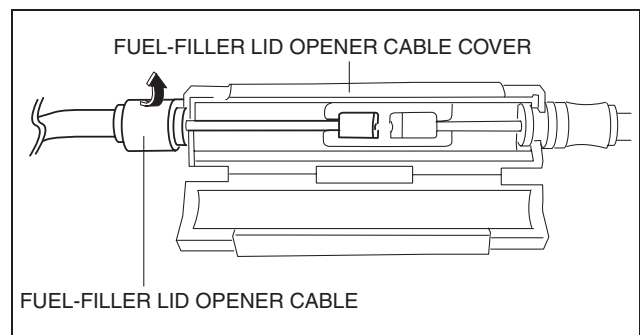
## SECURITY AND LOCKS

- (5) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (6) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (7) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Open the fuel-filler lid opener cable cover.



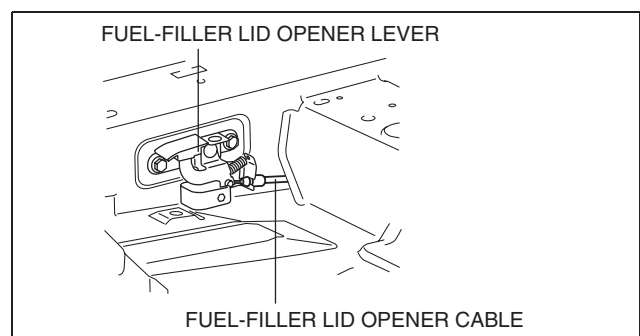
am2zzw0000345

4. Disconnect the fuel-filler lid opener cable from the fuel-filler lid opener cable cover.



am2zzw0000345

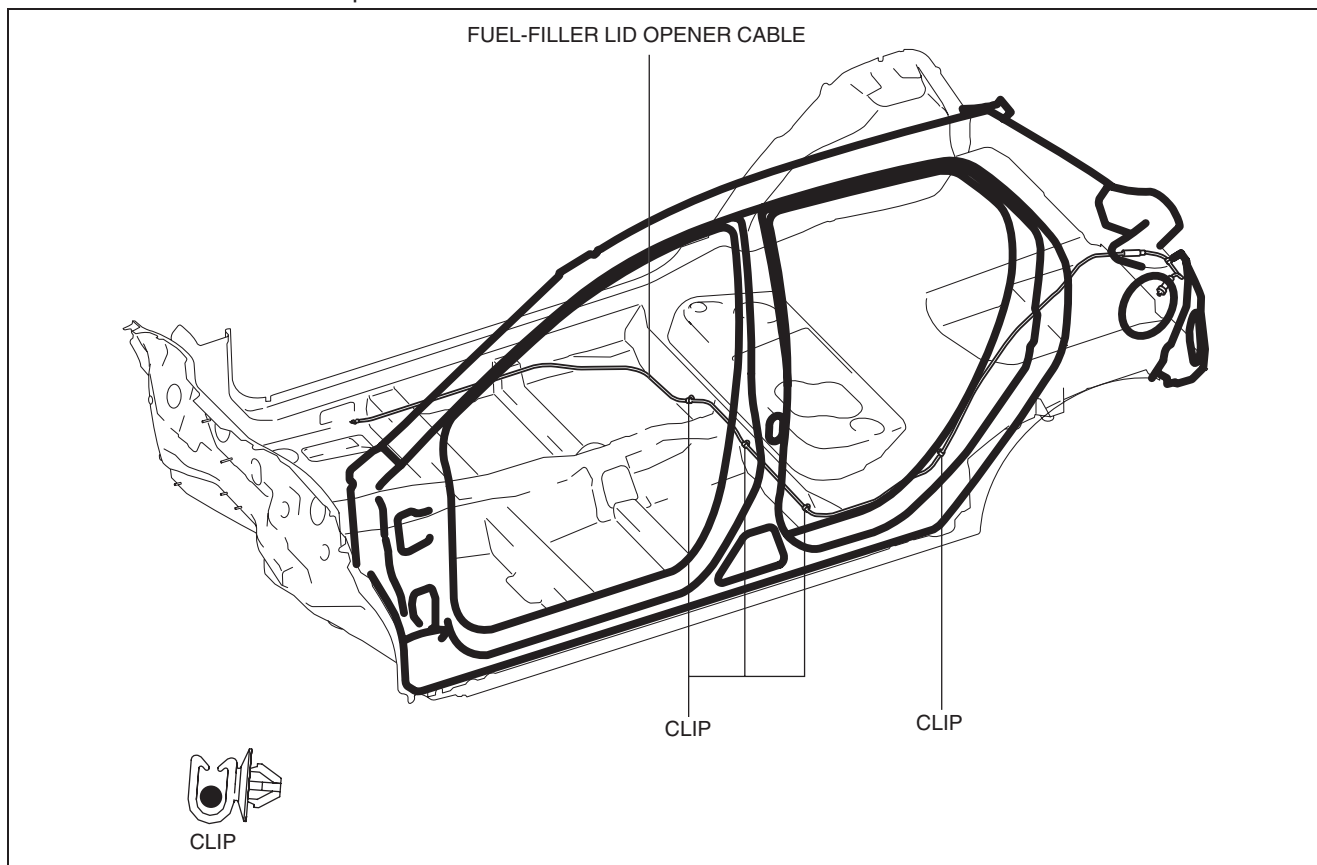
5. Flip over the floor mat and remove the cable from the fuel-filler lid opener lever.



am2zzw0000065

## SECURITY AND LOCKS

6. Remove the fuel-filler lid opener cable.



am2zzw0000071

7. Install in the reverse order of removal.

### FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [5HB]

#### Fuel-filler Lid Opener

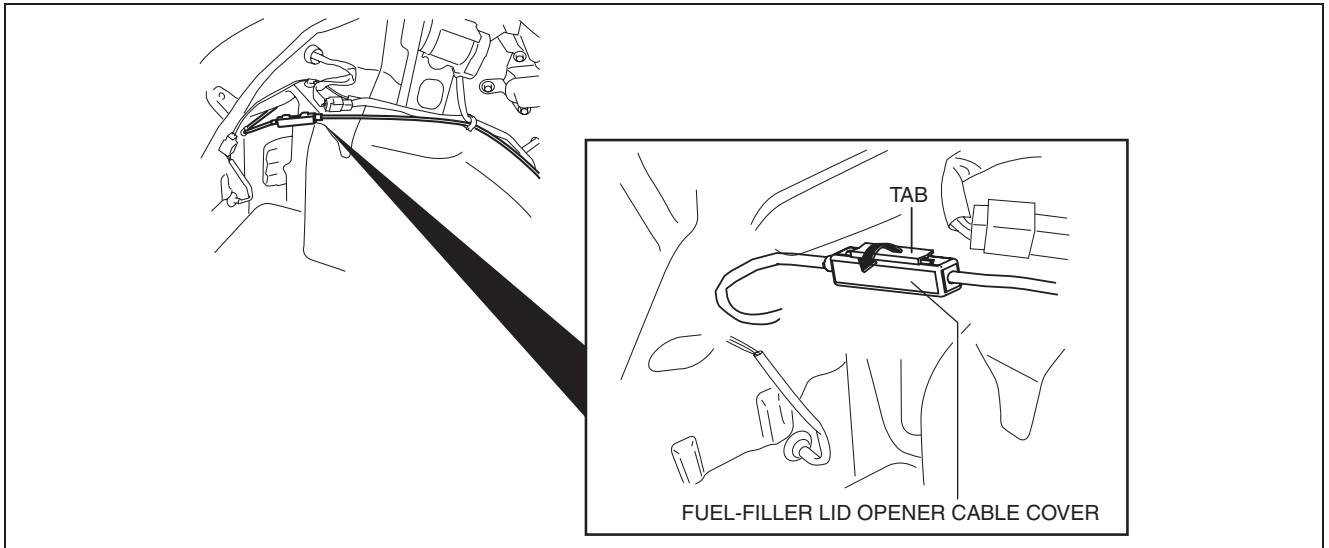
id0914004352d4

#### R.H.D.

1. Open the fuel-filler lid.
2. Remove the following parts:
  - (1) Rear scuff plate (LH) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (3) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (5) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

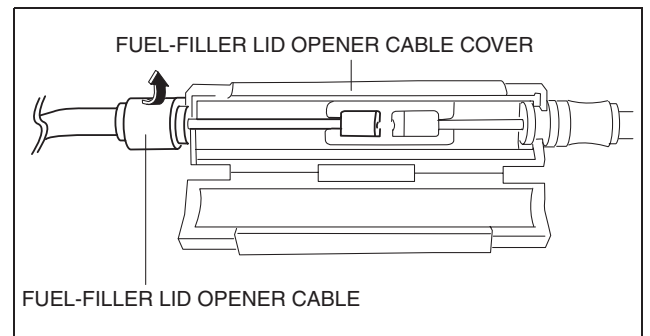
## SECURITY AND LOCKS

3. Open the fuel-filler lid opener cable cover.



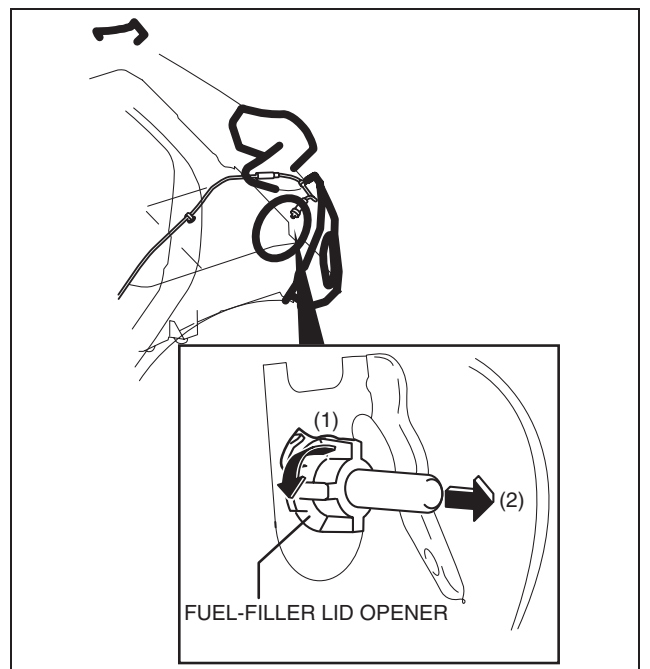
am2zzw0000345

4. Disconnect the release cable from the fuel-filler lid opener cable cover.



am2zzw0000345

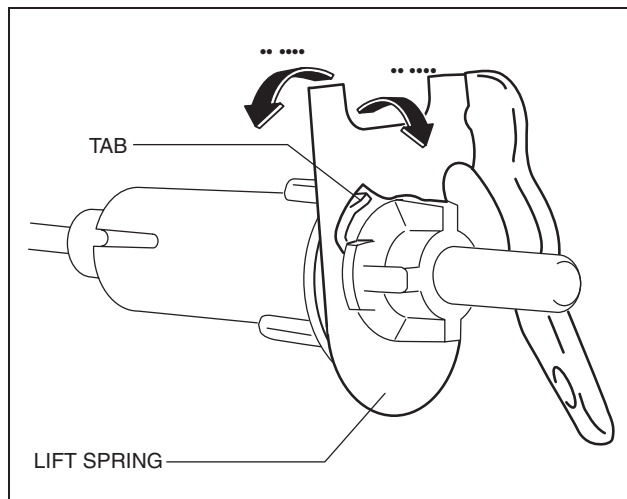
5. Rotate the fuel-filler lid opener in the direction of the arrow (1) as shown in the figure and pull it out in the direction of the arrow (2).
6. Pull the lift spring in the direction of arrow (1) shown in the figure to remove it from the tab.



am2zzw0000064

## SECURITY AND LOCKS

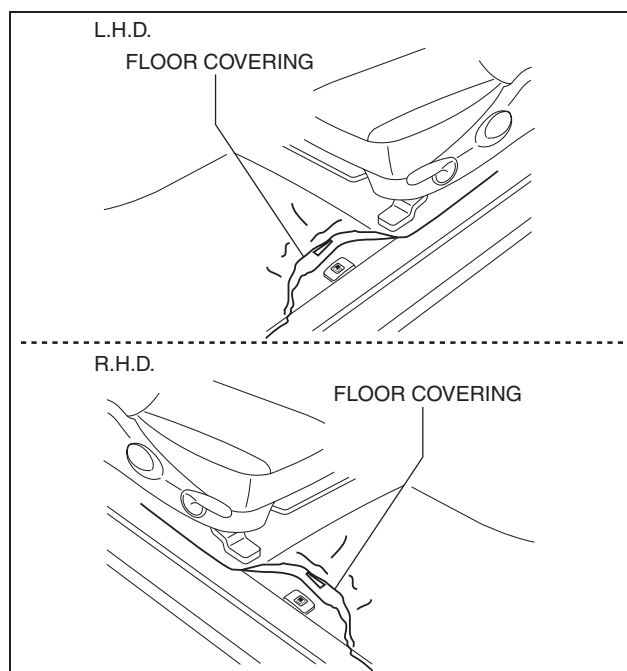
7. While keeping the lift spring in the condition of Step 6, rotate the lift spring in the direction of arrow (2) shown in the figure to remove it.
8. Install in the reverse order of removal.



am2zzw000064

### Fuel-filler Lid Opener Lever

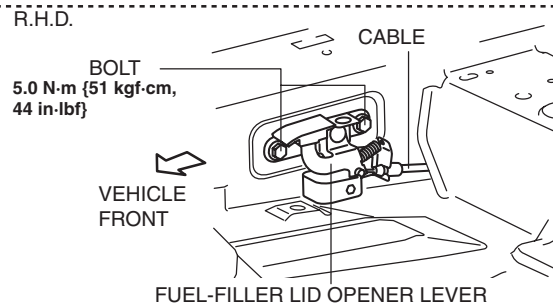
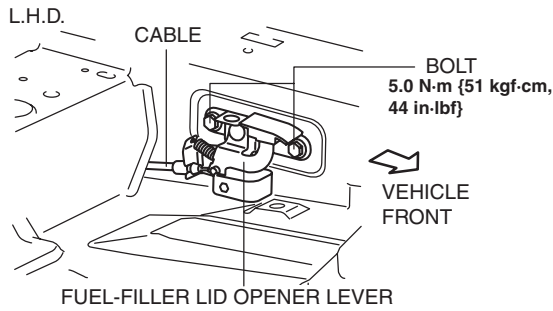
1. Remove the front scuff plate. (Driver's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
2. Remove the front side trim. (Driver's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
3. Partially peel back the floor covering.
4. Remove the bolts.



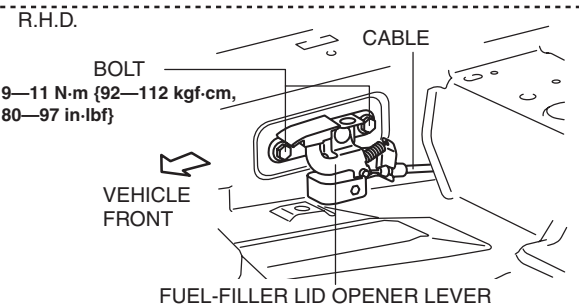
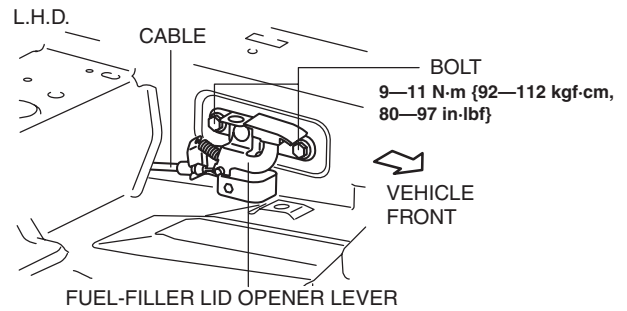
am2zzw000071

## SECURITY AND LOCKS

Except AutoAlliance (AAT) Thailand manufactured vehicles



AutoAlliance (AAT) Thailand manufactured vehicles



am2zzw0000512

5. Disconnect the cable and fuel-filler lid opener lever.
6. Install in the reverse order of removal.

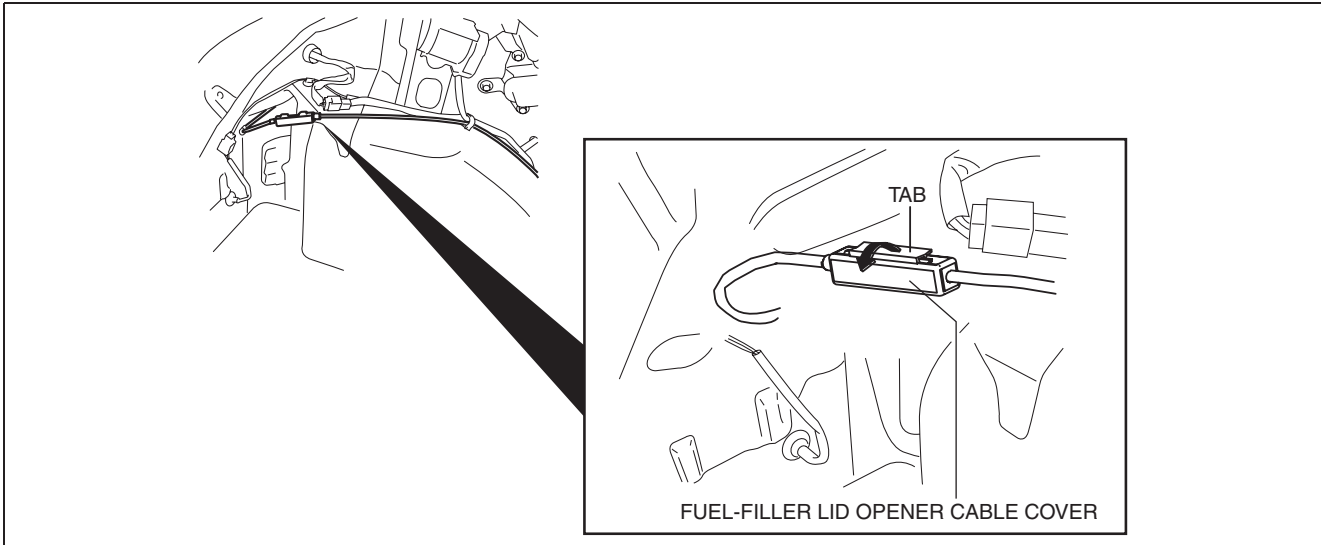
### FUEL-FILLER LID OPENER CABLE REMOVAL/INSTALLATION [3HB]

#### R.H.D.

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front seat (driver's seat) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (3) Rear seat belt lower anchor installation bolt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (4) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (5) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (6) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (7) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

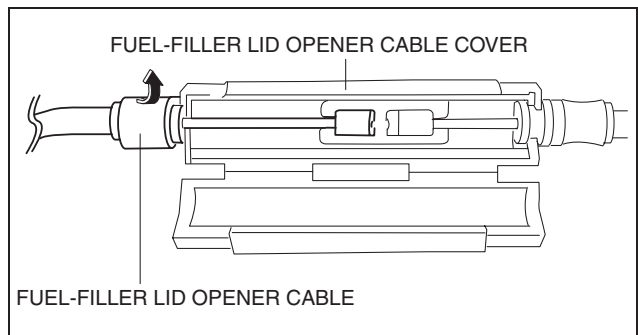
## SECURITY AND LOCKS

3. Open the fuel-filler lid opener cable cover.



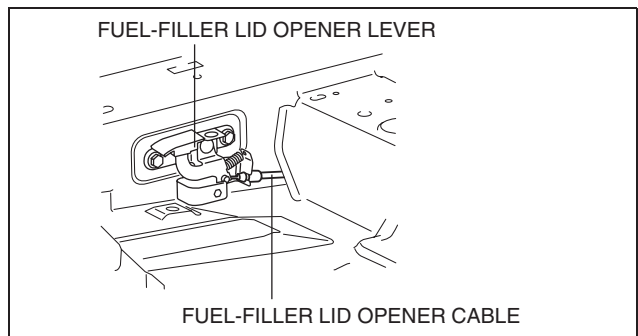
am2zzw0000346

4. Disconnect the fuel-filler lid opener cable from the fuel-filler lid opener cable cover.



am2zzw0000346

5. Flip over the floor mat and remove the cable from the fuel-filler lid opener lever.

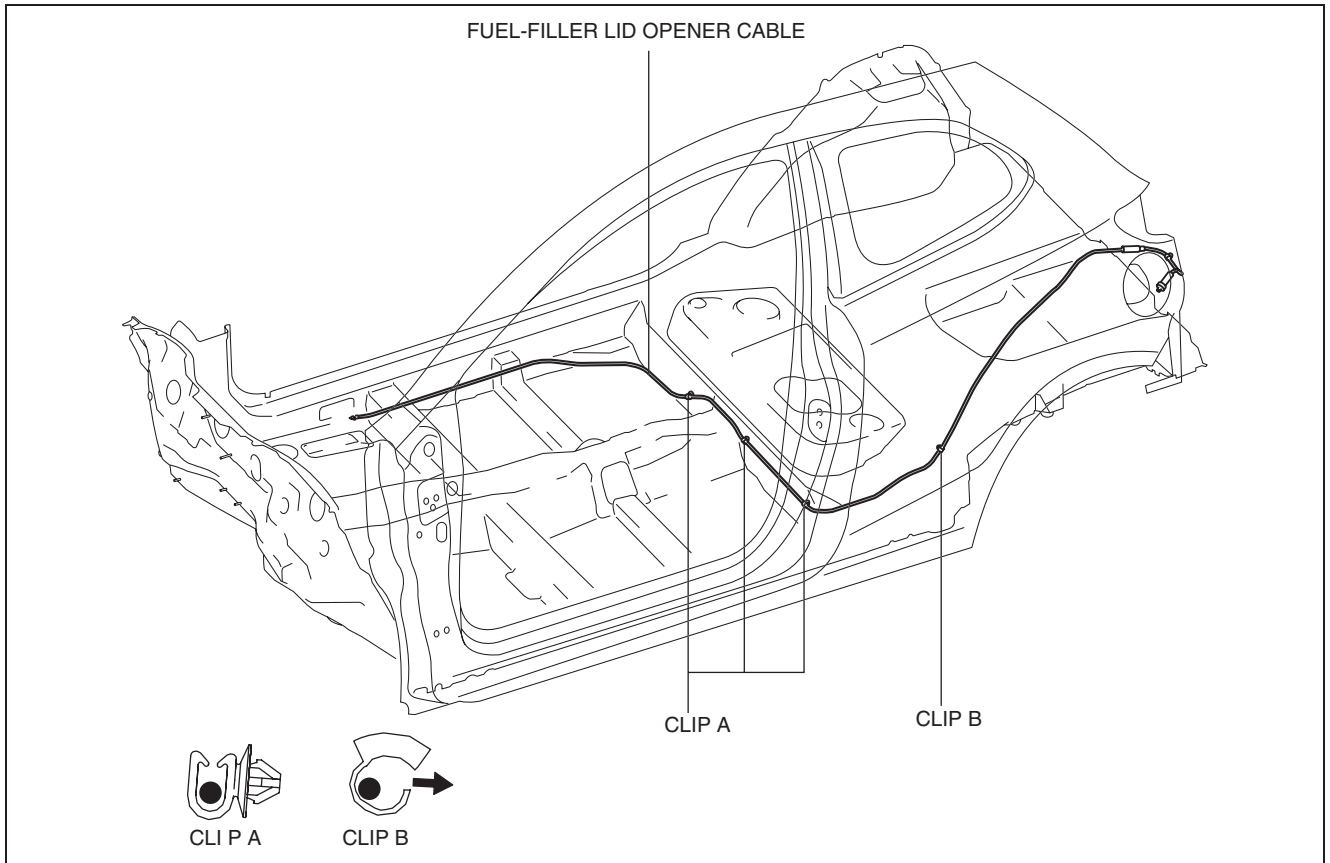


am2zzw0000065



## SECURITY AND LOCKS

6. Remove the fuel-filler lid opener cable.



am2zzw0000331

7. Install in the reverse order of removal.

### FUEL-FILLER LID OPENER AND LEVER REMOVAL/INSTALLATION [3HB]

id0914004352d5

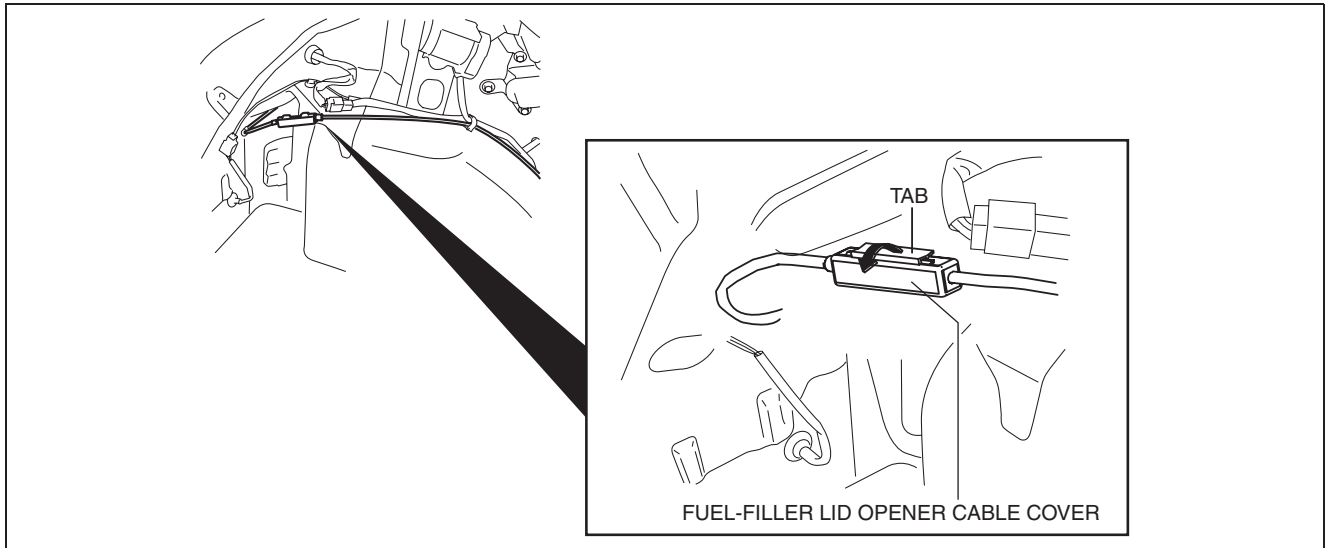
#### Fuel-filler Lid Opener

##### R.H.D.

1. Open the fuel-filler lid.
2. Remove the following parts:
  - (1) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (2) Rear seat belt lower anchor installation bolt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (3) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (4) Front scuff plate (LH) (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (5) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (6) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

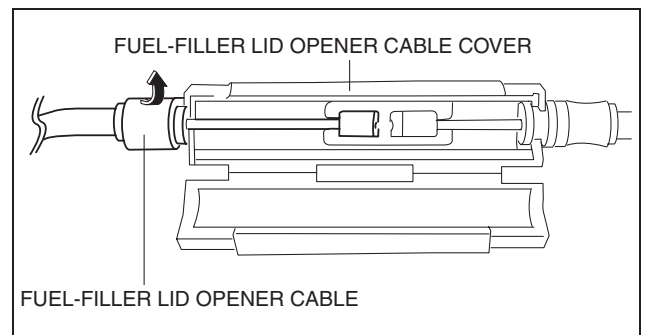
## SECURITY AND LOCKS

3. Open the fuel-filler lid opener cable cover.



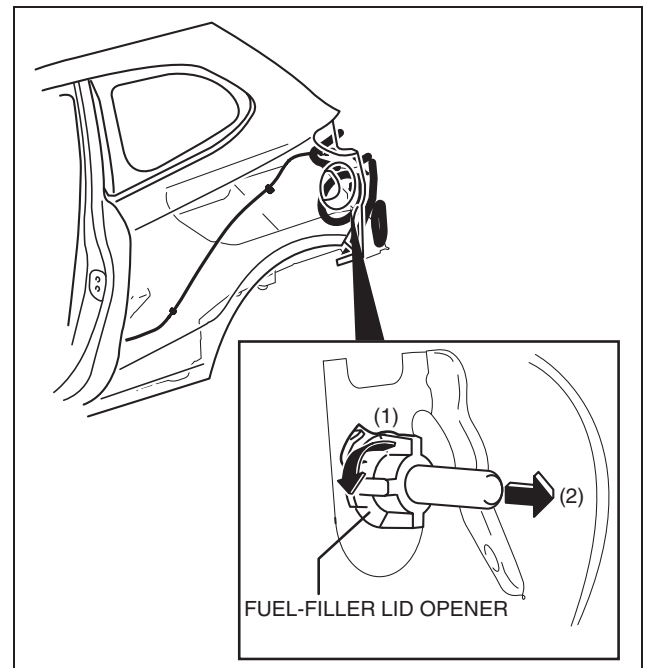
am2zzw0000345

4. Disconnect the release cable from the fuel-filler lid opener cable cover.



am2zzw0000345

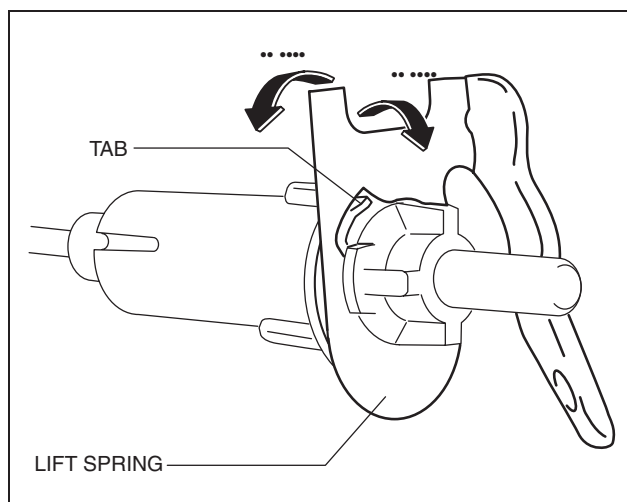
5. Rotate the fuel-filler lid opener in the direction of the arrow (1) as shown in the figure and pull it out in the direction of the arrow (2).
6. Pull the lift spring in the direction of arrow (1) shown in the figure to remove it from the tab.



am2zzw0000329

## SECURITY AND LOCKS

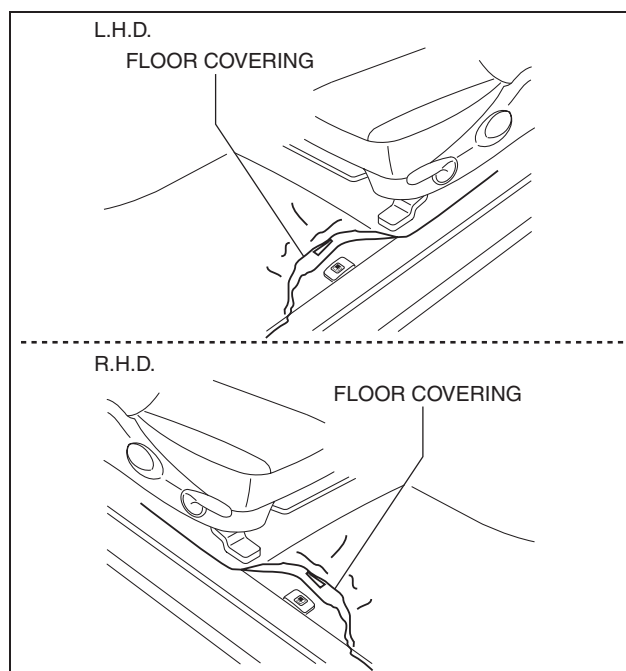
7. While keeping the lift spring in the condition of Step 6, rotate the lift spring in the direction of arrow (2) shown in the figure to remove it.
8. Install in the reverse order of removal.



am2zzw0000064

### Fuel-filler Lid Opener Lever

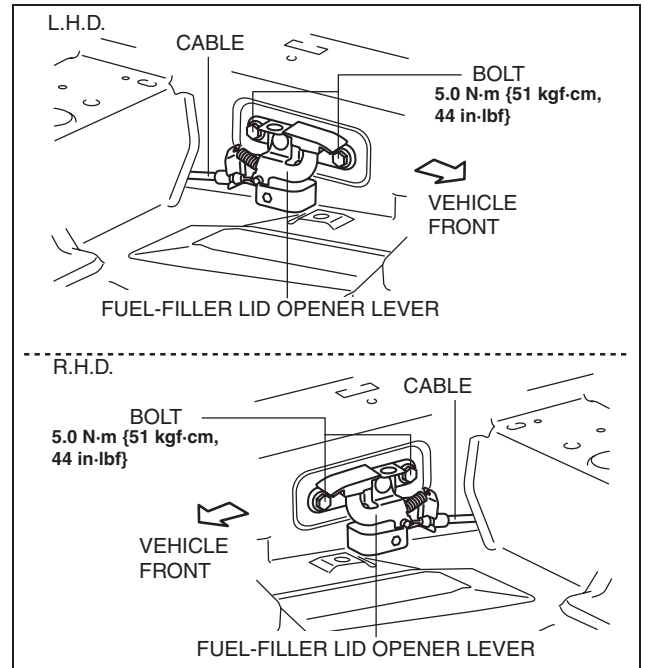
1. Remove the front scuff plate. (Driver's side) (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
2. Remove the front side trim. (Driver's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
3. Partially peel back the floor covering.



am2zzw0000071

## SECURITY AND LOCKS

4. Remove the bolts.
5. Disconnect the cable and fuel-filler lid opener lever.
6. Install in the reverse order of removal.



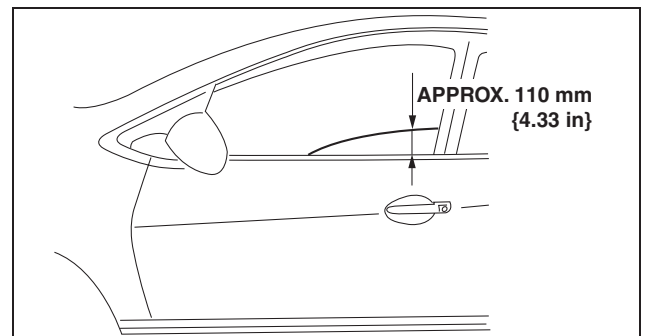
am2zzw0000071

### FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION

id091400429400

#### 5HB, 4SD

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)

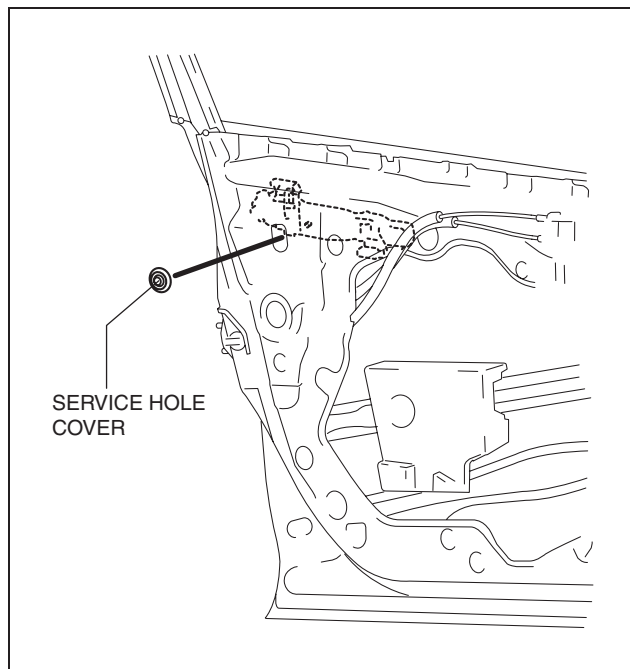


am2zzw00000517

- (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
- (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
- (5) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.)  
(See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)

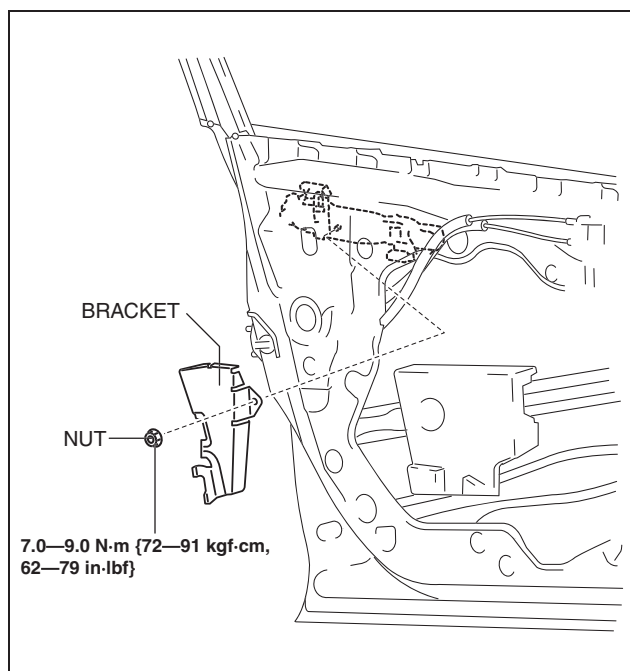
## SECURITY AND LOCKS

4. Remove the service hole cover.



am2zzw0000066

5. Remove the tab, then remove the door lock-link bracket. (Driver's door).

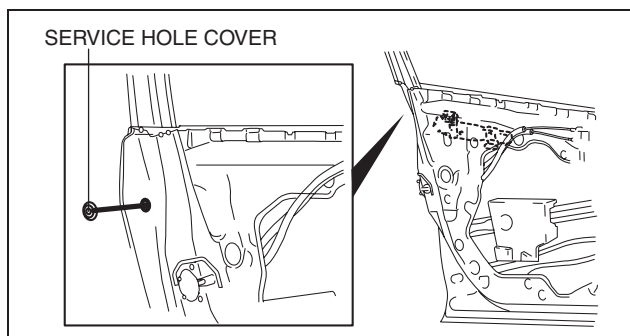


am2zzw0000066

6. Remove the service hole cover.  
7. Remove the screw from the service hole.

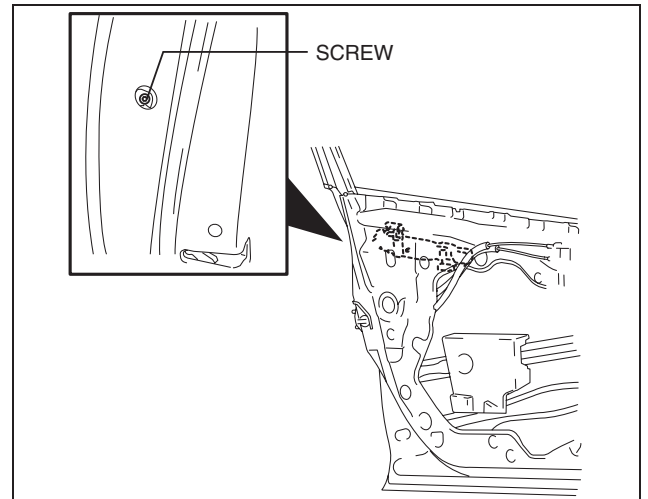
**Note**

- The screw cannot be removed because of the stopper.



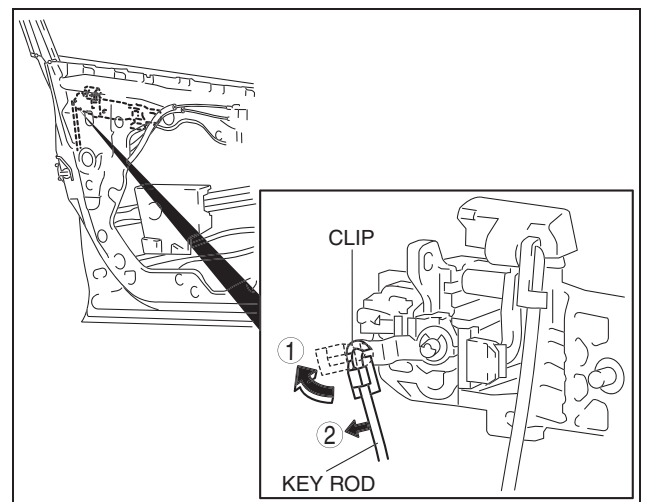
am2zzw0000332

## SECURITY AND LOCKS



am2zzw0000066

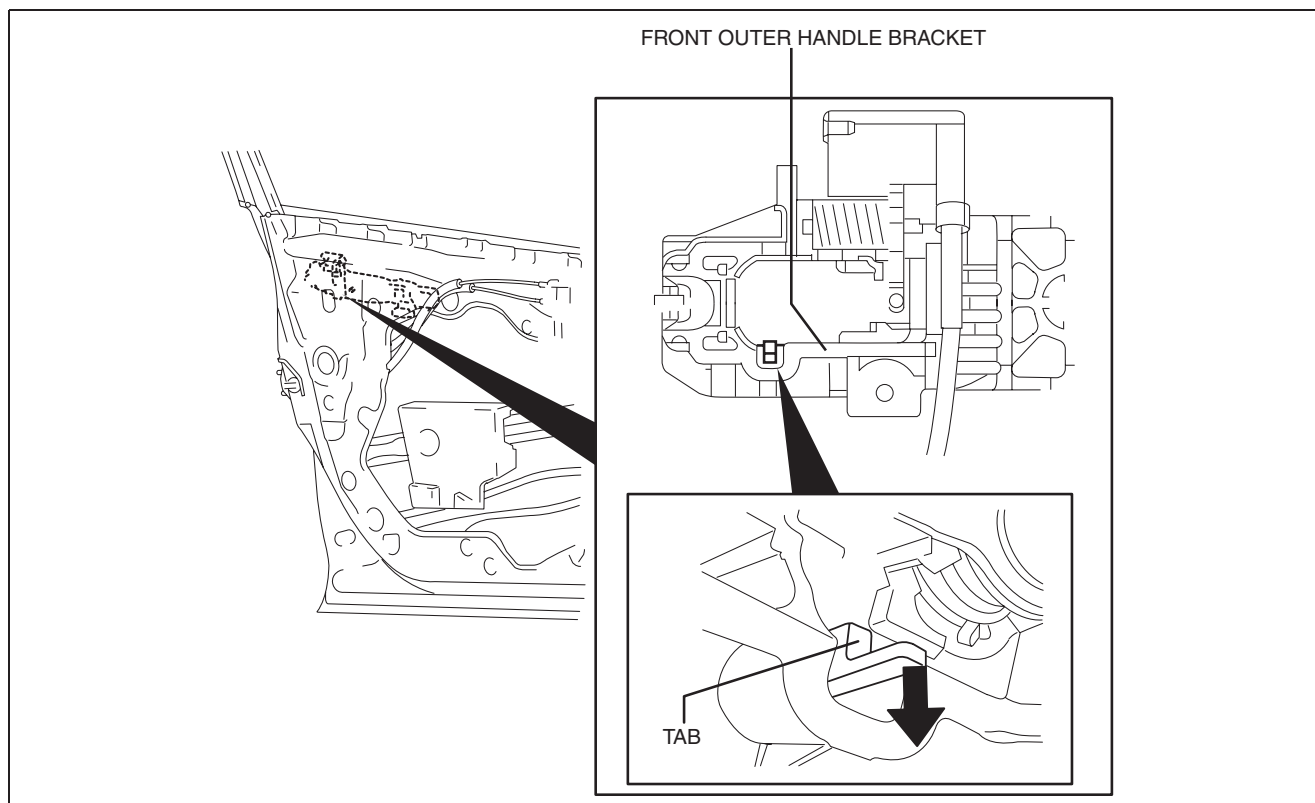
8. Lift the clip in the direction of the arrow (1), and pull out the key rod in the direction of the arrow (2).



am2zzw0000066

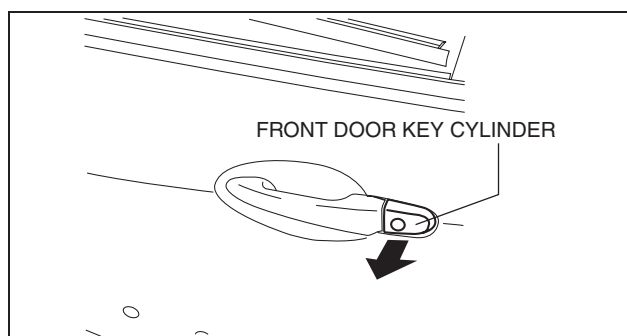
## SECURITY AND LOCKS

9. Press the tab on the front outer handle bracket in the direction of the arrow.



am2zzw0000066

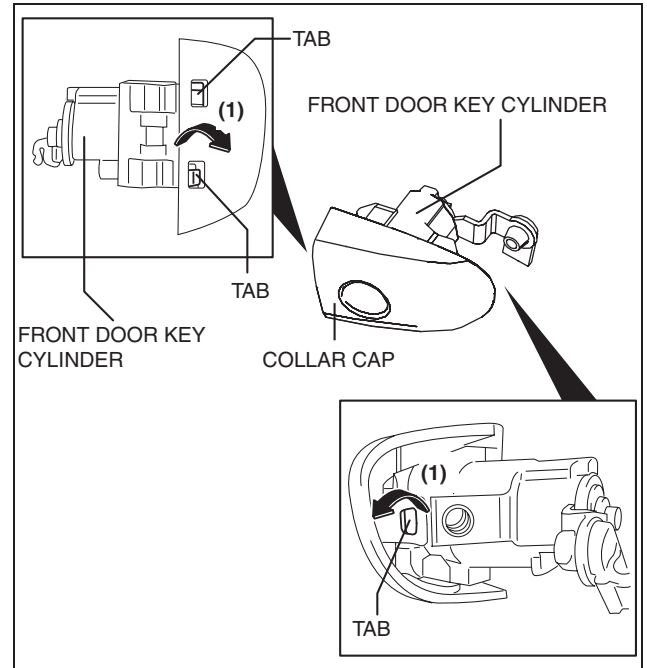
10. Maintaining the condition in Step 9, remove the front key cylinder.



am2zzw0000066

## SECURITY AND LOCKS

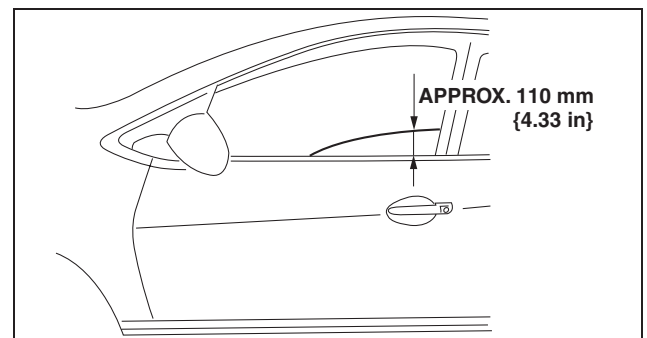
11. Using a tape-wrapped fastener remover, press up the collar cap in the direction of the arrow shown in the arrow, press aside the front door key cylinder tabs (1), and remove the collar cover from the front door key cylinder.
12. Install in the reverse order of removal.



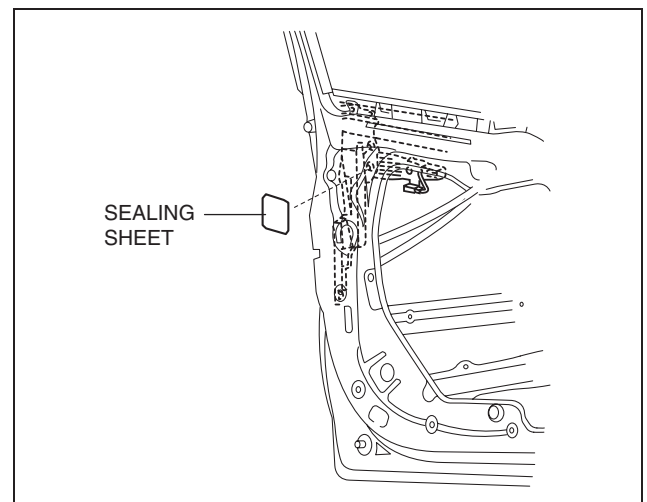
am2zzw0000067

### 3HB

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)
4. Remove the sealing sheet.
5. Remove the nuts.
6. Remove the fastener.



am2zzw0000517

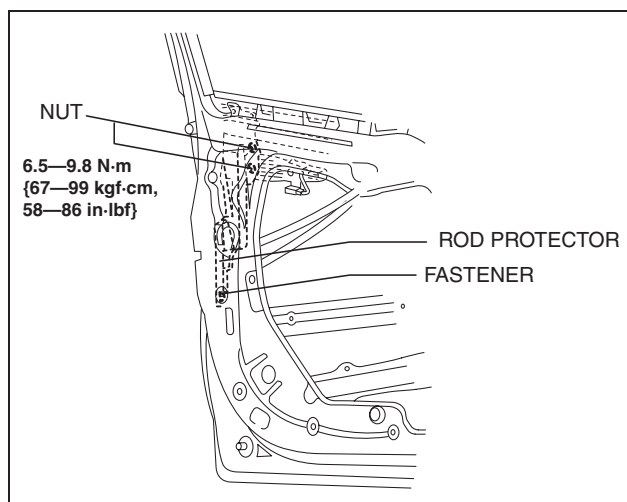


am2zzw0000331



## SECURITY AND LOCKS

7. Remove the rod protector.



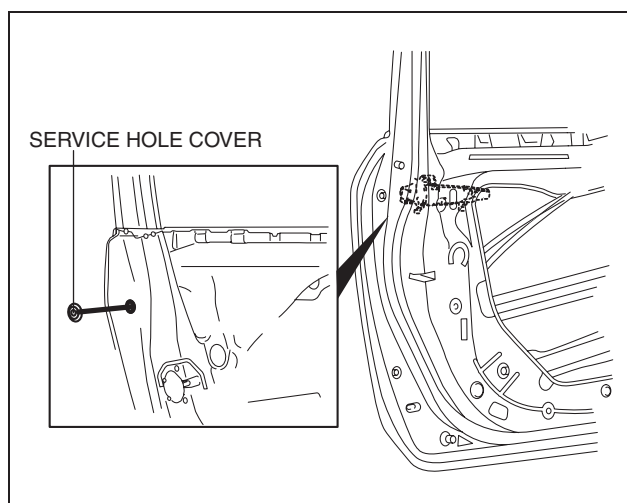
am2zzw0000331

8. Remove the service hole cover.

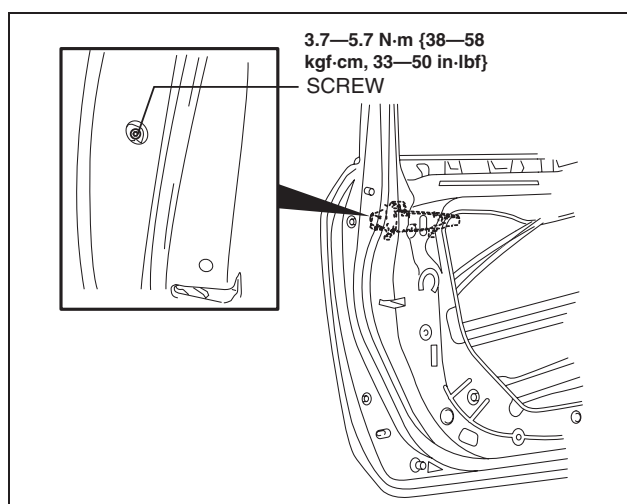
9. Remove the screw from the service hole.

### Note

- The screw cannot be removed because of the stopper.



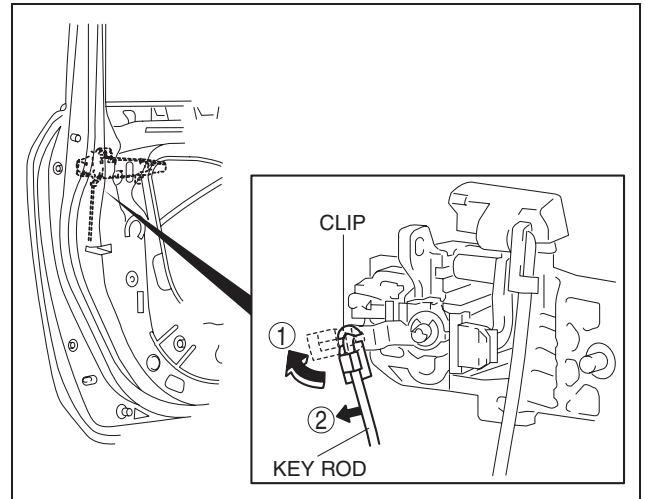
am2zzw0000332



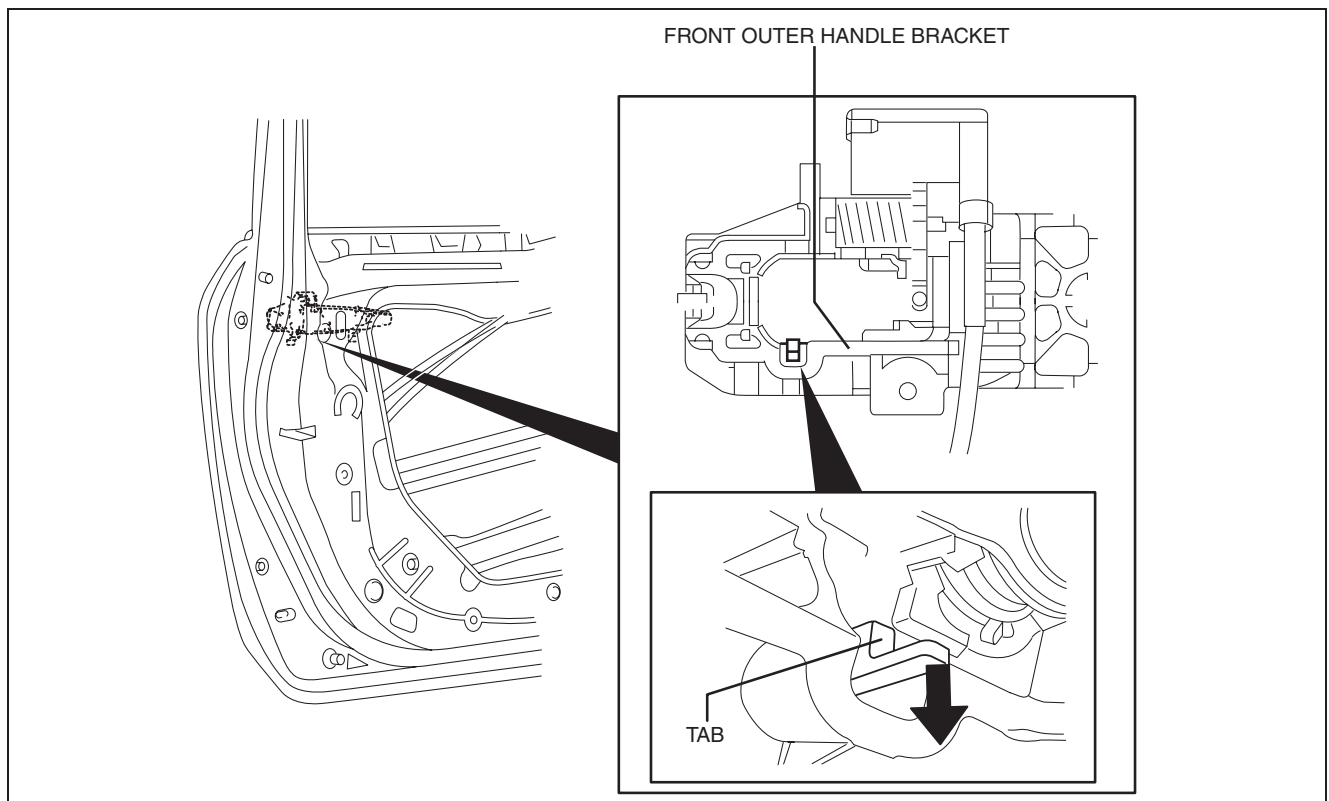
am2zzw0000332

## SECURITY AND LOCKS

10. Lift the clip in the direction of the arrow (1), and pull out the key rod in the direction of the arrow (2).
11. Press the tab on the front outer handle bracket in the direction of the arrow.

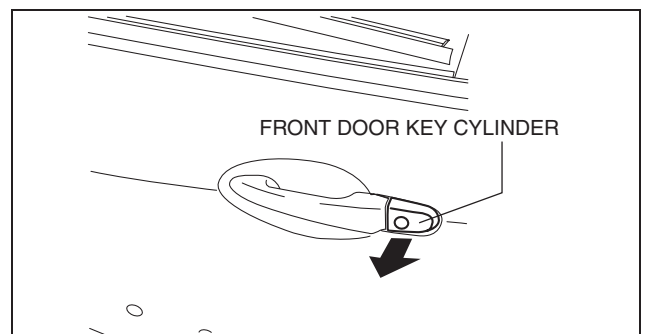


am2zzw0000332



am2zzw0000332

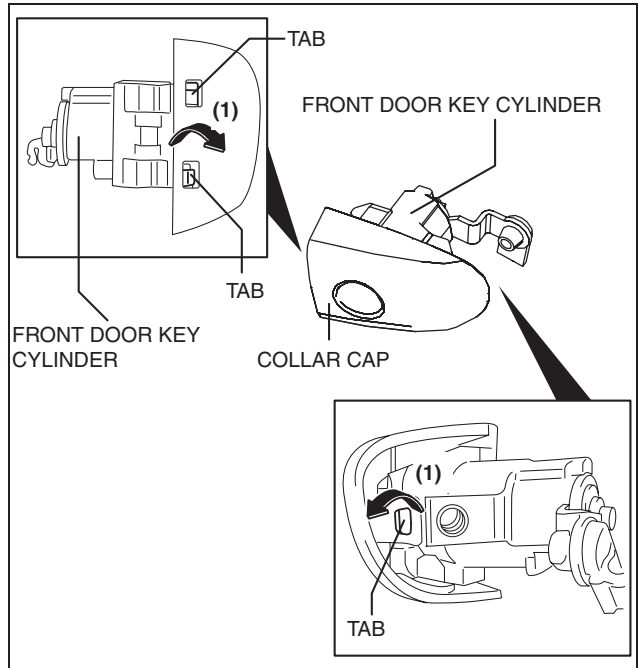
12. Maintaining the condition in Step 11, remove the front key cylinder.



am2zzw0000066

## SECURITY AND LOCKS

13. Using a tape-wrapped fastener remover, press up the collar cap in the direction of the arrow shown in the arrow, press aside the front door key cylinder tabs (1), and remove the collar cover from the front door key cylinder.
14. Install in the reverse order of removal.

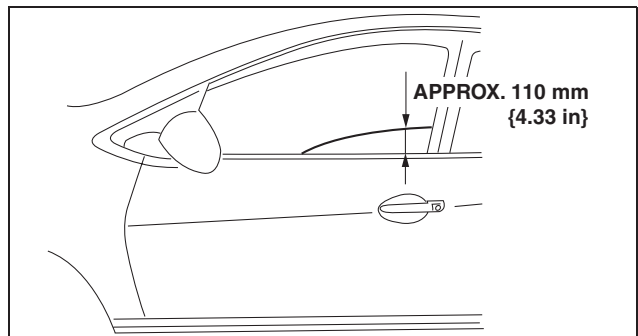


am2zzw0000067

### FRONT DOOR KEY CYLINDER SWITCH INSPECTION

id091400801300

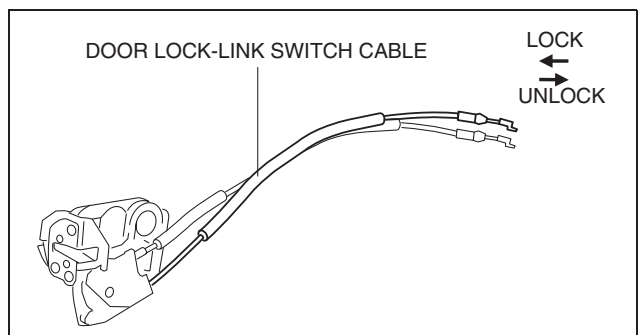
1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.) (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)
  - (6) Front door latch and lock actuator (See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
4. If the door lock condition is to be inspected, pull the door lock-link switch cable, or press it in.



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#### Note

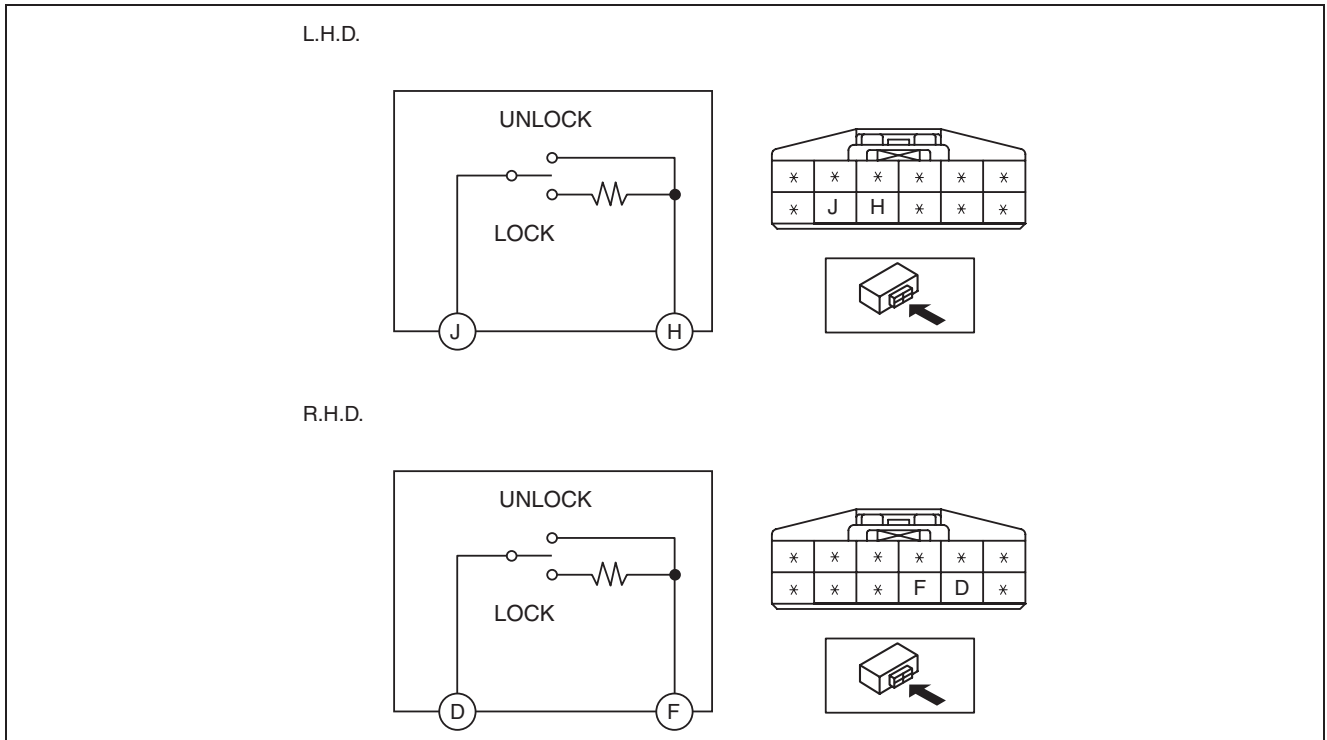
- The door lock-link switch cable locks or unlocks only when the latch lever is locked.



am2zzw0000181

## SECURITY AND LOCKS

5. Verify that the continuity is as indicated in the table.



am6zzw0000044

- If not as indicated in the table, replace the front door latch and lock actuator.

○—○ : Continuity

| Key cylinder position | Terminal                 |                          |
|-----------------------|--------------------------|--------------------------|
|                       | L.H.D. : J<br>R.H.D. : D | L.H.D. : H<br>R.H.D. : F |
| Unlock                | ○                        | ○                        |
| Lock                  | ○                        | ○                        |

R: 1 kilohm

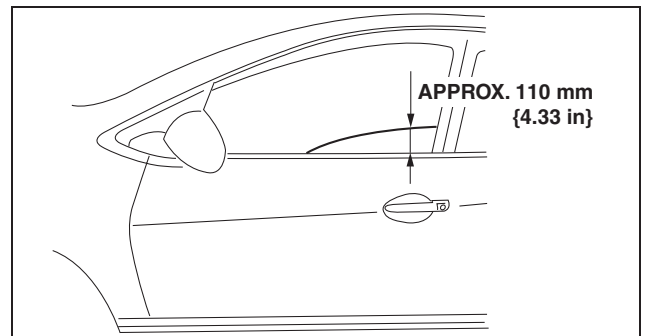
am6zzw0000044

### FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION

id091400429500

#### 5HB, 4SD

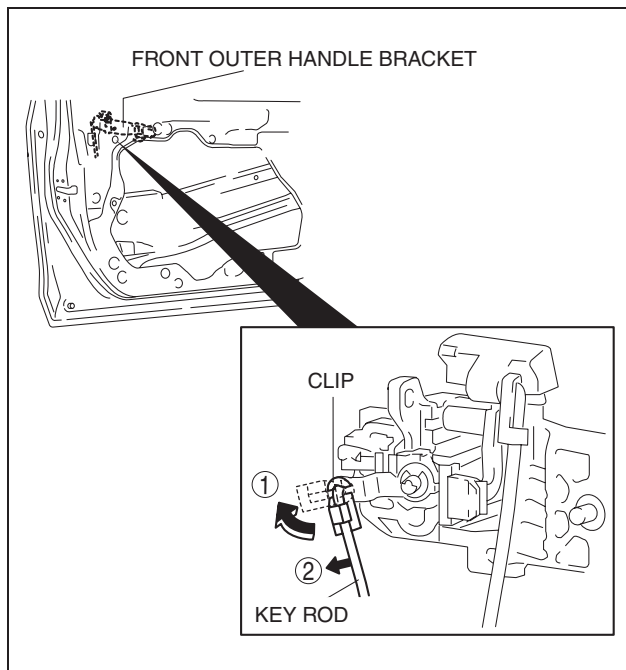
- To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
- Disconnect the negative battery cable.
- Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front inner handle (See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)
  - (4) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (6) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.)



am2zzw0000517

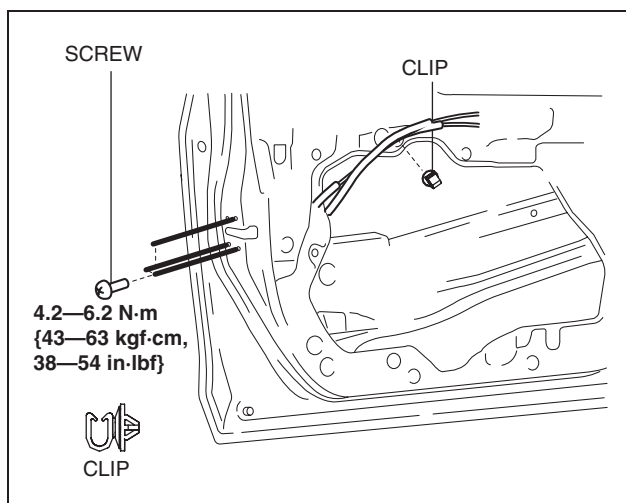
## SECURITY AND LOCKS

4. Disconnect the key rod from the front outer handle bracket.



am2zzw0000070

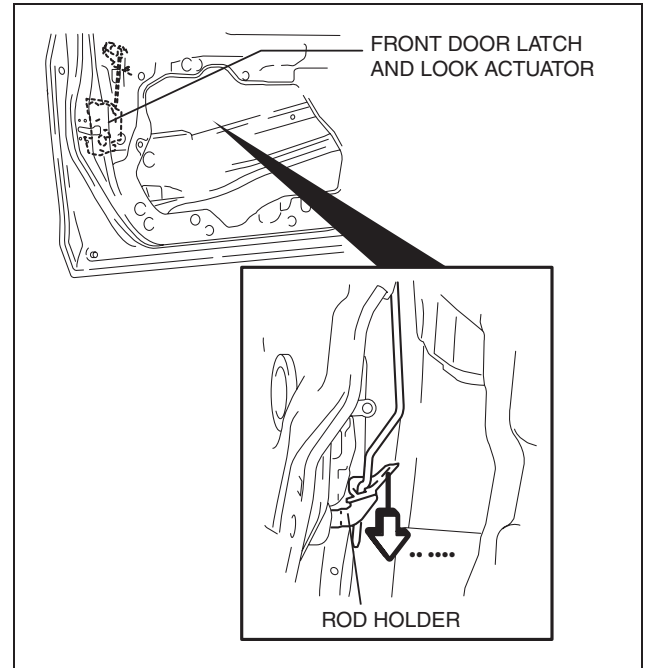
5. Remove the screw
6. Detach the clips.



am2zzw0000517

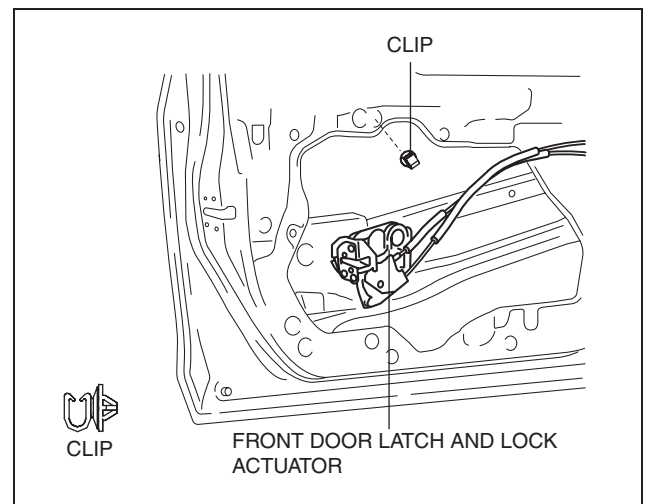
## SECURITY AND LOCKS

7. Press down the rod holder of the front door latch and lock actuator in the direction of the arrow.



am2zzw0000070

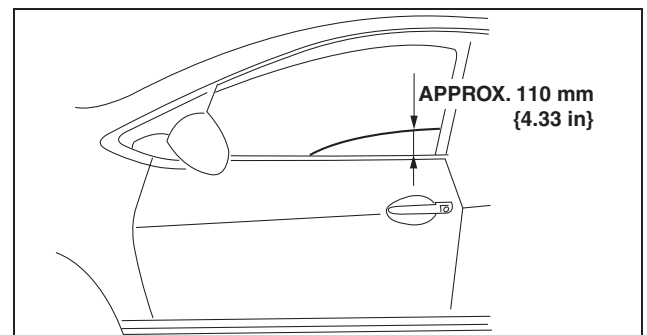
8. Maintaining the condition in Step 7, remove the front door latch and lock actuator.
9. Install in the reverse order of removal.



am2zzw0000067

### 3HB

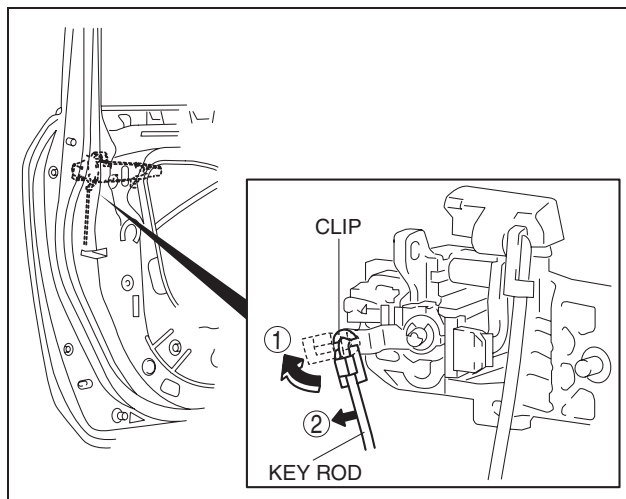
1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front inner handle (See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)
  - (4) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (6) Front door module panel (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)



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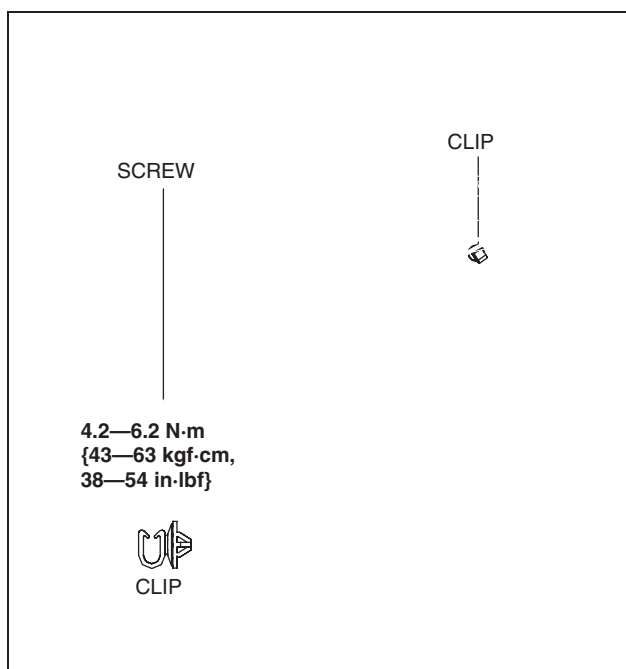
## SECURITY AND LOCKS

4. Disconnect the key rod from the front outer handle bracket.



am2zzw0000332

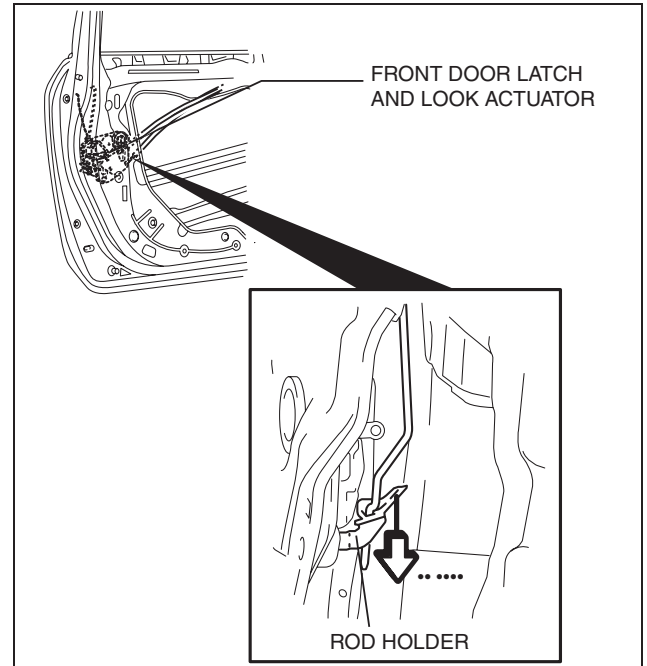
5. Remove the screw
6. Detach the clips.



am2zzw0000518

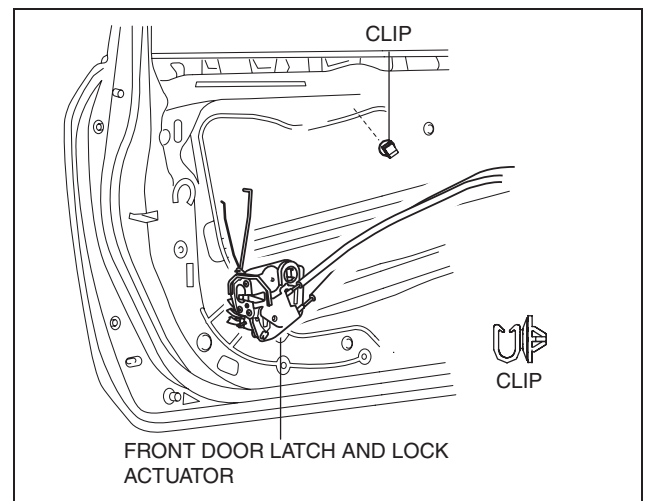
## SECURITY AND LOCKS

7. Press down the rod holder of the front door latch and lock actuator in the direction of the arrow.



am2zzw0000332

8. Maintaining the condition in Step 7, remove the front door latch and lock actuator.
9. Install in the reverse order of removal.



am2zzw0000332

### FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION

id091400430500

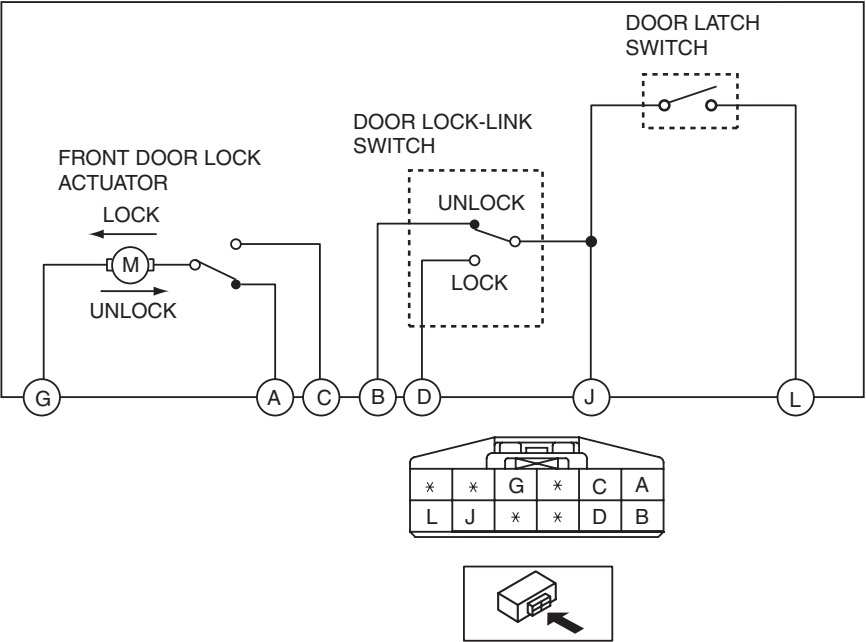
1. The following actuators and switches are integrated with the front door latch and lock actuator. Inspect the front door latch and lock actuator according to each inspection procedure for the following items.
  - Front door lock actuator (See 09-14-72 FRONT DOOR LOCK ACTUATOR INSPECTION.)
  - Door lock-link switch(Vehicles with theft-deterrent system) (See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)
  - Door latch switch (See 09-14-74 FRONT DOOR LATCH SWITCH INSPECTION.)
  - Front door key cylinder (See 09-14-62 FRONT DOOR KEY CYLINDER SWITCH INSPECTION.)



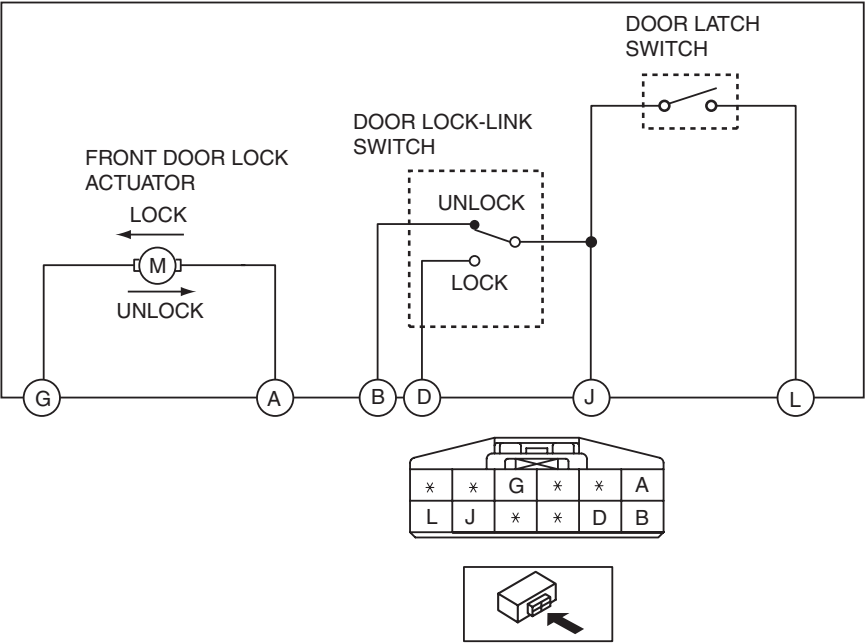
# SECURITY AND LOCKS

R.H.D.  
LH

DOUBLE LOCKING SYSTEM



POWER DOOR LOCK SYSTEM

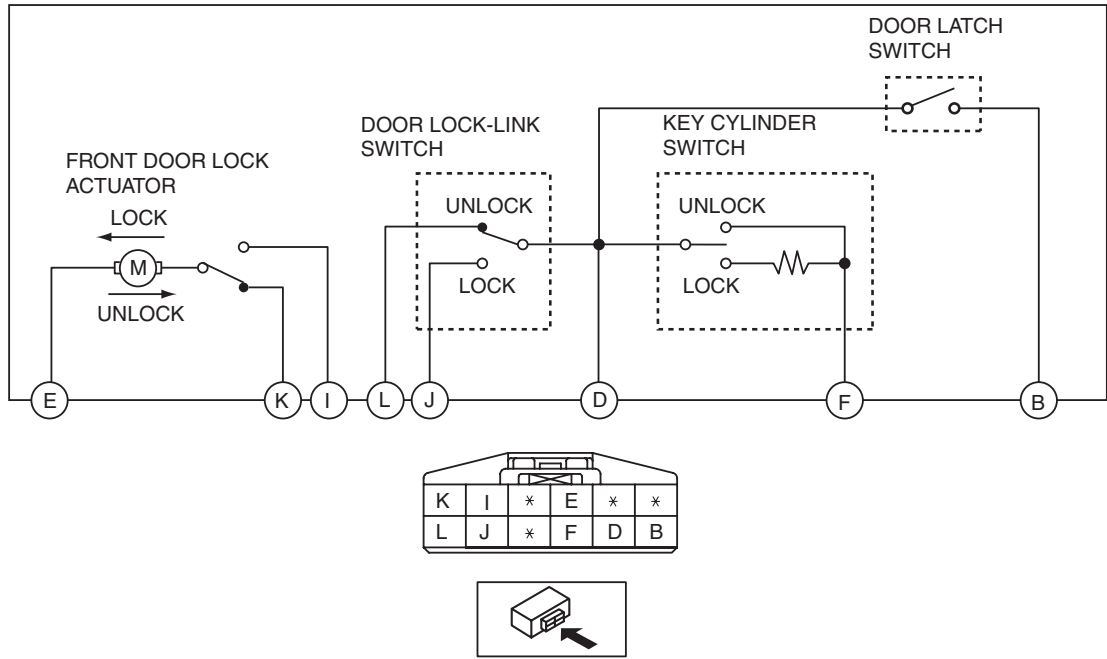


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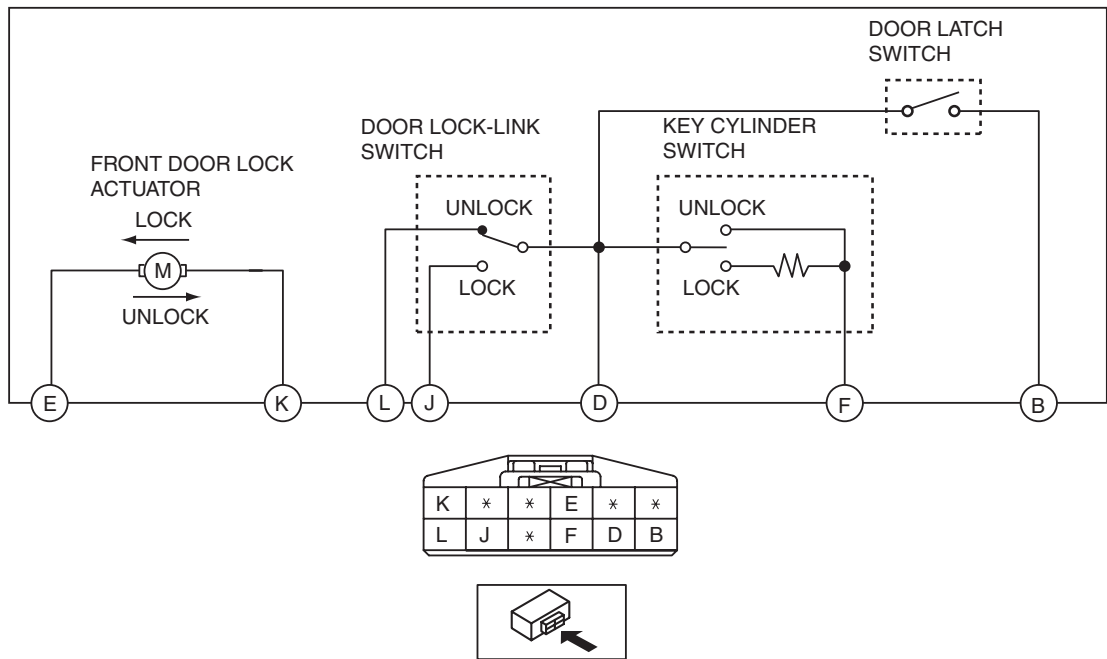
# SECURITY AND LOCKS

RH

DOUBLE LOCKING SYSTEM



POWER DOOR LOCK SYSTEM



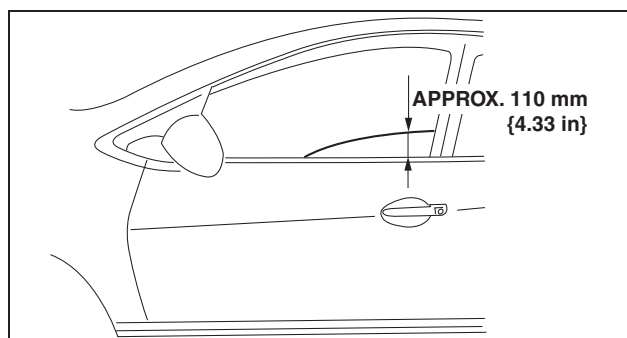
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## SECURITY AND LOCKS

### FRONT DOOR LOCK ACTUATOR INSPECTION

id091400428700

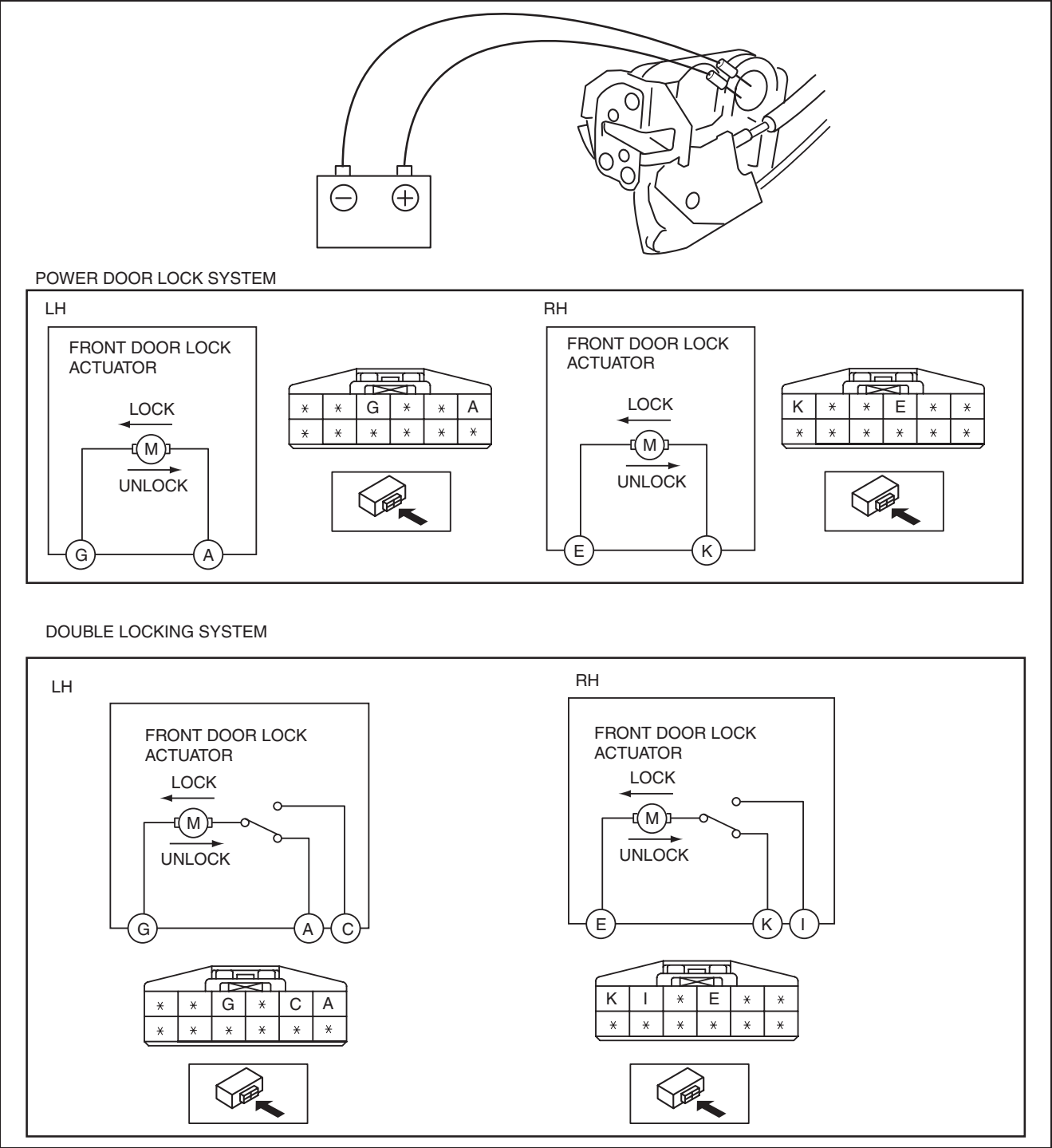
1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.) (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)
  - (6) Front door latch and lock actuator (See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)



am2zzw0000518

# SECURITY AND LOCKS

4. Apply battery positive voltage and connect the ground to each terminal, and then verify the operation.



am2zzw0000085

- If not as indicated in the table, replace the front door latch and lock actuator.

## SECURITY AND LOCKS

### Power door lock system

| Operation |    | Terminal |        |
|-----------|----|----------|--------|
|           |    | B+       | Ground |
| LOCK      | RH | K        | E      |
|           | LH | A        | G      |
| UNLOCK    | RH | E        | K      |
|           | LH | G        | A      |

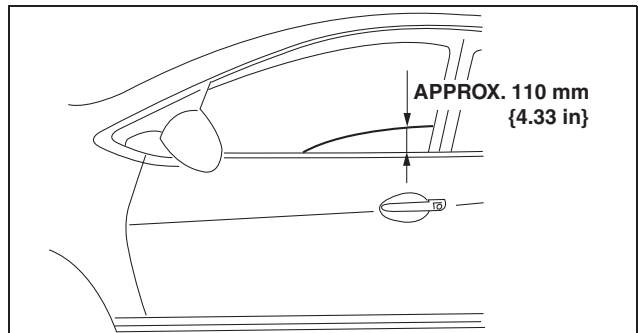
### Double locking system

| Operation   |    | Terminal |        |
|-------------|----|----------|--------|
|             |    | B+       | Ground |
| LOCK        | RH | I        | E      |
|             | LH | C        | G      |
| DOUBLE LOCK | RH | K        | E      |
|             | LH | A        | G      |
| UNLOCK      | RH | E        | K,I    |
|             | LH | G        | A,C    |

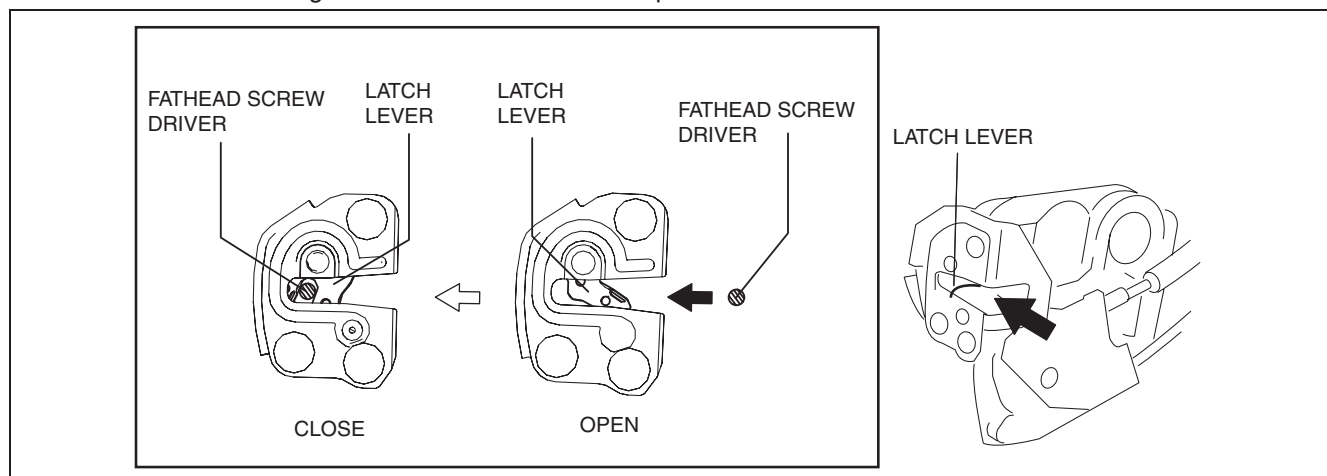
### FRONT DOOR LATCH SWITCH INSPECTION

- To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
- Disconnect the negative battery cable.
- Remove the following parts:
  - Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.) (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)
  - Front door key cylinder (See 09-14-55 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION.)
- Press the latch in using a flathead screwdriver to inspect the latch lever condition.

id091400430800



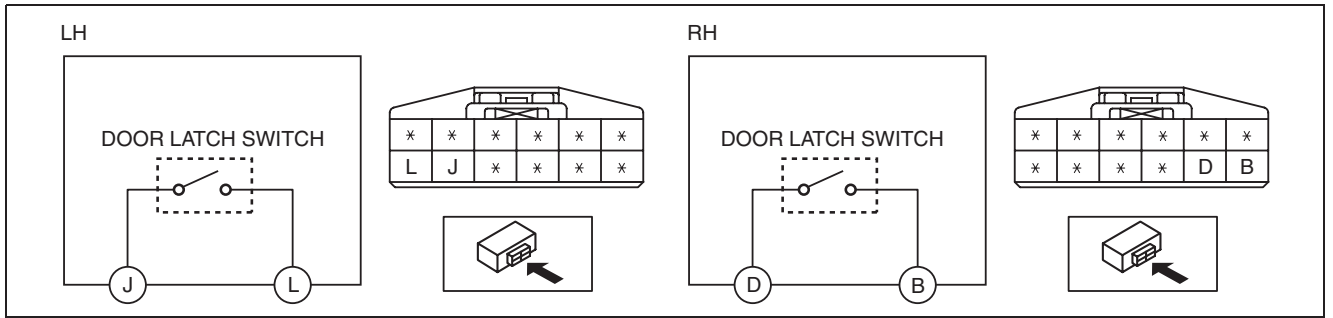
am2zzw0000518



am2zzw0000068

## SECURITY AND LOCKS

5. Verify that the continuity is as indicated in the table.



am2zzw0000068

- If not as indicated in the table, replace the front door latch and lock actuator.

|                   |                 |              |
|-------------------|-----------------|--------------|
|                   | ○—○: CONTINUITY |              |
| DOOR LATCH SWITCH | TERMINAL        |              |
|                   | LH:L<br>RH:B    | LH:J<br>RH:D |
| OPEN              |                 |              |
| CLOSE             | ○—○             | ○—○          |

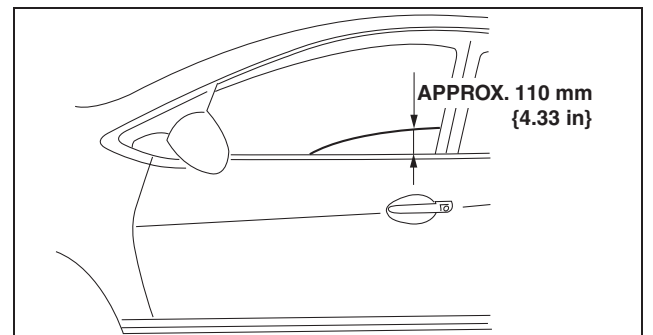
am2zzw0000068

### DOOR LOCK-LINK SWITCH INSPECTION

id091400430200

#### Font Door Lock-link Inspection

1. To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Inner garnish (driver's door) (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.) (See 09-11-13 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION [3HB].)
  - (6) Front door latch and lock actuator (See 09-14-63 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
4. If the door lock condition is to be inspected, pull the door lock-link switch cable, or press it in.



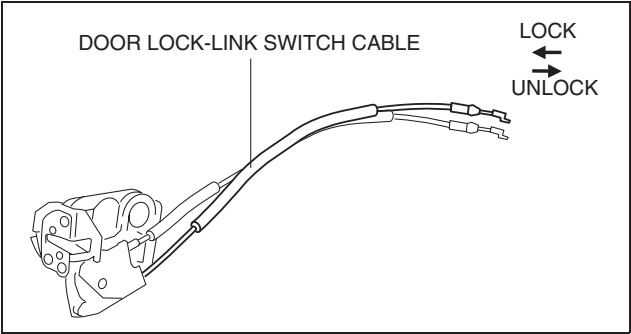
am2zzw0000518

#### Note

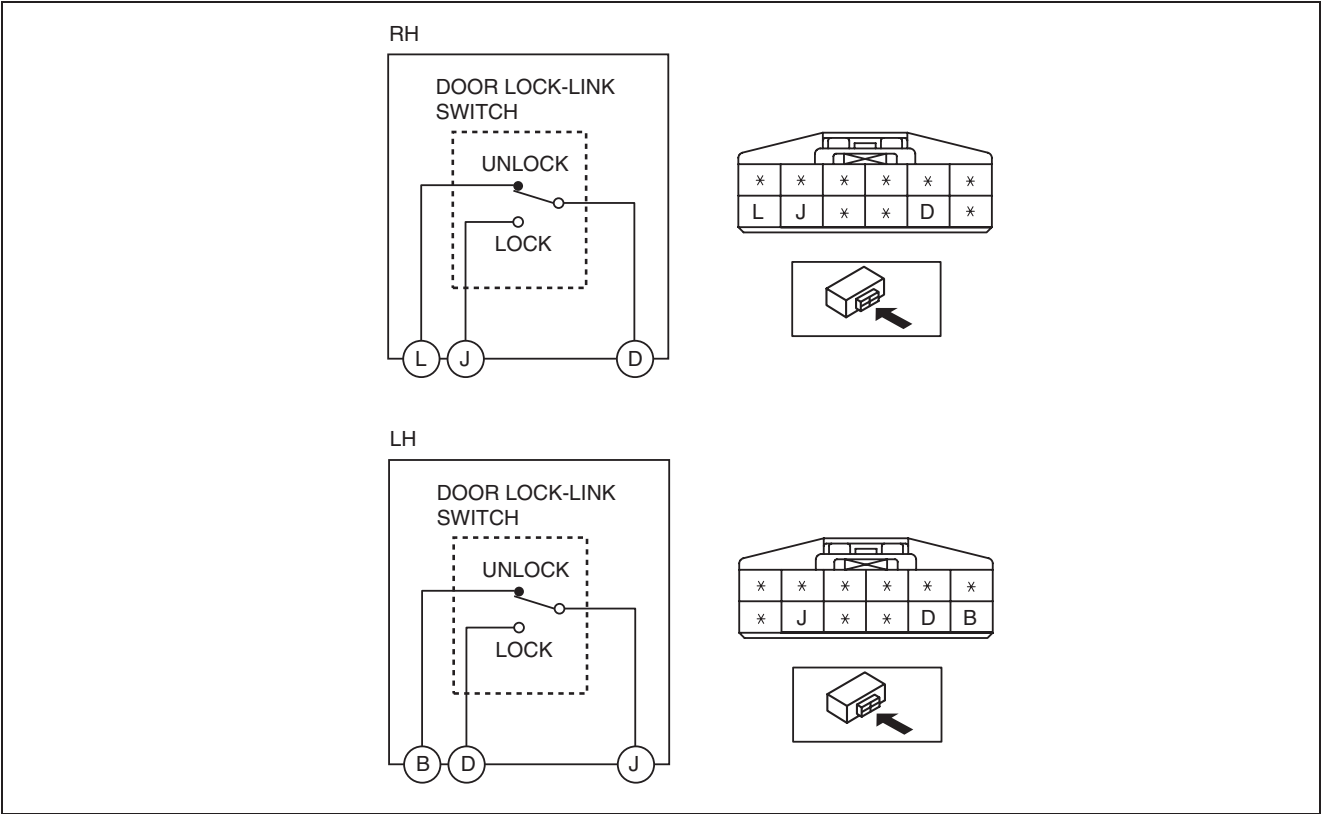
- The door lock-link switch cable locks or unlocks only when the latch lever is locked.

SECURITY AND LOCKS

5. Verify that the continuity is as indicated in the table.



am2zzw0000067



am2zzw0000349

- If not as indicated in the table, replace the front door latch and lock actuator.

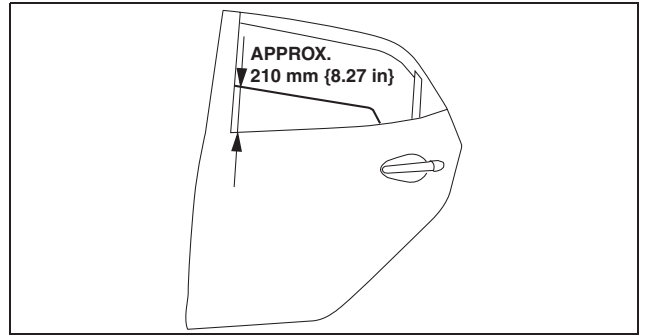
| LOCK KNOB POSITION | TERMINAL     |              |              |
|--------------------|--------------|--------------|--------------|
|                    | RH:J<br>LH:D | RH:D<br>LH:J | RH:L<br>LH:B |
|                    | LOCK         | UNLOCK       |              |
| UNLOCK             |              | LOCK         |              |

am2zzw0000067

## SECURITY AND LOCKS

### Rear Door Lock-link Inspection

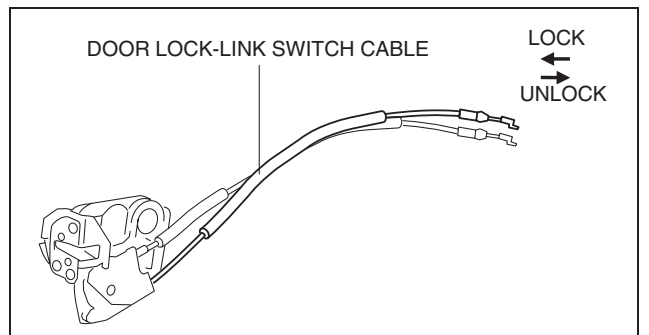
1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (3) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (4) Rear inner handle (See 09-14-27 INNER HANDLE REMOVAL/INSTALLATION.)
  - (5) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (6) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)
  - (7) Rear door module panel (See 09-11-19 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION.) (See 09-11-20 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION [4SD].)
  - (8) Rear door latch and lock actuator (See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
4. If the door lock condition is to be inspected, pull the door lock-link switch cable, or press it in.



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### Note

- The door lock-link switch cable locks or unlocks only when the latch lever is locked.

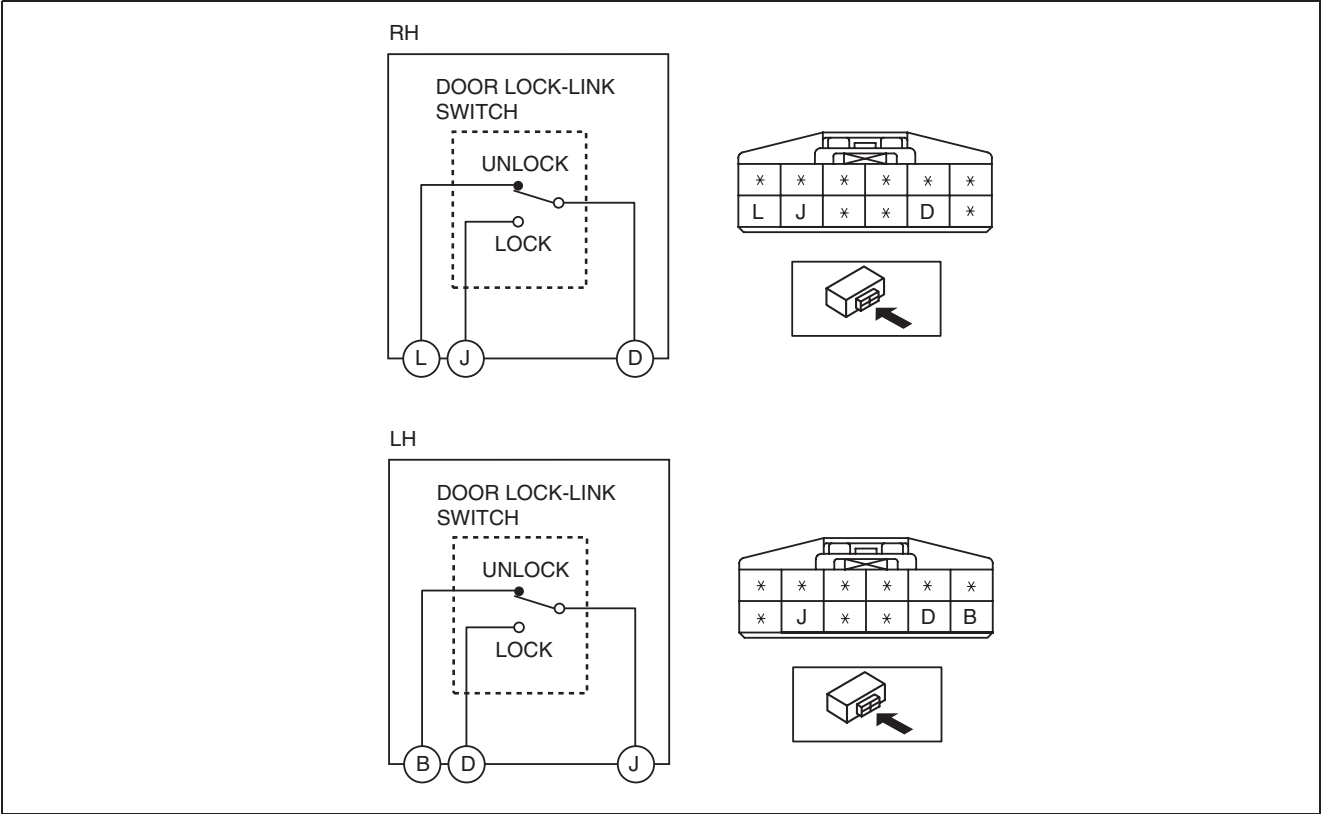


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# SECURITY AND LOCKS

5. Verify that the continuity is as indicated in the table.



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- If not as indicated in the table, replace the front door latch and lock actuator.

○—○ : CONTINUITY

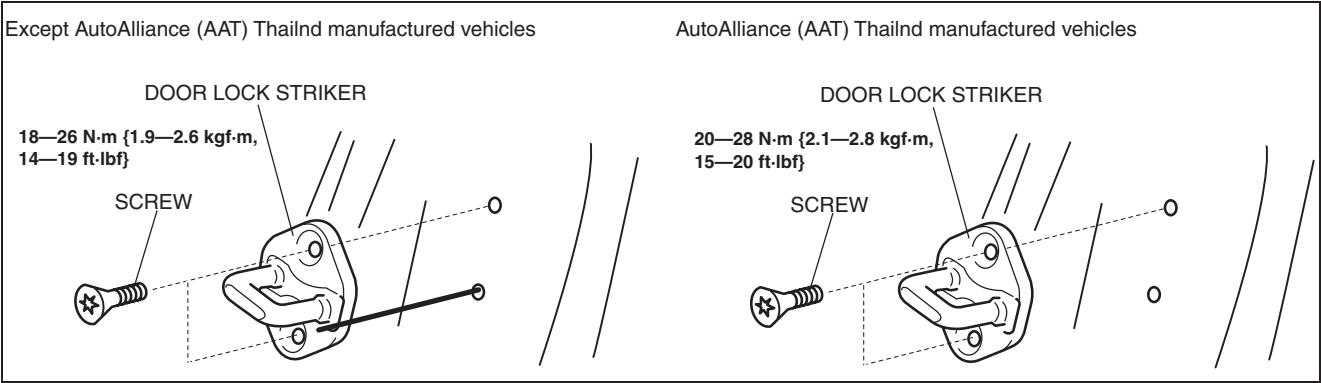
| LOCK KNOB POSITION | TERMINAL     |              |              |
|--------------------|--------------|--------------|--------------|
|                    | RH:J<br>LH:D | RH:D<br>LH:J | RH:L<br>LH:B |
| LOCK               | ○            | ○            |              |
| UNLOCK             |              | ○            | ○            |

am2zzw0000067

## DOOR LOCK STRIKER REMOVAL/INSTALLATION

id091400430300

1. Remove the screws, then remove the door lock striker.



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2. Install in the reverse order of removal.
3. Adjust the door lock striker. (See 09-11-22 DOOR ADJUSTMENT.)

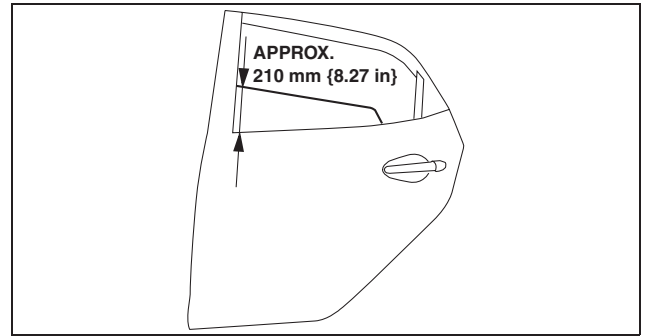
## SECURITY AND LOCKS

### REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION

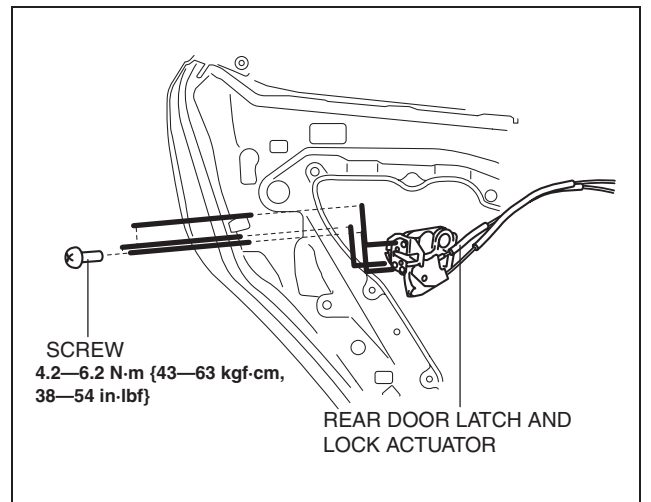
id091400430400

#### 5HB

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (3) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (4) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)
  - (6) Rear door module panel (See 09-11-19 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION.)
  - (7) Rear door latch and lock actuator (See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
4. Remove the screw.
5. Remove the rear door latch and lock actuator.
6. Install in the reverse order of removal.



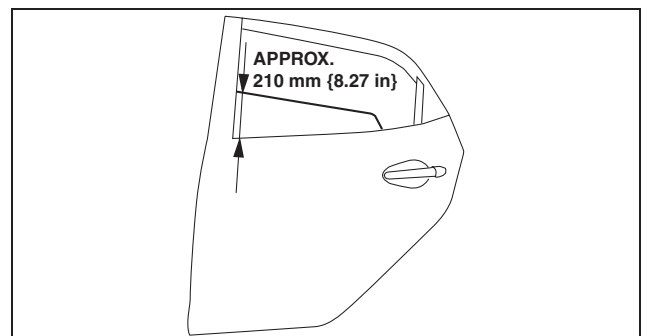
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am2zzw0000067

#### 4SD

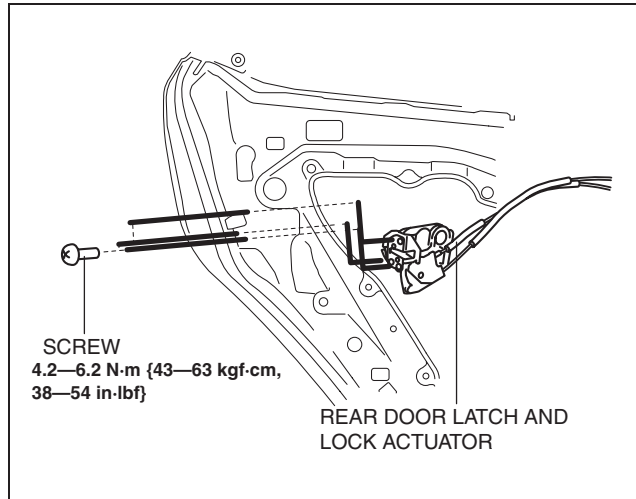
1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (2) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (3) Rear door glass (See 09-12-10 REAR DOOR GLASS REMOVAL/INSTALLATION [4SD].)
  - (4) Rear door module panel (See 09-11-20 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION [4SD].)
  - (5) Rear door latch and lock actuator (See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)



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## SECURITY AND LOCKS

4. Remove the screw.
5. Remove the rear door latch and lock actuator.
6. Install in the reverse order of removal.



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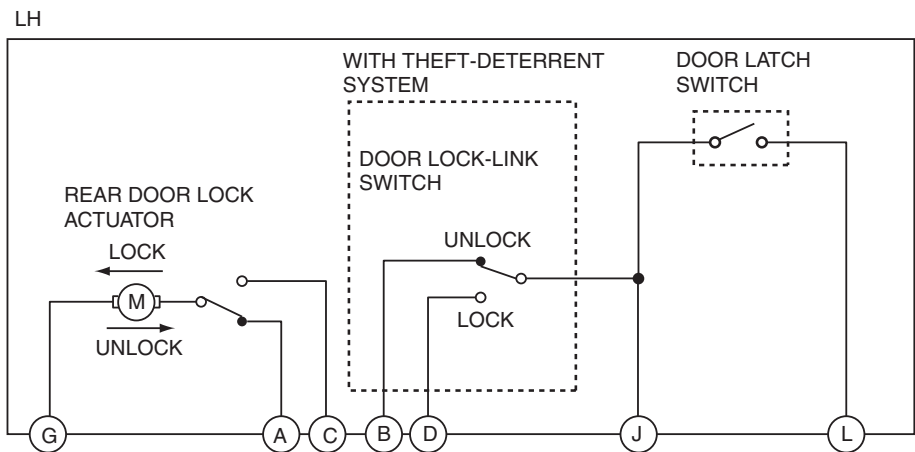
### REAR DOOR LATCH AND LOCK ACTUATOR INSPECTION

id091400430600

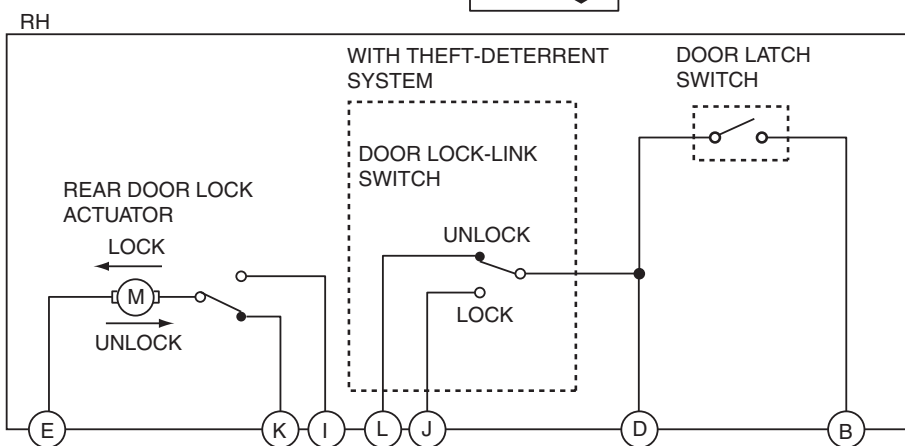
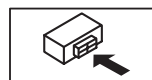
1. The following actuator and switch are integrated with the rear door latch and lock actuator. Inspect the rear door latch and lock actuator according to each inspection procedure for the following items.
  - Rear door lock actuator (See 09-14-85 REAR DOOR LOCK ACTUATOR INSPECTION.)
  - Rear door latch switch (See 09-14-83 REAR DOOR LATCH SWITCH INSPECTION.)
  - Rear door lock-link switch (Vehicles with theft-deterrent system) (See 09-14-75 DOOR LOCK-LINK SWITCH INSPECTION.)

# SECURITY AND LOCKS

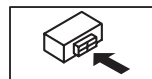
## Double Locking System



|   |   |   |   |   |   |
|---|---|---|---|---|---|
| * | * | G | * | C | A |
| L | J | * | * | D | B |



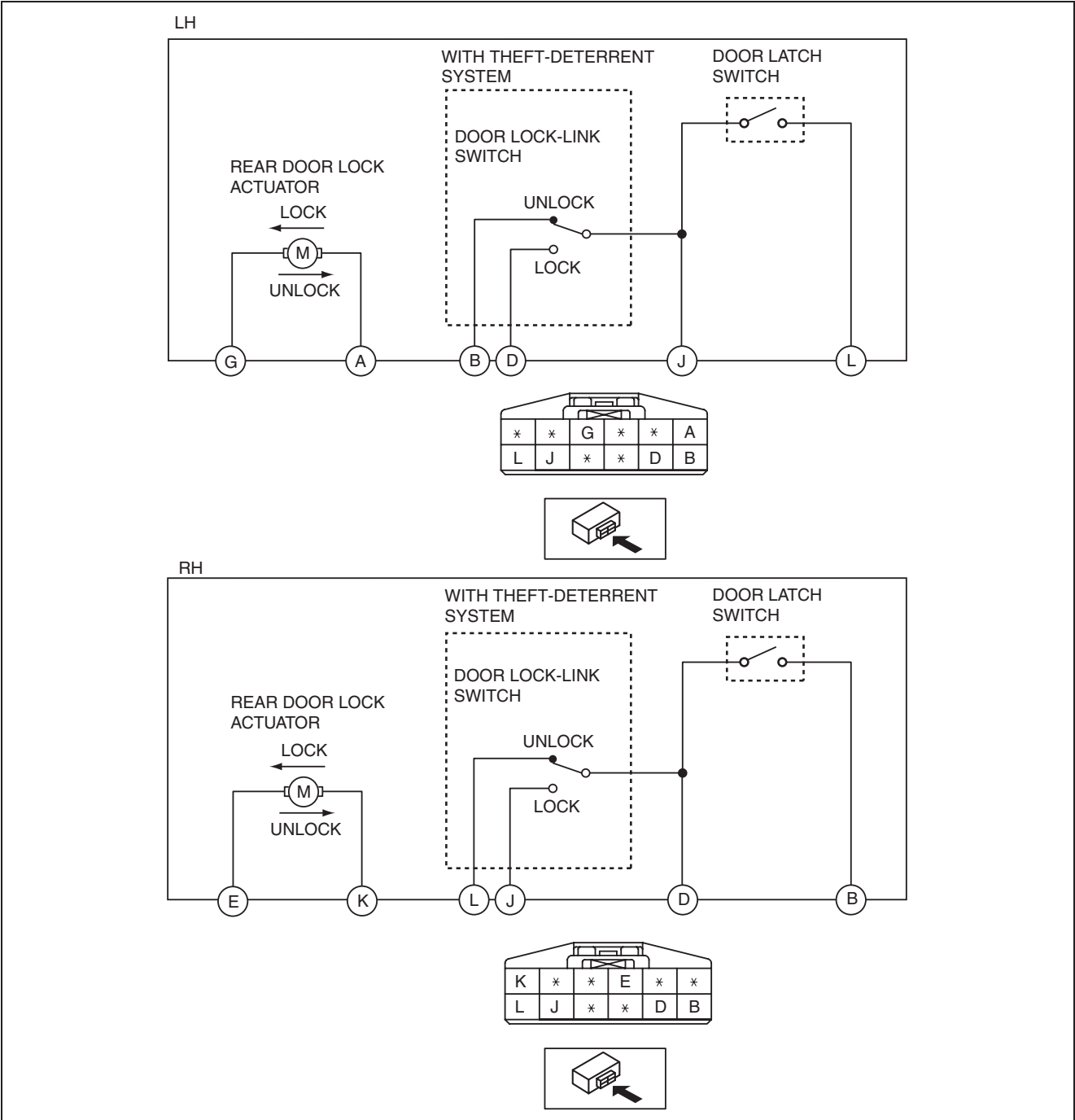
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| K | I | * | E | * | * |
| L | J | * | * | D | B |



am2zzw0000378

SECURITY AND LOCKS

Power Door Lock System



am2zzw0000511

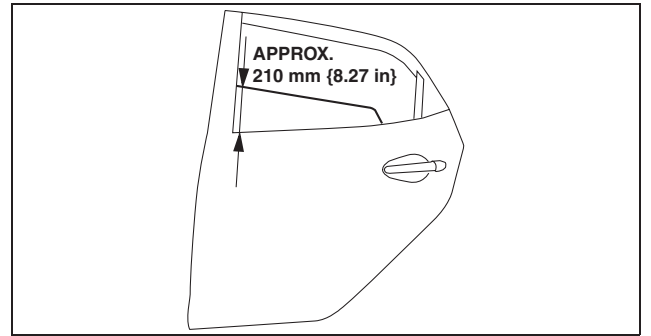
## SECURITY AND LOCKS

### REAR DOOR LATCH SWITCH INSPECTION

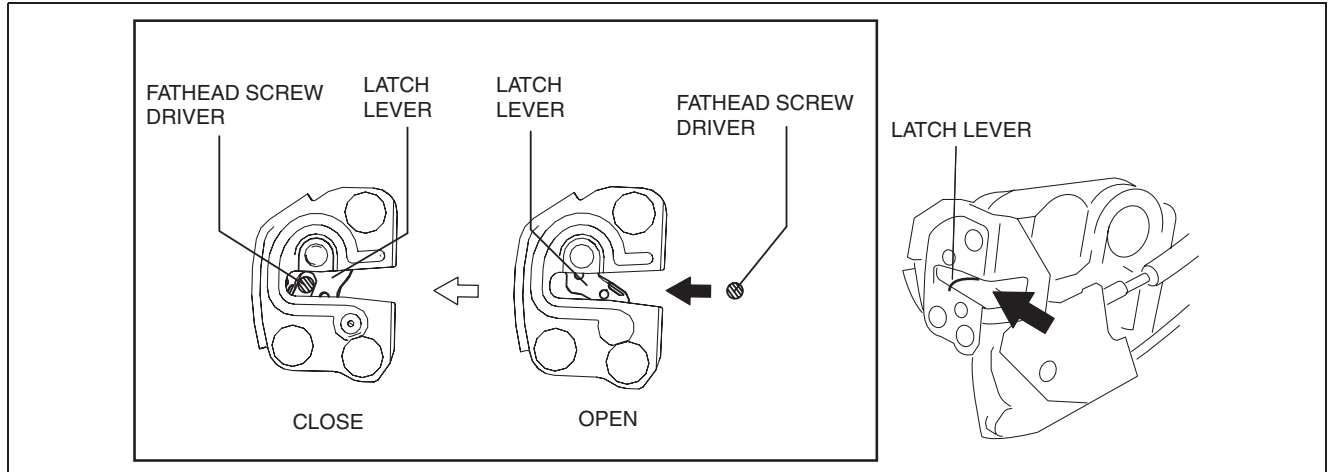
id091400430900

#### 5HB

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (3) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (4) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)
  - (6) Rear door module panel (See 09-11-19 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION.)
  - (7) Rear door latch and lock actuator (See 09-14-80 REAR DOOR LATCH AND LOCK ACTUATOR INSPECTION.)
4. Press the latch in using a flathead screwdriver to inspect the latch lever condition.

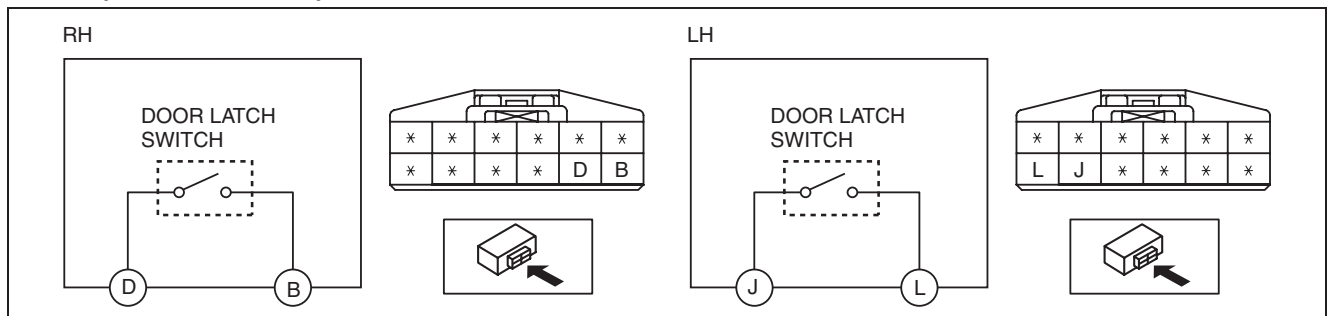


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am2zzw0000068

5. Verify that the continuity is as indicated in the table.



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- If not as indicated in the table, replace the rear door latch and lock actuator.

## SECURITY AND LOCKS

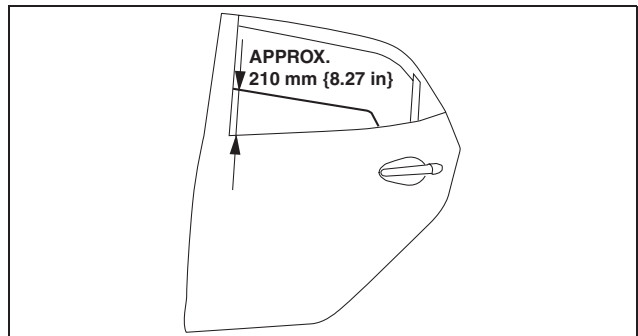
○—○ : CONTINUITY

| DOOR LATCH SWITCH | TERMINAL     |              |
|-------------------|--------------|--------------|
|                   | RH:B<br>LH:L | RH:D<br>LH:J |
| OPEN              |              |              |
| CLOSE             | ○—○          | ○—○          |

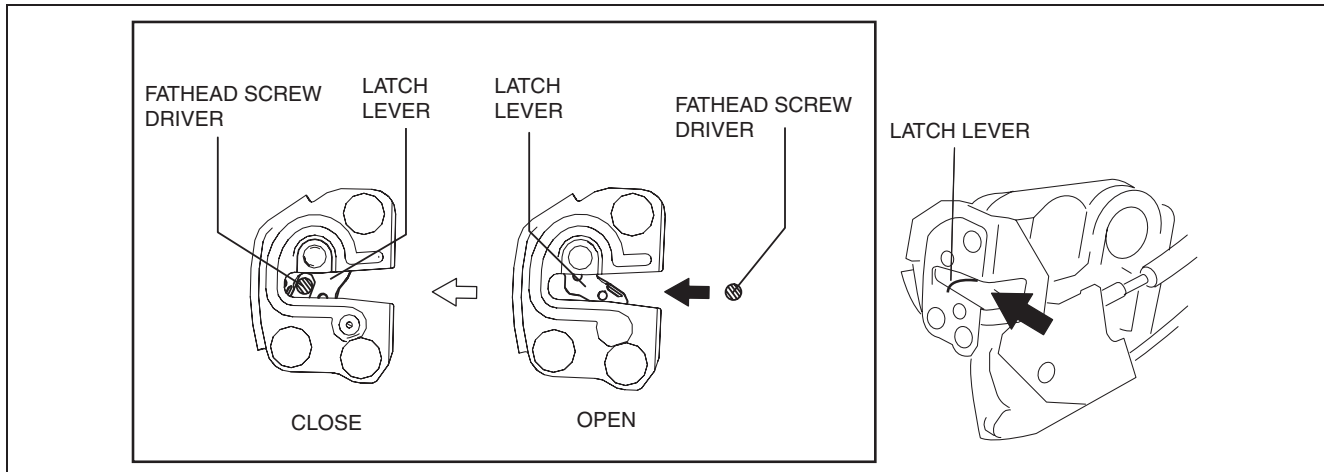
am2zzw000069

### 4SD

- To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in.}**.
- Disconnect the negative battery cable.
- Remove the following parts:
  - Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - Rear door glass (See 09-12-10 REAR DOOR GLASS REMOVAL/INSTALLATION [4SD].)
  - Rear door module panel (See 09-11-20 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION [4SD].)
  - Rear door latch and lock actuator (See 09-14-80 REAR DOOR LATCH AND LOCK ACTUATOR INSPECTION.)
- Press the latch in using a flathead screwdriver to inspect the latch lever condition.

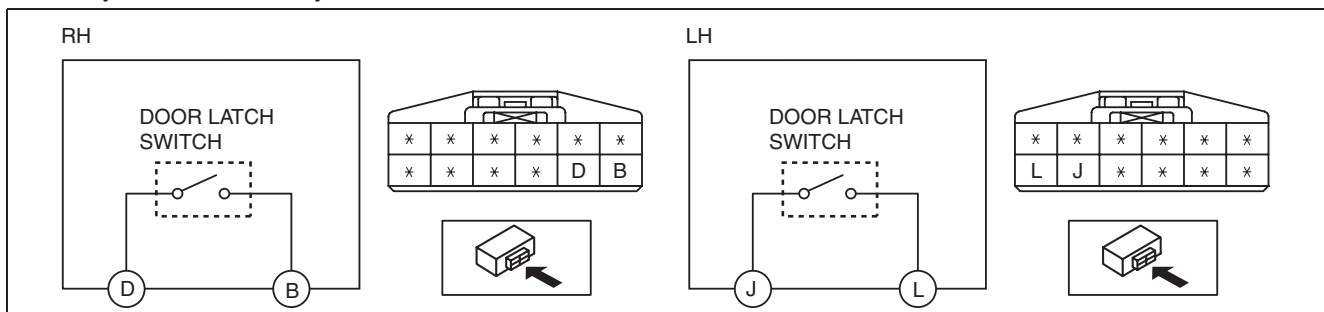


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am2zzw000068

- Verify that the continuity is as indicated in the table.



am2zzw000068

- If not as indicated in the table, replace the rear door latch and lock actuator.

# SECURITY AND LOCKS

○—○: CONTINUITY

| DOOR LATCH SWITCH | TERMINAL     |              |
|-------------------|--------------|--------------|
|                   | RH:B<br>LH:L | RH:D<br>LH:J |
| OPEN              |              |              |
| CLOSE             | ○—           | —○           |

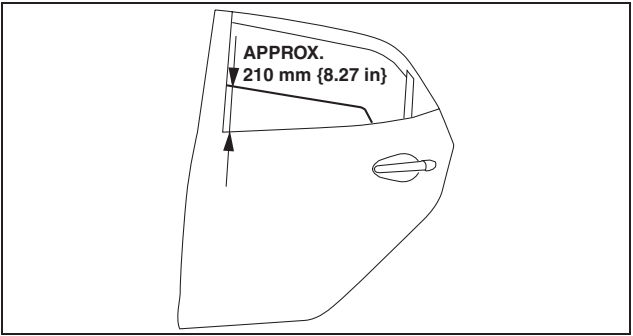
am2zzw0000069

## REAR DOOR LOCK ACTUATOR INSPECTION

id091400430700

### 5HB

1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (3) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (4) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (5) Rear door glass (See 09-12-9 REAR DOOR GLASS REMOVAL/INSTALLATION.)
  - (6) Rear door module panel (See 09-11-19 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION.)
  - (7) Rear door latch and lock actuator (See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)

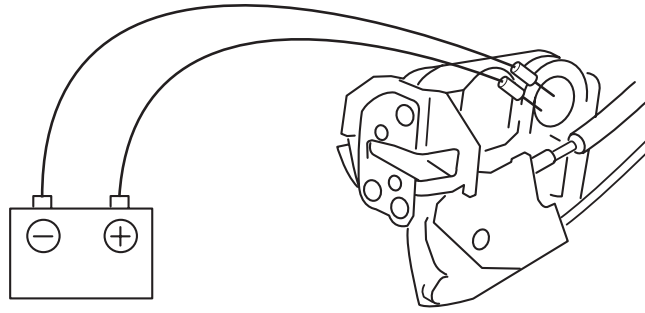


am2zzw0000518



## SECURITY AND LOCKS

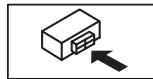
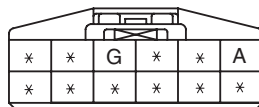
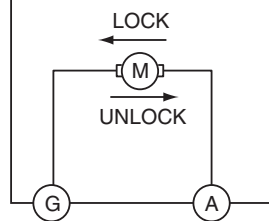
4. Apply battery positive voltage and connect the ground to each terminal, and then verify the operation.



### POWER DOOR LOCK SYSTEM

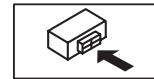
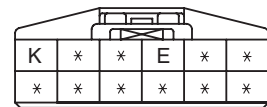
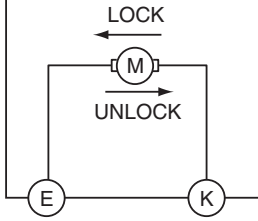
LH

FRONT DOOR LOCK ACTUATOR



RH

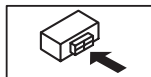
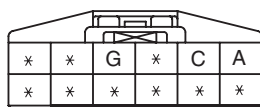
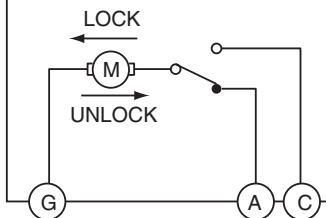
FRONT DOOR LOCK ACTUATOR



### DOUBLE LOCKING SYSTEM

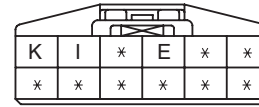
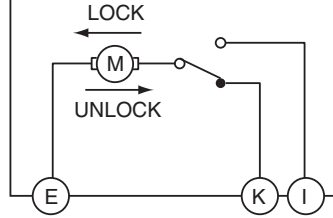
LH

FRONT DOOR LOCK ACTUATOR



RH

FRONT DOOR LOCK ACTUATOR



am2zzw0000379

- If not as indicated in the table, replace the front door latch and lock actuator.

## SECURITY AND LOCKS

### Power Door Lock System

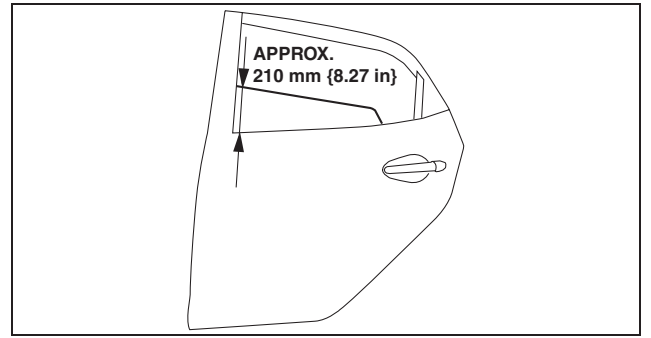
| Operation |    | Terminal |        |
|-----------|----|----------|--------|
|           |    | B+       | Ground |
| LOCK      | RH | K        | E      |
|           | LH | A        | G      |
| UNLOCK    | RH | E        | K      |
|           | LH | G        | A      |

### Double Locking System

| Operation   |    | Terminal |        |
|-------------|----|----------|--------|
|             |    | B+       | Ground |
| LOCK        | RH | I        | E      |
|             | LH | C        | G      |
| DOUBLE LOCK | RH | K        | E      |
|             | LH | A        | G      |
| UNLOCK      | RH | E        | K,I    |
|             | LH | G        | A,C    |

### 4SD

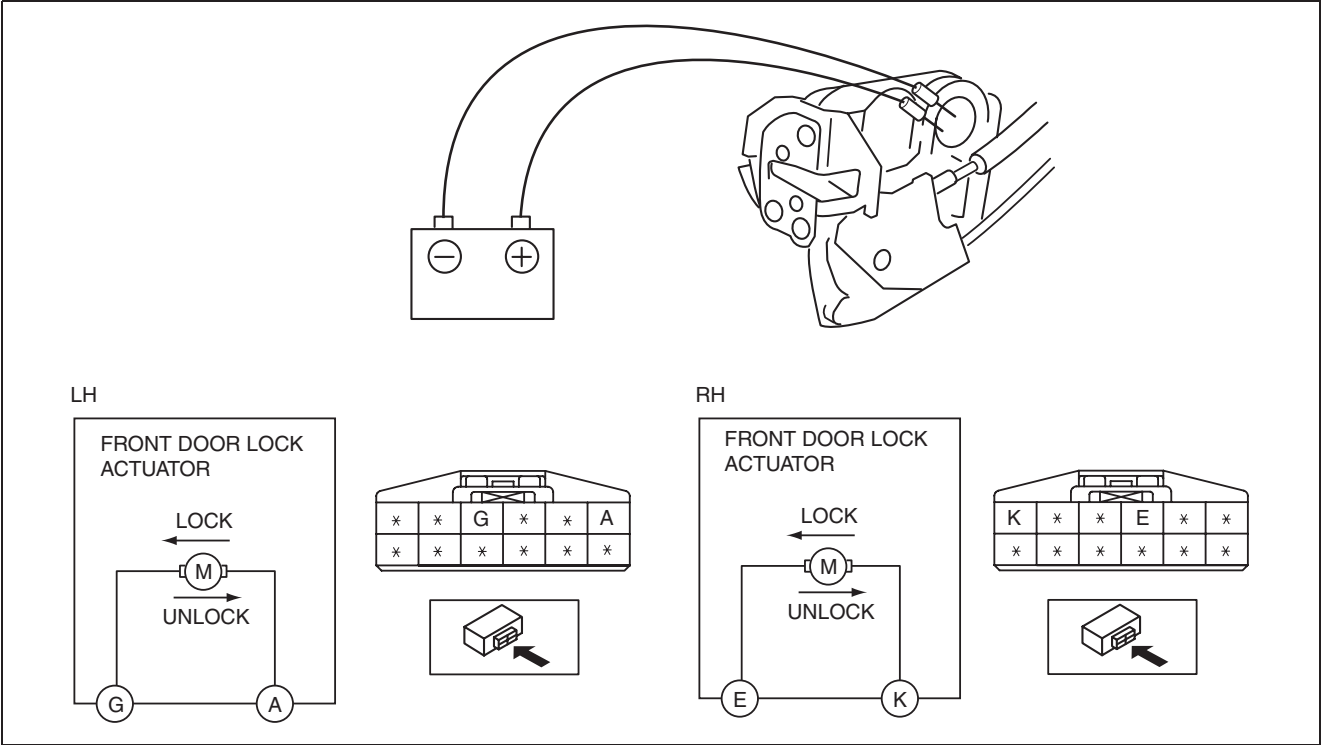
1. To access the glass installation bolt, position the rear door glass so that the distance from the top of the rear door glass to the upper part of the rear beltline molding is **approx. 210 mm {8.27 in}**.
2. Disconnect the negative battery cable.
3. Remove the following parts:
  - (1) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (2) Rear door speaker (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (3) Rear door glass (See 09-12-10 REAR DOOR GLASS REMOVAL/INSTALLATION [4SD].)
  - (4) Rear door module panel (See 09-11-20 REAR DOOR MODULE PANEL REMOVAL/INSTALLATION [4SD].)
  - (5) Rear door latch and lock actuator (See 09-14-79 REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)



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# SECURITY AND LOCKS

4. Apply battery positive voltage and connect the ground to each terminal, and then verify the operation.



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- If not as indicated in the table, replace the front door latch and lock actuator.

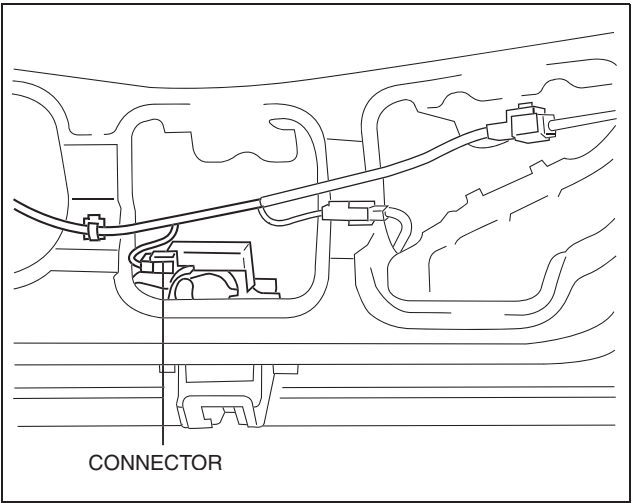
## Power Door Lock System

| Operation |    | Terminal |        |
|-----------|----|----------|--------|
|           |    | B+       | Ground |
| LOCK      | RH | K        | E      |
|           | LH | A        | G      |
| UNLOCK    | RH | E        | K      |
|           | LH | G        | A      |

## LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION

id091400433100

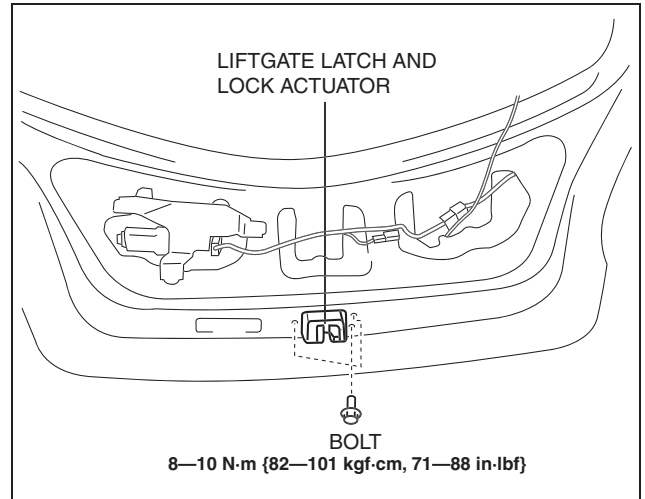
1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim.(See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION)
3. Disconnect the connector.



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## SECURITY AND LOCKS

4. Remove the bolts.
5. Remove the liftgate latch and lock actuator.
6. Install in the reverse order of removal.

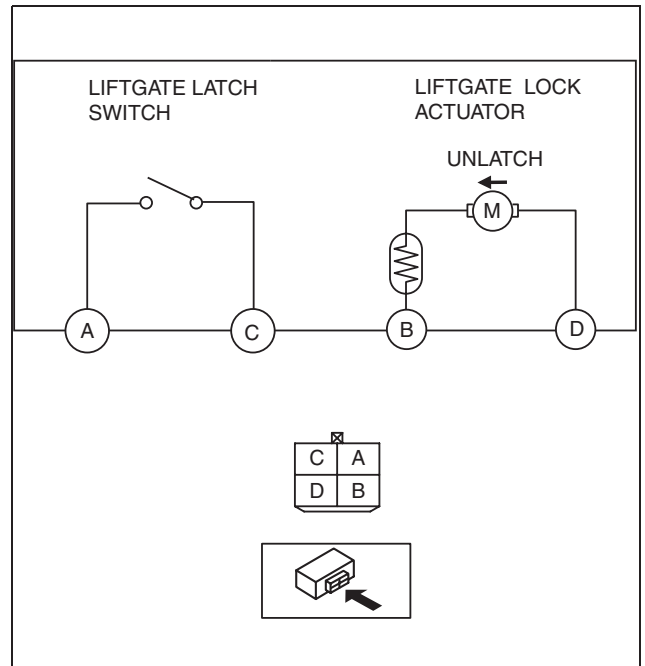


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### LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION

id091400434100

1. The following actuator and switch are integrated with the liftgate latch and lock actuator. Inspect the liftgate latch and lock actuator according to each inspection procedure for the following items.
  - Liftgate latch switch (See 09-14-90 LIFTGATE LATCH SWITCH INSPECTION.)
  - Liftgate lock actuator (See 09-14-89 LIFTGATE LOCK ACTUATOR INSPECTION.)



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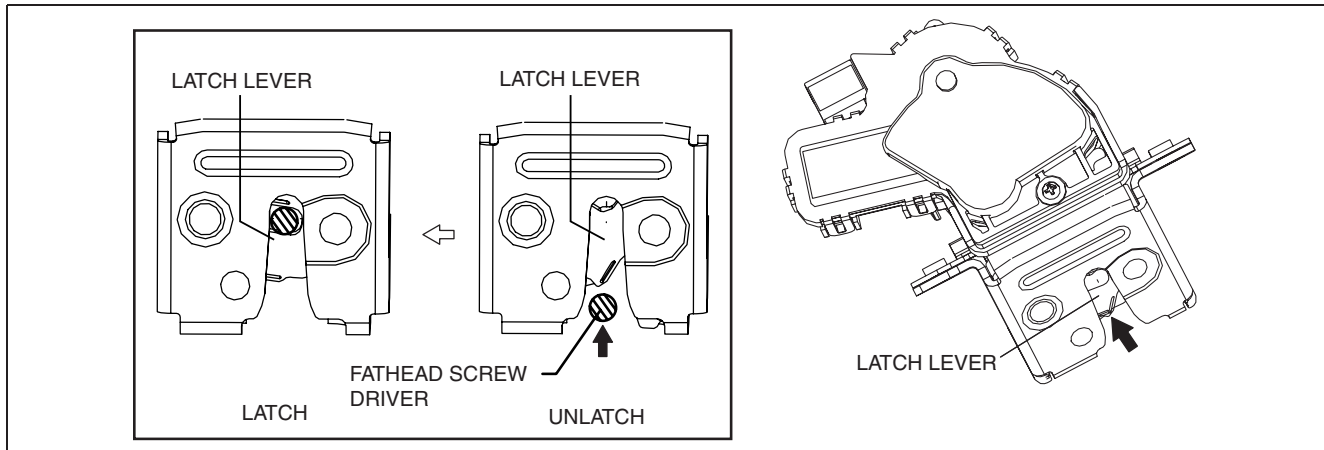
### LIFTGATE LOCK ACTUATOR INSPECTION

id091400433200

1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
3. Remove the liftgate latch and lock actuator. (See 09-14-88 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

4. Press the latch in using a flathead screwdriver to inspect the latch lever condition.

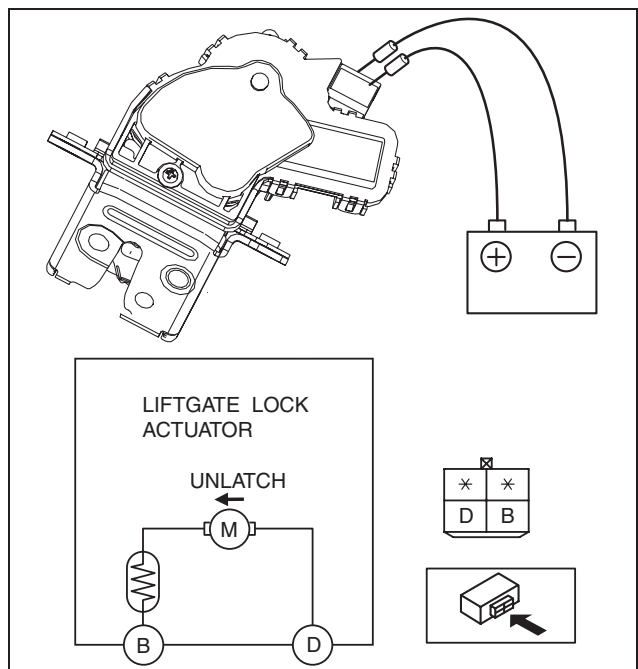


am2zzw0000260

5. Apply battery positive voltage and connect the ground to each terminal, and then verify the operation.

- If not as indicated in the table, replace the liftgate latch and lock actuator.

| Lock actuator operation | Terminal |        |
|-------------------------|----------|--------|
|                         | B+       | Ground |
| UNLATCH                 | D        | B      |



am2zzw0000069

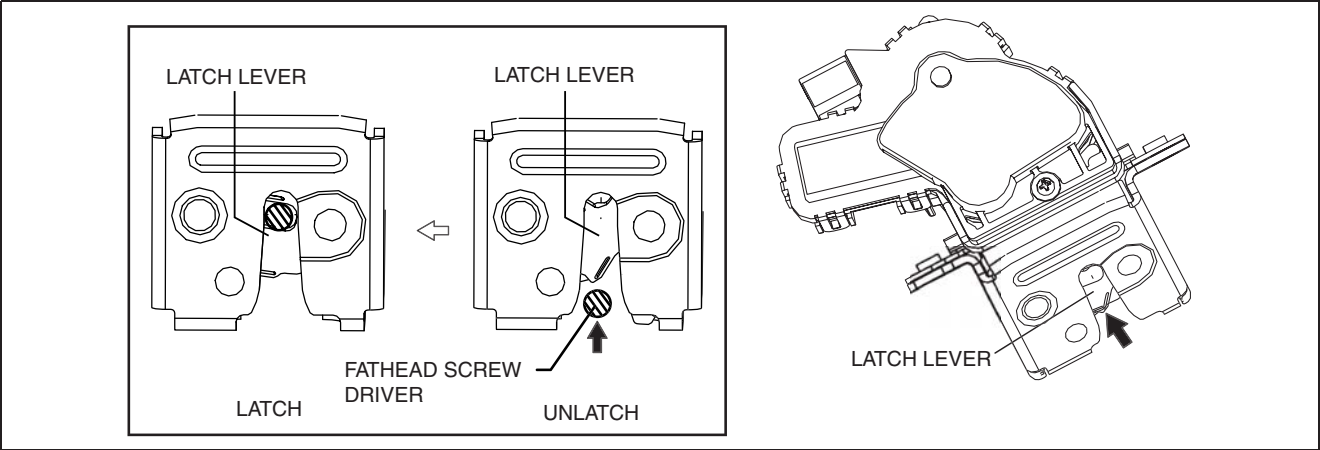
### LIFTGATE LATCH SWITCH INSPECTION

id091400433300

1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
3. Remove the liftgate latch and lock actuator. (See 09-14-88 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)

# SECURITY AND LOCKS

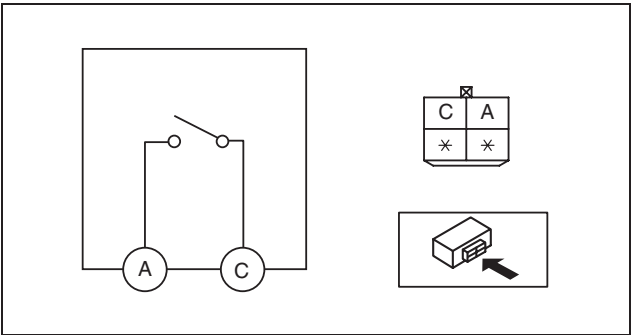
4. Press the latch in using a flathead screwdriver to inspect the latch lever condition.



am2zzw0000069

5. Verify that the continuity is as indicated in the table.

- If not as indicated in the table, replace the liftgate latch and lock actuator.



am2zzw0000379

○—○: CONTINUITY

| LATCH CONDITION        | TERMINAL |     |
|------------------------|----------|-----|
|                        | A        | C   |
| LATCH (LIFTGAE CLOSE)  |          |     |
| UNLATCH (LIFTGAE OPEN) | ○—○      | ○—○ |

am2zzw0000069

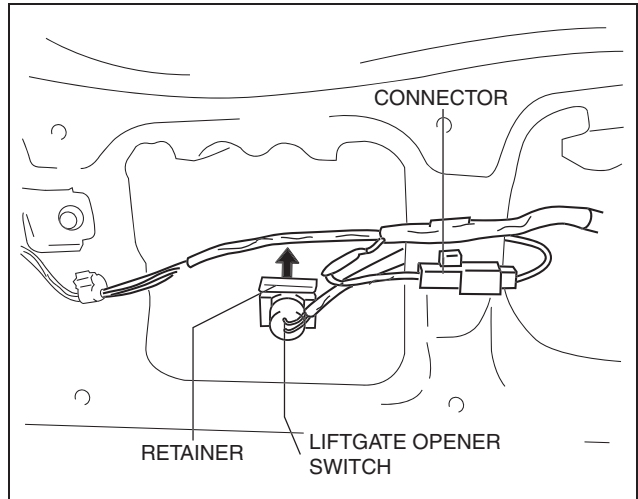
## LIFTGATE OPENER SWITCH REMOVAL/INSTALLATION

id09140044200

1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)

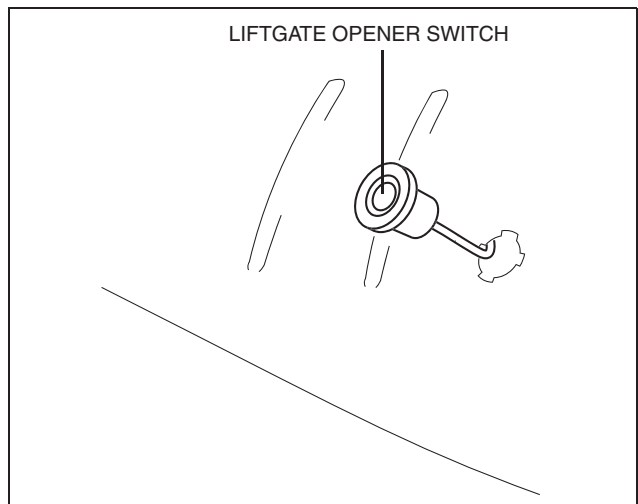
## SECURITY AND LOCKS

3. Disconnect the connector.
4. Pull out the retainer in the direction of the arrow.



am2zzw0000070

5. Remove the liftgate opener switch.
6. Install in the reverse order of removal.

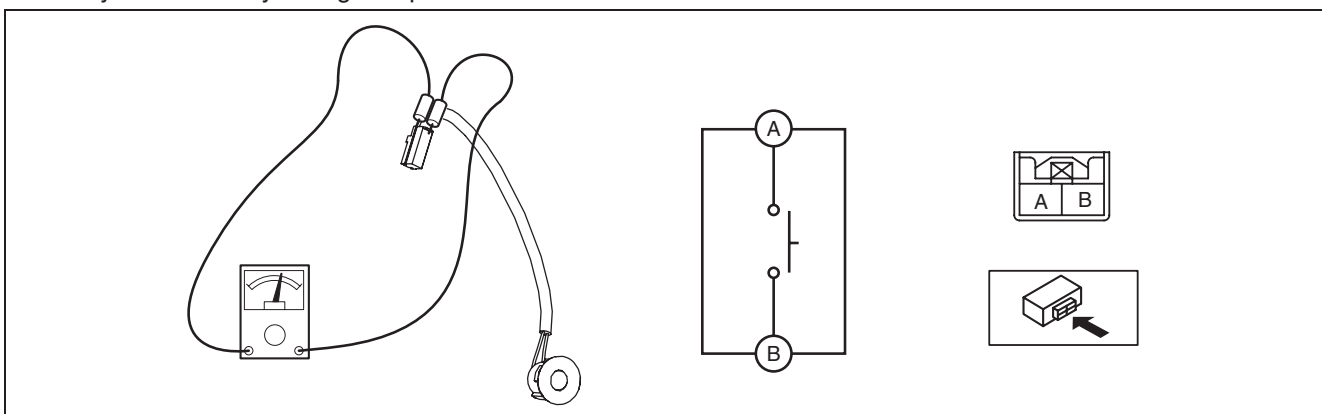


am2zzw0000070

### LIFTGATE OPENER SWITCH INSPECTION

id091400444300

1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
3. Remove the liftgate opener switch. (See 09-14-91 LIFTGATE OPENER SWITCH REMOVAL/INSTALLATION.)
4. Verify the continuity of liftgate opener switch terminals A and B.



am2zzw0000380

# SECURITY AND LOCKS

5. Verify that the continuity is as indicated in the table.
- If not as indicated in the table, replace the liftgate opener switch.

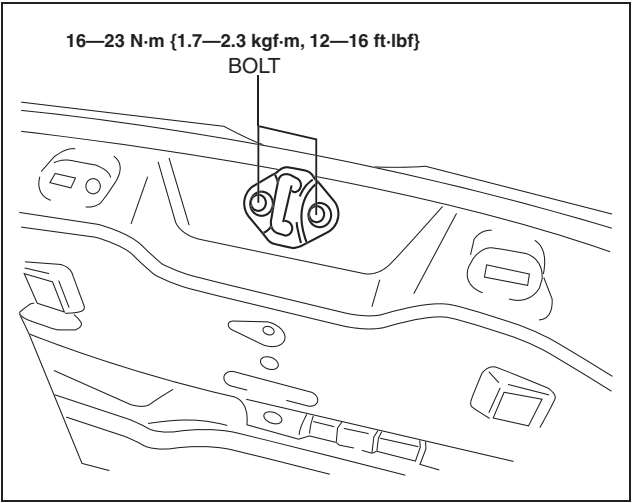
| ○—○: CONTINUITY |          |    |
|-----------------|----------|----|
| SWITCH POSITION | TERMINAL |    |
|                 | A        | B  |
| ON (PUSH)       | ○—       | —○ |
| OFF (RELEASE)   |          |    |

am2zzw0000070

## LIFTGATE LOCK STRIKER REMOVAL/INSTALLATION

id091400433400

1. Remove the trunk end trim. (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
2. Remove the bolts, then remove the liftgate lock striker.
3. Install in the reverse order of removal.
4. Adjust the liftgate lock striker. (See 09-11-30 LIFTGATE ADJUSTMENT.)



am2zzw0000069

## TRUNK LID LATCH MANUAL RELEASE PROCEDURE

id091400827100

### Note

- If the trunk lid cannot be opened due to a discharged battery or malfunction in the electrical system, it can be opened using the following procedure.

1. Fold down the rear seat back.

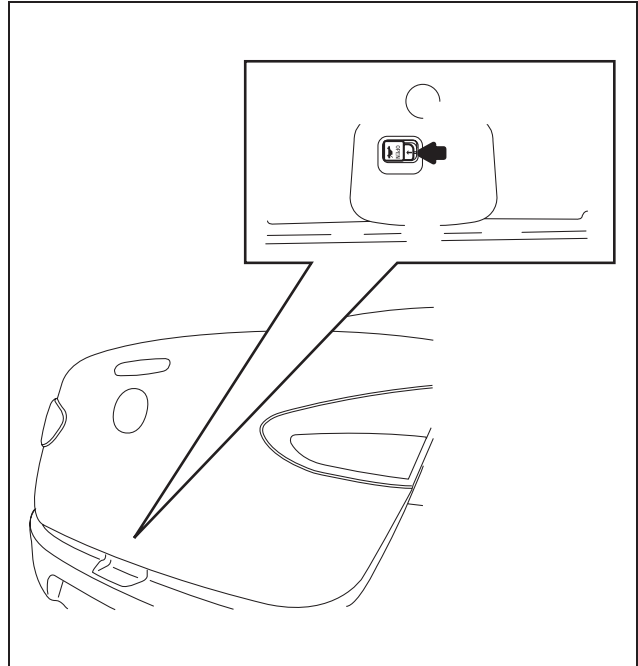
### Caution

- Wear gloves when performing the procedure. The body edge can injure bare hands.



## SECURITY AND LOCKS

2. Move the lever shown in the figure to the left to open the trunk lid.

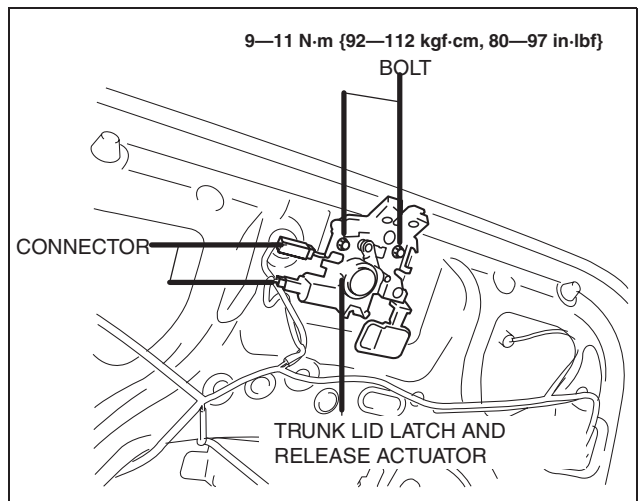


am2ccw0000014

### TRUNK LID LATCH AND RELEASE ACTUATOR REMOVAL/INSTALLATION

id091400828100

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Disconnect the connector.
4. Remove the bolts.
5. Remove the trunk lid latch and release actuator.
6. Install in the reverse order of removal.



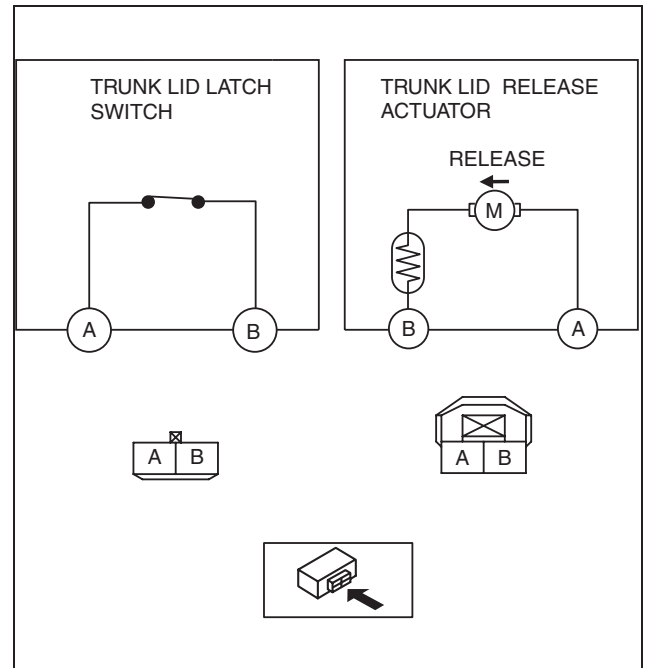
am2zzw0000512

### TRUNK LID LATCH AND RELEASE ACTUATOR INSPECTION

id091400457300

1. The following actuator and switch are integrated with the trunk lid latch and release actuator. Inspect the trunk lid latch and release actuator according to each inspection procedure for the following items.
  - Trunk lid latch switch (See 09-14-96 TRUNK LID LATCH SWITCH INSPECTION.)
  - Trunk lid release actuator (See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR INSPECTION.)

## SECURITY AND LOCKS

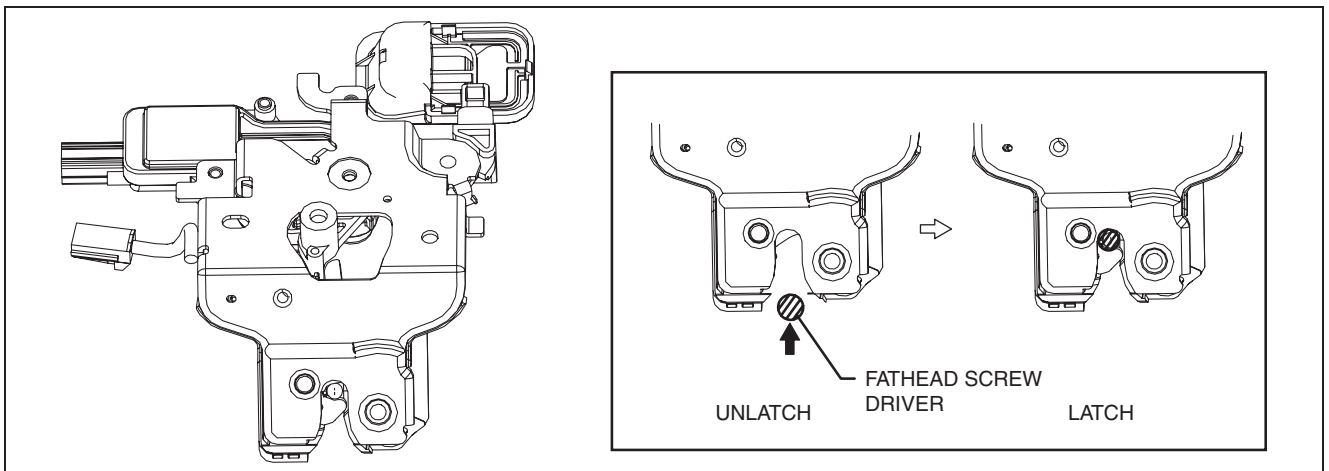


am2ccw0000027

### TRUNK LID RELEASE ACTUATOR INSPECTION

id091400457400

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Remove the trunk lid latch and release actuator. (See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR REMOVAL/INSTALLATION.)
4. Press the latch in using a flathead screwdriver to inspect the latch lever condition.



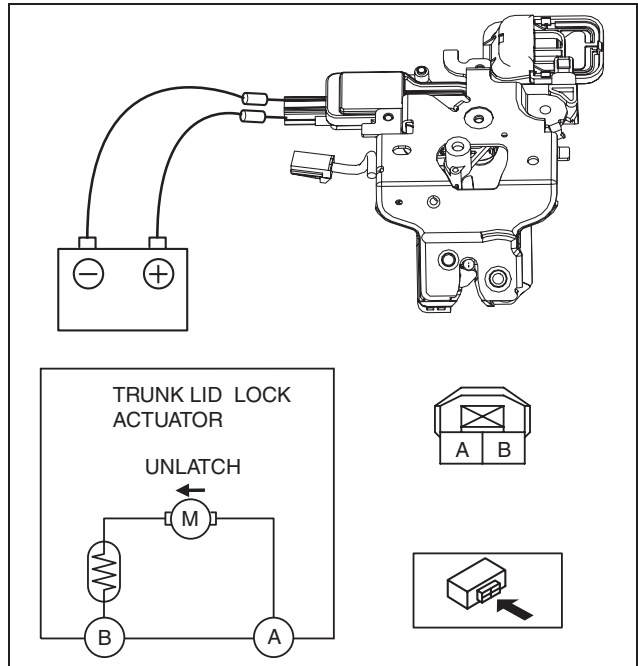
am2ccw0000015

## SECURITY AND LOCKS

5. Apply battery positive voltage and connect the ground to each terminal, and then verify the operation.

- If not as indicated in the table, replace the trunk lid latch and release actuator.

| release actuator operation | Terminal |        |
|----------------------------|----------|--------|
|                            | B+       | Ground |
| UNLATCH                    | A        | B      |

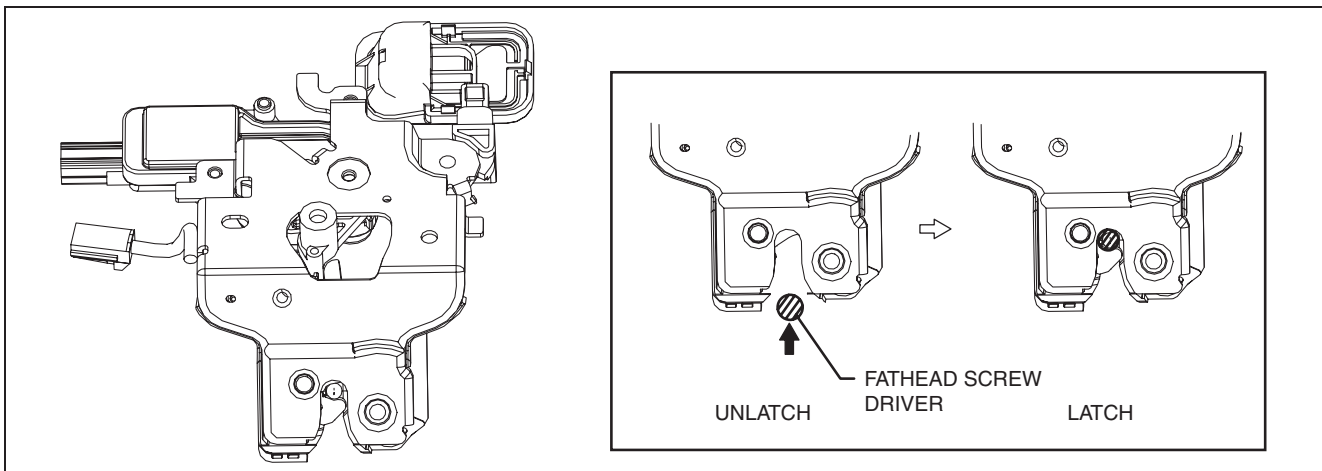


am2ccw0000015

### TRUNK LID LATCH SWITCH INSPECTION

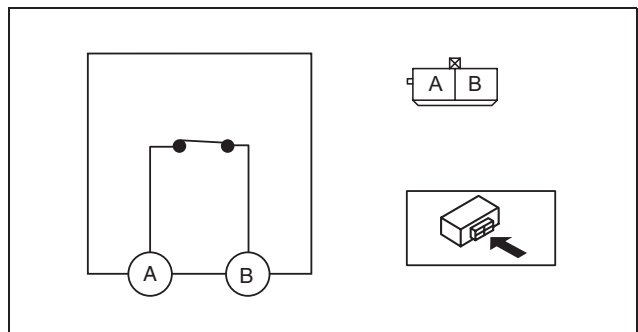
id091400811200

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Remove the trunk lid latch and release actuator. (See 09-14-94 TRUNK LID LATCH AND RELEASE ACTUATOR REMOVAL/INSTALLATION.)
4. Press the latch in using a flathead screwdriver to inspect the latch lever condition.



am2ccw0000014

5. Verify that the continuity is as indicated in the table.



am2ccw0000014

## SECURITY AND LOCKS

- If not as indicated in the table, replace the trunk lid latch and release actuator.

○—○: CONTINUITY

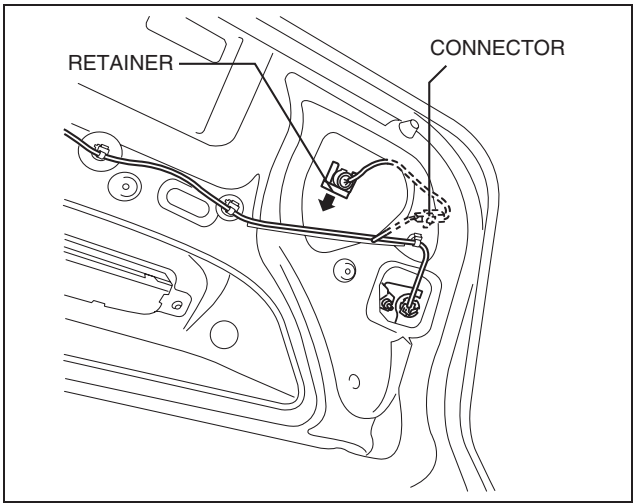
| LATCH CONDITION          | TERMINAL |     |
|--------------------------|----------|-----|
|                          | A        | B   |
| LATCH (TRUNK LID CLOSE)  |          |     |
| UNLATCH (TRUNK LID OPEN) | ○—○      | ○—○ |

am2ccw0000014

### TRUNK LID OPENER SWITCH REMOVAL/INSTALLATION

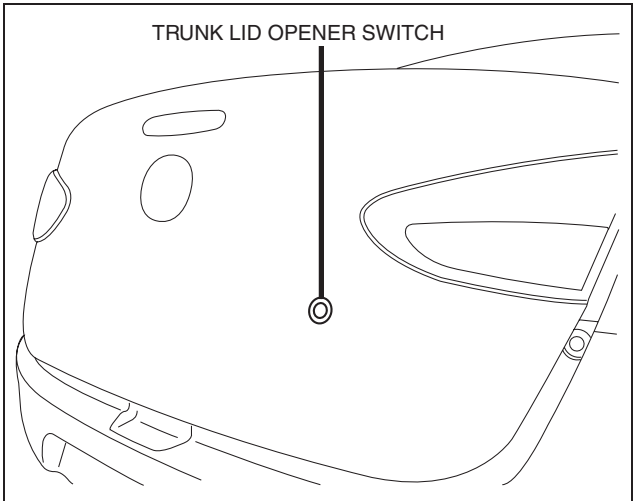
id091400445400

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Disconnect the connector.
4. Pull out the retainer in the direction of the arrow.



am2ccw0000015

5. Remove the trunk lid opener switch.
6. Install in the reverse order of removal.



am2ccw0000015

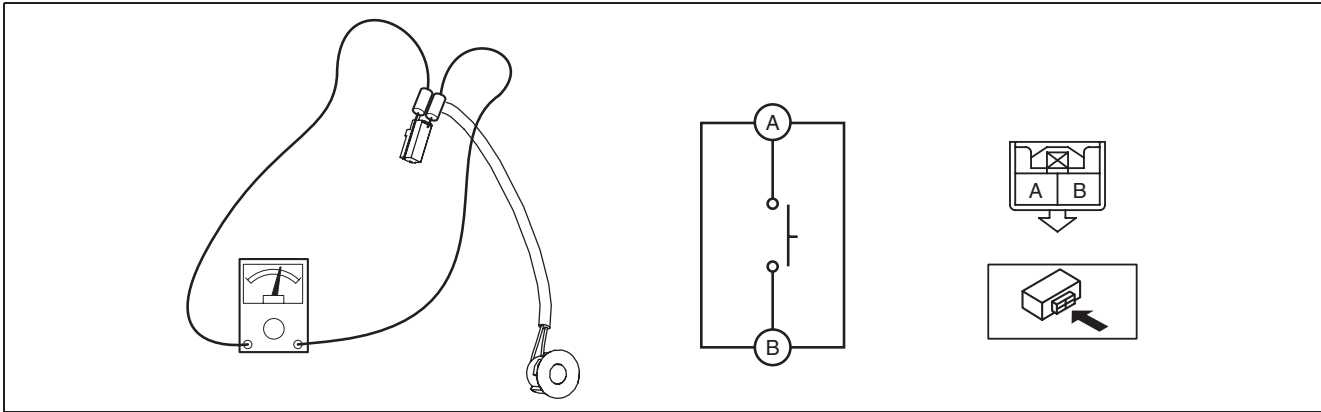
### TRUNK LID OPENER SWITCH INSPECTION

id091400445500

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Remove the trunk lid opener switch. (See 09-14-97 TRUNK LID OPENER SWITCH REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

- Verify the continuity of trunk lid opener switch terminals A and B.



am2ccw0000023

- Verify that the continuity is as indicated in the table.
  - If not as indicated in the table, replace the trunk lid opener switch.

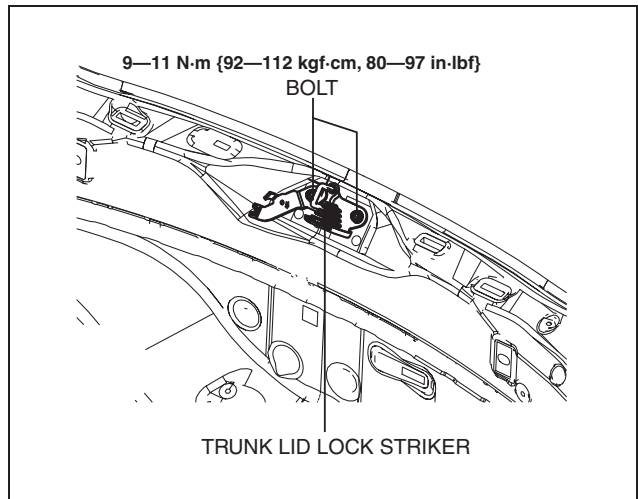
| ○—○: CONTINUITY |          |     |
|-----------------|----------|-----|
| SWITCH POSITION | TERMINAL |     |
|                 | A        | B   |
| ON (PUSH)       | ○—○      | ○—○ |
| OFF (RELEASE)   |          |     |

am2zzw0000070

### TRUNK LID LOCK STRIKER REMOVAL/INSTALLATION

id091400811300

- Remove the trunk end trim. (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
- Remove the bolts, then remove the trunk lid lock striker.
- Install in the reverse order of removal.
- Adjust the trunk lid lock striker. (See 09-10-6 TRUNK LID ADJUSTMENT [4SD].)



am2zzw0000513

### KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004384b0

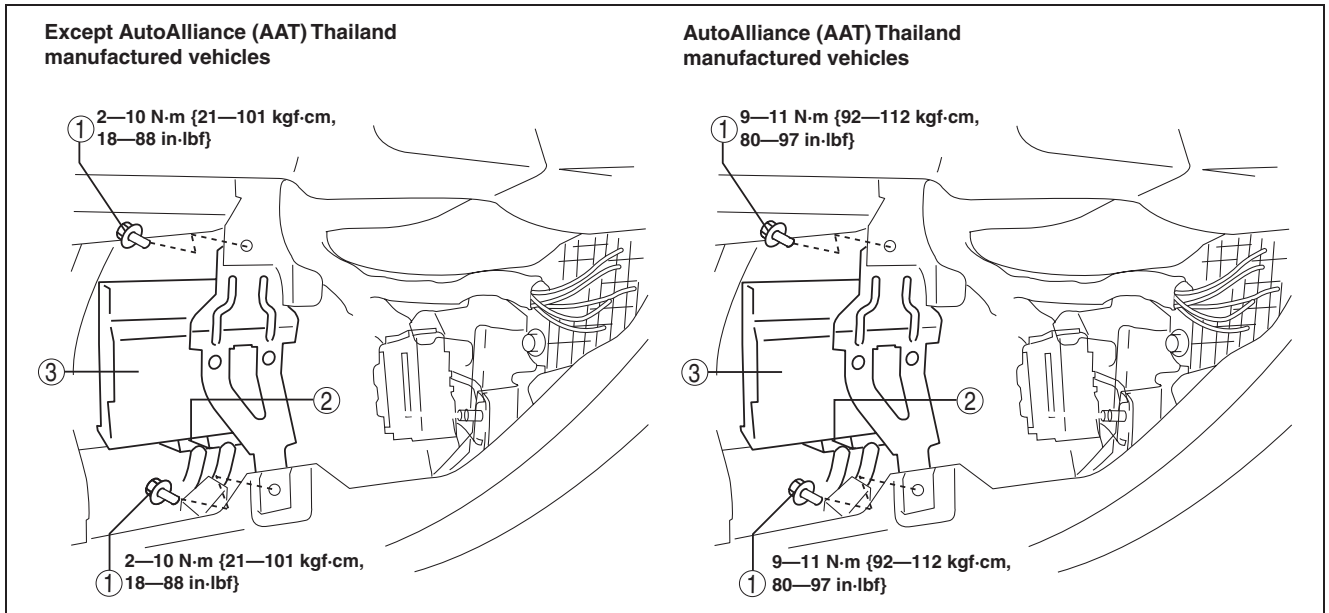
#### Note

- If the keyless control module is replaced, always perform the following procedure.
  - Configuration (See 09-14-102 KEYLESS CONTROL MODULE CONFIGURATION [ADVANCED KEYLESS AND START SYSTEM].)
  - Advanced key programming (See 09-14-123 ADVANCED KEY ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)
  - Steering lock unit programming (See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)
  - Immobilizer system-related parts programming (See 09-14-136 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM].)

- Disconnect the negative battery cable.

## SECURITY AND LOCKS

2. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
3. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.



am2zzw0000512

|   |                        |
|---|------------------------|
| 1 | Bolt                   |
| 2 | Connector              |
| 3 | Keyless control module |

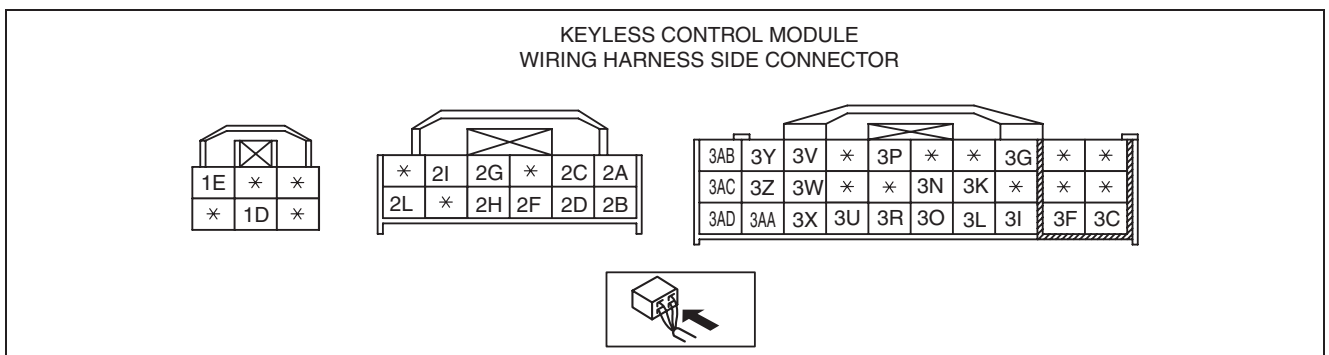
5. Install in the reverse order of removal.

### KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS AND START SYSTEM]

id0914004385b0

1. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
2. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
3. Measure the voltage according to the terminal voltage table.
  - If the voltages cannot be verified as indicated in the terminal voltage table, inspect the parts under “Inspection item(s)”.
  - If the system does not work normally even though the inspection items or related wiring harnesses do not have any malfunction, replace the keyless control module.

### Terminal Voltage Table (Reference)



am2zzw0000509

| Ter<br>min<br>al | Signal name  | Connected to | Measurement condition | Voltage (V) | Inspection item(s)               |
|------------------|--------------|--------------|-----------------------|-------------|----------------------------------|
| 1D               | Power supply | BCM          | Under any condition   | B+          | ROOM 15 A fuse<br>BCM<br>Battery |

## SECURITY AND LOCKS

| Ter<br>min<br>al | Signal name                                      | Connected to                                       | Measurement condition                                                                                      | Voltage (V)                             | Inspection item(s)                                     |
|------------------|--------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------|
| 1E               | Power supply                                     | P/W 20 A fuse                                      | Under any condition                                                                                        | B+                                      | P/W 20 A fuse<br>Battery                               |
| 2A               | Power supply                                     | MIRROR 7.5 A fuse                                  | Ignition switch at ACC position                                                                            | B+                                      | Ignition switch<br>MIRROR 7.5 A fuse<br>Battery        |
|                  |                                                  |                                                    | Ignition switch at LOCK position                                                                           | 1.0 or less                             |                                                        |
| 2B               | Rx-PATS*1                                        | Coil antenna                                       | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 2C               | Power supply                                     | ENG 10 A fuse                                      | Ignition switch is at ON position                                                                          | B+                                      | Ignition switch<br>ENG 10 A fuse<br>Battery            |
|                  |                                                  |                                                    | Ignition switch at LOCK position                                                                           | 1.0 or less                             |                                                        |
| 2D               | Tx-PATS*1                                        | Coil antenna                                       | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 2F               | BCM communication                                | BCM                                                | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 2G               | HS-CAN+                                          | -                                                  | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 2H               | Keyless entry communication                      | Keyless receiver                                   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 2I               | HS-CAN-                                          | -                                                  | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 2L               | Steering lock unit communication                 | Steering lock unit                                 | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 3C               | Keyless antenna (exterior, rear)                 | Keyless antenna (exterior, rear)                   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 3F               | Keyless antenna (LF)                             | Keyless antenna (LF)                               | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 3G               | Liftgate unlock input*2/Trunk lid unlock input*3 | Liftgate opener switch*2/Trunk lid opener switch*3 | Liftgate opener switch/Trunk lid opener switch pressed                                                     | 3.0                                     | Liftgate opener switch*2/<br>Trunk lid opener switch*3 |
|                  |                                                  |                                                    | Liftgate opener switch/Trunk lid opener switch released                                                    | 4.7                                     |                                                        |
| 3I               | Keyless antenna (interior, rear)                 | Keyless antenna (interior, rear)                   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 3K               | Keyless beeper power supply                      | Keyless beeper                                     | Exterior keyless beeper sounds (transmitter lock button pressed)                                           | Wave pattern (See 09-14-101 Pattern 1.) | Keyless beeper                                         |
|                  |                                                  |                                                    | Exterior keyless beeper sounds (transmitter unlock button pressed)                                         | Wave pattern (See 09-14-102 Pattern 2.) |                                                        |
|                  |                                                  |                                                    | Other                                                                                                      | 1.0 or less                             |                                                        |
| 3L*3             | Keyless antenna (interior, center)               | Keyless antenna (interior, center)                 | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 3N               | GND                                              | Body ground                                        | Under any condition                                                                                        | 1.0 or less                             | Ground                                                 |
| 3O               | Keyless antenna (RF)                             | Keyless antenna (RF)                               | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |
| 3P               | Lock input                                       | Door lock-link switch (driver's door)              | Driver's side door lock switch at LOCK                                                                     | 1.0 or less                             | Door lock-link switch                                  |
|                  |                                                  |                                                    | Driver's side door lock switch at UNLOCK                                                                   | Wave pattern (See 09-14-102 Pattern 3.) |                                                        |
| 3R               | Keyless antenna (interior, front)                | Keyless antenna (interior, front)                  | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                         |                                                        |

## SECURITY AND LOCKS

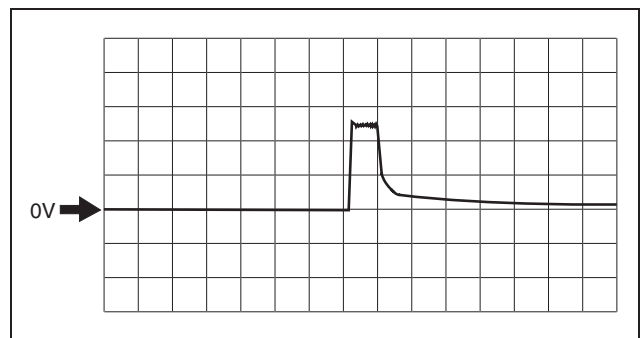
| Ter<br>min<br>al | Signal name                        | Connected to                       | Measurement condition                                                                                      | Voltage (V) | Inspection item(s)      |
|------------------|------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------|-------------|-------------------------|
| 3U               | Request switch input (RF)          | Request switch (RF)                | Outer handle (RF) side request switch ON                                                                   | 1.0 or less | Front outer handle (RF) |
|                  |                                    |                                    | Outer handle (RF) side request switch OFF                                                                  | B+          |                         |
| 3V               | Start knob (push switch)           | Steering lock unit                 | Push switch in pressed condition                                                                           | B+          | Steering lock unit      |
|                  |                                    |                                    | Other                                                                                                      | 1.0 or less |                         |
| 3W               | Key reminder switch                | Steering lock unit                 | Key inserted in steering lock                                                                              | B+          | Steering lock unit      |
|                  |                                    |                                    | Other                                                                                                      | 1.0 or less |                         |
| 3X               | Request switch input (LF)          | Request switch (LF)                | Outer handle (LF) side request switch ON                                                                   | 1.0 or less | Front outer handle (LF) |
|                  |                                    |                                    | Outer handle (LF) side request switch OFF                                                                  | B+          |                         |
| 3Y*3             | Keyless antenna (interior, center) | Keyless antenna (interior, center) | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                         |
| 3Z               | Keyless antenna (interior, rear)   | Keyless antenna (interior, rear)   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                         |
| 3AA              | Keyless antenna (interior, front)  | Keyless antenna (interior, front)  | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                         |
| 3AB              | Keyless antenna (LF)               | Keyless antenna (LF)               | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                         |
| 3AC              | Keyless antenna (exterior, rear)   | Keyless antenna (exterior, rear)   | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                         |
| 3AD              | Keyless antenna (RF)               | Keyless antenna (RF)               | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                         |

\*1 : With immobilizer system

\*2 : 3HB, 5HB

\*3 : 4SD

### Generated pulse (reference) Pattern 1



am2zzw0000510

- Terminal:
  - Keyless beeper power supply: 3K (+) ↔ body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 100 ms/DIV (X), DC range



## SECURITY AND LOCKS

### Pattern 2

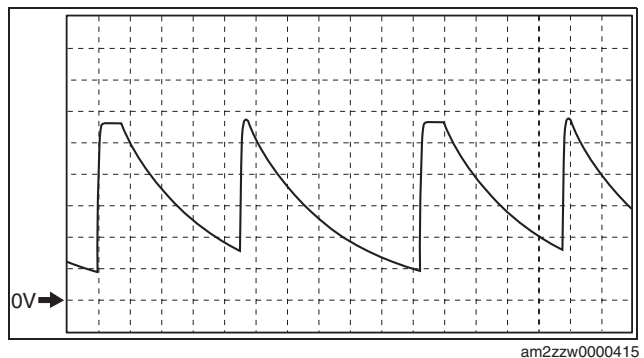


- Terminal:
  - Keyless beeper power supply: 3K (+)  $\leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 100 ms/DIV (X), DC range

### Pattern 3

#### Note

- A wave pattern is displayed when keyless control module terminal 3P is measured using an oscilloscope. However, it may overlap with the output wave pattern of BCM terminal 7K which is displayed simultaneously.
- Terminal:
  - Lock input (Door lock-link switch (driver's door): 3P (+)  $\leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

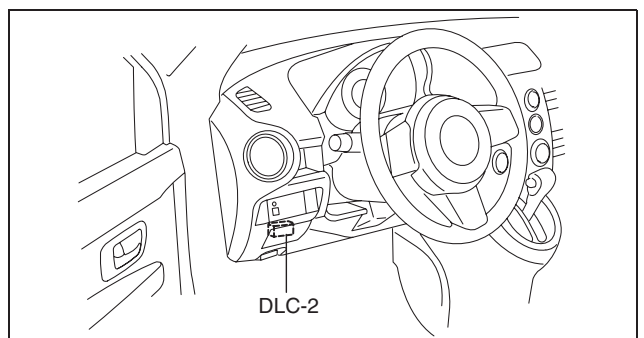


## KEYLESS CONTROL MODULE CONFIGURATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004394b0

#### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the KEYLESS CONTROL MODULE CONFIGURATION.
1. Connect the M-MDS to the DLC-2.
  2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
    - When using the IDS (laptop PC)
      1. Select "Module Programing".
  3. Then, select items from the screen menu in the following order.
    1. Select "Programmable Module Installation".
    2. Select "RKE".
  4. Perform the configuration according to the directions on the screen.



## THEFT-DETERRENT SIREN REMOVAL/INSTALLATION

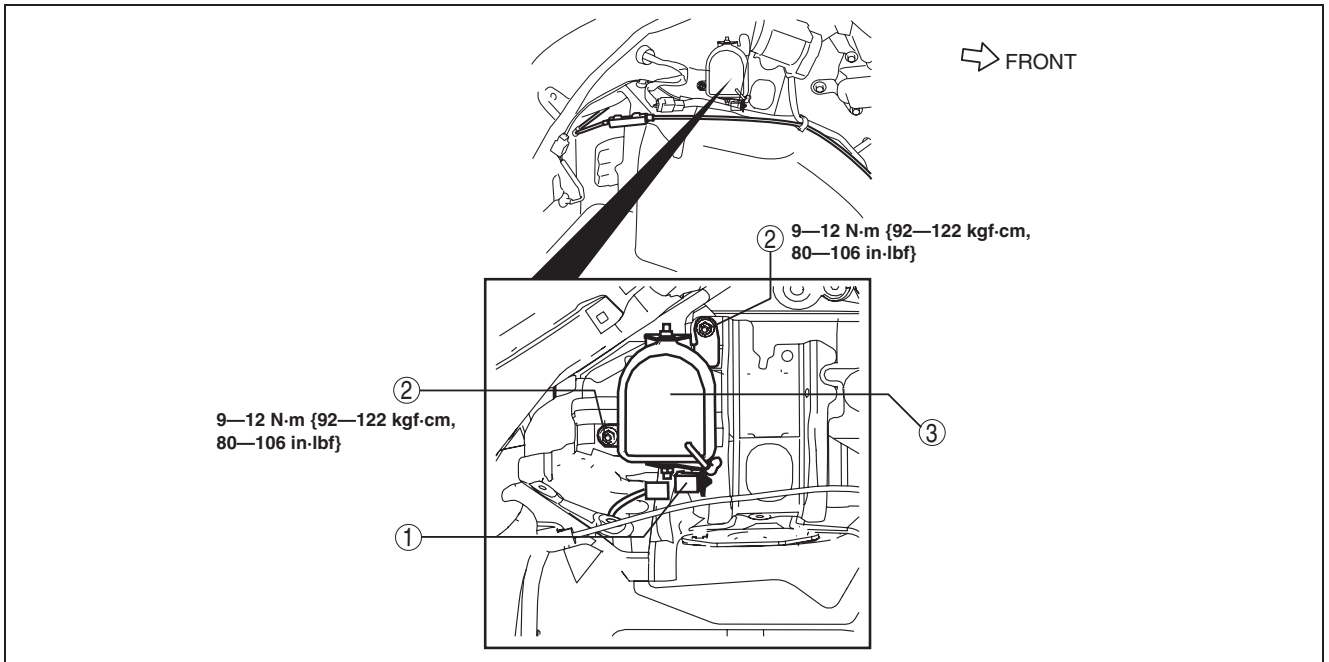
id091400809500

### 5HB

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Rear scuff plate (passenger's side) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

- (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
- (5) Trunk side trim (passenger's side) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



am2zzw0000044

|   |                       |
|---|-----------------------|
| 1 | Connector             |
| 2 | Nut                   |
| 3 | Theft-deterrent siren |

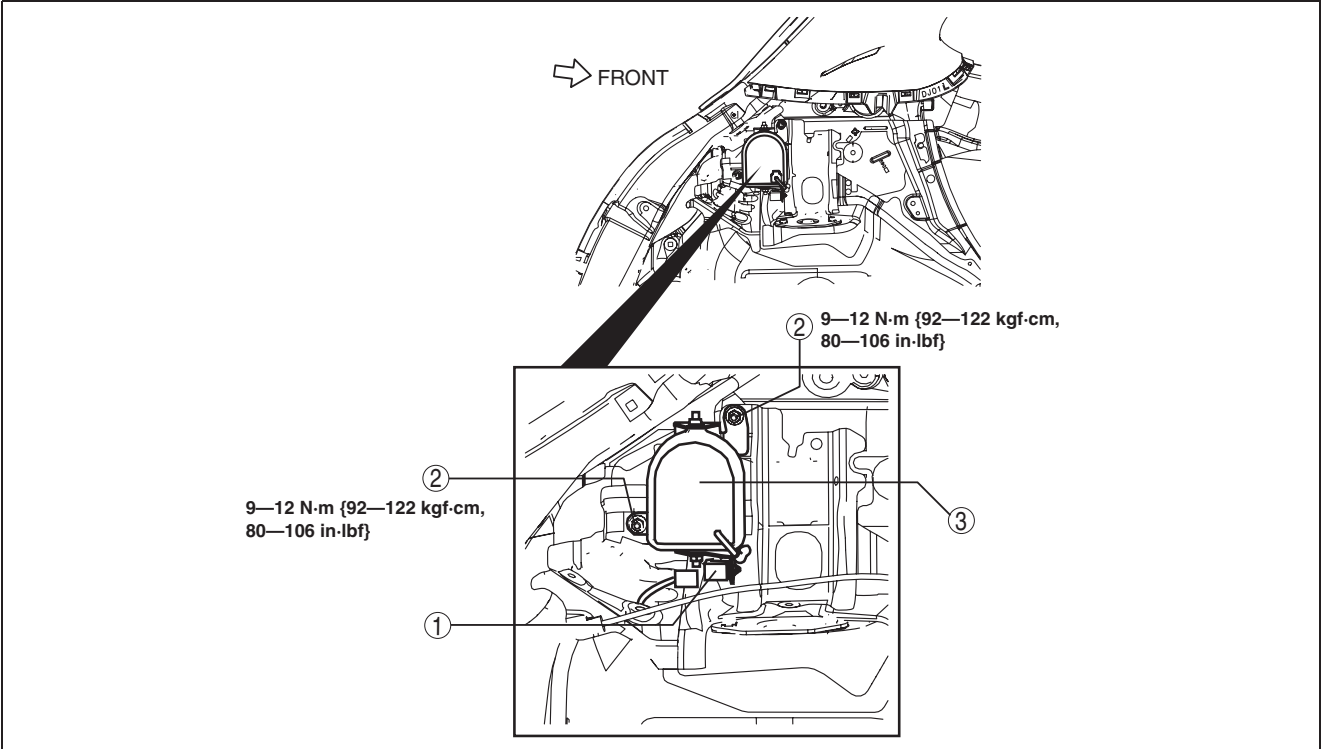
4. Install in the reverse order of removal.

### 3HB

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles])
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (5) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)

## SECURITY AND LOCKS

3. Remove in the order indicated in the table.



am2zzw0000328

|   |                       |
|---|-----------------------|
| 1 | Connector             |
| 2 | Nut                   |
| 3 | Theft-deterrent siren |

4. Install in the reverse order of removal.

### THEFT-DETERRENT SIREN INSPECTION

id091400819500

#### 5HB

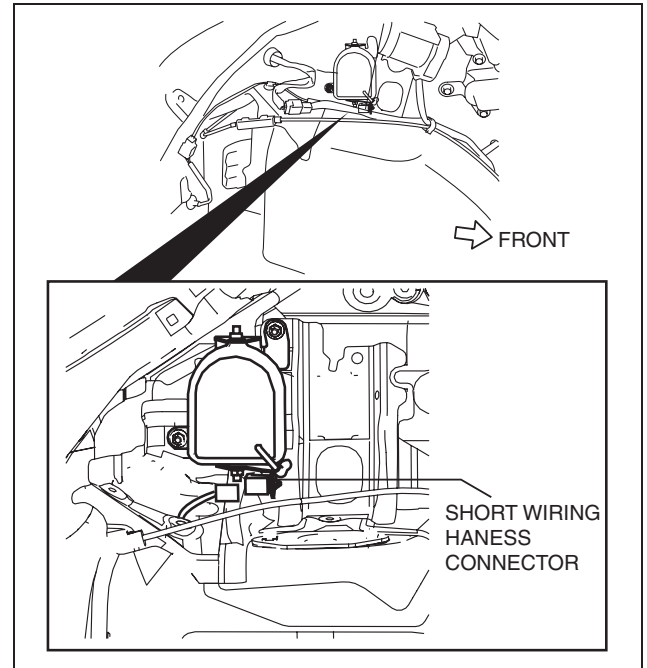
- Remove the following parts:
  - Rear scuff plate (passenger's side) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - Trunk side trim (passenger's side) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
- Remove the theft-deterrent siren with the connector connected.

## SECURITY AND LOCKS

- Measure the theft-deterrent siren terminal voltage using the short wiring harness connector in the position shown in the figure.

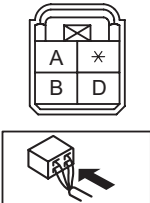
### Note

- The theft-deterrent siren cannot be connected to a tester due to its water-resistance processing, therefore the short wiring harness connector is used for measuring the terminal voltage.
- If the terminal voltage is not as indicated in the table, inspect the short wiring harness connector for continuity. (See 09-14-105 Terminal Voltage Table (Reference).) If the short wiring harness connector is normal, inspect the parts under "Inspection items".
  - If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the theft-deterrent siren.



am2zzw0000157

### Terminal Voltage Table (Reference)

| THEFT-DETERRENT SIREN<br>SHORT WIRING<br>HANESS CONNECTOR                           |  |  |  |  |  |
|-------------------------------------------------------------------------------------|--|--|--|--|--|
|  |  |  |  |  |  |

am2zzw0000348

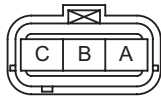
| Terminal | Signal name  | Connected to                   | Measurement condition                                                                                      | Voltage (V) | Inspection item(s) |
|----------|--------------|--------------------------------|------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| A        | Power supply | BCM                            | Under any condition                                                                                        | B+          | BCM                |
| B        | DATA         | theft-deterrent control module | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                    |
| D        | Ground       | Body ground                    | Under any condition                                                                                        | 1.0 or less | Ground             |

### Continuity Inspection Of Short Wiring Harness Connector

- Verify that the continuity between the short wiring harness connector terminals is as indicated in the table.
  - If the continuity is not as indicated in the table, replace the short wiring harness connector.

## SECURITY AND LOCKS

THEFT-DETERRENT SIREN  
WIRING HARNESS SIDE CONNECTOR



THEFT-DETERRENT SIREN  
SHORT WIRING  
HANESS CONNECTOR



○—○ : Continuity

| Test condition      | THEFT-DETERRENT SIREN CONNECTOR SIDE |     |     | SHORT HARNESS CONNECTOR SIDE |     |     |
|---------------------|--------------------------------------|-----|-----|------------------------------|-----|-----|
|                     | C                                    | B   | A   | A                            | B   | D   |
| Under any condition |                                      |     | ○—○ |                              |     |     |
|                     |                                      | ○—○ |     |                              | ○—○ |     |
|                     | ○—○                                  |     |     |                              |     | ○—○ |

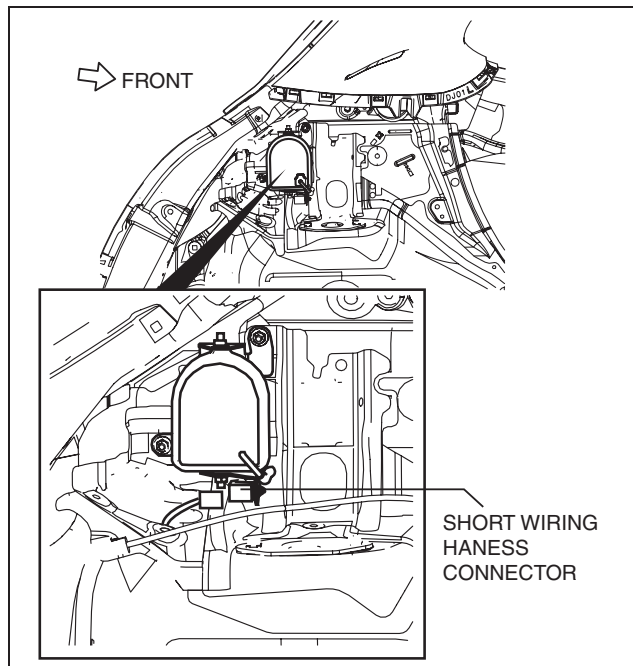
am2zzw0000044

### 3HB

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (5) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
3. Remove the theft-deterrent siren with the connector connected.
4. Measure the theft-deterrent siren terminal voltage using the short wiring harness connector in the position shown in the figure.

#### Note

- The theft-deterrent siren cannot be connected to a tester due to its water-resistance processing, therefore the short wiring harness connector is used for measuring the terminal voltage.
- If the terminal voltage is not as indicated in the table, inspect the short wiring harness connector for continuity. (See 09-14-105 Terminal Voltage Table (Reference).) If the short wiring harness connector is normal, inspect the parts under "Inspection items".
  - If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the theft-deterrent siren.



am2zzw0000478

## SECURITY AND LOCKS

### Terminal Voltage Table (Reference)

|                                                                                                                                                                                                                                        |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| <p>THEFT-DETERRENT SIREN<br/>SHORT WIRING<br/>HANESS CONNECTOR</p>   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|

am2zzw0000348

| Terminal | Signal name  | Connected to                   | Measurement condition                                                                                      | Voltage (V) | Inspection item(s) |
|----------|--------------|--------------------------------|------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| A        | Power supply | BCM                            | Under any condition                                                                                        | B+          | BCM                |
| B        | DATA         | theft-deterrent control module | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                    |
| D        | Ground       | Body ground                    | Under any condition                                                                                        | 1.0 or less | Ground             |

### Continuity Inspection Of Short Wiring Harness Connector

- Verify that the continuity between the short wiring harness connector terminals is as indicated in the table.
  - If the continuity is not as indicated in the table, replace the short wiring harness connector.

THEFT-DETERRENT SIREN  
WIRING HARNESS SIDE CONNECTOR

THEFT-DETERRENT SIREN  
SHORT WIRING  
HANESS CONNECTOR

○—○ : Continuity

| Test condition      | THEFT-DETERRENT SIREN CONNECTOR SIDE |     |     | SHORT HARNESS CONNECTOR SIDE |     |     |
|---------------------|--------------------------------------|-----|-----|------------------------------|-----|-----|
|                     | C                                    | B   | A   | A                            | B   | D   |
| Under any condition |                                      |     | ○—○ |                              |     |     |
|                     |                                      | ○—○ |     |                              | ○—○ |     |
|                     | ○—○                                  |     |     |                              |     | ○—○ |

am2zzw0000044

### THEFT-DETERRENT HORN REMOVAL/INSTALLATION

id091400525100

#### 5HB

- Disconnect the negative battery cable.
- Remove the following parts:
  - Rear scuff plate (LH) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)

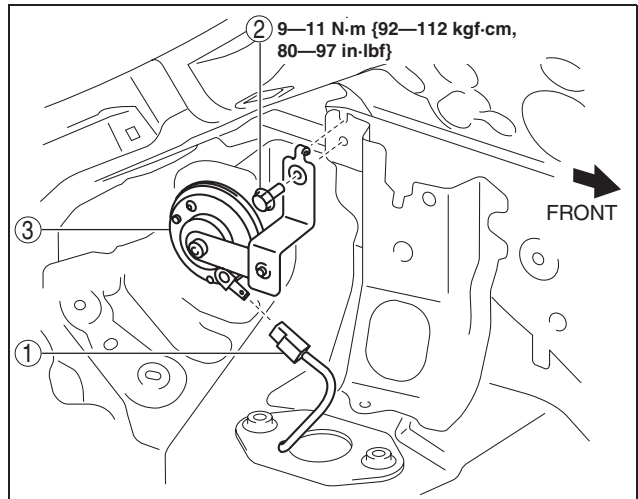
## SECURITY AND LOCKS

(5) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

3. Remove in the order indicated in the table.

|   |                       |
|---|-----------------------|
| 1 | Connector             |
| 2 | Bolt                  |
| 3 | Theft-deterrent siren |

4. Install in the reverse order of removal.



am2zzw0000446

### 4SD

1. Disconnect the negative battery cable.

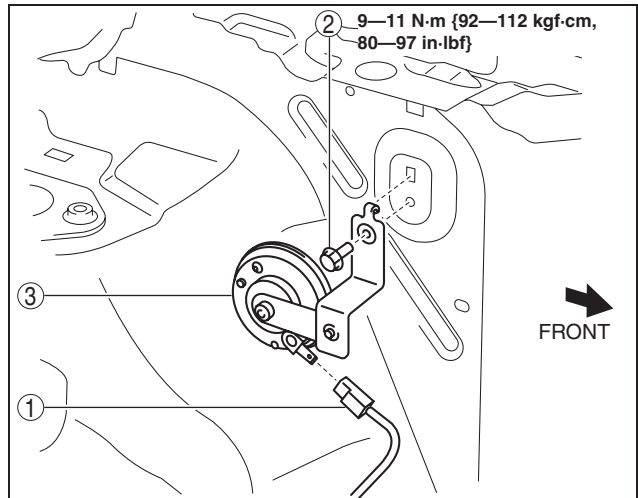
2. Remove the following parts:

- (1) Rear scuff plate (LH) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
- (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
- (3) Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
- (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
- (5) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

3. Remove in the order indicated in the table.

|   |                       |
|---|-----------------------|
| 1 | Connector             |
| 2 | Bolt                  |
| 3 | Theft-deterrent siren |

4. Install in the reverse order of removal.



am2zzw0000494

### KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004383b0

1. Disconnect the negative battery cable.

2. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)

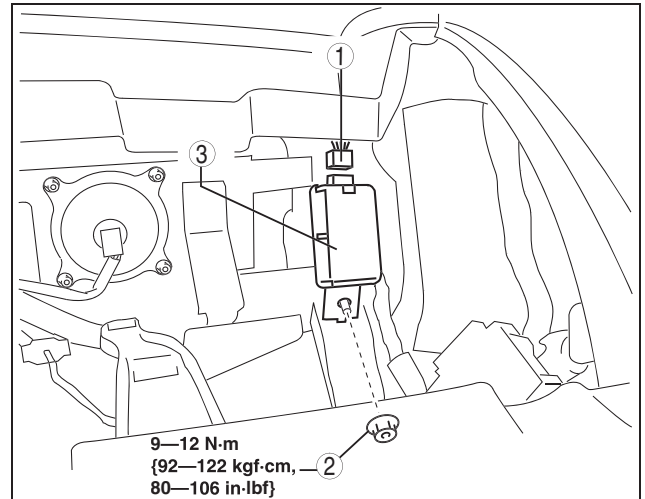
3. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

4. Remove in the order indicated in the table.

|   |                  |
|---|------------------|
| 1 | Connector        |
| 2 | Nut              |
| 3 | Keyless receiver |

5. Install in the reverse order of removal.



am2zzw0000054

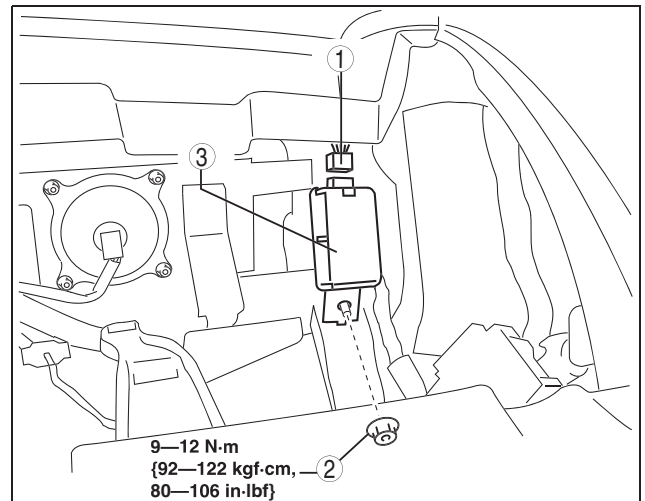
### KEYLESS RECEIVER REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM]

id0914004383b3

1. Disconnect the negative battery cable.
2. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
3. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

|   |                  |
|---|------------------|
| 1 | Connector        |
| 2 | Nut              |
| 3 | Keyless receiver |

5. Install in the reverse order of removal.



am2zzw0000054

### KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS AND START SYSTEM]

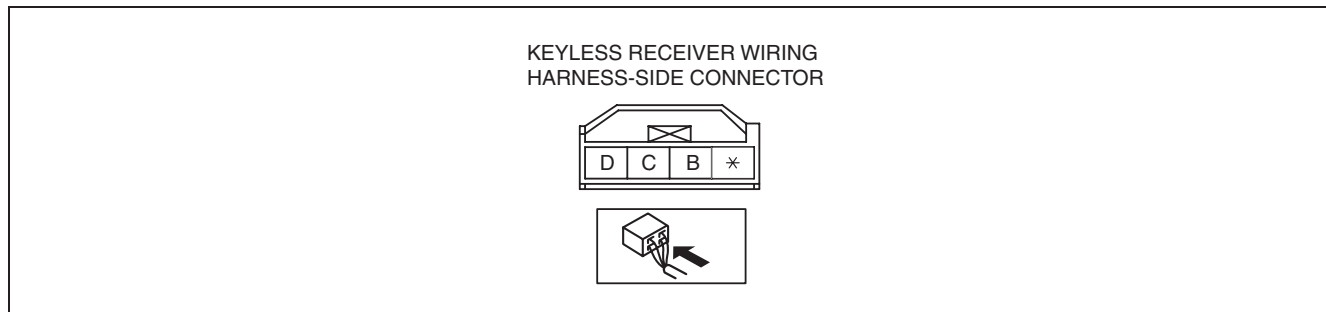
id0914004378b0

1. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
2. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
3. Measure the voltage according to the terminal voltage table.
  - If the voltages cannot be verified as indicated in the terminal voltage table, inspect the parts under "Inspection item(s)".
    - If the system does not work normally even though the parts or related wiring harnesses do not have any malfunction, replace the keyless receiver.
4. Disconnect the negative battery cable.



## SECURITY AND LOCKS

**Terminal Voltage Table (Reference)**



am2zzw0000379

| Terminal | Signal name  | Connected to           | Measurement condition                                                                                      | Voltage (V)/ | Inspection item(s)                                                                             |
|----------|--------------|------------------------|------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------|
| B        | GND          | Body ground            | Under any condition                                                                                        | 1.0 or less  | Ground                                                                                         |
| C        | DATA         | Keyless control module | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |              | Keyless control module                                                                         |
| D        | Power supply | BCM                    | Under any condition                                                                                        | B+           | <ul style="list-style-type: none"> <li>ROOM 15 A fuse</li> <li>BCM</li> <li>Battery</li> </ul> |

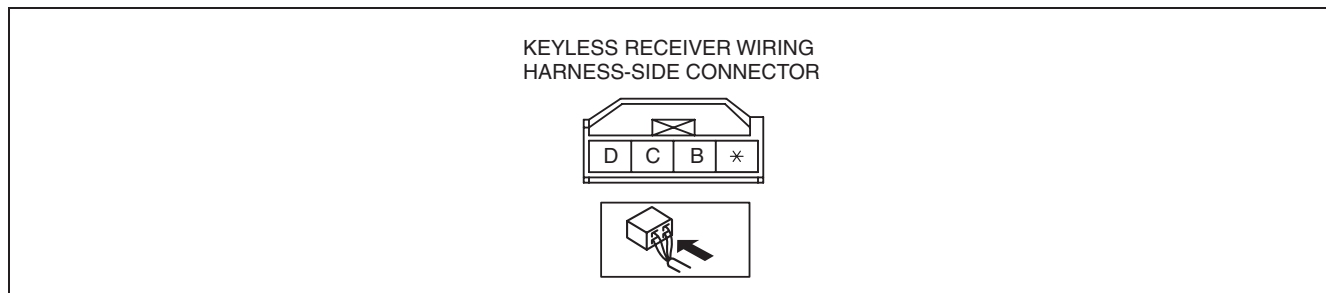
### KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM]

id0914004378b3

#### 4-pin Connector Type

1. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
2. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
3. Measure the voltage according to the terminal voltage table.
  - If the voltages cannot be verified as indicated in the terminal voltage table, inspect the parts under "Inspection item(s)".
    - If the system does not work normally even though the parts or related wiring harnesses do not have any malfunction, replace the keyless receiver.
4. Disconnect the negative battery cable.

#### Terminal voltage table (reference)



am2zzw0000379

| Terminal | Signal name  | Connected to | Measurement condition                                                                                      | Voltage (V) | Inspection item(s)                                                                             |
|----------|--------------|--------------|------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------|
| B        | GND          | Body ground  | Under any condition                                                                                        | 1.0 or less | Ground                                                                                         |
| C        | DATA         | BCM          | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             | BCM                                                                                            |
| D        | Power supply | BCM          | Under any condition                                                                                        | B+          | <ul style="list-style-type: none"> <li>ROOM 15 A fuse</li> <li>BCM</li> <li>Battery</li> </ul> |

#### 6-pin Connector Type

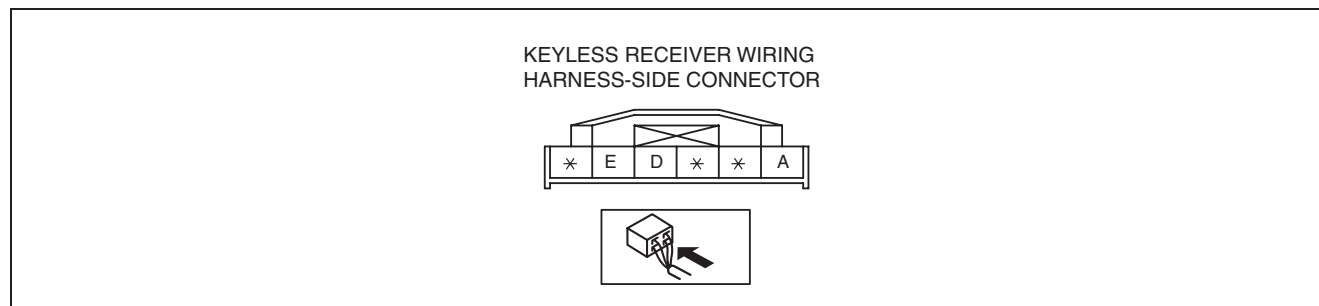
1. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
2. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/

## SECURITY AND LOCKS

### INSTALLATION.)

3. Measure the voltage according to the terminal voltage table.
  - If the voltages cannot be verified as indicated in the terminal voltage table, inspect the parts under "Inspection item(s)".
    - If the system does not work normally even though the parts or related wiring harnesses do not have any malfunction, replace the keyless receiver.
4. Disconnect the negative battery cable.

### Terminal voltage table (reference)



am2zzw0000384

| Ter<br>min<br>al | Signal name  | Connected to | Measurement condition                                                                                      | Voltage (V) | Inspection item(s)                                                                                   |
|------------------|--------------|--------------|------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------|
| A                | Power supply | BCM          | Under any condition                                                                                        | B+          | <ul style="list-style-type: none"> <li>• ROOM 15 A fuse</li> <li>• BCM</li> <li>• Battery</li> </ul> |
| D                | DATA         | BCM          | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             | BCM                                                                                                  |
| E                | GND          | Body ground  | Under any condition                                                                                        | 1.0 or less | Ground                                                                                               |

### THEFT-DETERRENT CONTROL MODULE REMOVAL/INSTALLATION

id091400820800

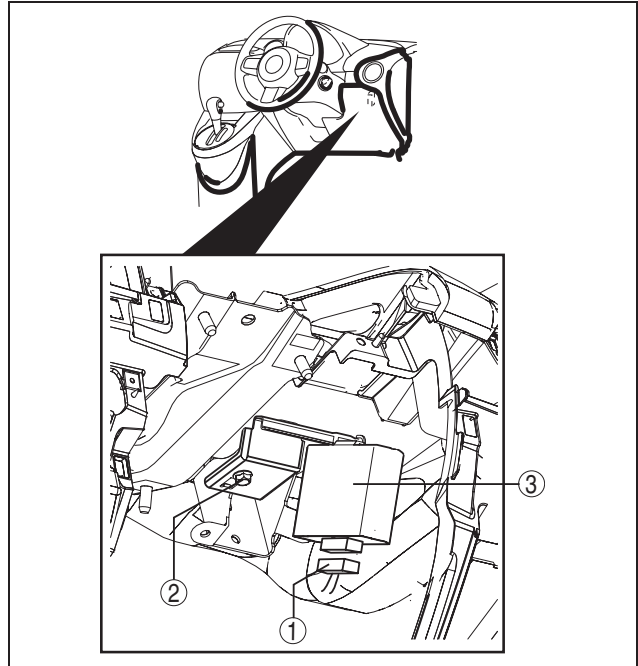
1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (driver's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (driver's side)(3HB) (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (3) Front side trim (driver's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - (4) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].)(See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (5) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (6) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (7) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (8) Lower panel (Driver's side) (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

3. Remove in the order indicated in the table.

|   |                                |
|---|--------------------------------|
| 1 | Connector                      |
| 2 | Bolt                           |
| 3 | Theft-deterrent control module |

4. Install in the reverse order of removal.



am2zzw0000045

### THEFT-DETERRENT CONTROL MODULE INSPECTION

id091400820900

1. Remove the following parts:

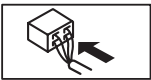
- (1) Front scuff plate (driver's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
- (2) Front scuff plate (driver's side)(3HB) (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
- (3) Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
- (4) Shift lever knob (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].)(See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
- (5) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
- (6) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
- (7) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
- (8) Lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)

2. Measure the voltage according to the terminal voltage table.

- If the voltages cannot be verified as indicated in the terminal voltage table, inspect the parts under "Inspection item(s)".
- If the system does not work normally even though the inspection items or related wiring harnesses do not have any malfunction, replace the theft-deterrent control module.

**Except AutoAlliance Thailand (AAT) manufactured vehicles**  
**Terminal Voltage Table (Reference)**

| THEFT-DETERRENT CONTROL MODULE |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|
| W                              | U | S | Q | O | M | K | I | G | E | C | * |
| X                              | V | T | R | P | N | K | J | H | * | * | * |



am2zzw0000059

## SECURITY AND LOCKS

| Terminal | Signal name                                                                                                 | Connected to                                                                                  | Measurement condition                                                                                      | Voltage (V)                                                                                   | Inspection item(s)                                                                                                                 |
|----------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| C        | <ul style="list-style-type: none"><li>Intruder sensor signal</li><li>Theft-deterrent siren signal</li></ul> | <ul style="list-style-type: none"><li>Intruder sensor</li><li>Theft-deterrent siren</li></ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                                                               |                                                                                                                                    |
| E        | Start knob (push switch)                                                                                    | Steering lock unit (with advanced keyless system)                                             | Start knob is pushed                                                                                       | B+                                                                                            | <ul style="list-style-type: none"><li>Steering lock unit (with advanced keyless system)</li><li>Related wiring harnesses</li></ul> |
|          |                                                                                                             |                                                                                               | Other                                                                                                      | 1.0 or less                                                                                   |                                                                                                                                    |
| G        | Key reminder switch signal                                                                                  | Key reminder switch (with keyless entry system)                                               | Key inserted                                                                                               | B+                                                                                            | <ul style="list-style-type: none"><li>Key reminder switch (with keyless entry system)</li><li>Related wiring harnesses</li></ul>   |
|          |                                                                                                             |                                                                                               | Key removed                                                                                                | 1.0 or less                                                                                   |                                                                                                                                    |
|          | Push switch signal                                                                                          | Steering lock unit (with advanced keyless system)                                             | Start knob is pressed                                                                                      | B+                                                                                            | <ul style="list-style-type: none"><li>Steering lock unit (with advanced keyless system)</li><li>Related wiring harnesses</li></ul> |
|          |                                                                                                             |                                                                                               | Start knob is not pressed                                                                                  | 1.0 or less                                                                                   |                                                                                                                                    |
| H        | Bonnet latch switch signal                                                                                  | Bonnet latch switch                                                                           | Bonnet open (Bonnet latch switch off)                                                                      | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"><li>Bonnet latch switch</li><li>Related wiring harnesses</li></ul>                               |
|          |                                                                                                             |                                                                                               | Bonnet closed (Bonnet latch switch on)                                                                     | 1.0 or less                                                                                   |                                                                                                                                    |
| I        | CAN_L                                                                                                       | -                                                                                             | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                                                               |                                                                                                                                    |
| J        | GND                                                                                                         | Ground                                                                                        | Under any condition                                                                                        | 1.0 or less                                                                                   | <ul style="list-style-type: none"><li>Related wiring harnesses</li></ul>                                                           |
| K        | CAN_H                                                                                                       | -                                                                                             | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                                                               |                                                                                                                                    |
| M        | Front door latch switch (passenger's door) signal                                                           | Front door latch switch (passenger's door)                                                    | Front door (passenger-side) open (Front door switch (passenger' door) off)                                 | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"><li>Front door switch (passenger' door)</li><li>Related wiring harnesses</li></ul>               |
|          |                                                                                                             |                                                                                               | Front door (passenger's door) closed (Front door switch (passenger's door) on)                             | 1.0 or less                                                                                   |                                                                                                                                    |

## SECURITY AND LOCKS

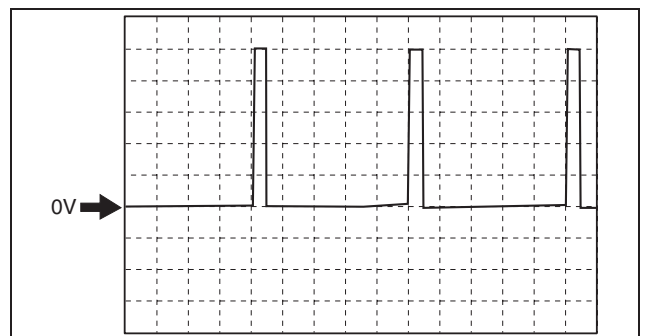
| Terminal | Signal name                                    | Connected to                                                                                                                                                   | Measurement condition                                                                                      | Voltage (V)                                                                                   | Inspection item(s)                                                                                                    |
|----------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| N        | Rear door latch switch (RH) signal*1           | Rear door latch switch (RH)                                                                                                                                    | Any rear doors open (Rear door switch off)                                                                 | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"><li>• Rear door switches</li><li>• Related wiring harnesses</li></ul>               |
|          |                                                |                                                                                                                                                                | All rear doors closed (Rear door switch on)                                                                | 1.0 or less                                                                                   |                                                                                                                       |
| O        | Front door latch switch (driver's door) signal | Front door latch switch (driver' door)                                                                                                                         | Front door (driver' door) open (Front door switch (driver' door) off)                                      | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"><li>• Front door switch (driver' door)</li><li>• Related wiring harnesses</li></ul> |
|          |                                                |                                                                                                                                                                | Front door (driver' door) closed (Front door switch (driver' door) on)                                     | 1.0 or less                                                                                   |                                                                                                                       |
| P        | Rear door latch switch (LH) signal*1           | Rear door latch switch (LH)                                                                                                                                    | Any rear door open (Rear door switch off)                                                                  | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"><li>• Rear door switches</li><li>• Related wiring harnesses</li></ul>               |
|          |                                                |                                                                                                                                                                | All rear doors closed (Rear door switch on)                                                                | 1.0 or less                                                                                   |                                                                                                                       |
| Q        | Serial communication                           | <ul style="list-style-type: none"><li>• Keyless control module (with advanced keyless system)</li><li>• Keyless receiver (with keyless entry system)</li></ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                                                               |                                                                                                                       |
| R        | Liftgate latch switch signal                   | Liftgate latch switch                                                                                                                                          | Liftgate is open. (Liftgate latch switch on)                                                               | 1.0 or less                                                                                   | <ul style="list-style-type: none"><li>• Liftgate latch switch</li><li>• Related wiring harnesses</li></ul>            |
|          |                                                |                                                                                                                                                                | Liftgate is closed. (Liftgate latch switch off)                                                            | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) |                                                                                                                       |
| S        | Security light on/off                          | Instrument cluster                                                                                                                                             | Security light on                                                                                          | 1.0 or less                                                                                   | <ul style="list-style-type: none"><li>• Instrument cluster</li><li>• Related wiring harnesses</li></ul>               |
|          |                                                |                                                                                                                                                                | Security light off                                                                                         | B+                                                                                            |                                                                                                                       |

## SECURITY AND LOCKS

| Terminal | Signal name                                   | Connected to                   | Measurement condition                         | Voltage (V)                                                                                   | Inspection item(s)                                                                                                               |
|----------|-----------------------------------------------|--------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| T        | Lock/unlock signal                            | Door lock link switch          | All doors except the driver's door are locked | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"> <li>Door lock link switch (Except driver's side)</li> <li>Related wiring harnesses</li> </ul> |
|          |                                               |                                | Any door except the driver's door is unlocked | 1.0 or less                                                                                   |                                                                                                                                  |
| U        | IG 1                                          | METER 10 A fuse                | IG ON                                         | B+                                                                                            | <ul style="list-style-type: none"> <li>METER 10 A fuse</li> <li>Ignition switch</li> <li>Related wiring harnesses</li> </ul>     |
|          |                                               |                                | IG OFF                                        | 1.0 or less                                                                                   |                                                                                                                                  |
| V        | Unlock input (Driver's door lock-link switch) | Driver's door lock-link switch | Driver's door locked                          | Inspect using the wave Profile. (See 09-14-115 Inspection Using An Oscilloscope (Reference).) | <ul style="list-style-type: none"> <li>Driver's door lock-link switch</li> <li>Related wiring harnesses</li> </ul>               |
|          |                                               |                                | Driver's door unlocked                        | 1.0 or less                                                                                   |                                                                                                                                  |
| W        | Power supply                                  | BCM                            | Under any condition                           | B+                                                                                            | <ul style="list-style-type: none"> <li>Related wiring harnesses</li> <li>BCM</li> <li>Room 15 A fuse</li> </ul>                  |
| X        | Hazard warning switch signal                  | BCM                            | Hazard flash                                  | 1.0 or less                                                                                   | <ul style="list-style-type: none"> <li>BCM</li> <li>Related wiring harnesses</li> </ul>                                          |
|          |                                               |                                | Other                                         | 5                                                                                             |                                                                                                                                  |

\*1 : 5HB

### Inspection Using An Oscilloscope (Reference)

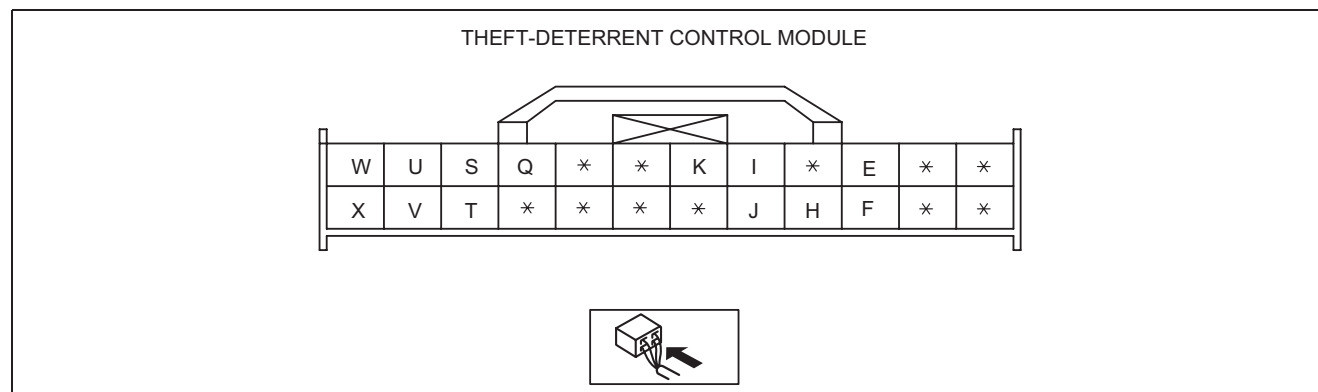


am2zzw0000349

- Oscilloscope setting: 1 V/DIV (Y): 2 ms/DIV (X), DC range

## SECURITY AND LOCKS

### AutoAlliance Thailand (AAT) manufactured vehicles Terminal Voltage Table (Reference)



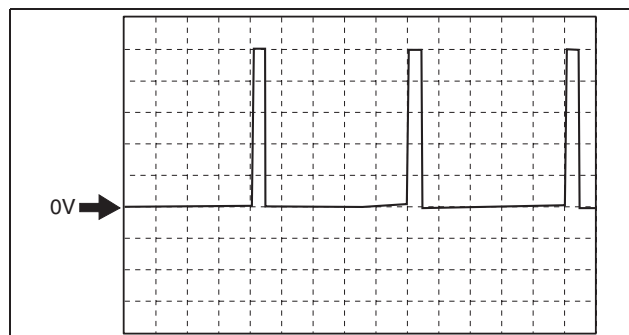
am2zzw0000440

| Terminal | Signal name                 | Connected to                                                                                                                                               | Measurement condition                                                                                      | Voltage (V)                            | Inspection item(s)                                                                                                                 |
|----------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| E        | Start knob (push switch)    | Steering lock unit (with advanced keyless system)                                                                                                          | Start knob is pushed                                                                                       | B+                                     | <ul style="list-style-type: none"><li>Steering lock unit (with advanced keyless system)</li><li>Related wiring harnesses</li></ul> |
|          |                             |                                                                                                                                                            | Other                                                                                                      | 1.0 or less                            |                                                                                                                                    |
| F        | Theft-deterrent horn signal | Theft-deterrent horn relay                                                                                                                                 | Theft-deterrent siren not sounded                                                                          | B+                                     | <ul style="list-style-type: none"><li>Theft-deterrent horn relay</li><li>Related wiring harnesses</li></ul>                        |
|          |                             |                                                                                                                                                            | Theft-deterrent siren sounded                                                                              | 1.0 or less                            |                                                                                                                                    |
| H        | Bonnet latch switch signal  | Bonnet latch switch                                                                                                                                        | Bonnet open (Bonnet latch switch off)                                                                      | Wave pattern (See 09-14-117 Pattern1.) | <ul style="list-style-type: none"><li>Bonnet latch switch</li><li>Related wiring harnesses</li></ul>                               |
|          |                             |                                                                                                                                                            | Bonnet closed (Bonnet latch switch on)                                                                     | 1.0 or less                            |                                                                                                                                    |
| I        | CAN_L                       | -                                                                                                                                                          | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                        |                                                                                                                                    |
| J        | GND                         | Ground                                                                                                                                                     | Under any condition                                                                                        | 1.0 or less                            | <ul style="list-style-type: none"><li>Related wiring harnesses</li></ul>                                                           |
| K        | CAN_H                       | -                                                                                                                                                          | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                        |                                                                                                                                    |
| Q        | Serial communication        | <ul style="list-style-type: none"><li>Keyless control module (with advanced keyless system)</li><li>Keyless receiver (with keyless entry system)</li></ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                        |                                                                                                                                    |
| S        | Security light on/off       | Instrument cluster                                                                                                                                         | Security light on                                                                                          | 1.0 or less                            | <ul style="list-style-type: none"><li>Instrument cluster</li><li>Related wiring harnesses</li></ul>                                |
|          |                             |                                                                                                                                                            | Security light off                                                                                         | B+                                     |                                                                                                                                    |
| T        | Lock/unlock signal          | Door lock link switch                                                                                                                                      | All doors except the driver's door are locked                                                              | Wave pattern (See 09-14-117 Pattern1.) | <ul style="list-style-type: none"><li>Door lock link switch (Except driver's side)</li><li>Related wiring harnesses</li></ul>      |
|          |                             |                                                                                                                                                            | Any door except the driver's door is unlocked                                                              | 1.0 or less                            |                                                                                                                                    |
| U        | IG 1                        | METER 10 A fuse                                                                                                                                            | IG ON                                                                                                      | B+                                     | <ul style="list-style-type: none"><li>METER 10 A fuse</li><li>Ignition switch</li><li>Related wiring harnesses</li></ul>           |
|          |                             |                                                                                                                                                            | IG OFF                                                                                                     | 1.0 or less                            |                                                                                                                                    |

## SECURITY AND LOCKS

| Terminal | Signal name                                   | Connected to                   | Measurement condition  | Voltage (V)                            | Inspection item(s)                                                                                                 |
|----------|-----------------------------------------------|--------------------------------|------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| V        | Unlock input (Driver's door lock-link switch) | Driver's door lock-link switch | Driver's door locked   | Wave pattern (See 09-14-117 Pattern1.) | <ul style="list-style-type: none"> <li>Driver's door lock-link switch</li> <li>Related wiring harnesses</li> </ul> |
|          |                                               |                                | Driver's door unlocked | 1.0 or less                            |                                                                                                                    |
| W        | Power supply                                  | BCMF                           | Under any condition    | B+                                     | <ul style="list-style-type: none"> <li>Related wiring harnesses</li> <li>BCM</li> <li>Room 15 A fuse</li> </ul>    |
| X        | Hazard warning switch signal                  | BCM                            | Hazard flash           | 1.0 or less                            | <ul style="list-style-type: none"> <li>BCM</li> <li>Related wiring harnesses</li> </ul>                            |
|          |                                               |                                | Other                  | Wave pattern (See 09-14-117 Pattern2.) |                                                                                                                    |

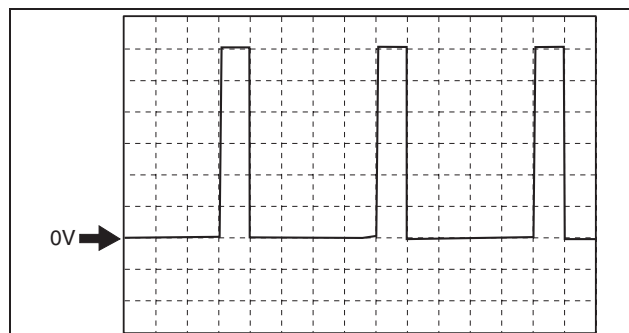
### Generated pulse (reference) Pattern1



am2zzw0000349

- Oscilloscope setting: 1 V/DIV (Y): 2 ms/DIV (X), DC range

### Pattern2



am2zzw0000462

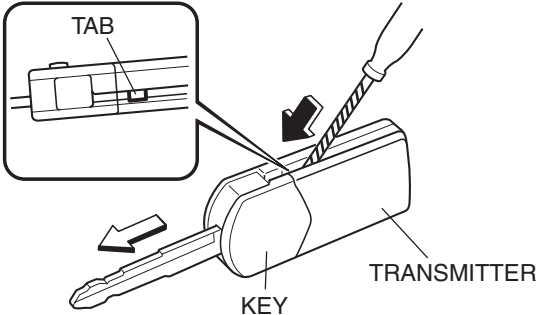
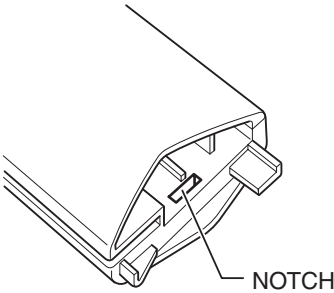
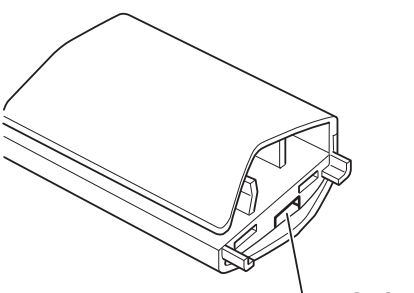
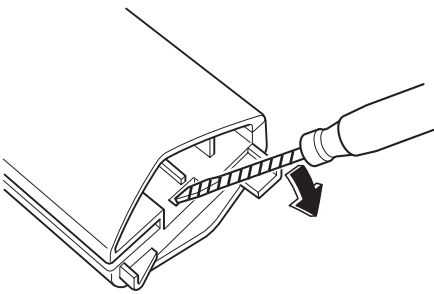
- Oscilloscope setting: 2 V/DIV (Y): 2 ms/DIV (X), DC range



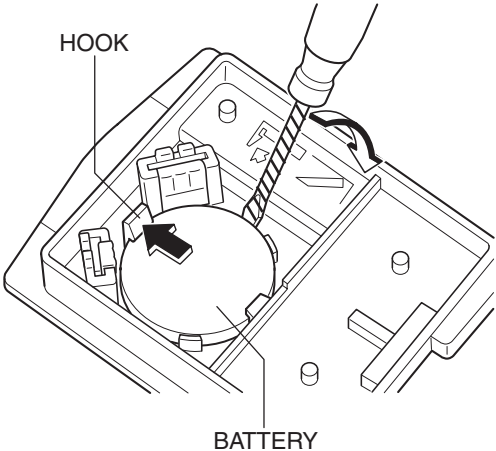
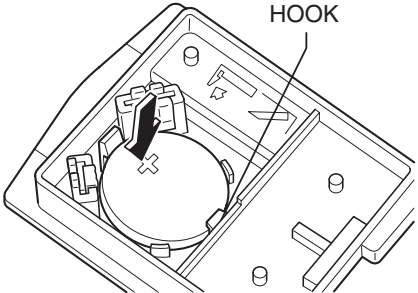
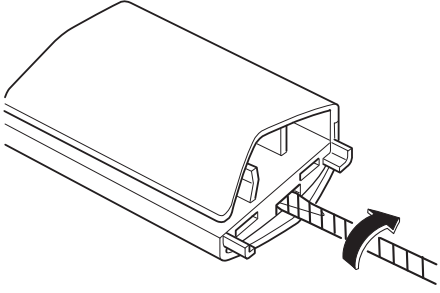
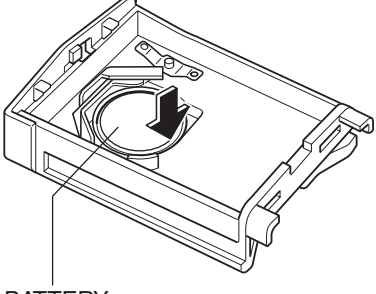
## SECURITY AND LOCKS

### TRANSMITTER BATTERY REPLACEMENT [KEYLESS ENTRY SYSTEM]

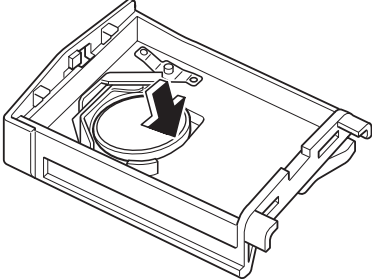
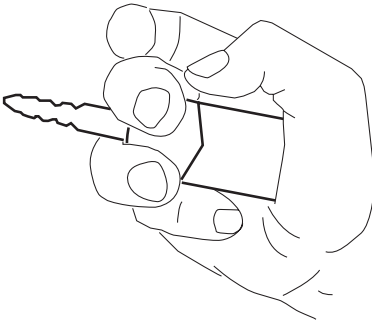
id0914004374b3

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action after procedure                                                                                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>Disconnecting key from transmitter</b><br>1. Insert a flathead screwdriver into the transmitter notch and remove the key from the transmitter by pressing the tab.                                                                                                                                                                                                  | Go to the next step.                                                                                                                   |
| 2    | <b>Notch position verification</b><br>1. Verify the position of the transmitter notch. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>A-TYPE</b><br/>  </div> <div style="text-align: center;"> <b>B-TYPE</b><br/>  </div> </div> | <ul style="list-style-type: none"> <li>• For the A-type notch, go to Step 3.</li> <li>• For the B-type notch, go to Step 6.</li> </ul> |
| 3    | <b>Opening transmitter</b><br>1. Insert a flathead screwdriver into the transmitter notch and open the transmitter.                                                                                                                                                                                                                                                  | Go to the next step.                                                                                                                   |

# SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                     | Action after procedure |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 4    | <p><b>Battery removal</b></p> <p>1. Press the hook in the direction of the arrow and remove the battery using the flathead screwdriver.</p>  | Go to the next step.   |
| 5    | <p><b>Battery installation</b></p> <p>1. Install the new battery (CR1620) with the positive (+) pole facing up.</p>                         | Go to Step 9.          |
| 6    | <p><b>Opening transmitter</b></p> <p>1. Insert a flathead screwdriver into the transmitter notch and open the transmitter.</p>             | Go to the next step.   |
| 7    | <p><b>Battery removal</b></p> <p>1. Remove the battery by pressing it in the direction of the arrow shown in the figure.</p>               | Go to the next step.   |

## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action after procedure |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 8    | <b>Battery installation</b><br>1. Install the new battery (CR1620) with the plus pole facing down.<br>                                                                                                                                                                                                                                                        | Go to the next step.   |
| 9    | <b>Battery removal</b><br>1. Align the upper and lower covers and close the transmitter.<br><b>Battery type</b><br>— Lithium battery CR1620<br><b>Battery life</b><br>— Approx. 2 years (when used approx. 10 times/day)<br>2. Install the key to the transmitter.                                                                                                                                                                             | Go to the next step.   |
| 10   | <b>Verification of key and transmitter connection</b><br>1. When connecting the key to the transmitter, grip the key and the transmitter as shown in the figure and connect until a click sound is heard.<br><b>Note</b> <ul style="list-style-type: none"> <li>If the key is not completely connected to the transmitter, they may come apart.</li> </ul>  | Procedure is completed |

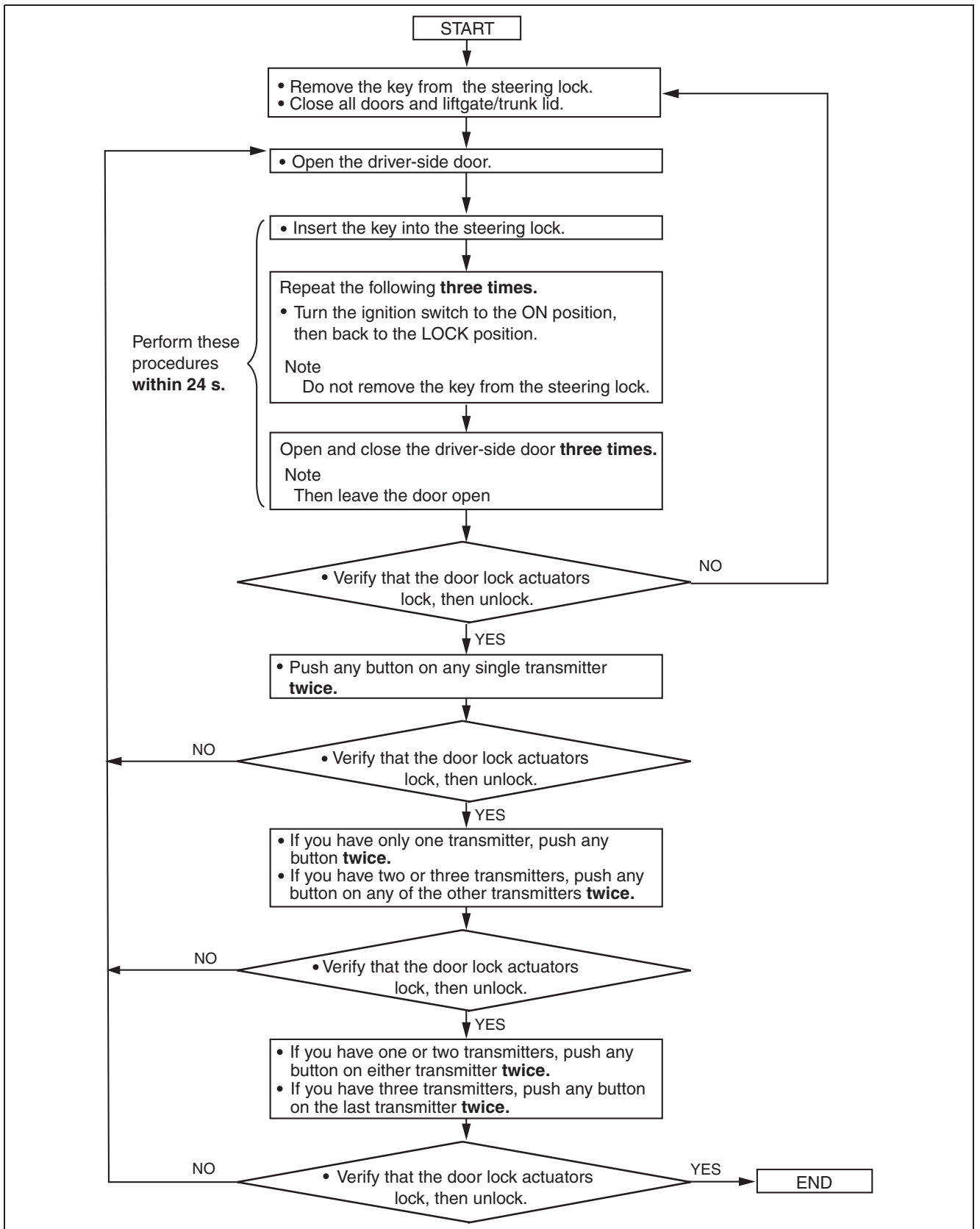
### TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM]

id0914004376b3

#### Note

- Verify that the other transmitter is not being operated around the servicing area while updating the ID code.
- After completing the work, remove the key from the steering lock and verify that all the door lock/unlock operation using the transmitter is correct.

## SECURITY AND LOCKS

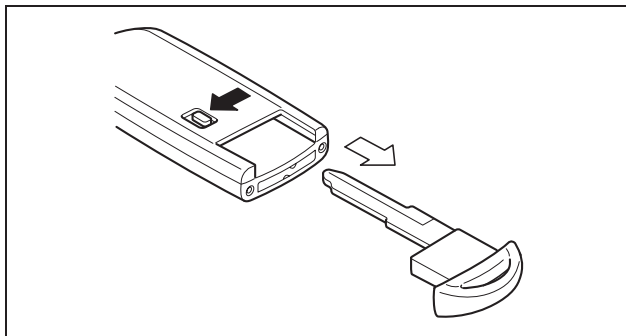


## SECURITY AND LOCKS

### ADVANCED KEY BATTERY REPLACEMENT [ADVANCED KEYLESS AND START SYSTEM]

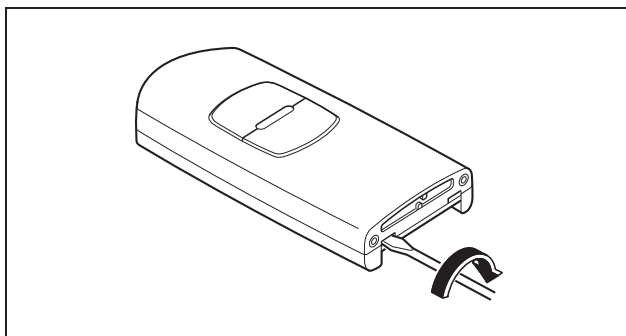
id0914004477b0

1. Pull out the auxiliary key.



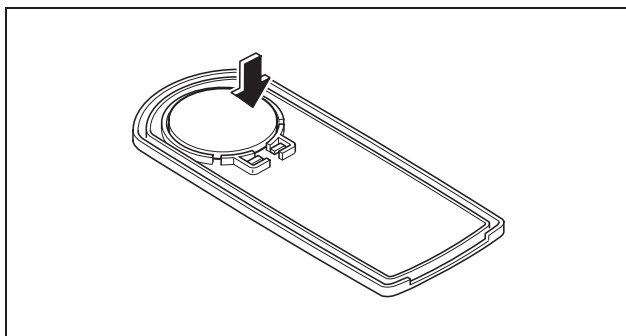
adejjw00001676

2. Insert a flathead screwdriver into the notch in the transmitter and rotate it in the direction shown in the figure to open the transmitter.



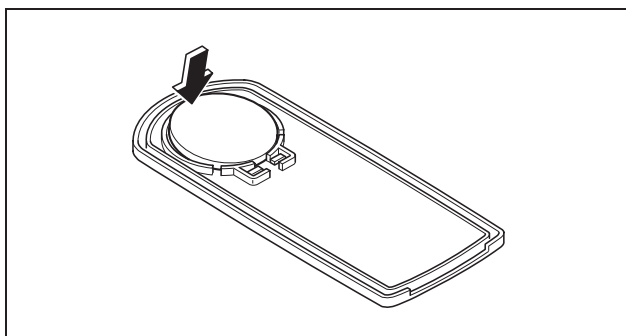
adejjw00001677

3. Remove the battery.



adejjw00001678

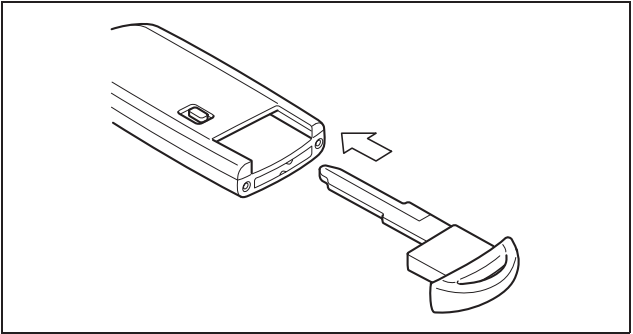
4. Install the new battery (CR1620) with the positive pole facing down.
5. Align the upper and lower covers and close the transmitter.



adejjw00001679

# SECURITY AND LOCKS

6. Insert the auxiliary key.



adejjw00001705

## ADVANCED KEY ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004493b0

### Caution

- Do not place the following devices in the vehicle while programming, otherwise programming cannot be performed:
  - M-MDS
  - Personal computer
  - Devices that can send/receive radio waves
- Verify that the other transmitter is not being operated around the servicing area during advanced key programming.

### Note

- Use the M-MDS and start programming if the condition corresponds to the following:
  - No programmed advanced keys (two or more)
  - Keyless control module is replaced
- If six advanced keys are already programmed, the programming mode does not launch. If programming is needed, use the M-MDS to erase the unnecessary advanced key programming.

### Two Programmed Advanced Keys Available

1. Bring two programmed advanced keys and one unprogrammed advanced key into the vehicle.

|                                      |                                                                                                       |                                                                                                         |
|--------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| VALID KEY                            | <br>ADVANCED KEY 1 | <br>ADVANCED KEY 2 |
| KEY FOR REGISTRATION<br>ADVANCED KEY | <br>ADVANCED KEY   |                                                                                                         |

am2zzw0000053

2. Close all doors.
3. Insert the auxiliary key into the ignition key cylinder.

### Note

- Complete the procedures up to Step 7 within 30 s after the auxiliary key is inserted.
4. Turn the ignition switch to the ON position.
  5. Wait until the keyless indicator light in the instrument cluster illuminates. (Turns off 3 s after ignition switch is turned to ON)
  6. Press the UNLOCK button of advanced key 1.
  7. Press the UNLOCK button of advanced key 2.
  8. From the ignition switch in the ON position, turn the ignition switch in the order indicated below.
    - ACC\_ON→ACC\_ON→ACC\_ON
  9. Open/close the driver's door 3 times.

## SECURITY AND LOCKS

### Note

- After Step 9 is completed and the advanced key programming is activated, the door lock actuator operates to lock, and then operates to unlock.
- If the door lock actuator does not operate, repeat the procedure from Step 2.

10. Press the UNLOCK button of the unprogrammed advanced key and wait approx. 5 s.

### Note

- After Step 10 is completed and the advanced key is programmed, the door lock actuator operates to lock, and then operates to unlock.

11. If programming more advanced keys, remove the auxiliary key once, and then repeat the procedure from Step 2.

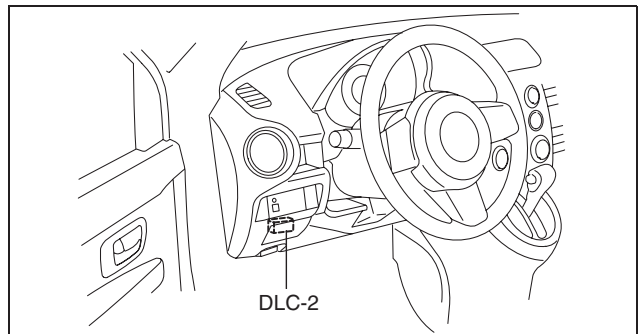
### Using the M-MDS

1. Fully lower the driver-side door glass.
2. Connect the M-MDS to the DLC-2.
3. Set the M-MDS outside the vehicle with its cable passing through the door glass opening.

### Caution

- **Cover the vehicle body with a clean rag so as not to damage the vehicle body with the cable.**

4. After the vehicle is identified, select the following items from the initial screen of the M-MDS.
  - Using an IDS (laptop PC)
    1. Select "Body".
    2. Select "Security".
    3. Select "PATS Functions".
  - Using a PDS (Pocket PC):
    1. Select "All Tests and Calibrations".
    2. Select "PATS Functions".
5. Select the following from the screen menu.
  1. Select "Program Additional Advanced Key".
6. Perform the security access according to the directions on the M-MDS screen.



am2zzw0000216

### CLEARING ADVANCED KEY [ADVANCED KEYLESS AND START SYSTEM]

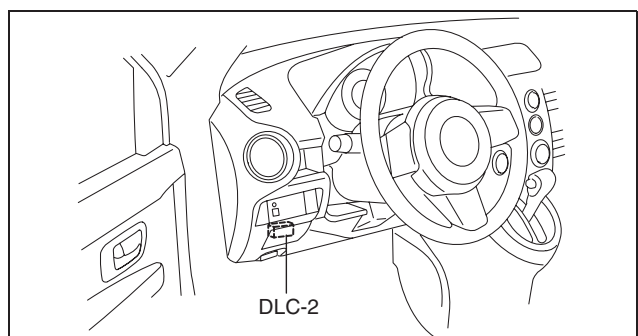
id0914004496b0

1. Fully lower the driver-side door glass.
2. Connect the M-MDS to the DLC-2.
3. Pull out the M-MDS cable from the door glass opening and set the M-MDS outside the vehicle.

### Caution

- **Protect the cable and body contact area with a clean rag, otherwise they could be damaged.**

4. After the vehicle is identified, select the following items from the initial screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Body".
    2. Select "Security".
    3. Select "PATS Functions".
  - When using the PDS (Pocket PC)
    1. Select "All Tests and Calibrations".
    2. Select "PATS Functions".
5. Then, select items from the screen menu in the following order.
  1. Select "Advanced Key Code Erase and Program".
6. Perform the security access according to the directions on the M-MDS screen.



am2zzw0000153

## SECURITY AND LOCKS

### CUSTOMIZED FUNCTION SETTING PROCEDURE [ADVANCED KEYLESS AND START SYSTEM]

id0914004397b0

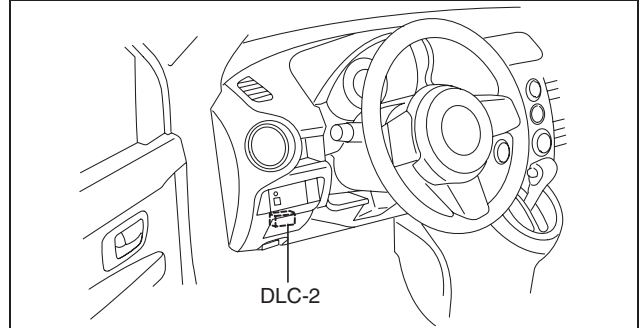
#### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the CUSTOMIZED FUNCTION SETTING PROCEDURE.

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  1. Select "Module Programming".
3. Then, select items from the screen menu in the following order.
  1. Select "Programmable Parameters".
  2. Select "RKE".
4. Select the item name, and then select option.

#### Item

- Advanced Keyless Function (Disabled / Enabled)
- Answer Back Buzzer Volume (Disabled / 5 — 10)
- Advanced Key Battery Low Warning (Disabled / Enabled)
- Prevention Function of Key Containment in Trunk or Liftgate (Disabled / Enabled)
- Warning Buzzer Volume (5 — 10)



am2zzw0000216

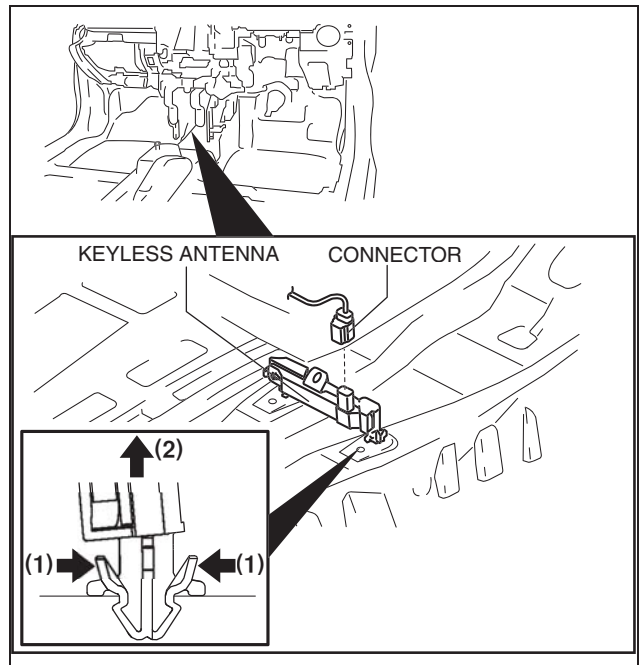
### KEYLESS ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004405b0

#### 3HB, 5HB

##### Vehicle Interior, Front

1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console component. (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
4. Disconnect the connector.
5. Remove the keyless antenna (2) in the direction of the arrow shown in the figure while pressing the keyless antenna tabs (1).
6. Install in the reverse order of removal.



am2zzw0000054

##### Vehicle Interior, Rear

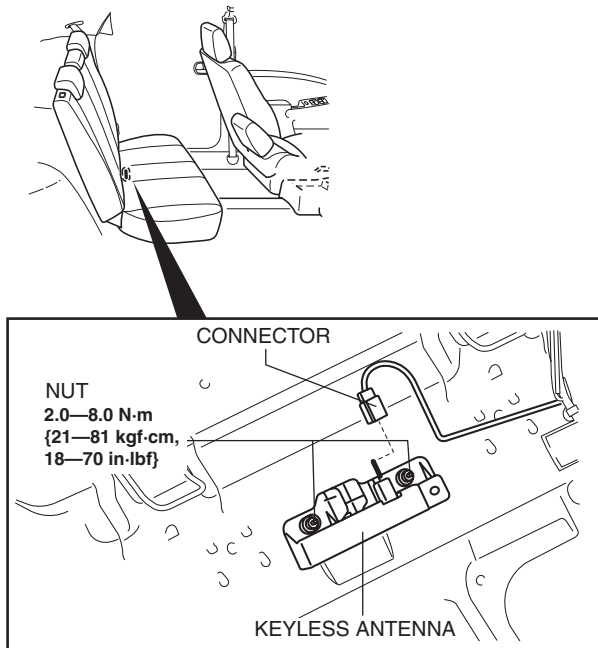
1. Disconnect the negative battery cable.
2. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)



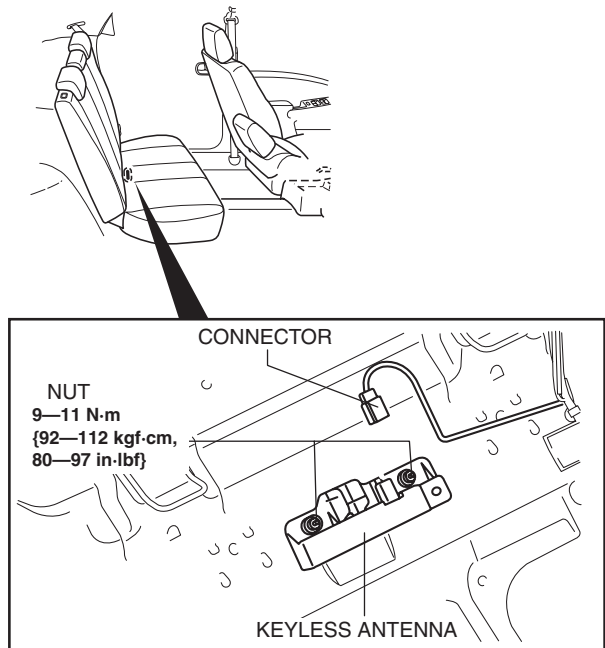
## SECURITY AND LOCKS

### 3. Disconnect the connector.

3HB,5HB (Except AutoAlliance (AAT) manufactured vehicles)



5HB (AutoAlliance (AAT) manufactured vehicles)

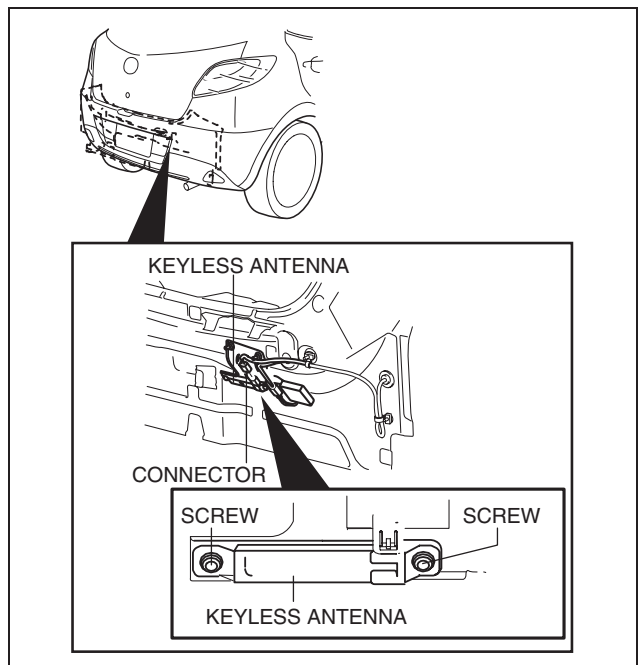


am2zzw0000515

4. Remove the bolts.
5. Remove the keyless antenna.
6. Install in the reverse order of removal.

### Vehicle Exterior, Rear

1. Disconnect the negative battery cable.
2. Disconnect the connector.
3. Remove the screw.
4. Remove the keyless antenna.
5. Install in the reverse order of removal.



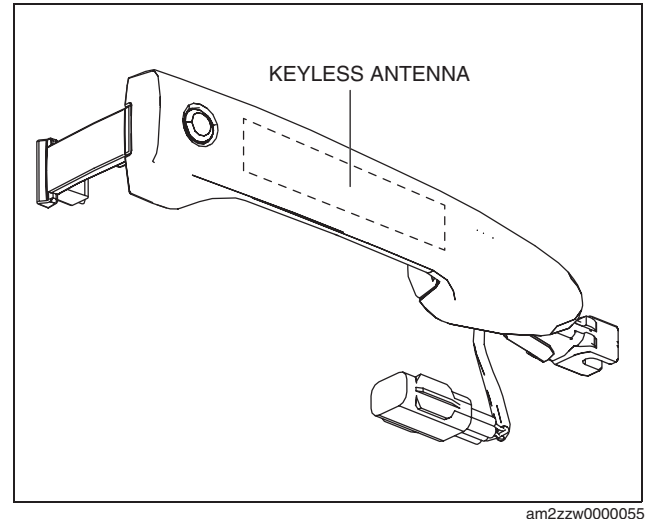
am2zzw0000329

### Vehicle Exterior, Driver's Door/Passenger's Door

#### Note

- The keyless antenna (vehicle exterior, driver's door/passenger's door) is built into the front outer handle.  
(See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

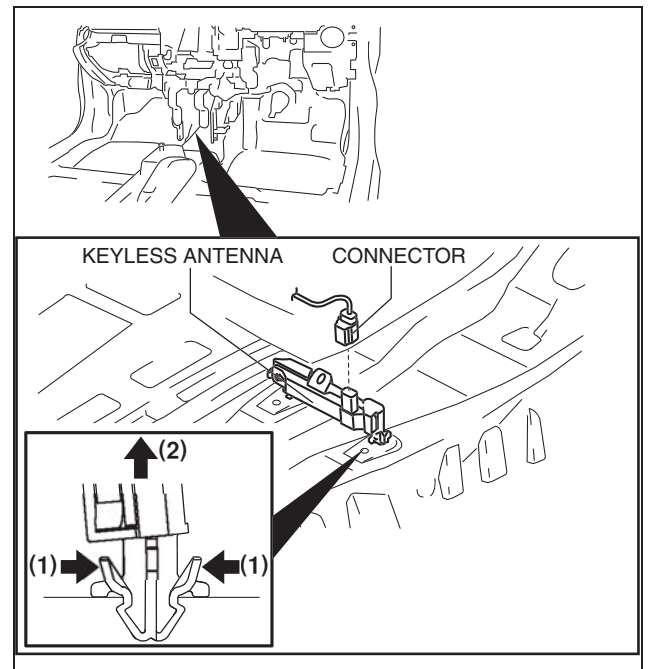


am2zzw0000055

### 4SD

#### Vehicle Interior, Front

1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console component. (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
4. Disconnect the connector.
5. Remove the keyless antenna (2) in the direction of the arrow shown in the figure while pressing the keyless antenna tabs (1).
6. Install in the reverse order of removal.



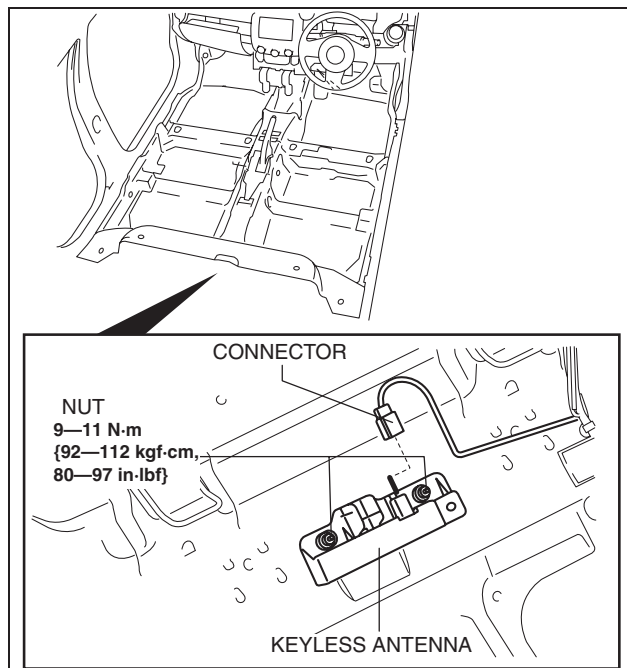
am2zzw0000054

#### Vehicle Interior, Center

1. Disconnect the negative battery cable.
2. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS

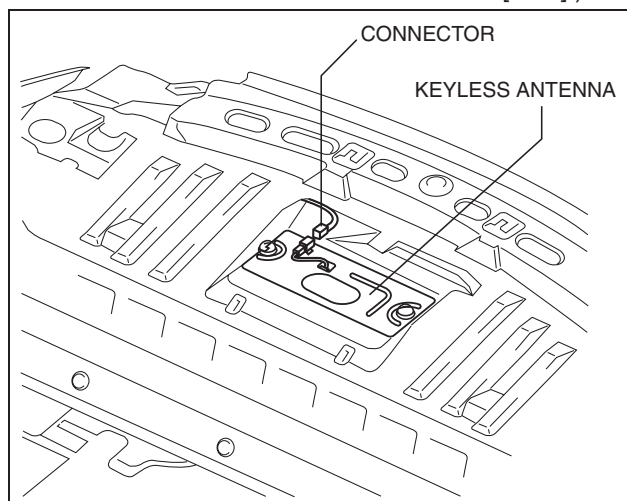
3. Disconnect the connector.
4. Remove the bolts.
5. Remove the keyless antenna.
6. Install in the reverse order of removal.



am2zzw0000512

### Vehicle Interior, Rear

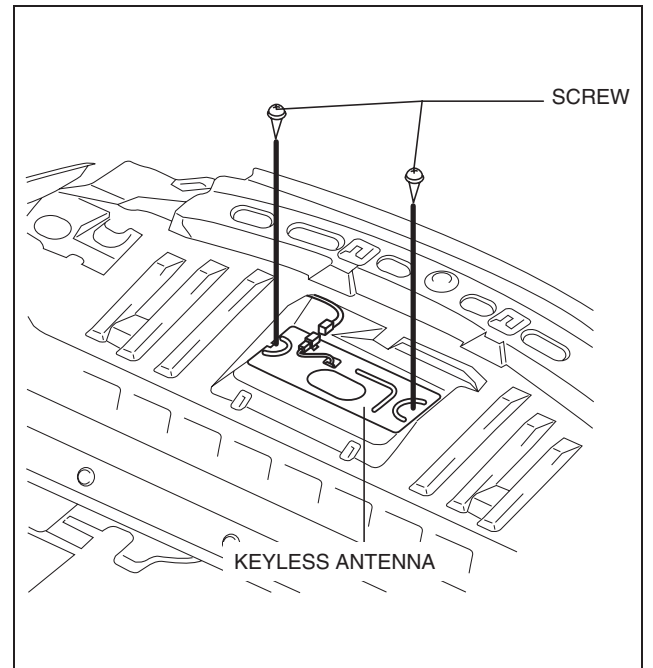
1. Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
2. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
3. Remove the tire house trim. (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
4. Remove the C-pillar trim. (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
5. Remove the rear package trim. (See 09-17-68 REAR PACKAGE TRIM REMOVAL/INSTALLATION [4SD].)
6. Disconnect the connector.



am2ccw0000022

## SECURITY AND LOCKS

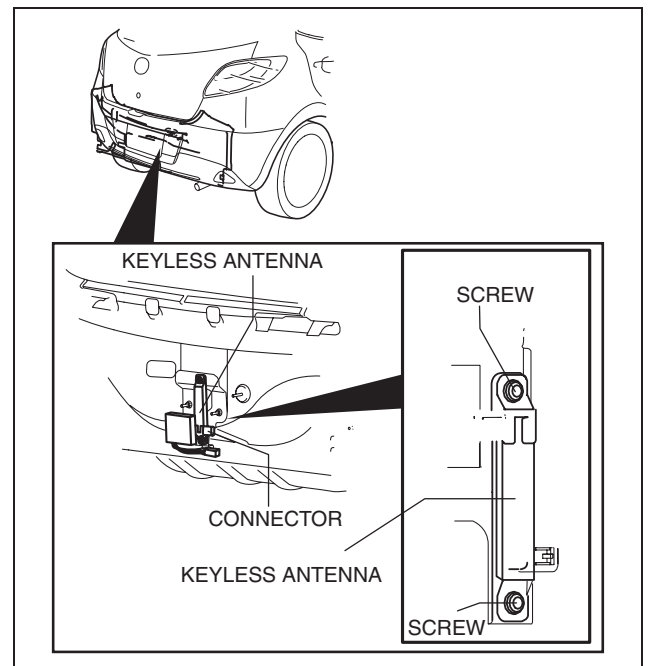
7. Remove the screw.
8. Remove the keyless antenna.
9. Install in the reverse order of removal.



am2ccw0000022

### Vehicle Exterior, Rear

1. Disconnect the negative battery cable.
2. Disconnect the connector.
3. Remove the screw.
4. Remove the keyless antenna.
5. Install in the reverse order of removal.



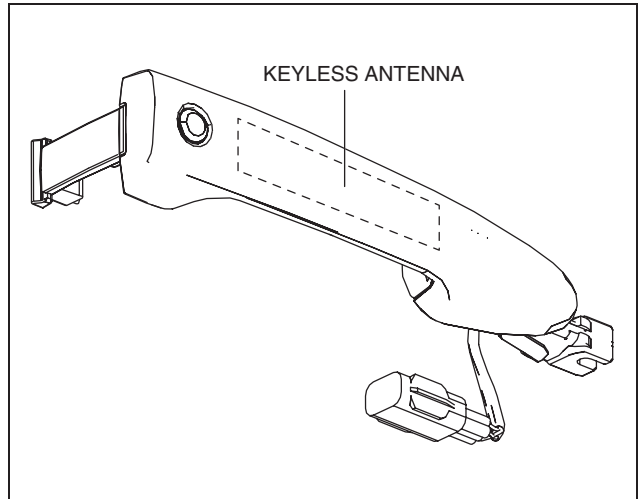
am2ccw0000022

### Vehicle Exterior, Driver's Door/Passenger's Door

#### Note

- The keyless antenna (vehicle exterior, driver's door/passenger's door) is built into the front outer handle. (See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)

## SECURITY AND LOCKS



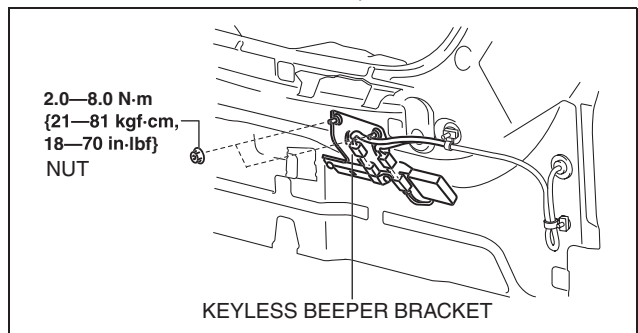
am2zzw0000055

### KEYLESS BEEPER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004406b0

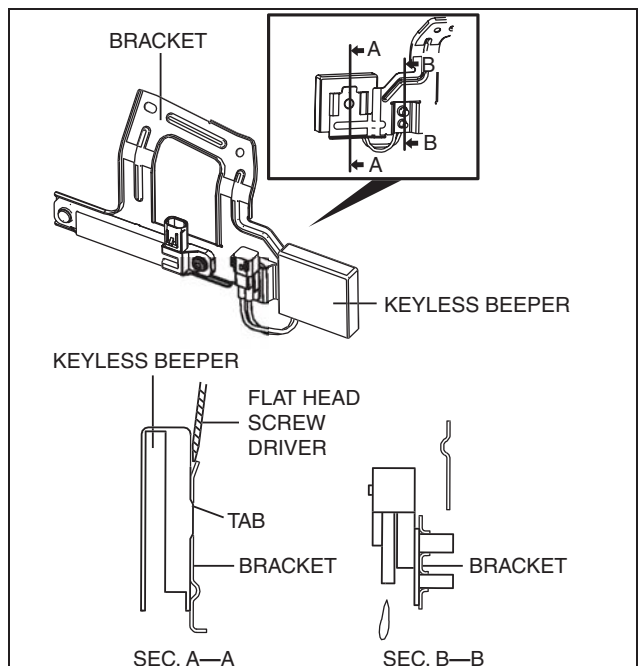
#### 3HB, 5HB

1. Disconnect the negative battery cable.
2. Remove the rear combination light. (See 09-18-23 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
3. Remove the splash shield. (See 09-16-9 SPLASH SHIELD REMOVAL/INSTALLATION.)
4. Remove the rear bumper. (See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION.)
5. Disconnect the connector.
6. Remove the nuts.



am2zzw0000055

7. Press the keyless beeper tab aside using a tape-wrapped flathead screwdriver.
8. Remove the keyless beeper from the bracket.
9. Install in the reverse order of removal.

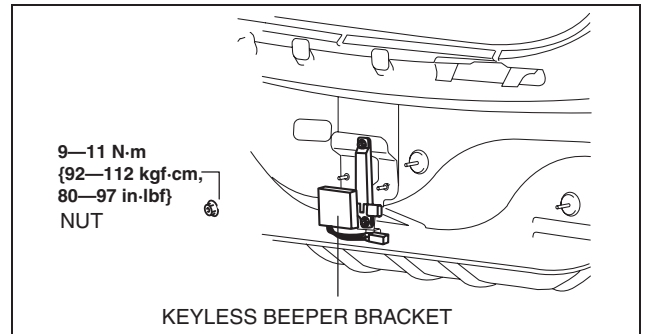


am2zzw0000055

## SECURITY AND LOCKS

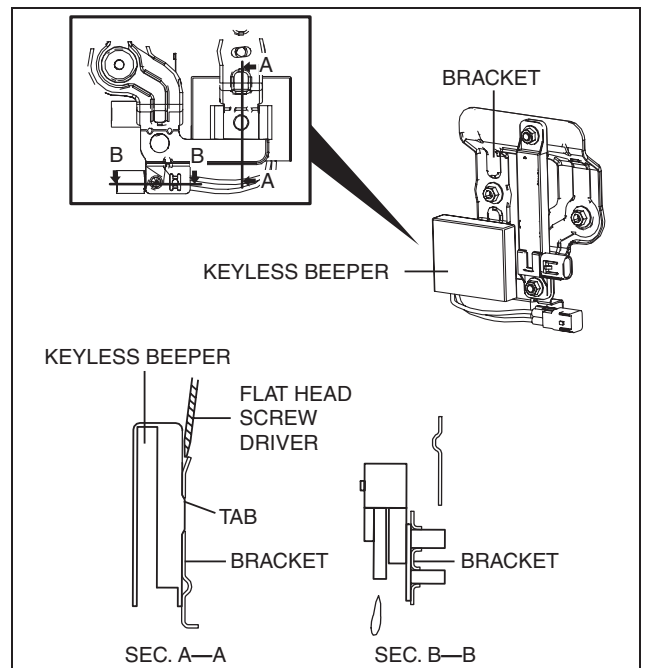
### 4SD

1. Disconnect the negative battery cable.
2. Remove the rear combination light. (See 09-18-23 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
3. Remove the splash shield. (See 09-16-9 SPLASH SHIELD REMOVAL/INSTALLATION.)
4. Remove the rear bumper. (See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION.)
5. Disconnect the connector.
6. Remove the nuts.



am2zzw0000513

7. Press the keyless beeper tab aside using a tape-wrapped flathead screwdriver.
8. Remove the keyless beeper from the bracket.
9. Install in the reverse order of removal.



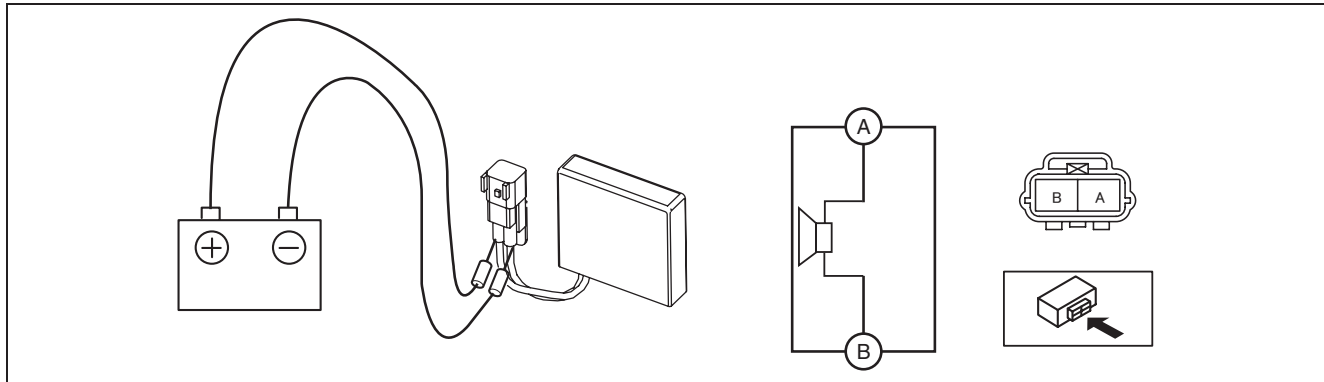
am2ccw0000022

### KEYLESS BEEPER INSPECTION [ADVANCED KEYLESS AND START SYSTEM]

id0914004416b0

1. Disconnect the negative battery cable.
2. Remove the rear combination light. (See 09-18-23 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
3. Remove the splash shield. (See 09-16-9 SPLASH SHIELD REMOVAL/INSTALLATION.)
4. Remove the rear bumper. (See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION.)
5. Remove the keyless beeper. (See 09-14-130 KEYLESS BEEPER REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)
6. Apply battery positive voltage and connect the ground to each terminal and verify the keyless beeper sound operation.
  - If the beep sound cannot be verified, replace the keyless beeper.

## SECURITY AND LOCKS



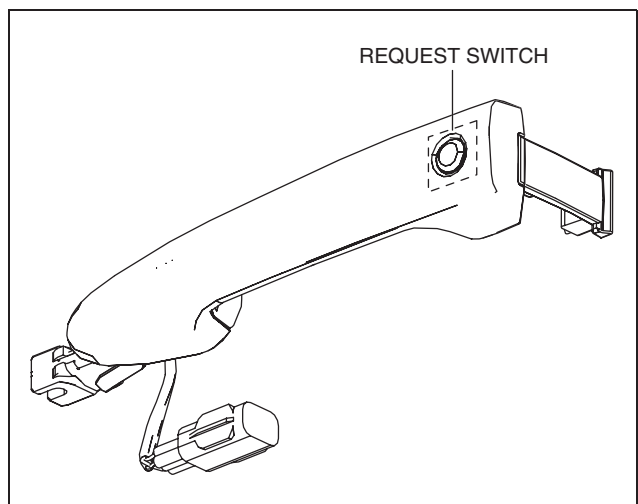
adejjw00003254

### REQUEST SWITCH REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004400b0

#### Note

- The request switches are built into the front outer handles. (See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)

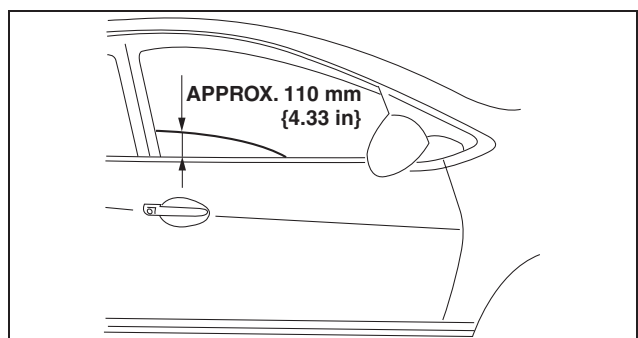


am2zzw0000054

### REQUEST SWITCH INSPECTION [ADVANCED KEYLESS AND START SYSTEM]

id0914004401b0

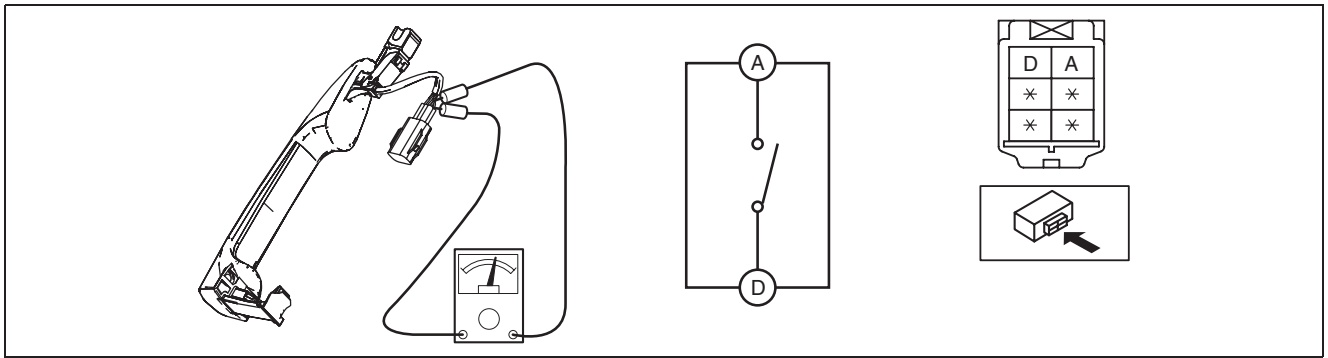
- To access the glass installation bolt, position the front door glass so that the distance from the top of the front door glass to the upper part of the front beltline molding is **approx. 110 mm {4.33 in}**.
- Disconnect the negative battery cable.
- Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Front door speaker (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
  - (4) Front door glass (See 09-12-7 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
  - (5) Front door module panel (See 09-11-12 FRONT DOOR MODULE PANEL REMOVAL/INSTALLATION.)
  - (6) Front door key cylinder (Driver's side) (See 09-14-55 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION.)
  - (7) Front outer handle (See 09-14-17 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)



am2zzw0000519

## SECURITY AND LOCKS

4. Verify the continuity of request switch terminals A and D.



am2zzw0000379

5. Verify that the continuity is as indicated in the table.

- If not as indicated in the table, replace the front outer handle.

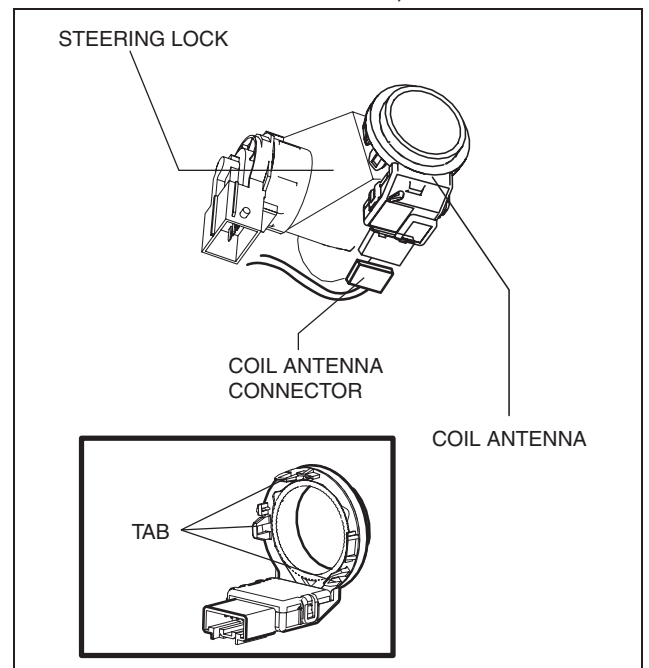
| REQUEST SWITCH | CONTINUITY |       |
|----------------|------------|-------|
|                | TERMINAL   |       |
|                | A          | D     |
| PUSH (ON)      | ○ — ○      | ○ — ○ |
| NOT PUSH (OFF) |            |       |

am2zzw0000379

### COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004359b0

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Disconnect the coil antenna connector.
4. Detach the coil antenna hooks and remove the coil antenna from the steering lock.
5. Install in the reverse order of removal.



am2zzw0000057

### COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM]

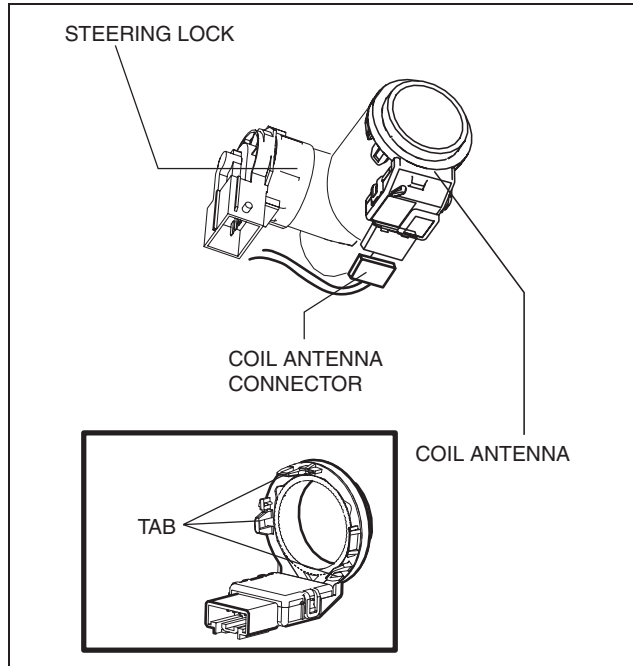
id0914004359b3

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)



## SECURITY AND LOCKS

3. Disconnect the coil antenna connector.
4. Detach the coil antenna hooks and remove the coil antenna from the steering lock.
5. Install in the reverse order of removal.



am2zzw0000053

### STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM]

id0914004395b0

#### Caution

- Do not place the following devices in the vehicle while programming, otherwise programming cannot be performed:
  - M-MDS
  - Personal computer
  - Devices that can send/receive radio waves

#### Note

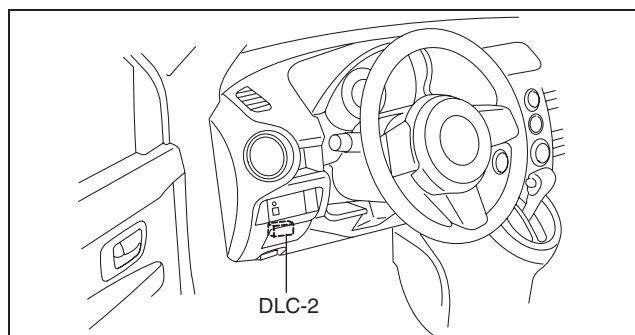
- The steering lock unit and steering lock component are a single unit. Therefore, replace the steering lock component when replacing steering lock unit. (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.] )
- For this procedure, a programmed card key is necessary. If there is no programmed card key, perform the steering lock unit programming after the card key programming.

1. Bring the programmed card key into the vehicle.
2. Fully lower the driver-side door glass.
3. Connect the M-MDS to the DLC-2.
4. Pull out the M-MDS cable from the door glass opening and set the M-MDS outside the vehicle.

#### Caution

- Cover the vehicle body with a clean rag so as not to damage the vehicle body with the cable.

5. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Body".
    2. Select "Security".
    3. Select "PATS Functions".
  - When using the PDS (Pocket PC)
    1. Select "All Tests and Calibrations".
    2. Select "PATS Functions".
6. Then, select items from the screen menu in the following order.
  1. Select "Steering Lock Unit Programming".
7. Perform the security access according to the directions on the M-MDS screen.



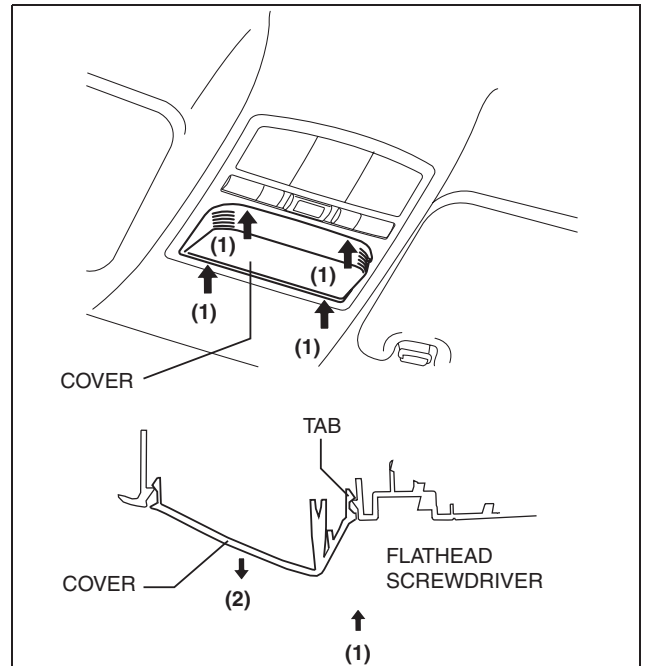
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## SECURITY AND LOCKS

### INTRUDER SENSOR REMOVAL/INSTALLATION

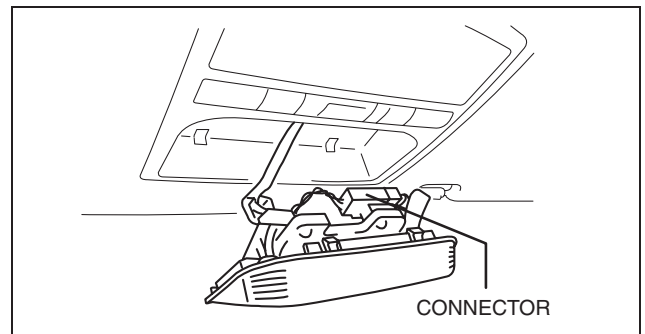
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1. Disconnect the negative battery cable.
2. Using a tape-wrapped flathead screwdriver, press the tabs in the direction of the arrows (1) shown in the figure, and remove the cover in the direction of the arrow (2).



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3. Remove the connector under the condition from procedure 2.
4. Install in the reverse order of removal.



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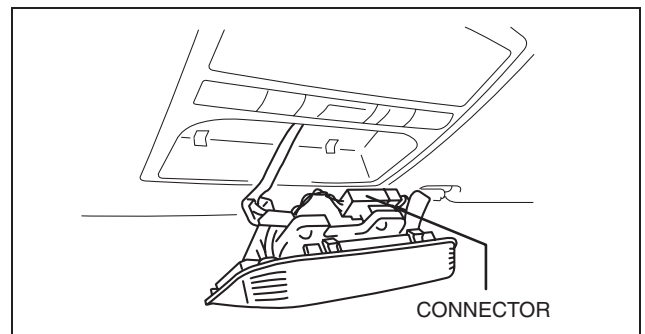
### INTRUDER SENSOR INSPECTION

id091400819400

1. Remove the intruder sensor with the connector connected.
2. Measure the intruder sensor terminal voltage using the short wiring harness connector in the position shown in the figure.

#### Note

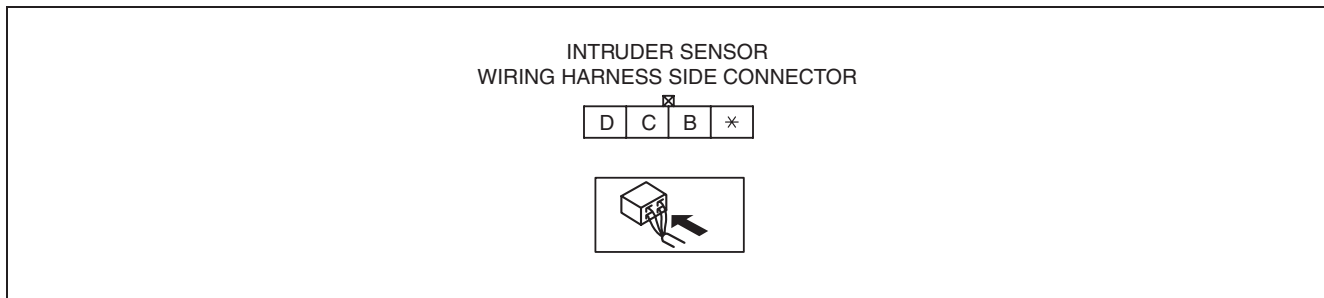
- The intruder sensor cannot be connected to a tester due to its water-resistance processing, therefore the short wiring harness connector is used for measuring the terminal voltage.
- If the terminal voltage is not as indicated in the table, inspect the short wiring harness connector for continuity. (See 09-14-136 Continuity Inspection Of Short Wiring Harness Connector.) If the short wiring harness connector is normal, inspect the parts under "Inspection items".
  - If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the intruder sensor.



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## SECURITY AND LOCKS

Terminal Voltage Table (Reference)

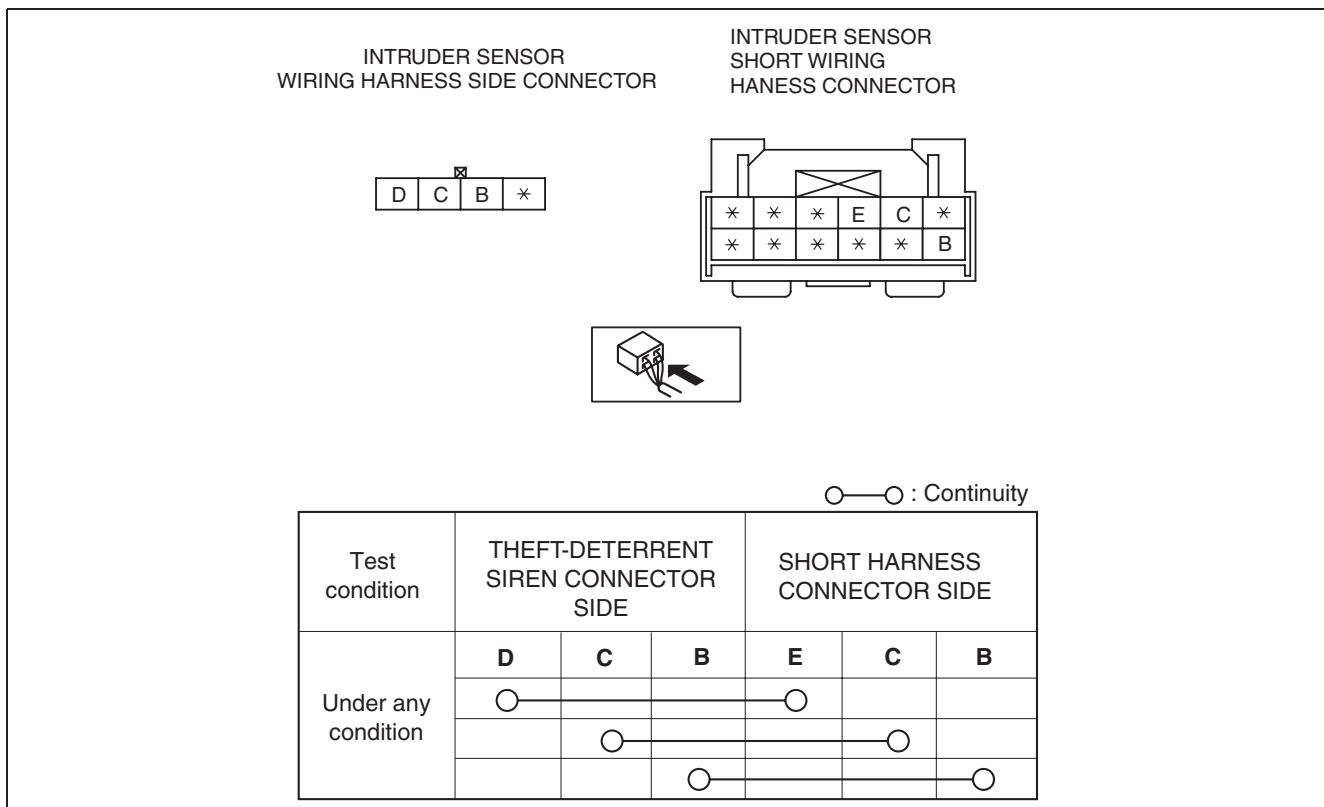


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| Terminal | Signal name  | Connected to                   | Measurement condition                                                                                      | Voltage (V) | Inspection item(s) |
|----------|--------------|--------------------------------|------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| B        | GND          | Body ground                    | Under any condition                                                                                        | 1.0 or less | Ground             |
| C        | DATA         | Theft-deterrent control module | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                    |
| D        | Power supply | BCM                            | Under any condition                                                                                        | B+          | BCM                |

### Continuity Inspection Of Short Wiring Harness Connector

- Verify that the continuity between the short wiring harness connector terminals is as indicated in the table.
  - If the continuity is not as indicated in the table, replace the short wiring harness connector.



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## IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [ADVANCED KEYLESS AND START SYSTEM]

id0914004419b0

### Foreword

- When replacing immobilizer system-related parts or programming an additional key, program the immobilizer system-related parts so that the system operates normally. For immobilizer system-related parts programming, Select programming procedures according to the service. (See 09-14-137 Selection of Procedure for Immobilizer System-Related Parts Programming.)

### Caution

- If any metallic or magnetic object is near the key, communication between the key and the vehicle

## SECURITY AND LOCKS

may be obstructed, resulting in a failure to program the immobilizer system-related parts. Remove any metallic or magnetic objects, such as key holders, from the key when programming immobilizer system-related parts.

- If any of the following devices are inside the vehicle, programming of immobilizer system-related parts may fail. Do not bring any of the following devices or similar products inside the vehicle when programming immobilizer system-related parts.
  - Advanced key
  - M-MDS
  - Personal computer
  - Devices that can send/receive radio waves
- If the engine is started during immobilizer system-related parts programming, the programming mode cancels. Therefore, do not start the engine unless indicated in the procedure. Repeat the procedure from the beginning if the engine is started during the immobilizer system-related parts programming.
- If an advanced key is near the vehicle during immobilizer system-related parts programming, it may be programmed mistakenly. Keep advanced keys 1 m away from the vehicle unless indicated in the procedure.

### Note

- The “Valid key” or “Valid advanced key” referred to in this manual indicates the key that can start the engine.
- Two or more key ID numbers must be programmed for the engine to start.
- A maximum of eight key ID numbers can be programmed for one vehicle.
- The number of programmed key ID numbers can be verified using the M-MDS.
- Do not select any screen menu other than the ones indicated in the procedure during M-MDS operation.

### Selection of Procedure for Immobilizer System-Related Parts Programming

1. Verify that the room fuse is equipped.
2. Select applicable programming procedure from the service content of the immobilizer system-related parts.

### Immobilizer System-Related Parts Service and Programming Procedure Table

| No. | Service                                                                                                                                                                                                 |                                          | Programming procedure                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Additional key programming                                                                                                                                                                              | Have two or more valid keys              | (See 09-14-138 No.1 Additional Key Programming Procedure (Using Two Valid Keys).)                                                                                     |
| 2   |                                                                                                                                                                                                         | Have one valid key or valid advanced key | (See 09-14-139 No. 2 Additional Key Programming Procedure (Using the M-MDS).)                                                                                         |
| 3   | Additional key programming procedure setting                                                                                                                                                            | Disable programming using valid keys     | (See 09-14-140 No.3 Additional Key Programming Procedure Changing.)                                                                                                   |
|     |                                                                                                                                                                                                         | Enable programming using valid keys      |                                                                                                                                                                       |
| 4   | Programming due to PCM replacement                                                                                                                                                                      |                                          | (See 09-14-141 No.4 Programming Procedure Due to PCM Replacement.)                                                                                                    |
| 5   | Programming due to steering lock unit replacement                                                                                                                                                       |                                          | (See 09-14-142 No.5 Programming Procedure Due to Steering Lock Unit Replacement.)                                                                                     |
| 6   | Programming due to keyless control module replacement                                                                                                                                                   |                                          | (See 09-14-144 No.6 Programming Procedure Due to Keyless Control Module Replacement.)                                                                                 |
| 7   | Programming due to simultaneous replacement of immobilizer system-related parts <ul style="list-style-type: none"> <li>• PCM</li> <li>• Keyless control module</li> <li>• Steering lock unit</li> </ul> |                                          | (See 09-14-147 No.7 Programming Procedure Due to Simultaneous Replacement of Immobilizer System-related Parts (PCM, Keyless Control Module, and Steering Lock Unit).) |
| 8   | Programming due to coil antenna replacement                                                                                                                                                             |                                          | Programming of immobilizer system-related parts is not necessary                                                                                                      |
| 9   | Programming after keyless receiver replacement                                                                                                                                                          |                                          | Programming of immobilizer system-related parts is not necessary                                                                                                      |

### M-MDS Connecting Procedure

#### Note

- Do not place the M-MDS in the vehicle while programming the immobilizer system.

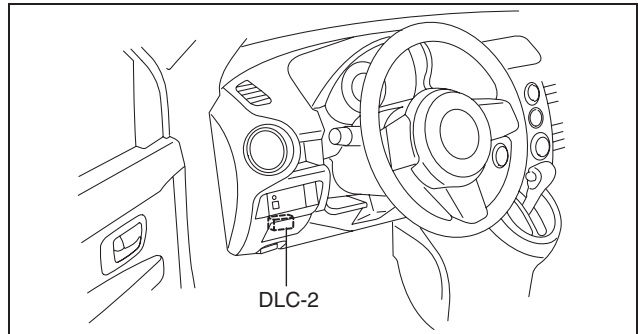
1. Fully lower the door glass.

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2. Connect the M-MDS to the DLC-2.
3. Place the M-MDS outside the vehicle.

### Caution

- Cover the vehicle body with a clean rag so as not to damage the vehicle body with the cable.



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### No.1 Additional Key Programming Procedure (Using Two Valid Keys)

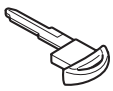
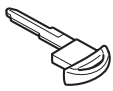
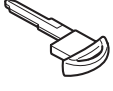
#### Conditions

- Have two or more valid keys.

#### Note

- If a key ID number cannot be programmed and DTC 15 is displayed, the maximum number of programmed keys may have been reached. Verify the number of programmed keys using the M-MDS.
- If eight keys have already been programmed and it is necessary to program other keys, the previously programmed key ID numbers must first be cleared.
- If "Customer spare key programming disable" is selected, perform additional key programming using the M-MDS. (See 09-14-139 No. 2 Additional Key Programming Procedure (Using the M-MDS).)

#### Procedure

|                      |                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VALID KEY            | <br>KEY 1 <br>KEY 2 |
| KEY FOR REGISTRATION | <br>KEY 3                                                                                               |

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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action after procedure |                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|
| 1    | <b>START ENGINE</b><br>1. Start the engine using key 1.<br>2. Verify that the security light illuminates for <b>approx. 3 s</b> , and then turns off.<br>3. Turn the ignition switch to the LOCK position.                                                                                                                                                                                                                                                                                                                                                                     | Go to the next step.   |                      |
| 2    | <b>LAUNCH PROGRAMMING MODE</b><br>1. Turn the ignition switch to the ON position using key 1.<br>2. After verifying that the security light illuminates for <b>approx. 3 s</b> and turns off, turn the ignition switch to the LOCK position within <b>approx. 4 s</b> using key 1.<br>3. Remove key 1.<br>4. Turn the ignition switch to the ON position using key 2.<br>5. After verifying that the security light illuminates for <b>approx. 3 s</b> and turns off, turn the ignition switch to the LOCK position within <b>approx. 4 s</b> using key 2.<br>6. Remove key 2. | Go to the next step.   |                      |
| 3    | <b>PERFORM ADDITIONAL KEY PROGRAMMING</b><br>1. Turn the ignition switch to the ON position using key 3.<br>2. Verify that the security light illuminates for <b>approx. 3 s</b> , and then turns off.<br>3. Remove key 3.<br>4. Are there other keys to be programmed?                                                                                                                                                                                                                                                                                                        | Yes                    | Go back to Step 2.   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                     | Go to the next step. |

## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                           | Action after procedure |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 4    | <b>VERIFY KEY PROGRAMMED CORRECTLY</b> <ul style="list-style-type: none"> <li>Verify that the engine can start and run for <b>approx. 5 s</b> or more using all the programmed keys.</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>When verifying that the engine starts, wait at least <b>approx. 5.s or more</b> before starting the engine using the next key.</li> </ul> | Procedure is completed |

### No. 2 Additional Key Programming Procedure (Using the M-MDS)

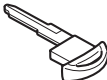
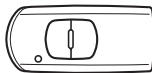
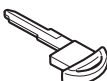
#### Conditions

- There is only one valid key. Or, there is an advanced key which can start the engine.

#### Note

- If a key ID number cannot be programmed and DTC 15 is displayed, the maximum number of programmed keys may have been reached. Verify the number of programmed keys using the M-MDS.
- If eight keys have already been programmed and it is necessary to program other keys, the previously programmed key ID numbers must first be cleared.

#### Procedure

|  |                                 |                                                                                                                                                                         |
|--|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | VALID KEY<br>OR<br>ADVANCED KEY |  OR  |
|  | KEY FOR<br>RESISTRATION         |                                                                                      |

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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action after procedure |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <b>START ENGINE</b> <ol style="list-style-type: none"> <li>Start the engine using the key 1 or the advanced key.</li> </ol> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li><b>When starting the engine with key 1, key programming may not be performed correctly if the advanced key is inside the vehicle. Do not place the advanced key in the vehicle when starting the engine with key 1.</b></li> <li><b>When starting the engine with the advanced key, remove the advanced key from the vehicle after the engine is started.</b></li> </ul> <ol style="list-style-type: none"> <li>Verify that the security light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>Turn the ignition switch to the LOCK position.</li> </ol> | Go to the next step.   |

## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action after procedure |                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <b>PERFORM ADDITIONAL KEY PROGRAMMING</b><br>1. Connect the M-MDS to the DLC-2.<br>(See 09-14-137 M-MDS Connecting Procedure.)<br>2. Turn the ignition switch to the ON position using key 2.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Although the security light starts flashing and DTC 15 is displayed after <b>approx. 1 min</b>, this does not indicate an improper procedure. Continue to perform the procedure as indicated.</li> </ul> 3. After vehicle identification, Select following from the M-MDS initial screen.<br>— Using an IDS (laptop PC)<br>1. Select “Body”.<br>2. Select “Security”.<br>3. Select “PATS function”.<br>— Using a PDS (Pocket PC):<br>1. Select “All Tests and Calibrations”.<br>2. Select “PATS Functions”.<br>4. Then, select an item from the screen menu.<br>• Program Additional Ignition Key<br>5. Perform the security access according to the directions on the M-MDS screen.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>After executing the above menu, “The operation is successful” is displayed. This indicates that the programming of the key currently in the ignition switch ON position has been completed.</li> </ul> 6. After verifying that the PATS function menu is displayed again on the M-MDS screen, turn the ignition switch to the LOCK position.<br>7. Remove key 2.<br>8. Are there other keys to be programmed? | Yes                    | Change the key and repeat Step 2.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Additional key programming can be performed using the procedure in No.1 Additional Key Programming Procedure (Using Two Valid Keys).</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                     | Go to the next step.                                                                                                                                                                                                                        |
| 3    | <b>CLOSE THE M-MDS</b><br>1. After verifying that the PATS function menu is displayed again on the M-MDS screen, select “Finish (this menu)”.<br>2. Turn the ignition switch to the LOCK position.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Go to the next step.   |                                                                                                                                                                                                                                             |
| 4    | <b>VERIFY KEY PROGRAMMED CORRECTLY</b><br>Verify that the engine can be started with the programmed key.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>When verifying that the engine starts, wait at least <b>approx. 5.s or more</b> before starting the engine using the next key.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Procedure is completed |                                                                                                                                                                                                                                             |

### No.3 Additional Key Programming Procedure Changing

#### Note

- This procedure is performed for disabling the No.1 Additional Key Programming Procedure (Using Two Valid Keys).
- The setting is “Customer spare key programming enable” when the vehicle is new or the keyless control module is replaced with a new one.

## SECURITY AND LOCKS

### Procedure

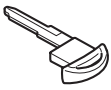
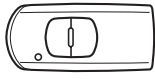
| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action after procedure |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <p><b>CHANGE CUSTOMER SPARE KEY PROGRAMMING PROCEDURE</b></p> <ol style="list-style-type: none"> <li>1. Connect the M-MDS to the DLC-2.<br/>(See 09-14-137 M-MDS Connecting Procedure.)</li> <li>2. Turn the ignition switch to the ON position using a key (The key can be either the valid key or an unprogrammed key).</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• If an unprogrammed key is used, the security light starts flashing and DTC 15 is displayed after <b>approx. 1 min</b>. However, this does not indicate an improper procedure. Continue to perform the procedure as indicated.</li> </ul> <ol style="list-style-type: none"> <li>3. After vehicle identification, Select following from the M-MDS initial screen.               <ul style="list-style-type: none"> <li>— Using an IDS (laptop PC)                   <ol style="list-style-type: none"> <li>1. Select "Body".</li> <li>2. Select "Security".</li> <li>3. Select "PATS function".</li> </ol> </li> <li>— Using a PDS (Pocket PC):                   <ol style="list-style-type: none"> <li>1. Select "All Tests and Calibrations".</li> <li>2. Select "PATS Functions".</li> </ol> </li> </ul> </li> <li>4. Select either of the following from the M-MDS menu to change the additional key programming procedure.               <ul style="list-style-type: none"> <li>— When "Customer Spare Key Programming Enable" is selected: The additional key programming procedure using valid keys is enabled.</li> <li>— When "Customer Spare Key Programming Disable" is selected: The additional key programming procedure using valid keys is disabled.</li> </ul> </li> <li>5. Perform the security access according to the directions on the M-MDS screen.</li> <li>6. After verifying that the PATS function menu is displayed again on the M-MDS screen, select "Finish (this menu)".</li> <li>7. Turn the ignition switch to the LOCK position.</li> </ol> | Procedure is completed |

### No.4 Programming Procedure Due to PCM Replacement

#### Conditions

- Prepare a valid key or an advanced key that can start the engine.

### Procedure

|                                 |                                                                                              |    |                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------|
| VALID KEY<br>OR<br>ADVANCED KEY | <br>KEY 1 | OR | <br>ADVANCED KEY |
|---------------------------------|----------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------|

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| Step | Procedure                                                                                                                                                                                                                                                                                                  | Action after procedure |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <p><b>REPLACE THE PCM</b></p> <p>Refer to PCM REMOVAL/INSTALLATION to perform PCM replacement and configuration.<br/>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br/>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br/>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)</p> | Go to the next step.   |



## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Action after procedure |                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------|
| 2    | <p><b>PERFORM PARAMETER RESET</b></p> <ol style="list-style-type: none"> <li>1. Connect the M-MDS to the DLC-2.<br/>(See 09-14-137 M-MDS Connecting Procedure.)</li> <li>2. Turn the ignition switch to the ON position using the valid key or the valid advanced key.</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Although the security light remains illuminated and DTC 23 is displayed after <b>approx. 1 min</b>, continue to perform the procedure as indicated.</li> </ul> <ol style="list-style-type: none"> <li>3. Verify that the keyless warning light illuminates for <b>approx 3 s</b>, and then turns off.</li> <li>4. After vehicle identification, Select following from the M-MDS initial screen.               <ul style="list-style-type: none"> <li>— Using an IDS (laptop PC):                   <ol style="list-style-type: none"> <li>1. Select “Body”.</li> <li>2. Select “Security”.</li> <li>3. Select “PATS function”.</li> </ol> </li> <li>— Using a PDS (pocket PC):                   <ol style="list-style-type: none"> <li>1. Select “All Tests and Calibrations”.</li> <li>2. Select “PATS Functions”.</li> </ol> </li> </ul> </li> <li>5. Then, select an item from the screen menu.               <ul style="list-style-type: none"> <li>• Parameter Reset</li> </ul> </li> <li>6. Perform the security access according to the directions on the M-MDS screen.</li> <li>7. Select replaced parts (PCM) according to the directions on the M-MDS screen.</li> </ol> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li>• <b>At this time, do not Select other parts from the M-MDS menu.</b></li> </ul> <ol style="list-style-type: none"> <li>8. After verifying that the PATS function menu is displayed again on the M-MDS screen, select “Finish (this menu)”.</li> <li>9. Turn the ignition switch to the LOCK position.</li> <li>10. Turn the ignition switch to the ON position.</li> <li>11. Verify that the security light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>12. Turn the ignition switch to the LOCK position.</li> </ol> | Go to the next step.   |                                                                             |
| 3    | <p><b>VERIFY PROGRAMMING IS PERFORMED CORRECTLY</b></p> <ol style="list-style-type: none"> <li>1. Verify that the engine can be started with all the keys.</li> <li>2. Can the engine be started?</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes                    | Procedure is completed                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No                     | Perform the corresponding DTC inspection to repair the malfunctioning part. |

### No.5 Programming Procedure Due to Steering Lock Unit Replacement

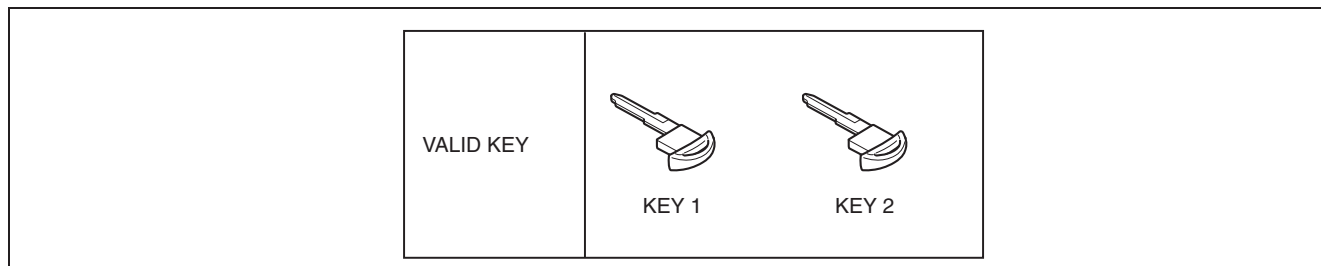
**Note**

- Since two or more keys need to be programmed to start the engine, program two or more keys after the replacement.

**Conditions**

- Have two or more keys to be programmed after the replacement.

**Procedure**



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| Step                      | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Action after procedure    |                |   |  |   |  |   |  |                      |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------|---|--|---|--|---|--|----------------------|
| 1                         | <b>REPLACE STEERING LOCK UNIT</b><br>Replace the steering lock unit. (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.] )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Go to the next step.      |                |   |  |   |  |   |  |                      |
| 2                         | <b>CLEAR IGNITION KEY ID NUMBERS</b><br>1. Connect the M-MDS to the DLC-2.<br>(See 09-14-137 M-MDS Connecting Procedure.)<br>2. Turn the ignition switch to the ON position using key 1.<br><br><b>Note</b> <ul style="list-style-type: none"><li>Although the security light starts flashing and DTC 15 is displayed after <b>approx. 1 min</b>, this does not indicate an improper procedure. Continue to perform the procedure as indicated.</li></ul><br>3. After vehicle identification, Select following from the M-MDS initial screen. <ul style="list-style-type: none"><li>— Using an IDS (laptop PC):<ol style="list-style-type: none"><li>1. Select “Body”.</li><li>2. Select “Security”.</li><li>3. Select “PATS function”.</li></ol></li><li>— Using a PDS (pocket PC):<ol style="list-style-type: none"><li>1. Select “All Tests and Calibrations”.</li><li>2. Select “PATS Functions”.</li></ol></li></ul><br>4. Then, select an item from the screen menu. <ul style="list-style-type: none"><li>• Ignition Key Code Erase and Program</li></ul><br>5. Perform the security access according to the directions on the M-MDS screen. | Go to the next step.      |                |   |  |   |  |   |  |                      |
| 3                         | <b>PERFORM IGNITION KEY ID NUMBER PROGRAMMING</b><br>1. Program two keys according to the directions on the M-MDS.<br>2. Verify that the PATS function menu is displayed again on the M-MDS screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Go to the next step.      |                |   |  |   |  |   |  |                      |
| 4                         | <b>PERFORM Steering Lock Unit Programming</b><br>1. Select “Steering Lock Unit Programming” from the M-MDS screen menu.<br>2. Complete the Steering Lock Unit Programming according to the directions on the M-MDS.<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>3. After verifying that the PATS function menu is displayed again on the M-MDS screen, select “Finish (this menu)”.<br>4. Turn the ignition switch to the LOCK position.<br>5. Disconnect the M-MDS from the DLC-2.<br>6. Remove the programmed card key from the vehicle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Go to the next step.      |                |   |  |   |  |   |  |                      |
| 5                         | <b>VERIFY KEY 1 PROGRAMMING PERFORMED CORRECTLY</b><br>1. Start the engine using key 1.<br>2. Verify that the security light and keyless warning light operate as shown in the following figure.<br>3. Turn the ignition switch to the LOCK position and remove key 1.<br><br><div><div><div>IGNITION SWITCH</div><div><div>START (ENGINE START)</div><div>ON</div><div>LOCK</div></div></div><div><div>SECURITY LIGHT</div><div><div>ON</div><div>OFF</div></div><div><div>Approx. 3 s</div></div></div><div><div>KEYLESS WARNING LIGHT</div><div><div>ON</div><div>OFF</div></div><div><div>Approx. 1 s</div></div><div><div>DISPLAY METHOD</div></div></div></div> <div><div>EXAMPLE</div><table><tr><th>NUMBER OF PROGRAMMED KEYS</th><th>DISPLAY METHOD</th></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr></table><div>a : Approx. 0.3 s<br/>b : Approx. 0.9 s</div></div>                                                                                                                                                                                                                          | NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD | 1 |  | 2 |  | 3 |  | Go to the next step. |
| NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                |   |  |   |  |   |  |                      |
| 1                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                |   |  |   |  |   |  |                      |
| 2                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                |   |  |   |  |   |  |                      |
| 3                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                |   |  |   |  |   |  |                      |

## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action after procedure |                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------|
| 6    | <div><div><div><div>VERIFY KEY 2 PROGRAMMING PERFORMED CORRECTLY</div><div><div><div><div>1. Start the engine using key 2.</div><div>2. Verify that the security light and keyless warning light operate as shown in the following figure.</div><div>3. Turn the ignition switch to the LOCK position and remove key 2.</div><div>4. Are there other keys to be programmed?</div></div></div></div><div><div><div><div>IGNITION SWITCH</div><div><div>START (ENGINE START)</div><div>ON</div><div>LOCK</div></div><div><div><div><div>SECURITY LIGHT</div><div>ON</div><div>OFF</div></div><div><div>Approx. 3 s</div></div></div><div><div><div><div>KEYLESS WARNING LIGHT</div><div>ON</div><div>OFF</div></div><div><div>Approx. 1 s</div></div></div><div><div>DISPLAY METHOD</div></div></div></div><div><div>EXAMPLE</div><div><div><div>NUMBER OF PROGRAMMED KEYS</div><div>DISPLAY METHOD</div></div><div><div>1</div><div><div><div><div><div></div><div>a</div><div></div></div><div><div>b</div></div></div></div></div><div><div>2</div><div><div><div><div><div></div><div>a</div><div></div></div><div><div>b</div></div></div></div></div><div><div>3</div><div><div><div><div><div></div><div>a</div><div></div></div><div><div>b</div></div></div></div></div></div><div><div>a : Approx. 0.3 s</div><div>b : Approx. 0.9 s</div></div></div></div></div></div></div></div></div></div></div></div> | Yes                    | Repeat Step 6 using each programmed key. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                     | Go to the next step.                     |
| 7    | <div><div><div><div>VERIFY ADVANCED KEY PROGRAMMING PERFORMED CORRECTLY</div><div><div><div><div>1. Bring the programmed advanced key into the vehicle.</div><div>2. Close all doors.</div><div>3. Remove the key from the key cylinder and place it on the front passenger's seat.</div><div>4. Start the engine using the advanced key.</div><div>5. Verify that the security light and keyless warning light operate as shown in the following figure.</div><div>6. After verifying that the keyless warning light turns off, turn the ignition switch to the LOCK position.</div></div></div></div><div><div><div><div>IGNITION SWITCH</div><div><div>START (ENGINE START)</div><div>ON</div><div>LOCK</div></div><div><div><div><div>SECURITY LIGHT</div><div>ON</div><div>OFF</div></div><div><div>Approx. 3 s</div></div></div><div><div><div><div>KEYLESS WARNING LIGHT</div><div>ON</div><div>OFF</div></div><div><div>Approx. 1 s</div></div></div></div></div></div></div><div>Procedure is completed</div></div></div></div></div>                                                                                                                                                                                                                                                                                                                                                                       |                        |                                          |

### No.6 Programming Procedure Due to Keyless Control Module Replacement

#### Note

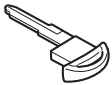
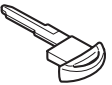
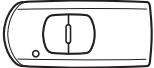
- Before beginning the procedure, verify that the customer has turned in all of the advanced keys and keys for the vehicle.
- The engine cannot be started unless an advanced key and two or more keys are programmed after the replacement.

#### Conditions

- Have two or more keys to be programmed after the replacement.
- Have one or more advanced keys to be programmed after the replacement.

## SECURITY AND LOCKS

### Procedure

|  |                      |                                                                                                                                                                                        |  |
|--|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | VALID KEY            | <br>KEY 1 <br>KEY 2 |  |
|  | KEY FOR RESISTRATION |                                                                                                       |  |

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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Action after procedure |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <b>REPLACE KEYLESS CONTROL MODULE</b><br>Replace the keyless control module. (See 09-14-98 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION [ADVANCED KEYLESS AND START SYSTEM].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Go to the next step.   |
| 2    | <b>PERFORM PARAMETER RESET</b> <ol style="list-style-type: none"> <li>Connect the M-MDS to the DLC-2.<br/>(See 09-14-137 M-MDS Connecting Procedure.)</li> <li>Turn the ignition switch to the ON position using key 1.</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Although the security light starts flashing and DTC 15 is displayed after <b>approx. 1 min</b>, this does not indicate an improper procedure. Continue to perform the procedure as indicated.</li> </ul> <ol style="list-style-type: none"> <li>After vehicle identification, Select following from the M-MDS initial screen.               <ul style="list-style-type: none"> <li>Using an IDS (laptop PC):                   <ol style="list-style-type: none"> <li>Select "Body".</li> <li>Select "Security".</li> <li>Select "PATS function".</li> </ol> </li> <li>Using a PDS (pocket PC):                   <ol style="list-style-type: none"> <li>Select "All Tests and Calibrations".</li> <li>Select "PATS Functions".</li> </ol> </li> </ul> </li> <li>Then, select an item from the screen menu.               <ul style="list-style-type: none"> <li>Parameter Reset</li> </ul> </li> <li>Perform the security access according to the directions on the M-MDS screen.</li> <li>Select replaced part "RKE" according to the directions on the M-MDS.</li> </ol> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li><b>At this time, do not Select other parts from the M-MDS menu.</b></li> </ul> | Go to the next step.   |
| 3    | <b>CLEAR IGNITION KEY ID NUMBERS</b> <ol style="list-style-type: none"> <li>Select "Ignition Key Code Erase and Program" from the M-MDS screen menu.</li> <li>Clear the ignition key ID number according to the directions on the M-MDS.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Go to the next step.   |
| 4    | <b>PERFORM IGNITION KEY ID NUMBER PROGRAMMING</b> <ol style="list-style-type: none"> <li>Program two keys according to the directions on the M-MDS.</li> <li>Verify that the PATS function menu is displayed again on the M-MDS screen.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Go to the next step.   |
| 5    | <b>PERFORM ADVANCED KEY PROGRAMMING</b> <ol style="list-style-type: none"> <li>Select "Program Additional Advanced Key" from the M-MDS screen menu.</li> <li>Program the advanced key according to the directions on the M-MDS.</li> <li>Verify that the PATS function menu is displayed again on the M-MDS screen.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Go to the next step.   |

## SECURITY AND LOCKS

| Step                      | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action after procedure    |                      |   |  |   |  |   |  |                      |                                          |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------|---|--|---|--|---|--|----------------------|------------------------------------------|
| 6                         | <b>PERFORM Steering Lock Unit Programming</b><br>1. Select "Steering Lock Unit Programming" from the M-MDS screen menu.<br>2. Complete the Steering Lock Unit Programming according to the directions on the M-MDS.<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>3. After verifying that the PATS function menu is displayed again on the M-MDS screen, select "Finish (this menu)".<br>4. Turn the ignition switch to the LOCK position.<br>5. Disconnect the M-MDS from the DLC-2.<br>6. Remove the programmed card key from the vehicle.                                                                                                                                                                                                                                           | Go to the next step.      |                      |   |  |   |  |   |  |                      |                                          |
| 7                         | <b>VERIFY KEY 1 PROGRAMMING PERFORMED CORRECTLY</b><br>1. Start the engine using key 1.<br>2. Verify that the security light and keyless warning light operate as shown in the following figure.<br>3. Turn the ignition switch to the LOCK position and remove key 1.<br><div><div><div>IGNITION SWITCH</div><div>START (ENGINE START)<br/>ON<br/>LOCK</div><div></div></div><div><div>SECURITY LIGHT</div><div>ON<br/>OFF</div><div></div></div><div><div>KEYLESS WARNING LIGHT</div><div>ON<br/>OFF</div><div></div></div><div><div>EXAMPLE</div><div><table><tr><th>NUMBER OF PROGRAMMED KEYS</th><th>DISPLAY METHOD</th></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr></table><p>a : Approx. 0.3 s<br/>b : Approx. 0.9 s</p></div></div></div>                                              | NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD       | 1 |  | 2 |  | 3 |  | Go to the next step. |                                          |
| NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                      |   |  |   |  |   |  |                      |                                          |
| 1                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                      |   |  |   |  |   |  |                      |                                          |
| 2                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                      |   |  |   |  |   |  |                      |                                          |
| 3                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                      |   |  |   |  |   |  |                      |                                          |
| 8                         | <b>VERIFY KEY 2 PROGRAMMING PERFORMED CORRECTLY</b><br>1. Start the engine using key 2.<br>2. Verify that the security light and keyless warning light operate as shown in the following figure.<br>3. Turn the ignition switch to the LOCK position and remove key 2.<br>4. Are there other keys to be programmed?<br><div><div><div>IGNITION SWITCH</div><div>START (ENGINE START)<br/>ON<br/>LOCK</div><div></div></div><div><div>SECURITY LIGHT</div><div>ON<br/>OFF</div><div></div></div><div><div>KEYLESS WARNING LIGHT</div><div>ON<br/>OFF</div><div></div></div><div><div>EXAMPLE</div><div><table><tr><th>NUMBER OF PROGRAMMED KEYS</th><th>DISPLAY METHOD</th></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr></table><p>a : Approx. 0.3 s<br/>b : Approx. 0.9 s</p></div></div></div> | NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD       | 1 |  | 2 |  | 3 |  | Yes                  | Repeat Step 8 using each programmed key. |
| NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                      |   |  |   |  |   |  |                      |                                          |
| 1                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                      |   |  |   |  |   |  |                      |                                          |
| 2                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                      |   |  |   |  |   |  |                      |                                          |
| 3                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                      |   |  |   |  |   |  |                      |                                          |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No                        | Go to the next step. |   |  |   |  |   |  |                      |                                          |

## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action after procedure |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 8    | <p><b>VERIFY ADVANCED KEY PROGRAMMING PERFORMED CORRECTLY</b></p> <ol style="list-style-type: none"> <li>1. Bring the programmed advanced key into the vehicle.</li> <li>2. Close all doors.</li> <li>3. Remove the key from the key cylinder and place it on the front passenger's seat.</li> <li>4. Start the engine using the advanced key.</li> <li>5. Verify that the security light and keyless warning light operate as shown in the following figure.</li> <li>6. Turn the ignition switch to the LOCK position.</li> </ol> <p>The diagram shows three horizontal timelines. The top timeline is for the IGNITION SWITCH, with states LOCK, ON (ENGINE START), and LOCK. The middle timeline is for the SECURITY LIGHT, which turns ON when the ignition is turned ON and stays ON for approximately 3 seconds before turning OFF. The bottom timeline is for the KEYLESS WARNING LIGHT, which turns ON when the ignition is turned ON and stays ON for approximately 1 second before turning OFF.</p> | Procedure is completed |

### No.7 Programming Procedure Due to Simultaneous Replacement of Immobilizer System-related Parts (PCM, Keyless Control Module, and Steering Lock Unit)

#### Caution

- The menu and execution sequence of the M-MDS vary depending on the type of replaced unit and parts. Perform the procedures referring to the following table.

#### M-MDS menu

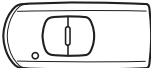
- (1): Parameter Reset
- (2): Ignition Key Code Erase and Program
- (3): Program Additional Advanced Key
- (4): Steering Lock Unit Programming

| Replacement part                                       | M-MDS execution menu/sequence | Conditions                                                                                                                                                                                          |
|--------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Keyless control module and PCM                         | (1)→(2)→(3)→(4)               | <ul style="list-style-type: none"> <li>• Have two or more keys to be programmed after the replacement.</li> <li>• Have one or more advanced keys to be programmed after the replacement.</li> </ul> |
| Keyless control module and steering lock unit *1       |                               |                                                                                                                                                                                                     |
| Keyless control module, PCM, and steering lock unit *1 |                               |                                                                                                                                                                                                     |
| PCM and steering lock unit *1                          | (1)→(2)→(4)                   | Have two or more keys to be programmed after the replacement.                                                                                                                                       |

\*1 : Because the steering lock unit is integrated with the ignition key cylinder, the key must also be replaced when replacing the steering lock unit.

## SECURITY AND LOCKS

### Procedure

|                      |                                                                                                                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VALID KEY            |  <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>KEY 1</span> <span>KEY 2</span> </div> |
| KEY FOR RESISTRATION |                                                                                                                             |

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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action after procedure |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <b>REPLACE UNITS OR PARTS</b><br>Replace the unit or parts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Go to the next step.   |
| 2    | <b>PERFORM PARAMETER RESET</b> <ol style="list-style-type: none"> <li>1. Connect the M-MDS to the DLC-2.<br/>(See 09-14-137 M-MDS Connecting Procedure.)</li> <li>2. Turn the ignition switch to the ON position using key 1.</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Although the security light flashes or illuminates and DTC 15 or 23 is displayed after <b>approx. 1 min</b>, continue to perform the procedure.</li> </ul> <ol style="list-style-type: none"> <li>3. After vehicle identification, Select following from the M-MDS initial screen.                             <ul style="list-style-type: none"> <li>— Using an IDS (laptop PC):                                     <ol style="list-style-type: none"> <li>1. Select “Body”.</li> <li>2. Select “Security”.</li> <li>3. Select “PATS function”.</li> </ol> </li> <li>— Using a PDS (pocket PC):                                     <ol style="list-style-type: none"> <li>1. Select “All Tests and Calibrations”.</li> <li>2. Select “PATS Functions”.</li> </ol> </li> </ul> </li> <li>4. Then, select an item from the screen menu.                             <ul style="list-style-type: none"> <li>• Parameter Reset</li> </ul> </li> <li>5. Perform the security access according to the directions on the M-MDS screen.</li> <li>6. Select replaced parts according to the directions on the M-MDS screen.                             <ul style="list-style-type: none"> <li>— If the PCM is replaced: Select “PCM”.</li> <li>— If the keyless control module is replaced: Select “RKE”.</li> </ul> </li> </ol> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li>• <b>At this time, do not Select other parts from the M-MDS menu.</b></li> </ul> | Go to the next step.   |
| 3    | <b>CLEAR IGNITION KEY ID NUMBERS</b> <ol style="list-style-type: none"> <li>1. Select “Ignition Key Code Erase and Program” from the M-MDS screen menu.</li> <li>2. Clear the ignition key ID number according to the directions on the M-MDS.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Go to the next step.   |
| 4    | <b>PERFORM IGNITION KEY ID NUMBER PROGRAMMING</b> <ol style="list-style-type: none"> <li>1. Program two keys according to the directions on the M-MDS.</li> <li>2. Verify that the PATS function menu is displayed again on the M-MDS screen.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Go to the next step.   |
| 5    | <b>PERFORM ADVANCED KEY PROGRAMMING</b> <ol style="list-style-type: none"> <li>1. Select “Program Additional Advanced Key” from the M-MDS screen menu.</li> <li>2. Program the advanced key according to the directions on the M-MDS.</li> <li>3. Verify that the PATS function menu is displayed again on the M-MDS screen.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Go to the next step.   |

## SECURITY AND LOCKS

| Step                      | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action after procedure    |                |   |  |   |  |   |  |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------|---|--|---|--|---|--|
| 6                         | <b>PERFORM Steering Lock Unit Programming</b><br>1. Select "Steering Lock Unit Programming" from the M-MDS screen menu.<br>2. Complete the Steering Lock Unit Programming according to the directions on the M-MDS.<br>(See 09-14-134 STEERING LOCK UNIT ID CODE REGISTRATION [ADVANCED KEYLESS AND START SYSTEM].)<br>3. After verifying that the PATS function menu is displayed again on the M-MDS screen, select "Finish (this menu)".<br>4. Turn the ignition switch to the LOCK position.<br>5. Disconnect the M-MDS from the DLC-2.<br>6. Remove the programmed card key from the vehicle.                                                                                                                                                                                                                                                                                                                                                                 | Go to the next step.      |                |   |  |   |  |   |  |
| 7                         | <b>VERIFY KEY 1 PROGRAMMING PERFORMED CORRECTLY</b><br>1. Start the engine using key 1.<br>2. Verify that the security light and keyless warning light operate as shown in the following figure.<br>3. Turn the ignition switch to the LOCK position and remove key 1.<br><div><div><div>IGNITION SWITCH</div><div>START (ENGINE START)</div><div>ON</div><div>LOCK</div></div><div><div>SECURITY LIGHT</div><div>ON</div><div>OFF</div></div><div><div>KEYLESS WARNING LIGHT</div><div>ON</div><div>OFF</div></div></div> <div><div>EXAMPLE</div><table><tr><th>NUMBER OF PROGRAMMED KEYS</th><th>DISPLAY METHOD</th></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr></table><div>a : Approx. 0.3 s<br/>b : Approx. 0.9 s</div></div> <div>Go to the next step.</div>                                                                                                                                                   | NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD | 1 |  | 2 |  | 3 |  |
| NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                |   |  |   |  |   |  |
| 1                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                |   |  |   |  |   |  |
| 2                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                |   |  |   |  |   |  |
| 3                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                |   |  |   |  |   |  |
| 8                         | <b>VERIFY KEY 2 PROGRAMMING PERFORMED CORRECTLY</b><br>1. Start the engine using key 2.<br>2. Verify that the security light and keyless warning light operate as shown in the following figure.<br>3. Turn the ignition switch to the LOCK position and remove key 2.<br>4. Are there other keys to be programmed?<br><div><div><div>IGNITION SWITCH</div><div>START (ENGINE START)</div><div>ON</div><div>LOCK</div></div><div><div>SECURITY LIGHT</div><div>ON</div><div>OFF</div></div><div><div>KEYLESS WARNING LIGHT</div><div>ON</div><div>OFF</div></div></div> <div><div>EXAMPLE</div><table><tr><th>NUMBER OF PROGRAMMED KEYS</th><th>DISPLAY METHOD</th></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr></table><div>a : Approx. 0.3 s<br/>b : Approx. 0.9 s</div></div> <div><div>Yes</div><div>Repeat Step 8 using each programmed key.</div></div> <div><div>No</div><div>Go to the next step.</div></div> | NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD | 1 |  | 2 |  | 3 |  |
| NUMBER OF PROGRAMMED KEYS | DISPLAY METHOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                |   |  |   |  |   |  |
| 1                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                |   |  |   |  |   |  |
| 2                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                |   |  |   |  |   |  |
| 3                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                |   |  |   |  |   |  |



## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action after procedure |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 9    | <p><b>VERIFY ADVANCED KEY PROGRAMMING PERFORMED CORRECTLY</b></p> <ol style="list-style-type: none"> <li>1. Bring the programmed advanced key into the vehicle.</li> <li>2. Close all doors.</li> <li>3. Remove the key from the key cylinder and place it on the front passenger's seat.</li> <li>4. Start the engine using the advanced key.</li> <li>5. Verify that the security light and keyless warning light operate as shown in the following figure.</li> <li>6. Turn the ignition switch to the LOCK position.</li> </ol> <div style="text-align: center;"> <p>The diagram shows three horizontal timelines. The top timeline is for the IGNITION SWITCH, with states LOCK, ON, and START (ENGINE START). The middle timeline is for the SECURITY LIGHT, which turns ON at the START point and remains ON for approximately 3 seconds. The bottom timeline is for the KEYLESS WARNING LIGHT, which turns ON at the START point and remains ON for approximately 1 second.</p> </div> | Procedure is completed |

### IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM]

id0914004419b3

#### Foreword

- When replacing immobilizer system-related parts or programming an additional key, program the immobilizer system-related parts so that the system operates normally. For immobilizer system-related parts programming, Select programming procedures according to the service. (See 09-14-150 Selection of Procedure for Immobilizer System-Related Parts Programming.)

#### Caution

- If any metallic or magnetic object is near the key, communication between the key and the vehicle may be obstructed, resulting in a failure to program the immobilizer system-related parts. Remove any metallic or magnetic objects, such as key holders, from the key when programming immobilizer system-related parts.
- If any of the following devices are inside the vehicle, programming of immobilizer system-related parts may fail. Do not bring any of the following devices or similar products inside the vehicle when programming immobilizer system-related parts.
  - M-MDS
  - Personal computer
  - Devices that can send/receive radio waves
- If the engine is started during immobilizer system-related parts programming, the programming mode cancels. Therefore, do not start the engine unless indicated in the procedure. Repeat the procedure from the beginning if the engine is started during the immobilizer system-related parts programming.

#### Note

- The "Valid key" referred to in this manual indicates the key that can start the engine.
- Two or more key ID numbers must be programmed for the engine to start.
- A maximum of eight key ID numbers can be programmed for one vehicle.
- The number of programmed key ID numbers can be verified using the M-MDS.
- Do not select any screen menu other than the ones indicated in the procedure during M-MDS operation.

#### Selection of Procedure for Immobilizer System-Related Parts Programming

1. Verify that the room fuse is equipped.
2. Select applicable programming procedure from the service content of the immobilizer system-related parts.

## SECURITY AND LOCKS

**Immobilizer System-Related Parts Service and Programming Procedure Table**

| No. | Service                                                                                                                                                               |                                      | Programming procedure                                                                                                                        |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Additional key programming                                                                                                                                            | Have two or more valid keys          | (See 09-14-151 No.1 Additional Key Programming Procedure (Using Two Valid Keys).)                                                            |
| 2   |                                                                                                                                                                       | Have one valid key or none           | (See 09-14-152 No. 2 Additional Key Programming Procedure (Using the M-MDS).)                                                                |
| 3   | Additional key programming procedure setting                                                                                                                          | Disable programming using valid keys | (See 09-14-153 No.3 Additional Key Programming Procedure Changing.)                                                                          |
|     |                                                                                                                                                                       | Enable programming using valid keys  |                                                                                                                                              |
| 4   | Programming due to PCM replacement                                                                                                                                    |                                      | (See 09-14-154 No.4 Programming Procedure Due to PCM Replacement.)                                                                           |
| 5   | Programming due to instrument cluster replacement                                                                                                                     |                                      | (See 09-14-155 No.5 Programming Procedure Due to Instrument Cluster Replacement.)                                                            |
| 6   | Programming due to simultaneous replacement of immobilizer system-related parts <ul style="list-style-type: none"> <li>• PCM</li> <li>• Instrument cluster</li> </ul> |                                      | (See 09-14-156 No.6 Programming Procedure Due to Simultaneous Replacement of Immobilizer System-related Parts (PCM and Instrument Cluster).) |
| 7   | Programming due to coil antenna replacement                                                                                                                           |                                      | Programming of immobilizer system-related parts is not necessary                                                                             |

### M-MDS Connecting Procedure

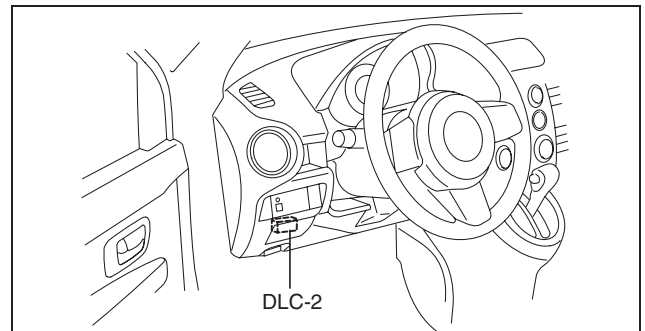
**Note**

- Do not place the M-MDS in the vehicle while programming the immobilizer system.

1. Fully lower the door glass.
2. Connect the M-MDS to the DLC-2.
3. Place the M-MDS outside the vehicle.

**Caution**

- **Cover the vehicle body with a clean rag so as not to damage the vehicle body with the cable.**



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### No.1 Additional Key Programming Procedure (Using Two Valid Keys)

**Conditions**

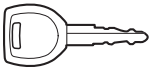
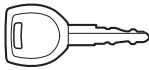
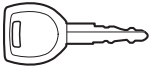
- Have two or more valid keys.

**Note**

- If a key ID number cannot be programmed and DTC 15 is displayed, the maximum number of programmed keys may have been reached. Verify the number of programmed keys using the M-MDS.
- If eight keys have already been programmed and it is necessary to program other keys, the previously programmed key ID numbers must first be cleared.
- If "Customer spare key programming disable" is selected, perform additional key programming using the M-MDS. (See 09-14-152 No. 2 Additional Key Programming Procedure (Using the M-MDS).)

## SECURITY AND LOCKS

### Procedure

|  |                      |                                                                                            |                                                                                             |  |
|--|----------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--|
|  | VALID KEY            | <br>KEY 1 | <br>KEY 2 |  |
|  | KEY FOR RESISTRATION | <br>KEY 3 |                                                                                             |  |

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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Action after procedure |                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|
| 1    | <b>LAUNCH PROGRAMMING MODE</b> <ol style="list-style-type: none"> <li>1. Turn the ignition switch to the ON position using key 1.</li> <li>2. After verifying that the security light illuminates for <b>approx. 3 s</b> and turns off, turn the ignition switch to the LOCK position within <b>approx. 4 s</b> using key 1.</li> <li>3. Remove key 1.</li> <li>4. Turn the ignition switch to the ON position using key 2.</li> <li>5. After verifying that the security light illuminates for <b>approx. 3 s</b> and turns off, turn the ignition switch to the LOCK position within <b>approx. 4 s</b> using key 2.</li> <li>6. Remove key 2.</li> </ol> | Go to the next step.   |                      |
| 2    | <b>PERFORM ADDITIONAL KEY PROGRAMMING</b> <ol style="list-style-type: none"> <li>1. Turn the ignition switch to the ON position using key 3.</li> <li>2. Verify that the security light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>3. Remove key 3.</li> <li>4. Are there other keys to be programmed?</li> </ol>                                                                                                                                                                                                                                                                                                                     | Yes                    | Go back to Step 1.   |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No                     | Go to the next step. |
| 3    | <b>VERIFY KEY PROGRAMMING IS CORRECT</b> <ul style="list-style-type: none"> <li>• Verify that the engine can start and run for approx. 5 s or more using all the programmed keys.</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• When verifying that the engine starts, wait at least <b>approx. 5.s or more</b> before starting the engine using the next key.</li> </ul>                                                                                                                                                                                                                                                          | Procedure is completed |                      |

### No. 2 Additional Key Programming Procedure (Using the M-MDS)

#### Conditions

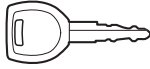
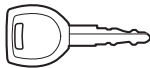
- There is only one valid key , or none.

#### Note

- If a key ID number cannot be programmed and DTC 15 is displayed, the maximum number of programmed keys may have been reached. Verify the number of programmed keys using the M-MDS.
- If eight keys have already been programmed and it is necessary to program other keys, the previously programmed key ID numbers must first be cleared.

## SECURITY AND LOCKS

### Procedure

|  |                      |                                                                                            |
|--|----------------------|--------------------------------------------------------------------------------------------|
|  | VALID KEY            | <br>KEY 1 |
|  | KEY FOR RESISTRATION | <br>KEY 1 |

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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Action after procedure |                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>PERFORM ADDITIONAL KEY PROGRAMMING</b><br>1. Connect the M-MDS to the DLC-2.<br>(See 09-14-151 M-MDS Connecting Procedure)<br>2. Turn the ignition switch to the ON position using key 1.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Although the security light starts flashing and DTC 15 is displayed after <b>approx. 1 min</b>, this does not indicate an improper procedure. Continue to perform the procedure as indicated.</li> </ul> 3. After vehicle identification, Select following from the M-MDS initial screen. <ul style="list-style-type: none"> <li>— Using an IDS (laptop PC)               <ol style="list-style-type: none"> <li>Select “Body”.</li> <li>Select “Security”.</li> <li>Select “PATS function”.</li> </ol> </li> <li>— Using a PDS (Pocket PC):               <ol style="list-style-type: none"> <li>Select “All Tests and Calibrations”.</li> <li>Select “PATS Functions”.</li> </ol> </li> </ul> 4. Then, select an item from the screen menu. <ul style="list-style-type: none"> <li>• Program Additional Ignition Key</li> </ul> 5. Perform the security access according to the directions on the M-MDS screen.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>After executing the above menu, “This operation is successful” is displayed. This indicates that the programming of the key currently in the ignition switch ON position has been completed.</li> </ul> 6. After verifying that the PATS function menu is displayed again on the M-MDS screen, turn the ignition switch to the LOCK position.<br>7. Remove key 1.<br>8. Are there other keys to be programmed? | Yes                    | Change the key and repeat Step 1.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Additional key programming can be performed using the procedure in No.1 Additional Key Programming Procedure (Using Two Valid Keys).</li> </ul> |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No                     | Go to the next step.                                                                                                                                                                                                                        |
| 2    | <b>CLOSE THE M-MDS</b><br>1. After verifying that the PATS function menu is displayed again on the M-MDS screen, select “Finish (this menu)”.<br>2. Turn the ignition switch to the LOCK position.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Go to the next step.   |                                                                                                                                                                                                                                             |
| 3    | <b>VERIFY KEY PROGRAMMING IS CORRECT</b><br>Verify that the engine can be started with the programmed key.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>When verifying that the engine starts, wait at least <b>approx. 5.s or more</b> before starting the engine using the next key.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Procedure is completed |                                                                                                                                                                                                                                             |

### No.3 Additional Key Programming Procedure Changing

#### Note

- This procedure is performed for disabling the No.1 Additional Key Programming Procedure (Using Two Valid Keys).

## SECURITY AND LOCKS

- The setting is “Customer spare key programming enable” when the vehicle is new or the keyless control module is replaced with a new one.

### Procedure

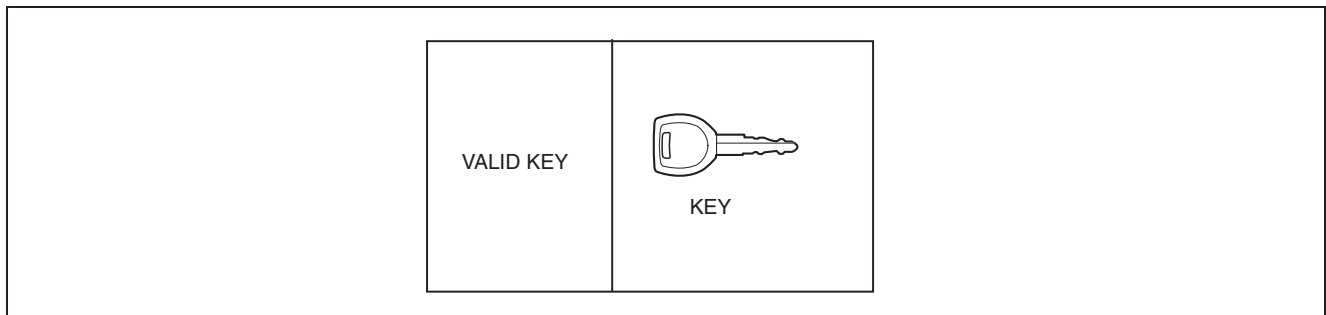
| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action after procedure |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <p><b>CHANGE CUSTOMER SPARE KEY PROGRAMMING PROCEDURE</b></p> <ol style="list-style-type: none"> <li>Connect the M-MDS to the DLC-2.<br/>(See 09-14-151 M-MDS Connecting Procedure.)</li> <li>Turn the ignition switch to the ON position using a key (The key can be either the valid key or an unprogrammed key).</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>If an unprogrammed key is used, the security light starts flashing and DTC 15 is displayed after <b>approx. 1 min.</b> However, this does not indicate an improper procedure. Continue to perform the procedure as indicated.</li> </ul> <ol style="list-style-type: none"> <li>After vehicle identification, Select following from the M-MDS initial screen.               <ul style="list-style-type: none"> <li>Using an IDS (laptop PC)                   <ol style="list-style-type: none"> <li>Select “Body”.</li> <li>Select “Security”.</li> <li>Select “PATS function”.</li> </ol> </li> <li>Using a PDS (Pocket PC):                   <ol style="list-style-type: none"> <li>Select “All Tests and Calibrations”.</li> <li>Select “PATS Functions”.</li> </ol> </li> </ul> </li> <li>Select either of the following from the M-MDS menu to change the additional key programming procedure.               <ul style="list-style-type: none"> <li>When “Customer Spare Key Programming Enable” is selected: The additional key programming procedure using valid keys is enabled.</li> <li>When “Customer Spare Key Programming Disable” is selected: The additional key programming procedure using valid keys is disabled.</li> </ul> </li> <li>Perform the security access according to the directions on the M-MDS screen.</li> <li>After verifying that the PATS function menu is displayed again on the M-MDS screen, select “Finish (this menu)”.</li> <li>Turn the ignition switch to the LOCK position.</li> </ol> | Procedure is completed |

### No.4 Programming Procedure Due to PCM Replacement

#### Conditions

- Have two or more valid keys.

### Procedure



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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action after procedure |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <p><b>REPLACE PCM</b></p> <p>Refer to PCM REMOVAL/INSTALLATION to perform PCM replacement and configuration.<br/>           (See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br/>           (See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br/>           (See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br/>           (See 01-40C-16 PCM CONFIGURATION [MZ-CD 1.6 (Y6)].)<br/>           (See 01-40B-19 PCM CONFIGURATION [MZ-CD 1.4 DI Turbo].)<br/>           (See 01-40A-28 PCM CONFIGURATION [ZJ, ZY].)</p> | Go to the next step.   |

## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action after procedure |                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------|
| 2    | <b>PERFORM PARAMETER RESET</b> <ol style="list-style-type: none"> <li>1. Connect the M-MDS to the DLC-2.<br/>(See 09-14-151 M-MDS Connecting Procedure.)</li> <li>2. Turn the ignition switch to the ON position using a valid key.</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Although the security light remains illuminated and DTC 23 is displayed after <b>approx. 1 min</b>, continue to perform the procedure as indicated.</li> </ul> <ol style="list-style-type: none"> <li>3. Verify that the keyless warning light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>4. After vehicle identification, Select following from the M-MDS initial screen.               <ul style="list-style-type: none"> <li>— Using an IDS (laptop PC):                   <ol style="list-style-type: none"> <li>1. Select “Body”.</li> <li>2. Select “Security”.</li> <li>3. Select “PATS function”.</li> </ol> </li> <li>— Using a PDS (pocket PC):                   <ol style="list-style-type: none"> <li>1. Select “All Tests and Calibrations”.</li> <li>2. Select “PATS Functions”.</li> </ol> </li> </ul> </li> <li>5. Then, select an item from the screen menu.               <ul style="list-style-type: none"> <li>• Parameter Reset</li> </ul> </li> <li>6. Perform the security access according to the directions on the M-MDS screen.</li> <li>7. Select replaced parts “PCM” according to the directions on the M-MDS screen.</li> </ol> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li>At this time, do not Select other parts from the M-MDS menu.</li> </ul> <ol style="list-style-type: none"> <li>8. After verifying that the PATS function menu is displayed again on the M-MDS screen, select “Finish (this menu)”.</li> <li>9. Turn the ignition switch to the LOCK position.</li> <li>10. Turn the ignition switch to the ON position.</li> <li>11. Verify that the security light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>12. Turn the ignition switch to the LOCK position.</li> </ol> | Go to the next step.   |                                                                             |
| 3    | <b>VERIFY PROGRAMMING IS PERFORMED CORRECTLY</b> <ol style="list-style-type: none"> <li>1. Verify that the engine can be started with all the keys.</li> <li>2. Can the engine be started?</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                    | Procedure is completed                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No                     | Perform the corresponding DTC inspection to repair the malfunctioning part. |

### No.5 Programming Procedure Due to Instrument Cluster Replacement

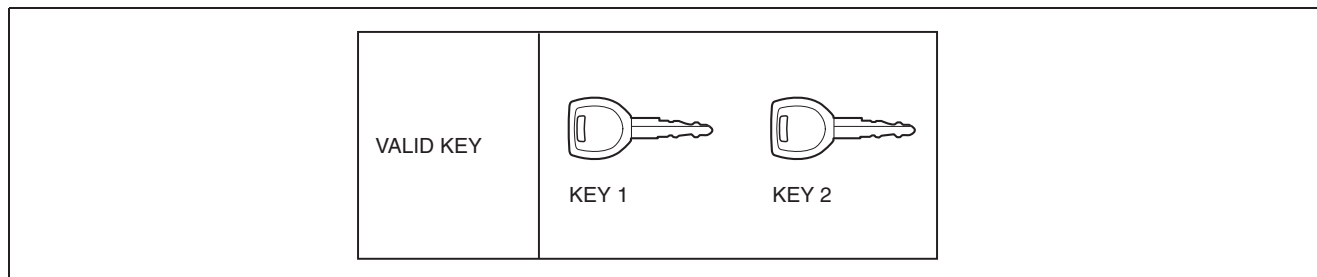
**Note**

- Since two or more keys need to be programmed to start the engine, program two or more keys after the replacement.

**Conditions**

- Have two or more keys to be programmed after the replacement.

**Procedure**



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## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action after procedure |                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------|
| 1    | <b>REPLACE INSTRUMENT CLUSTER</b><br>Refer to INSTRUMENT CLUSTER REMOVAL/INSTALLATION to perform instrument cluster replacement and configuration.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-7 INSTRUMENT CLUSTER CONFIGURATION.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Go to the next step.   |                                                                             |
| 2    | <b>PERFORM PARAMETER RESET</b><br>1. Connect the M-MDS to the DLC-2.<br>(See 09-14-151 M-MDS Connecting Procedure.)<br>2. Turn the ignition switch to the ON position using a valid key.<br><br><b>Note</b> <ul style="list-style-type: none"> <li>Although the security light remains illuminated and DTC 15 is displayed after <b>approx. 1 min</b>, continue to perform the procedure as indicated.</li> </ul> 3. Verify that the keyless warning light illuminates for <b>approx. 3 s</b> , and then turns off.<br>4. After vehicle identification, Select following from the M-MDS initial screen. <ul style="list-style-type: none"> <li>Using an IDS (laptop PC): <ol style="list-style-type: none"> <li>Select "Body".</li> <li>Select "Security".</li> <li>Select "PATS function".</li> </ol> </li> <li>Using a PDS (pocket PC): <ol style="list-style-type: none"> <li>Select "All Tests and Calibrations".</li> <li>Select "PATS Functions".</li> </ol> </li> </ul> 5. Then, select an item from the screen menu. <ul style="list-style-type: none"> <li>Parameter Reset</li> </ul> 6. Perform the security access according to the directions on the M-MDS screen.<br>7. Select replaced parts "IC" according to the directions on the M-MDS screen.<br><b>Caution</b> <ul style="list-style-type: none"> <li><b>At this time, do not Select other parts from the M-MDS menu.</b></li> </ul> 8. Verify that the PATS function menu is displayed again on the M-MDS screen. | Go to the next step.   |                                                                             |
| 3    | <b>CLEAR IGNITION KEY ID NUMBERS</b><br>1. Select "Ignition Key Code Erase and Program" from the M-MDS screen menu.<br>2. Clear the ignition key ID number according to the directions on the M-MDS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Go to the next step.   |                                                                             |
| 4    | <b>PERFORM IGNITION KEY ID NUMBER PROGRAMMING</b><br>1. Program two keys according to the directions on the M-MDS.<br>2. After verifying that the PATS function menu is displayed again on the M-MDS screen, select "Finish (this menu)".<br>3. Turn the ignition switch to the LOCK position.<br>4. Turn the ignition switch to the ON position.<br>5. Verify that the security light illuminates for <b>approx. 3 s</b> , and then turns off.<br>6. Turn the ignition switch to the LOCK position.<br>7. Disconnect the M-MDS from the DLC-2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Go to the next step.   |                                                                             |
| 5    | <b>VERIFY PROGRAMMING IS PERFORMED CORRECTLY</b><br>1. Verify that the engine can be started with all the keys.<br>2. Can the engine be started?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes                    | Procedure is completed                                                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                     | Perform the corresponding DTC inspection to repair the malfunctioning part. |

### No.6 Programming Procedure Due to Simultaneous Replacement of Immobilizer System-related Parts (PCM and Instrument Cluster)

#### Note

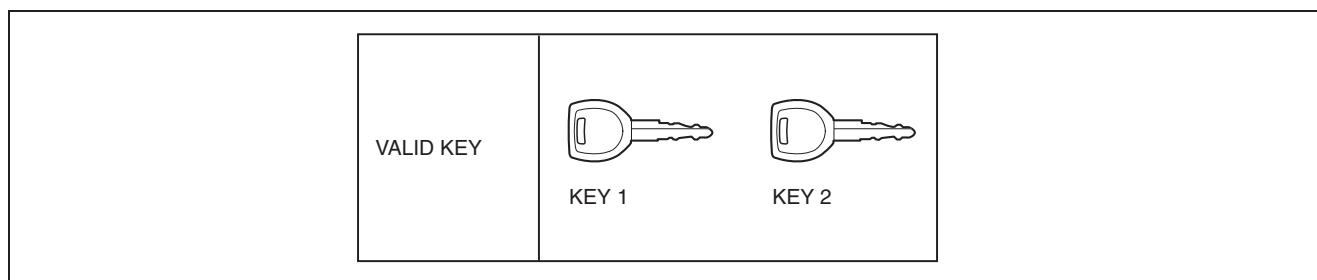
- Since two or more keys need to be programmed to start the engine, program two or more keys after the replacement.

#### Conditions

- Have two or more keys to be programmed after the replacement.

## SECURITY AND LOCKS

### Procedure



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| Step | Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Action after procedure |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1    | <b>REPLACE INSTRUMENT CLUSTER.</b><br>Refer to INSTRUMENT CLUSTER REMOVAL/INSTALLATION to perform instrument cluster replacement and configuration.<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-7 INSTRUMENT CLUSTER CONFIGURATION.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Go to the next step.   |
| 2    | <b>REPLACE PCM</b><br>Refer to PCM REMOVAL/INSTALLATION to perform PCM replacement and configuration.<br>(See 01-40C-5 PCM REMOVAL/INSTALLATION [MZ-CD 1.6 (Y6)].)<br>(See 01-40B-6 PCM REMOVAL/INSTALLATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40A-8 PCM REMOVAL/INSTALLATION [ZJ, ZY].)<br>(See 01-40C-16 PCM CONFIGURATION [MZ-CD 1.6 (Y6)].)<br>(See 01-40B-19 PCM CONFIGURATION [MZ-CD 1.4 DI Turbo].)<br>(See 01-40A-28 PCM CONFIGURATION [ZJ, ZY].)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Go to the next step.   |
| 3    | <b>PERFORM PARAMETER RESET</b> <ol style="list-style-type: none"> <li>Connect the M-MDS to the DLC-2.<br/> (See 09-14-151 M-MDS Connecting Procedure.)</li> <li>Turn the ignition switch to the ON position using a valid key.</li> </ol> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>Although the security light remains illuminated and DTC 15 is displayed after <b>approx. 1 min</b>, continue to perform the procedure as indicated.</li> </ul> <ol style="list-style-type: none"> <li>Verify that the keyless warning light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>After vehicle identification, Select following from the M-MDS initial screen. <ul style="list-style-type: none"> <li>Using an IDS (laptop PC): <ol style="list-style-type: none"> <li>Select "Body".</li> <li>Select "Security".</li> <li>Select "PATS function".</li> </ol> </li> <li>Using a PDS (pocket PC): <ol style="list-style-type: none"> <li>Select "All Tests and Calibrations".</li> <li>Select "PATS Functions".</li> </ol> </li> </ul> </li> <li>Then, select an item from the screen menu. <ul style="list-style-type: none"> <li>Parameter Reset</li> </ul> </li> <li>Perform the security access according to the directions on the M-MDS screen.</li> <li>Select replaced parts according to the directions on the M-MDS screen. <ul style="list-style-type: none"> <li>If the instrument cluster is replaced: Select "IC".</li> <li>If the PCM is replaced: Select "PCM".</li> </ul> </li> </ol> <p><b>Caution</b></p> <ul style="list-style-type: none"> <li><b>At this time, do not Select other parts from the M-MDS menu.</b></li> </ul> <ol style="list-style-type: none"> <li>Verify that the PATS function menu is displayed again on the M-MDS screen.</li> </ol> | Go to the next step.   |
| 4    | <b>CLEAR IGNITION KEY ID NUMBERS</b> <ol style="list-style-type: none"> <li>Select "Ignition Key Code Erase and Program" from the M-MDS screen menu.</li> <li>Clear the ignition key ID number according to the directions on the M-MDS.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Go to the next step.   |
| 5    | <b>PERFORM IGNITION KEY ID NUMBER PROGRAMMING</b> <ol style="list-style-type: none"> <li>Program two keys according to the directions on the M-MDS.</li> <li>After verifying that the PATS function menu is displayed again on the M-MDS screen, select "Finish (this menu)".</li> <li>Turn the ignition switch to the LOCK position.</li> <li>Turn the ignition switch to the ON position.</li> <li>Verify that the security light illuminates for <b>approx. 3 s</b>, and then turns off.</li> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the M-MDS from the DLC-2.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Go to the next step.   |



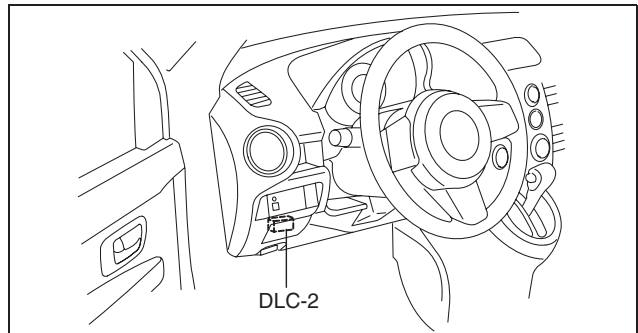
## SECURITY AND LOCKS

| Step | Procedure                                                                                                                                        | Action after procedure |                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------|
| 6    | <b>VERIFY PROGRAMMING IS PERFORMED CORRECTLY</b><br>1. Verify that the engine can be started with all the keys.<br>2. Can the engine be started? | Yes                    | Procedure is completed                                                      |
|      |                                                                                                                                                  | No                     | Perform the corresponding DTC inspection to repair the malfunctioning part. |

### SECURITY ACCESS PROCEDURE

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select the "Body"
    2. Select the "Security"
    3. Select the "PATS Functions"
  - When using the PDS (Pocket PC)
    1. Select the "All Tests and Calibrations"
    2. Select the "PATS Functions"
3. Then, select items from the screen menu in the following order.
  - Program Additional Advanced Key
  - Advanced Key Code Erase and Program
  - Steering Lock Unit Programming
  - Program Additional Ignition Key
  - Ignition Key Code Erase and Program
  - Customer Spare Key Programming Enable
  - Customer Spare Key Programming Disable
  - Parameter Reset
4. Perform the security access according to the directions on the M-MDS screen.

id091400436400



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## **09-16 EXTERIOR TRIM**

### **EXTERIOR TRIM LOCATION INDEX**

|                                     |          |
|-------------------------------------|----------|
| [4SD, 5HB] .....                    | 09-16-2  |
| 4SD .....                           | 09-16-2  |
| 5HB .....                           | 09-16-3  |
| <b>EXTERIOR TRIM LOCATION INDEX</b> |          |
| [3HB] .....                         | 09-16-4  |
| <b>COWL GRILLE</b>                  |          |
| REMOVAL/INSTALLATION .....          | 09-16-5  |
| <b>RADIATOR GRILLE</b>              |          |
| REMOVAL/INSTALLATION .....          | 09-16-5  |
| Standard Type .....                 | 09-16-5  |
| Sport Type .....                    | 09-16-6  |
| <b>SAIL GARNISH</b>                 |          |
| REMOVAL/INSTALLATION .....          | 09-16-7  |
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| <b>MUDGUARD</b>                     |          |
| REMOVAL/INSTALLATION .....          | 09-16-8  |
| <b>SPLASH SHIELD</b>                |          |
| REMOVAL/INSTALLATION .....          | 09-16-9  |
| <b>FRONT BELTLINE MOLDING</b>       |          |
| REMOVAL/INSTALLATION .....          | 09-16-9  |
| <b>FRONT BELTLINE MOLDING</b>       |          |
| REMOVAL/INSTALLATION [3HB] ....     | 09-16-10 |

### **REAR BELTLINE MOLDING**

|                                         |          |
|-----------------------------------------|----------|
| REMOVAL/INSTALLATION .....              | 09-16-10 |
| <b>ROOF MOLDING REMOVAL</b> .....       | 09-16-10 |
| <b>REAR FLAP</b>                        |          |
| REMOVAL/INSTALLATION .....              | 09-16-11 |
| <b>ROOF MOLDING INSTALLATION</b> .....  | 09-16-12 |
| <b>SIDE STEP MOLDING REMOVAL</b> .....  | 09-16-12 |
| <b>SIDE STEP MOLDING REMOVAL</b>        |          |
| [3HB] .....                             | 09-16-13 |
| <b>SIDE STEP MOLDING</b>                |          |
| INSTALLATION .....                      | 09-16-14 |
| <b>SIDE STEP MOLDING INSTALLATION</b>   |          |
| [3HB] .....                             | 09-16-15 |
| <b>REAR SPOILER REMOVAL</b> .....       | 09-16-17 |
| <b>REAR SPOILER REMOVAL [4SD]</b> ....  | 09-16-18 |
| <b>REAR SPOILER INSTALLATION</b> .....  | 09-16-19 |
| <b>REAR SPOILER INSTALLATION</b>        |          |
| [4SD] .....                             | 09-16-20 |
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| REMOVAL/INSTALLATION .....              | 09-16-21 |
| <b>DOOR SASH FILM REMOVAL</b> .....     | 09-16-22 |
| <b>DOOR SASH FILM REMOVAL [3HB]</b> ... | 09-16-22 |
| <b>DOOR SASH FILM INSTALLATION</b> .... | 09-16-22 |
| <b>DOOR SASH FILM INSTALLATION</b>      |          |
| [3HB] .....                             | 09-16-23 |

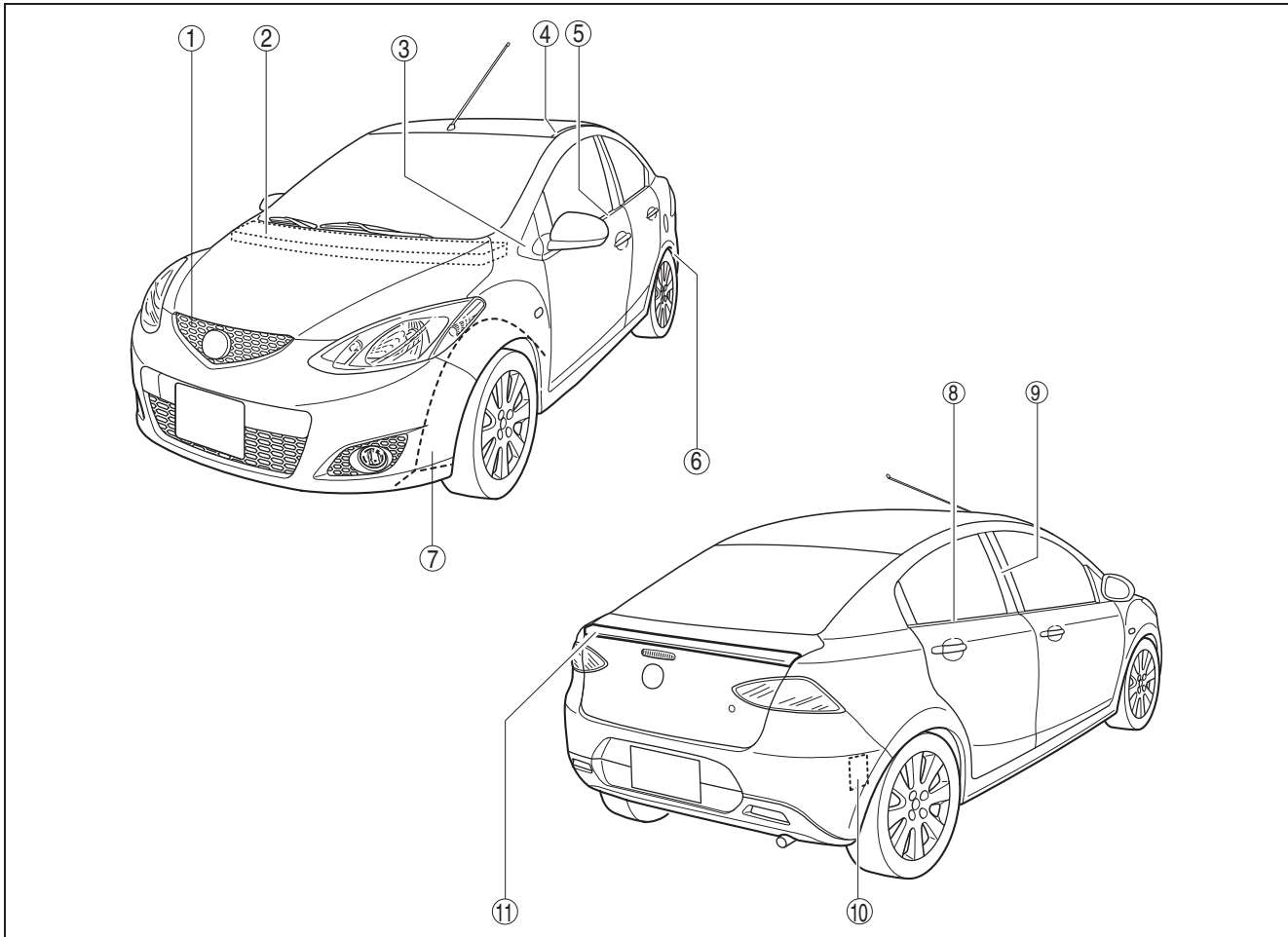
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## EXTERIOR TRIM

### EXTERIOR TRIM LOCATION INDEX [4SD, 5HB]

id0916004454a1

#### 4SD



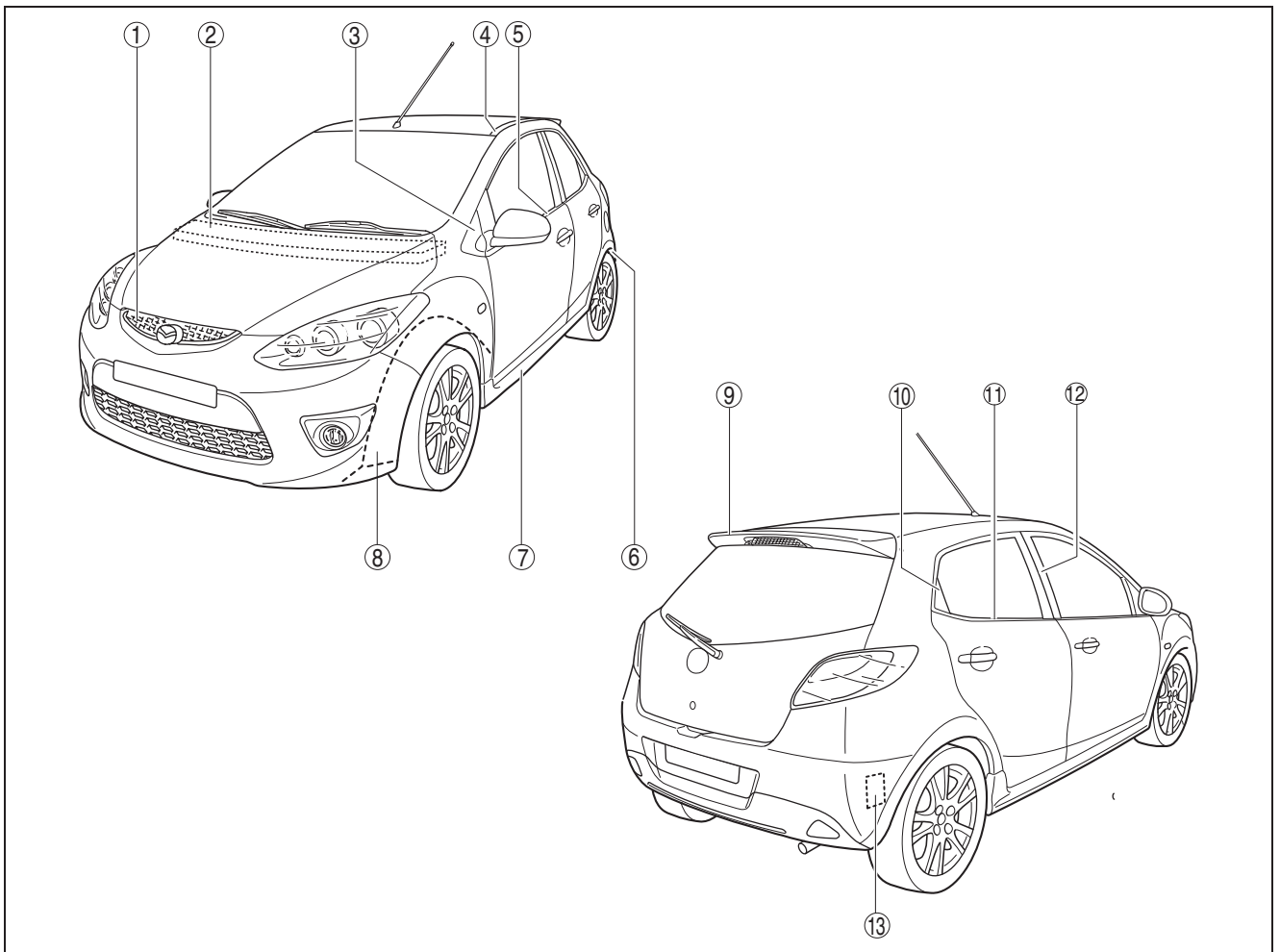
am2zzw0000499

|   |                                                                                                   |
|---|---------------------------------------------------------------------------------------------------|
| 1 | Radiator grille<br>(See 09-16-5 RADIATOR GRILLE REMOVAL/<br>INSTALLATION.)                        |
| 2 | Cowl grille<br>(See 09-16-5 COWL GRILLE REMOVAL/<br>INSTALLATION.)                                |
| 3 | Sail garnish<br>(See 09-16-7 SAIL GARNISH REMOVAL/<br>INSTALLATION.)                              |
| 4 | Roof molding<br>(See 09-16-10 ROOF MOLDING REMOVAL.)<br>(See 09-16-12 ROOF MOLDING INSTALLATION.) |
| 5 | Front beltline molding<br>(See 09-16-9 FRONT BELTLINE MOLDING<br>REMOVAL/INSTALLATION.)           |
| 6 | Splash shield<br>(See 09-16-9 SPLASH SHIELD REMOVAL/<br>INSTALLATION.)                            |

|    |                                                                                                                  |
|----|------------------------------------------------------------------------------------------------------------------|
| 7  | Mudguard<br>(See 09-16-8 MUDGUARD REMOVAL/<br>INSTALLATION.)                                                     |
| 8  | Rear beltline molding<br>(See 09-16-10 REAR BELTLINE MOLDING<br>REMOVAL/INSTALLATION.)                           |
| 9  | Door sash film<br>(See 09-16-22 DOOR SASH FILM REMOVAL.)<br>(See 09-16-22 DOOR SASH FILM INSTALLATION.)          |
| 10 | Extractor chamber<br>(See 09-16-7 EXTRACTOR CHAMBER REMOVAL/<br>INSTALLATION.)                                   |
| 11 | Rear spoiler<br>(See 09-16-18 REAR SPOILER REMOVAL [4SD].)<br>(See 09-16-20 REAR SPOILER INSTALLATION<br>[4SD].) |

## EXTERIOR TRIM

5HB



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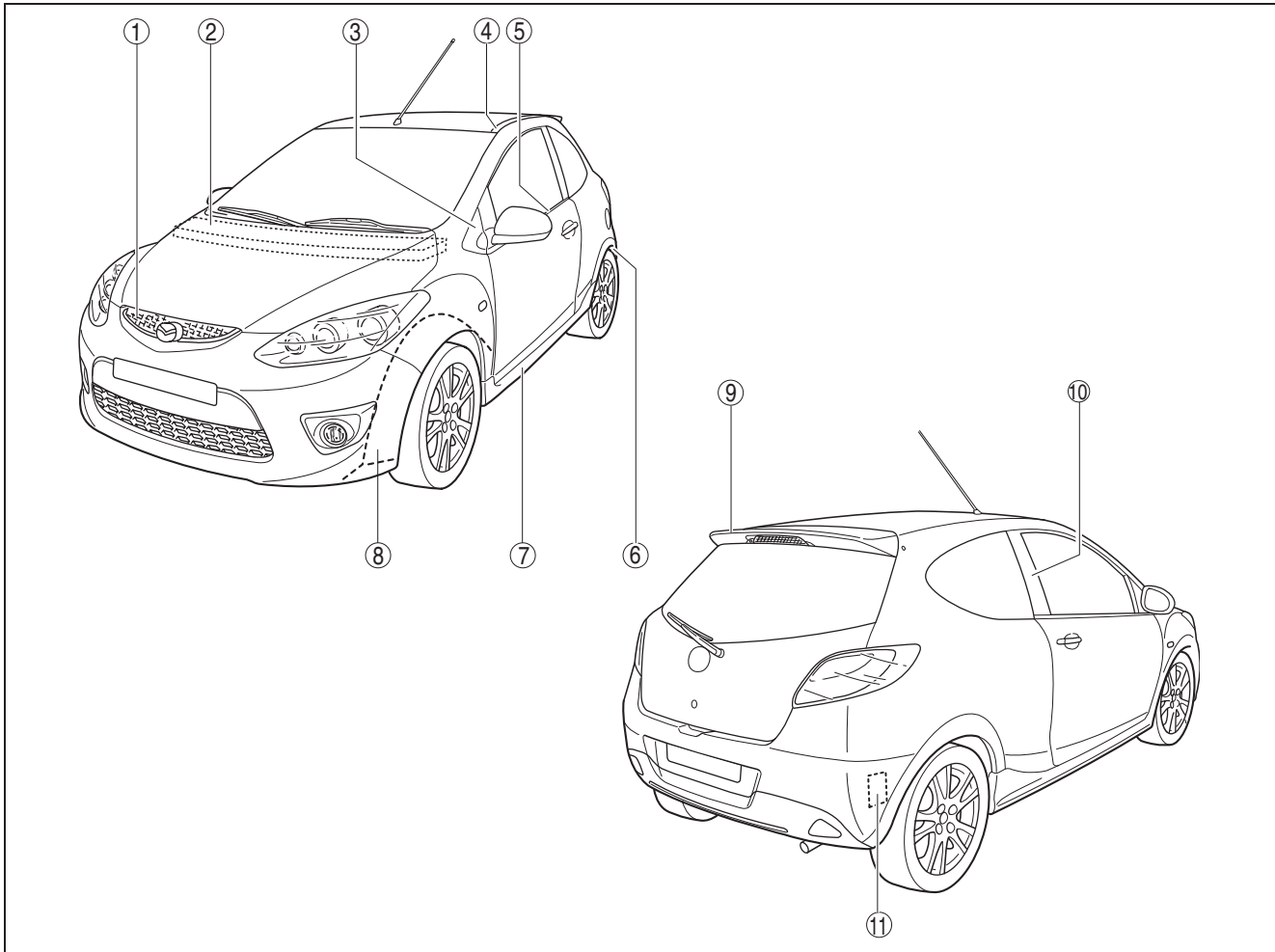
|   |                                                                                                                     |
|---|---------------------------------------------------------------------------------------------------------------------|
| 1 | Radiator grille<br>(See 09-16-5 RADIATOR GRILLE REMOVAL/<br>INSTALLATION.)                                          |
| 2 | Cowl grille<br>(See 09-16-5 COWL GRILLE REMOVAL/<br>INSTALLATION.)                                                  |
| 3 | Sail garnish<br>(See 09-16-7 SAIL GARNISH REMOVAL/<br>INSTALLATION.)                                                |
| 4 | Roof molding<br>(See 09-16-10 ROOF MOLDING REMOVAL.)<br>(See 09-16-12 ROOF MOLDING INSTALLATION.)                   |
| 5 | Front beltline molding<br>(See 09-16-9 FRONT BELTLINE MOLDING<br>REMOVAL/INSTALLATION.)                             |
| 6 | Splash shield<br>(See 09-16-9 SPLASH SHIELD REMOVAL/<br>INSTALLATION.)                                              |
| 7 | Side step molding<br>(See 09-16-12 SIDE STEP MOLDING REMOVAL.)<br>(See 09-16-14 SIDE STEP MOLDING<br>INSTALLATION.) |

|    |                                                                                                         |
|----|---------------------------------------------------------------------------------------------------------|
| 8  | Mudguard<br>(See 09-16-8 MUDGUARD REMOVAL/<br>INSTALLATION.)                                            |
| 9  | Rear spoiler<br>(See 09-16-17 REAR SPOILER REMOVAL.)<br>(See 09-16-19 REAR SPOILER INSTALLATION.)       |
| 10 | Rear door garnish<br>(See 09-16-21 REAR DOOR GARNISH REMOVAL/<br>INSTALLATION.)                         |
| 11 | Rear beltline molding<br>(See 09-16-10 REAR BELTLINE MOLDING<br>REMOVAL/INSTALLATION.)                  |
| 12 | Door sash film<br>(See 09-16-22 DOOR SASH FILM REMOVAL.)<br>(See 09-16-22 DOOR SASH FILM INSTALLATION.) |
| 13 | Extractor chamber<br>(See 09-16-7 EXTRACTOR CHAMBER REMOVAL/<br>INSTALLATION.)                          |

## EXTERIOR TRIM

### EXTERIOR TRIM LOCATION INDEX [3HB]

id0916004454z3



am2zzw0000339

|   |                                                                                                   |
|---|---------------------------------------------------------------------------------------------------|
| 1 | Radiator grille<br>(See 09-16-5 RADIATOR GRILLE REMOVAL/<br>INSTALLATION.)                        |
| 2 | Cowl grille<br>(See 09-16-5 COWL GRILLE REMOVAL/<br>INSTALLATION.)                                |
| 3 | Sail garnish<br>(See 09-16-7 SAIL GARNISH REMOVAL/<br>INSTALLATION.)                              |
| 4 | Roof molding<br>(See 09-16-10 ROOF MOLDING REMOVAL.)<br>(See 09-16-12 ROOF MOLDING INSTALLATION.) |
| 5 | Front beltline molding<br>(See 09-16-10 FRONT BELTLINE MOLDING<br>REMOVAL/INSTALLATION [3HB].)    |
| 6 | Splash shield<br>(See 09-16-9 SPLASH SHIELD REMOVAL/<br>INSTALLATION.)                            |

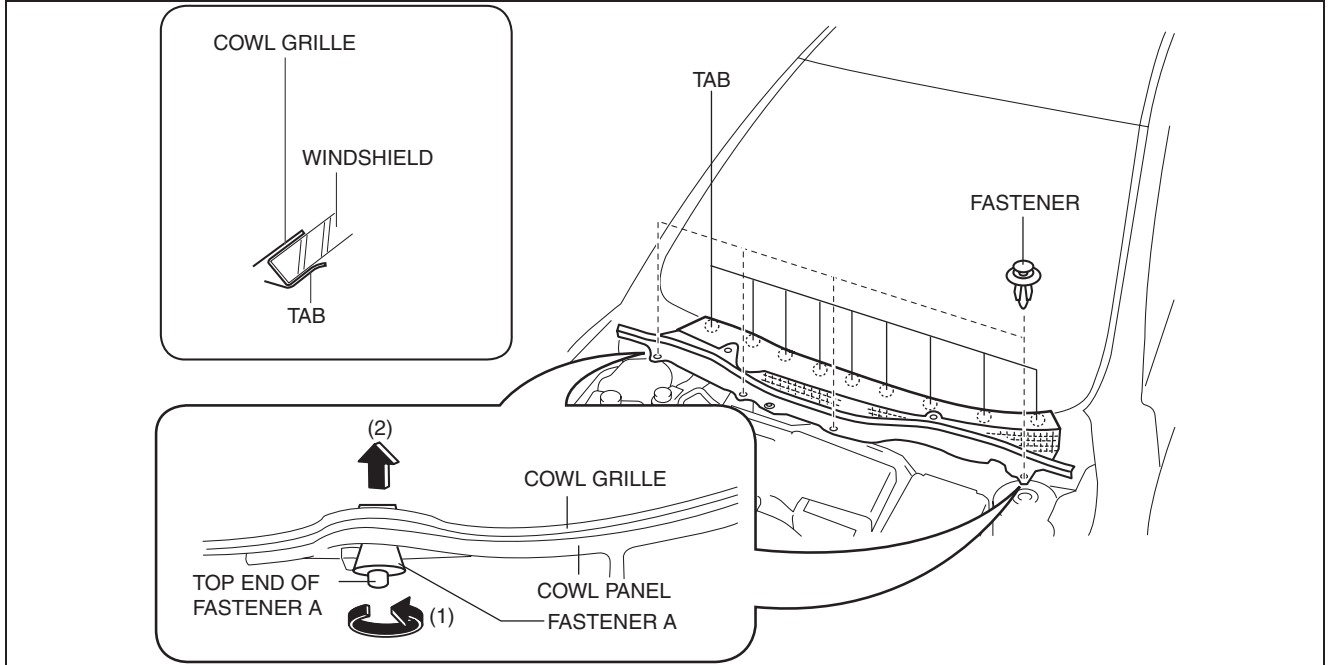
|    |                                                                                                                                    |
|----|------------------------------------------------------------------------------------------------------------------------------------|
| 7  | Side step molding<br>(See 09-16-13 SIDE STEP MOLDING REMOVAL<br>[3HB].)<br>(See 09-16-15 SIDE STEP MOLDING<br>INSTALLATION [3HB].) |
| 8  | Mudguard<br>(See 09-16-8 MUDGUARD REMOVAL/<br>INSTALLATION.)                                                                       |
| 9  | Rear spoiler<br>(See 09-16-17 REAR SPOILER REMOVAL.)<br>(See 09-16-19 REAR SPOILER INSTALLATION.)                                  |
| 10 | Door sash film<br>(See 09-16-22 DOOR SASH FILM REMOVAL<br>[3HB].)<br>(See 09-16-23 DOOR SASH FILM INSTALLATION<br>[3HB].)          |
| 11 | Extractor chamber<br>(See 09-16-7 EXTRACTOR CHAMBER REMOVAL/<br>INSTALLATION.)                                                     |

## EXTERIOR TRIM

### COWL GRILLE REMOVAL/INSTALLATION

id091600444000

1. Remove the windshield wiper arm and blade. (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION)
2. Remove the front fender molding. (See 09-10-17 FRONT FENDER PANEL REMOVAL/INSTALLATION)
3. Disconnect the windshield washer hose and the connector.
4. Remove the fasteners.



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#### Note

- A screwdriver or other tool cannot be used to remove fasteners from the vehicle body panel. Therefore, insert a hand into the back side of the cowl panel, rotate fasteners A in the direction of the arrow (1), and press them up in the direction of the arrow (2).

5. Pull the cowl grille and remove it while detaching tabs.
6. Install in the reverse order of removal.

### RADIATOR GRILLE REMOVAL/INSTALLATION

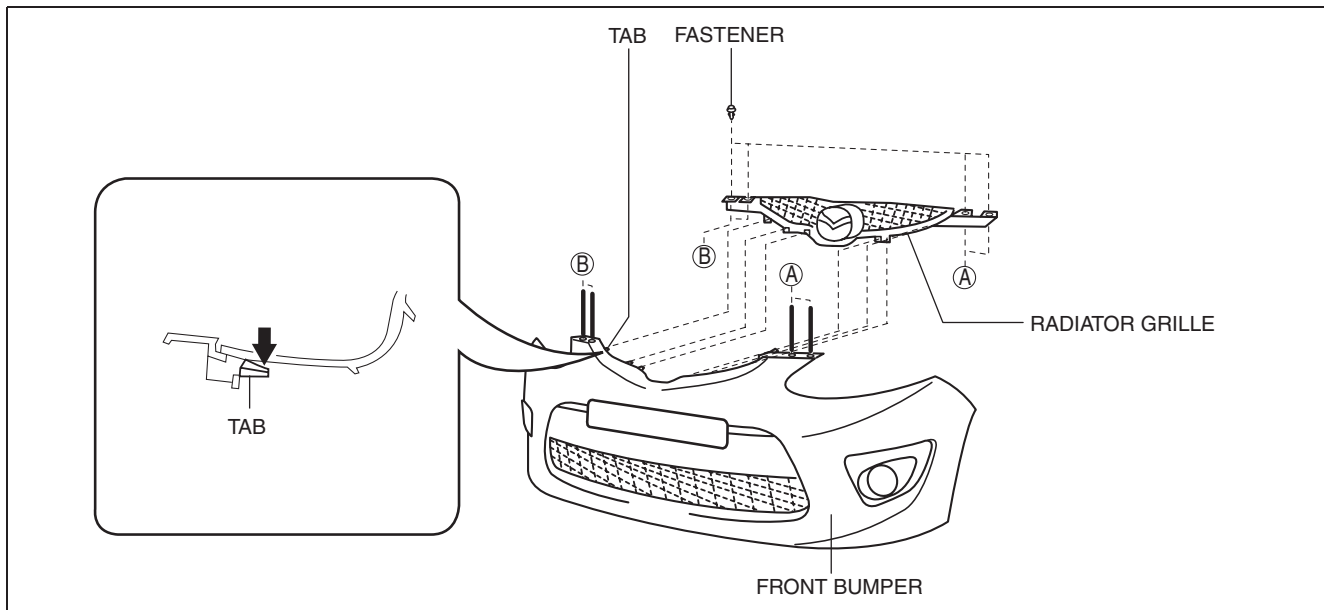
id091600468000

#### Standard Type

1. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)

## EXTERIOR TRIM

2. Remove the fasteners.

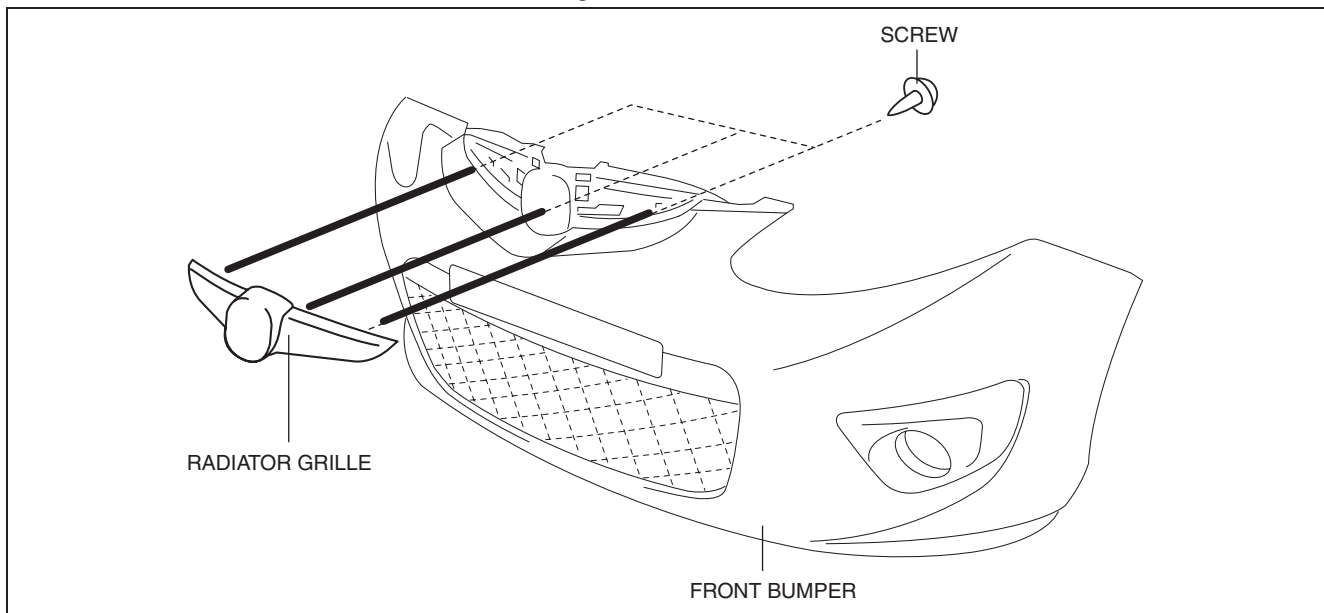


am2zzw0000189

3. Press the tab in the direction of the arrow shown in the figure and detach the front bumper from the radiator grille.
4. Remove the radiator grille.
5. Install in the reverse order of removal.

### Sport Type

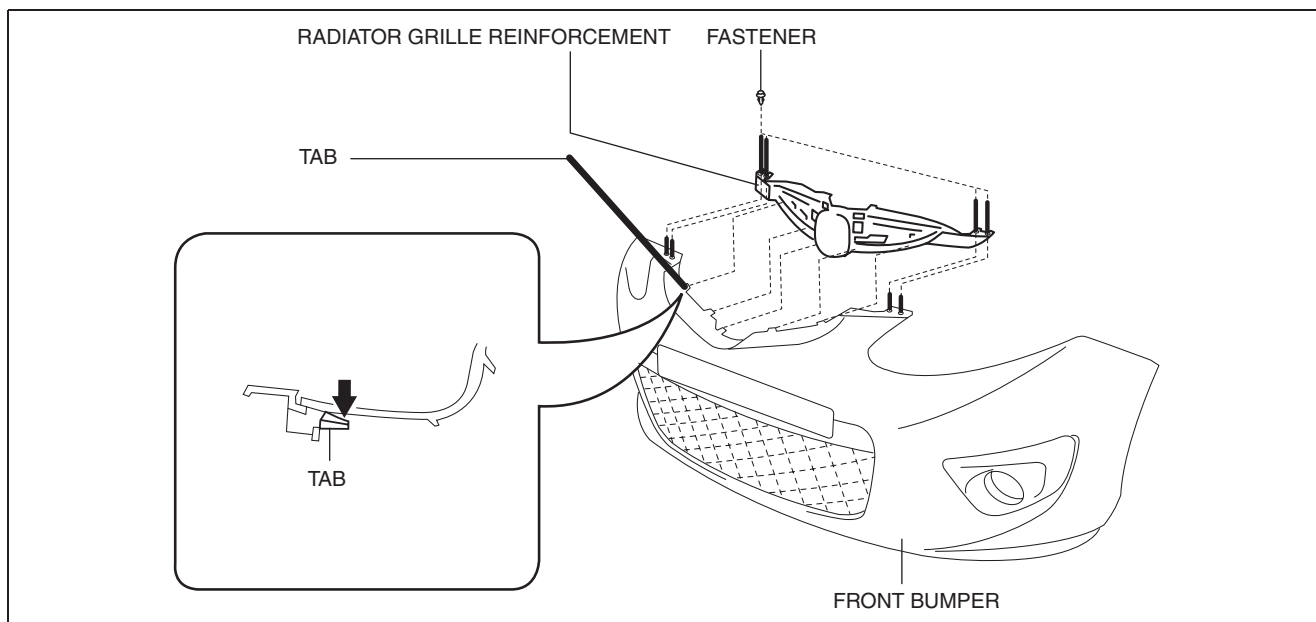
1. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION)
2. Remove the screws, and remove the radiator grille.



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## EXTERIOR TRIM

3. Remove the fasteners.



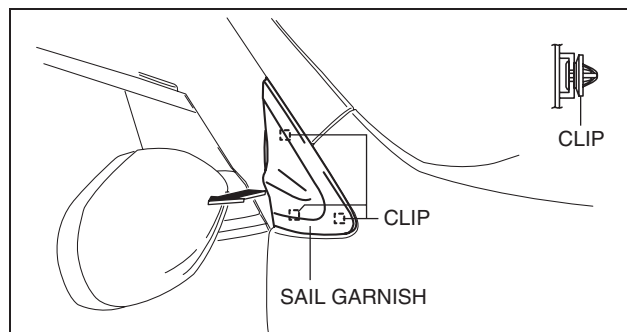
am2zzw0000189

4. Press the tab in the direction of the arrow shown in the figure and detach the front bumper from the radiator grille reinforcement.
5. Remove the radiator grille reinforcement.
6. Install in the reverse order of removal.

### SAIL GARNISH REMOVAL/INSTALLATION

id091600451200

1. Open the front door.
2. Pull the sail garnish in the direction shown in the figure and remove it while detaching the clips.
3. Install in the reverse order of removal.

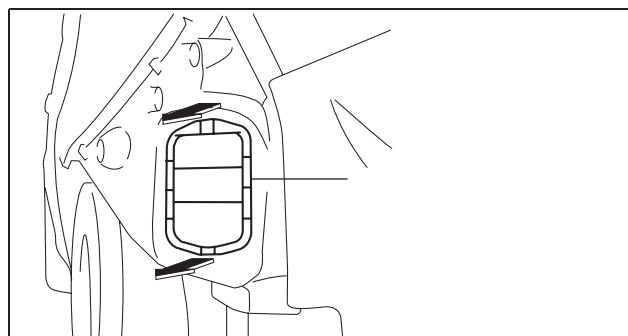


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### EXTRACTOR CHAMBER REMOVAL/INSTALLATION

id091600449500

1. Remove the rear combination light. (See 09-18-23 REAR COMBINATION LIGHT REMOVAL/INSTALLATION)
2. Remove the splash shield. (See 09-16-9 SPLASH SHIELD REMOVAL/INSTALLATION)
3. Remove the rear bumper. (See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION) (See 09-10-25 REAR BUMPER REMOVAL/INSTALLATION [4SD].)
4. Pull the extractor chamber in the direction of the arrow (1), (2) shown in the figure using a fastener remover and remove the extractor chamber.
5. Install in the reverse order of removal.



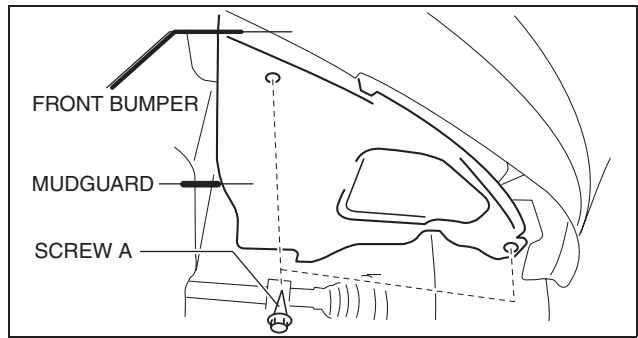
am2zzw0000192



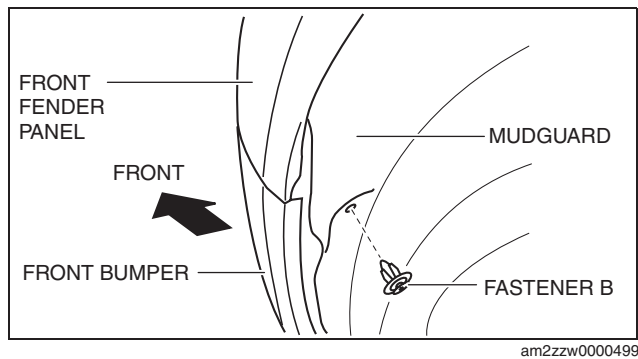
## EXTERIOR TRIM

### MUDGUARD REMOVAL/INSTALLATION

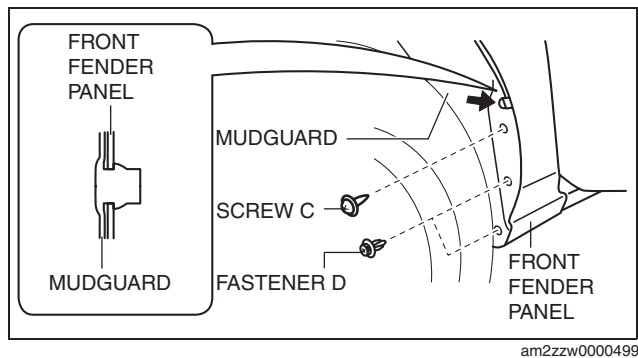
1. Remove screw A joined to the front bumper.



2. Remove fastener B.

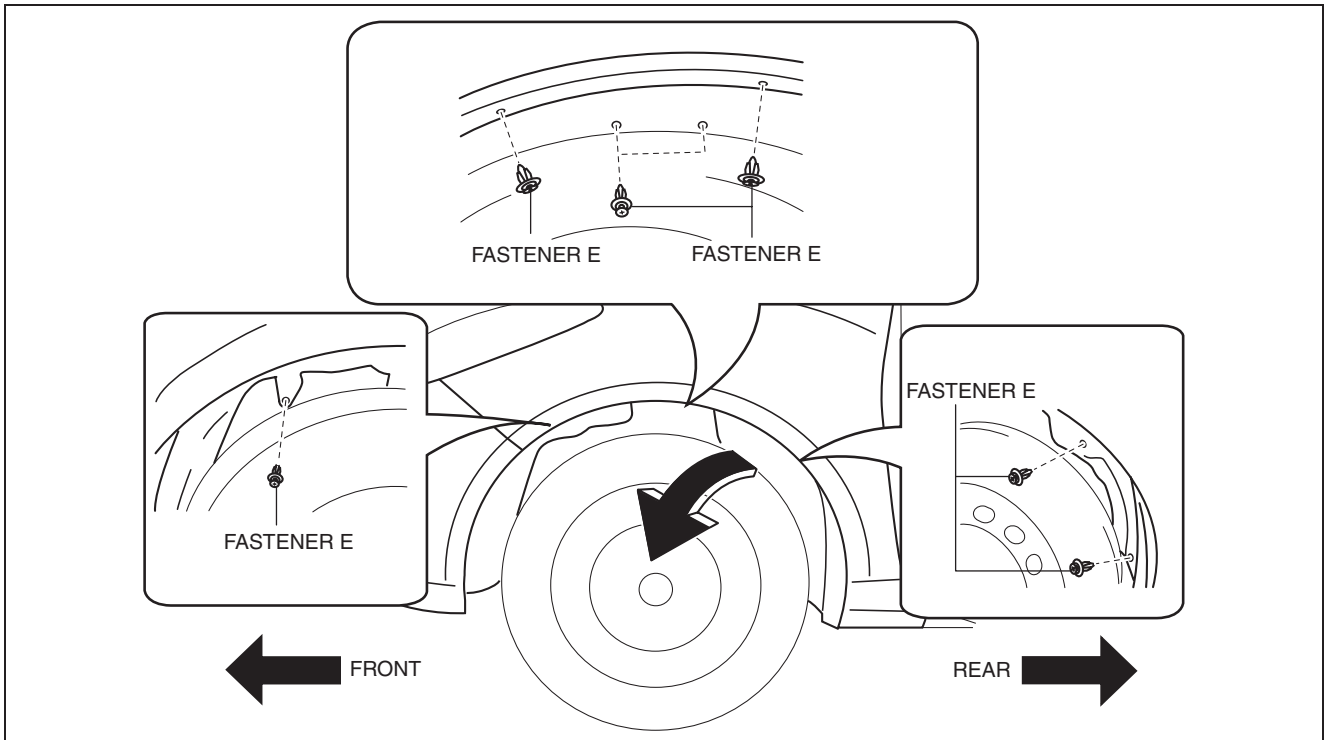


3. After removing screw C and fastener D, insert a fastener remover in the position indicated by the arrow in the figure and detach the mudguard from the front fender panel.



## EXTERIOR TRIM

- Remove fasteners E, then remove the mudguard in the direction of the arrow shown in the figure.



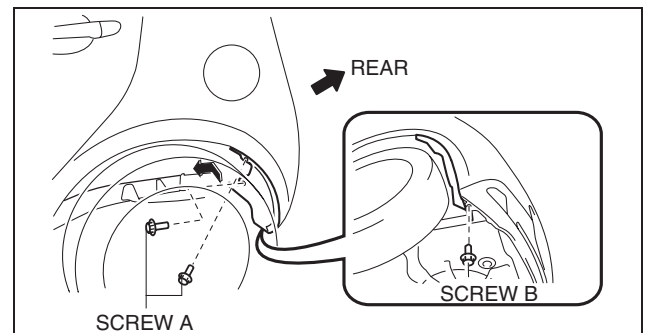
am2zzw0000499

- Install in the reverse order of removal.

### SPLASH SHIELD REMOVAL/INSTALLATION

id091600461200

- Remove the screws A and B, then remove the splash shield in the direction of the arrow shown in the figure.
- Install in the reverse order of removal.



am2zzw0000451

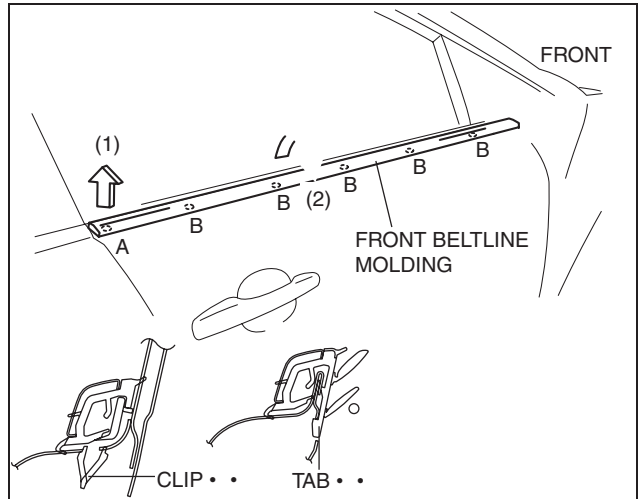
### FRONT BELTLINE MOLDING REMOVAL/INSTALLATION

id091600447700

- Fully open the front door glass.
- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION)
- Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION)
- Remove the power outer mirror. (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION)

## EXTERIOR TRIM

- Remove clip A using a fastener remover and pull the front beltline molding in the direction of the arrow (1) shown in the figure.
- Rotate the front beltline molding in the direction of the arrow (2) shown in the figure and remove it while detaching tab B.
- Install in the reverse order of removal.

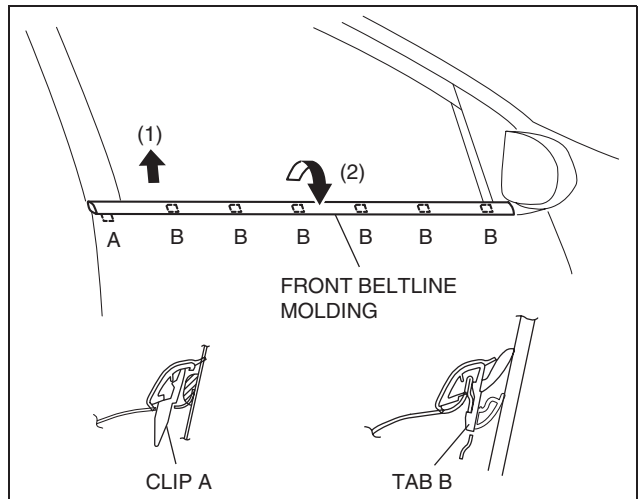


adejjw00003032

### FRONT BELTLINE MOLDING REMOVAL/INSTALLATION [3HB]

id0916004477z3

- Fully open the front door glass.
- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION)
- Remove the front door trim. (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB])
- Remove the power outer mirror. (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION)
- Remove clip A using a fastener remover and pull the front beltline molding in the direction of the arrow (1) shown in the figure.
- Rotate the front beltline molding in the direction of the arrow (2) shown in the figure and remove it while detaching tab B.
- Install in the reverse order of removal.

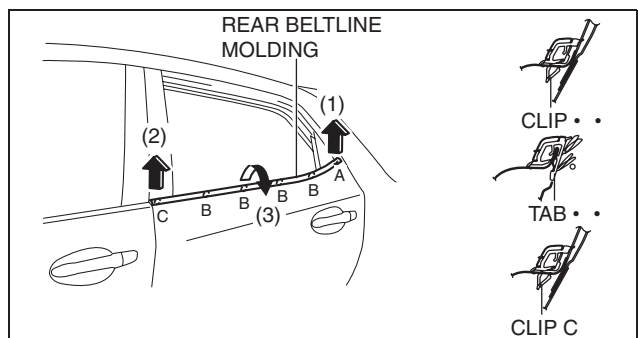


am2zzw0000339

### REAR BELTLINE MOLDING REMOVAL/INSTALLATION

id091600447900

- Fully open the rear door glass.
- Remove clip A using a fastener remover and pull up the rear beltline molding in the direction of the arrow (1) shown in the figure.
- Remove clip C using a fastener remover and pull up the rear beltline molding in the direction of the arrow (2) shown in the figure.
- Rotate the rear beltline molding in the direction of the arrow (3) shown in the figure and remove it while detaching tabs B.
- Install in the reverse order of removal.



am2zzw0000189

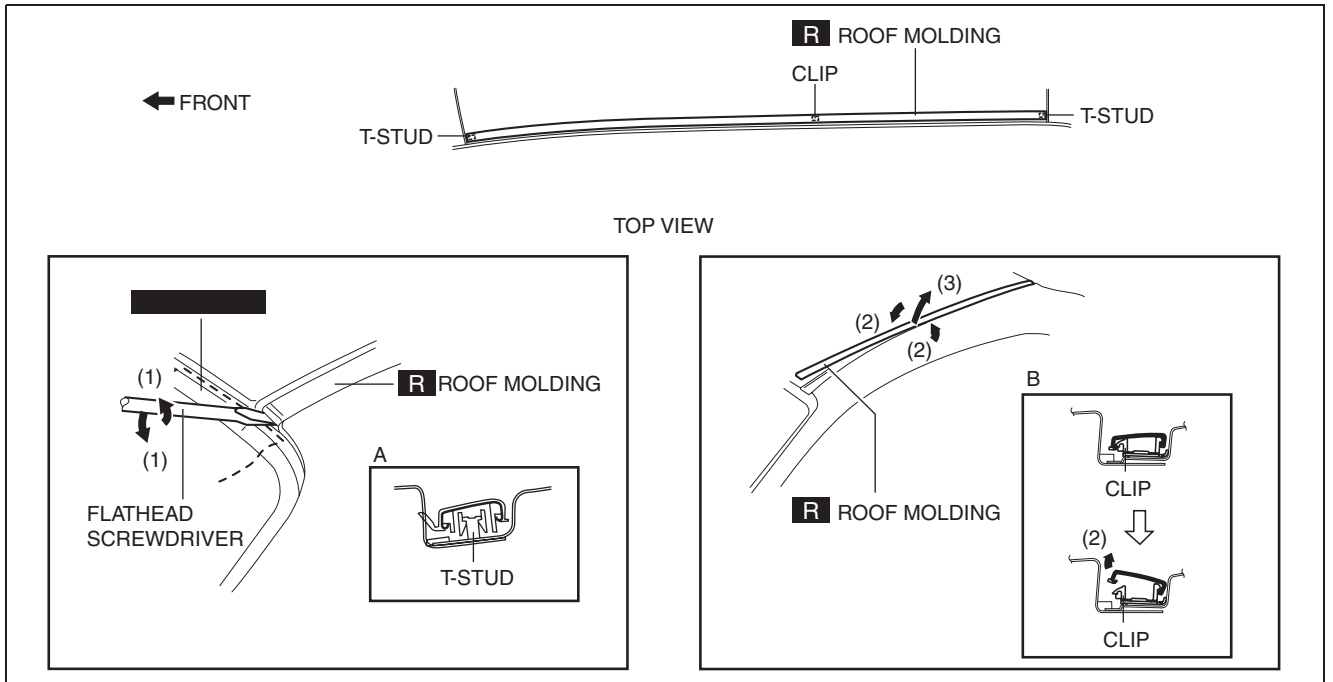
### ROOF MOLDING REMOVAL

id091600447800

- Insert a flathead screwdriver in the position shown in the figure.
- Rotate the flathead screwdriver in the direction of the arrow (1) shown in the figure and remove the roof molding from the T-stud (figure A).

## EXTERIOR TRIM

3. Rotate the roof molding in the direction of the arrow (2) shown in the figure, pull up the roof molding in the direction of the arrow (3) while detaching it from the clip (figure B), and then remove the roof molding.

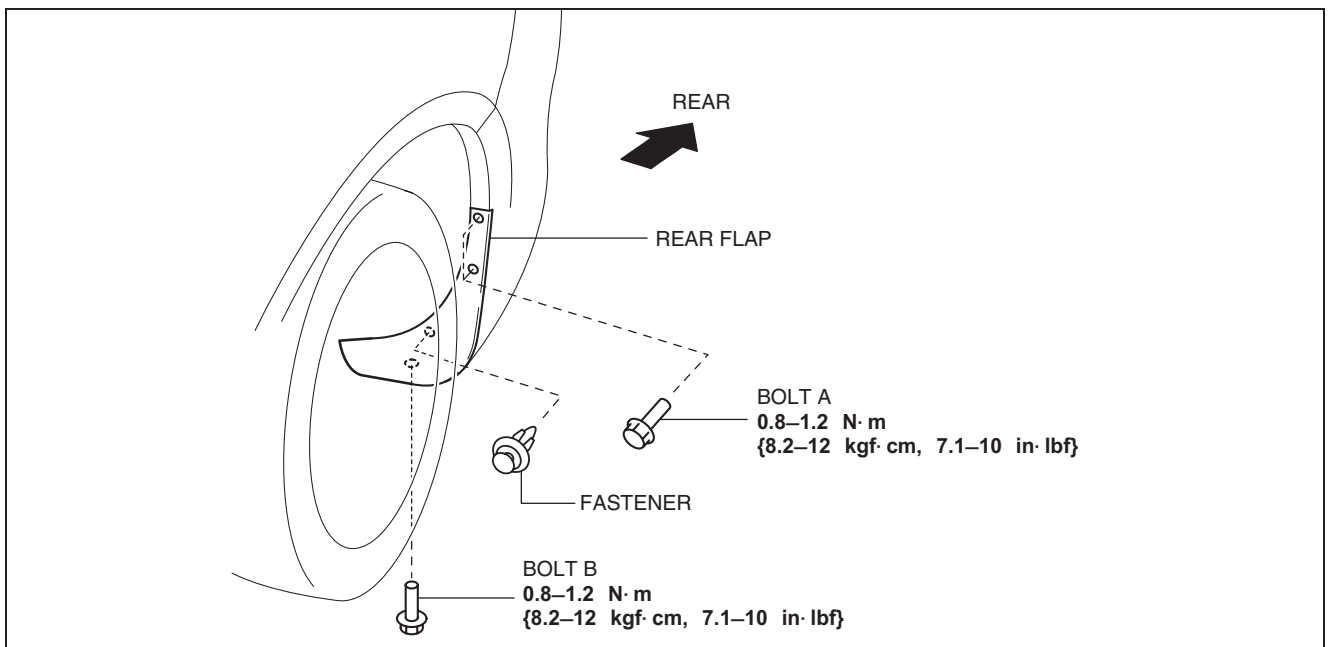


am2zzw0000373

## REAR FLAP REMOVAL/INSTALLATION

id091600806600

1. Remove the fastener.
2. Remove the bolts A and B.



am2zzw0000340

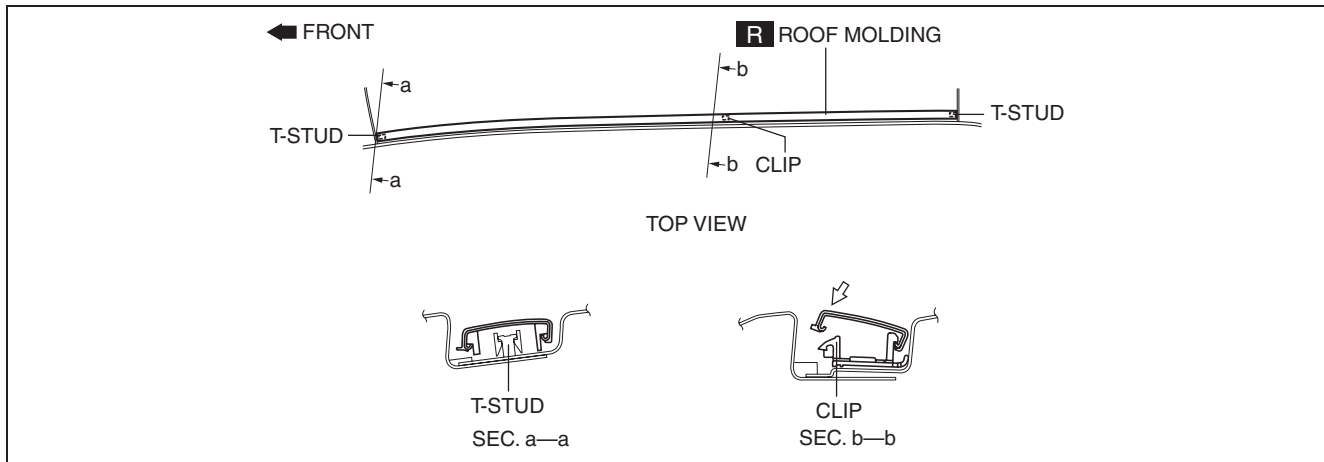
3. Remove the rear flap.
4. Install in the reverse order of removal.

## EXTERIOR TRIM

### ROOF MOLDING INSTALLATION

id091600447600

1. Install the roof molding to the front T-stud.



am2zzw0000189

2. Hook the roof molding to the clip and attach the roof molding while pressing it in the direction of the arrow shown in the figure.
3. Install the roof molding to the rear T-stud.

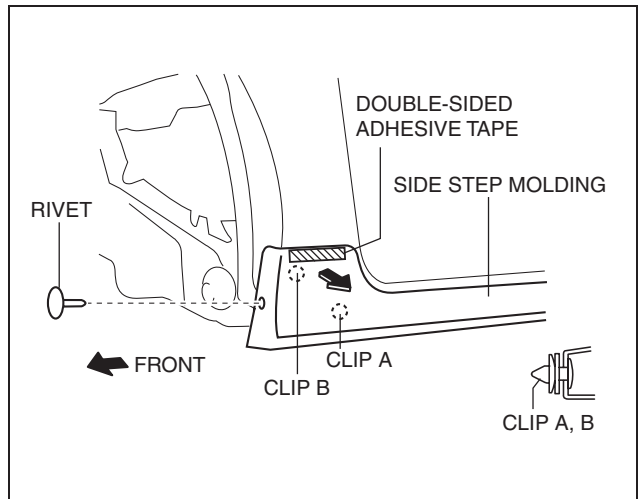
### SIDE STEP MOLDING REMOVAL

id091600717600

1. Remove the rivet.
2. Cut the double-sided adhesive tape shown in the figure using a utility knife and pull clips A and B in the direction of the arrow to remove them.

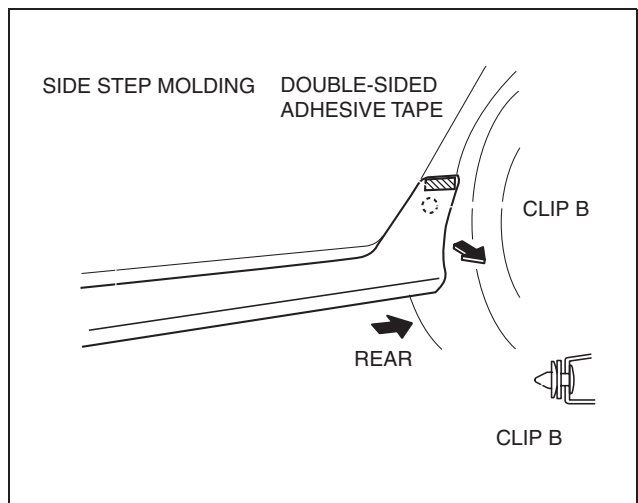
#### Warning

- Using a utility knife with bare hands could cause injury. Always wear gloves when using a utility knife.



am2zzw0000450

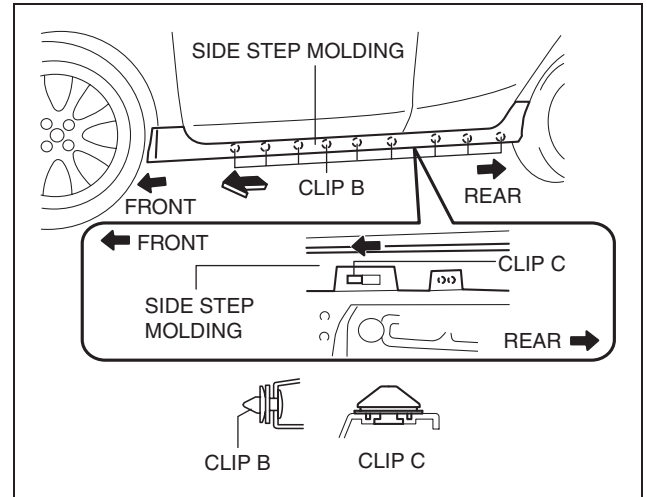
3. Cut the double-sided adhesive tape shown in the figure using a utility knife and pull clip B in the direction of the arrow to remove it.



am2zzw0000450

## EXTERIOR TRIM

- Slide the side step molding in the direction of the arrow shown in the figure and remove the side step molding from clips B and C.
- After removing the side step molding, remove clips B and C from the body using a fastener remover.



am2zzw0000450

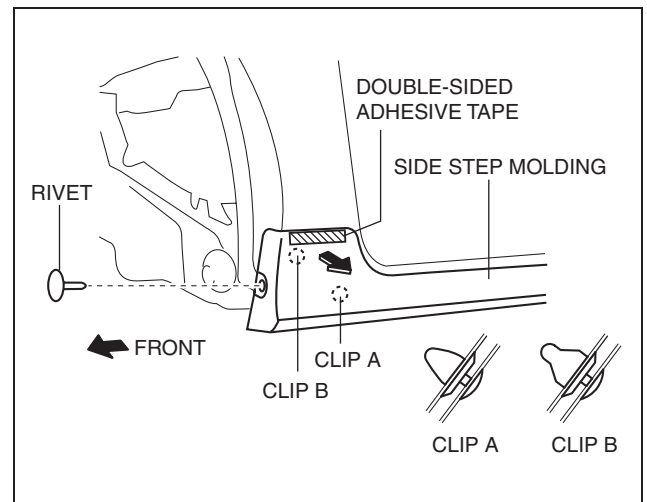
### SIDE STEP MOLDING REMOVAL [3HB]

id0916007176z3

- Remove the rivet.
- Cut the double-sided adhesive tape shown in the figure using a utility knife and pull clips A and B in the direction of the arrow to remove them.

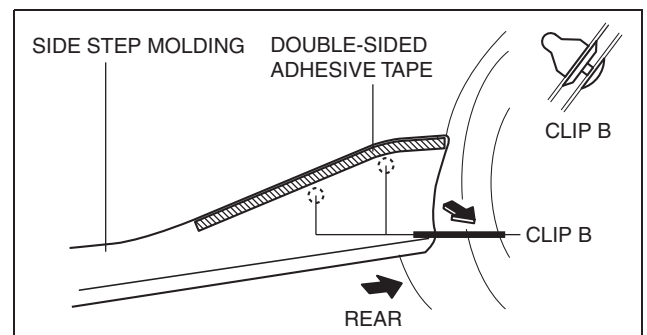
#### Warning

- Using a utility knife with bare hands could cause injury. Always wear gloves when using a utility knife.



am2zzw0000451

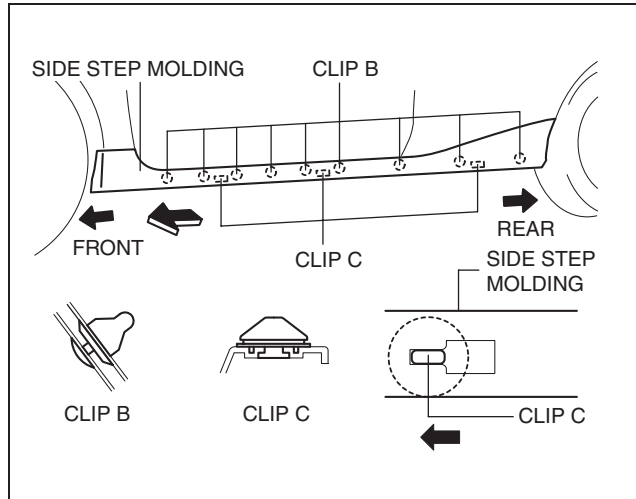
- Cut the double-sided adhesive tape shown in the figure using a utility knife and pull clip B in the direction of the arrow to remove it.



am2zzw0000451

## EXTERIOR TRIM

4. Slide the side step molding in the direction of the arrow shown in the figure and remove the side step molding from clips B and C.
5. After removing the side step molding, remove clips B and C from the body using a fastener remover.



am2zzw0000451

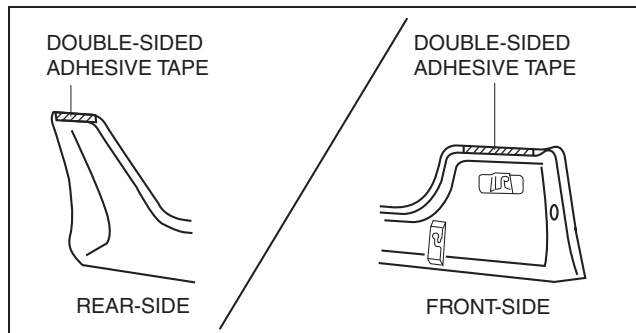
### SIDE STEP MOLDING INSTALLATION

id091600717700

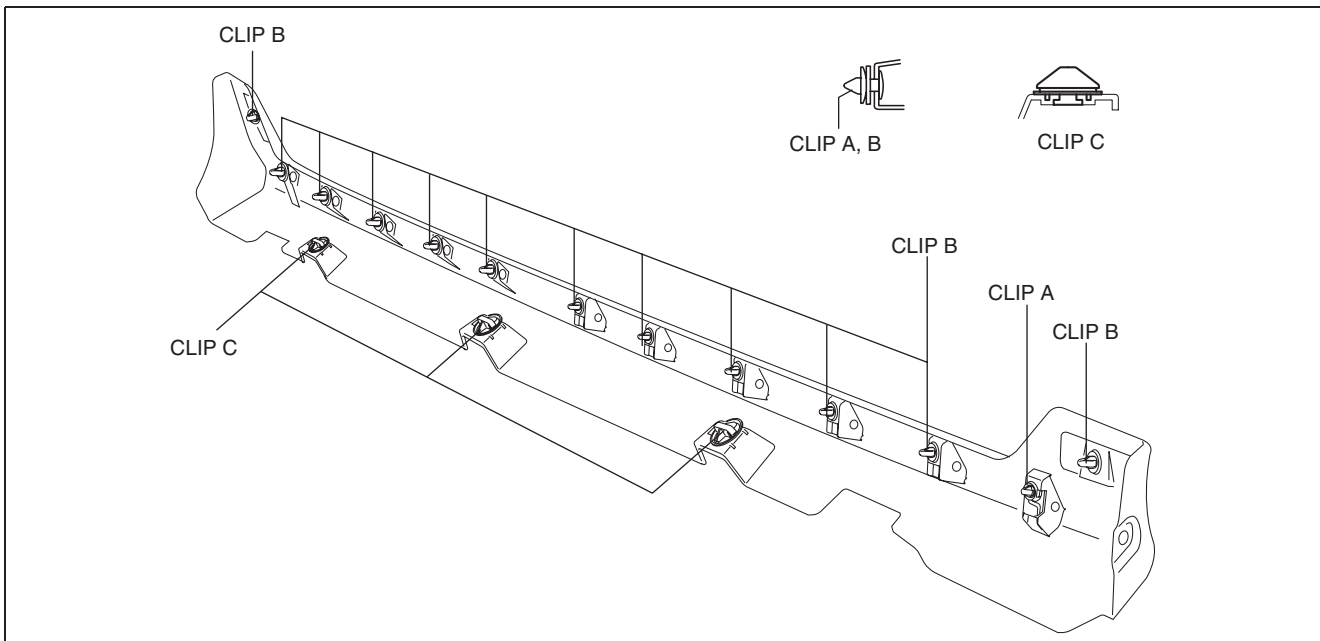
#### Note

- Double-sided adhesive tape has already been adhered to a new side step molding for installation.
- When a side step molding is to be reused, perform the following procedure:
  1. Remove any grease or dirt from the affixing surface of the side step molding.
  2. Affix double-sided adhesive tape to the position shown in the figure.

1. Install new clips A, B, C to the side step molding.



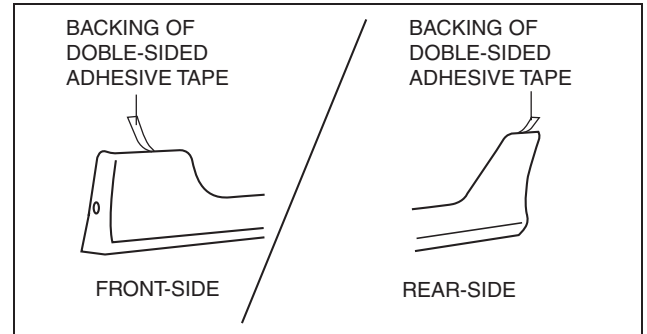
am2zzw0000190



am2zzw0000451

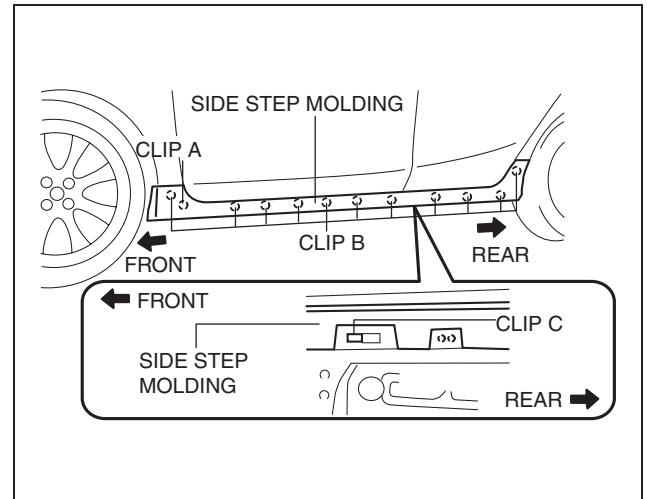
## EXTERIOR TRIM

2. Peel the tape backing of double-sided adhesive tape to the position shown in the figure.



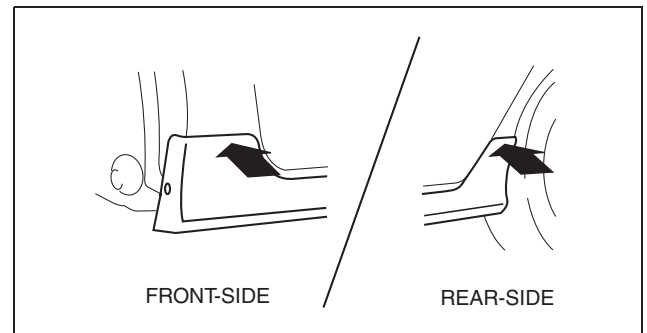
am2zzw0000190

3. Install the side step molding while pushing the clip A, B and C installation area shown in the figure.



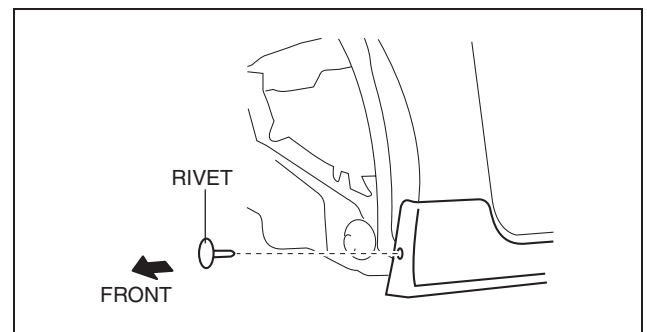
am2zzw0000451

4. Press the position shown in the figure.



am2zzw0000191

5. Install the rivet.



am2zzw0000451

### SIDE STEP MOLDING INSTALLATION [3HB]

id0916007177z3

#### Note

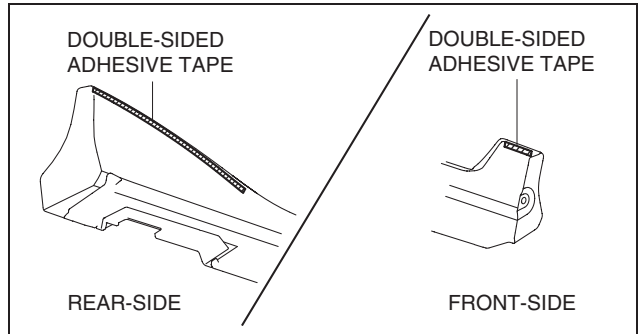
- Double-sided adhesive tape has already been adhered to a new side step molding for installation.
- When a side step molding is to be reused, perform the following procedure:
  1. Remove any grease or dirt from the affixing surface of the side step molding.



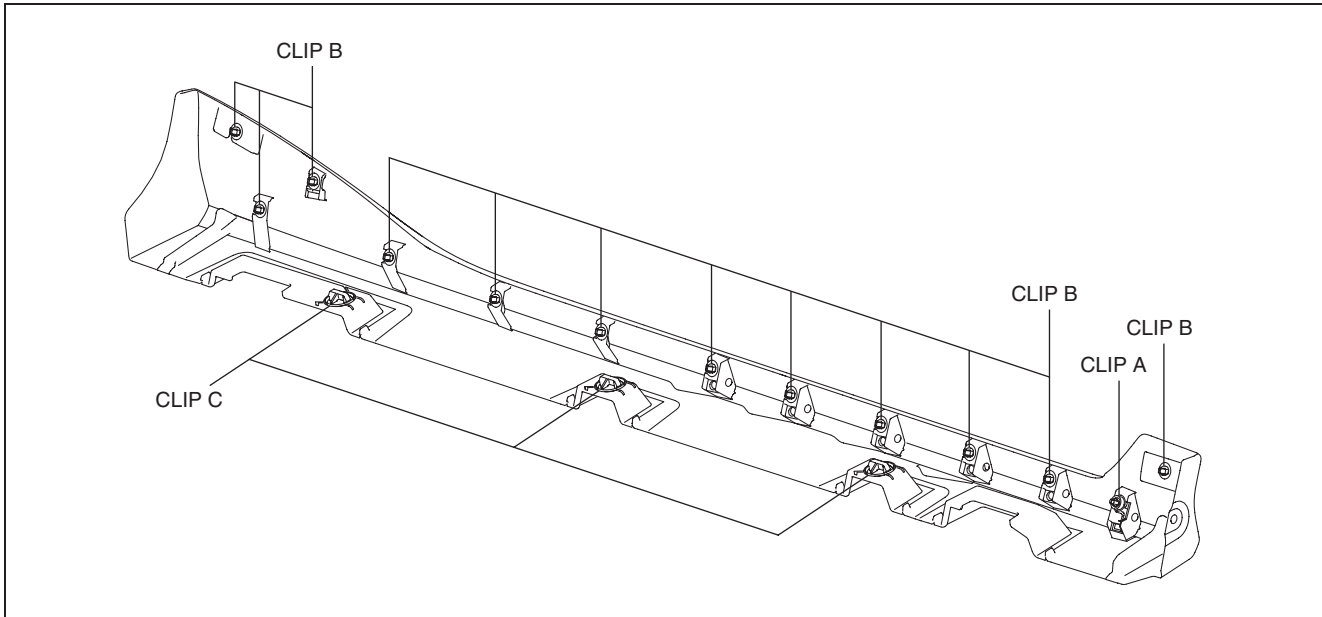
## EXTERIOR TRIM

2. Affix double-sided adhesive tape to the position shown in the figure.

1. Install new clips A, B, C to the side step molding.

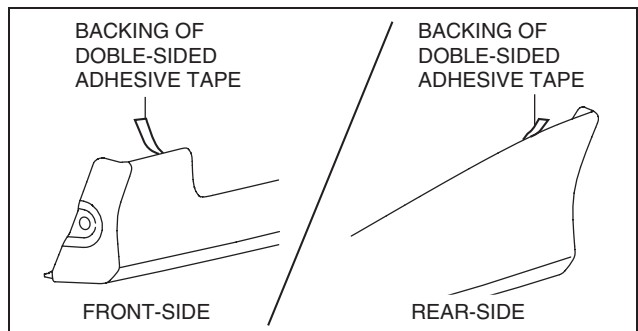


am2zzw0000340



am2zzw0000340

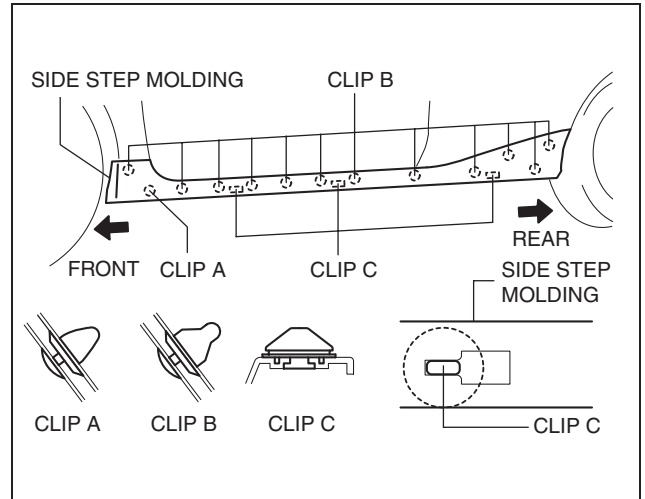
2. Peel the tape backing of double-sided adhesive tape to the position shown in the figure.



am2zzw0000340

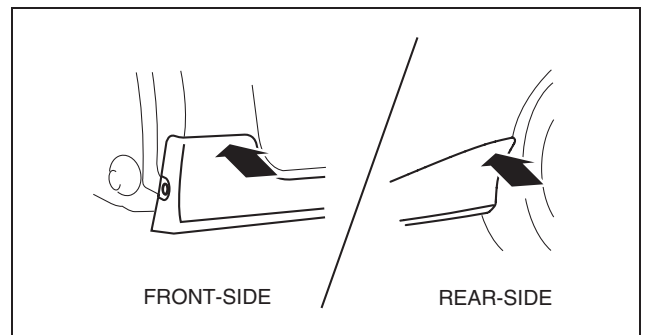
## EXTERIOR TRIM

3. Install the side step molding while pushing the clip A, B and C installation area shown in the figure.



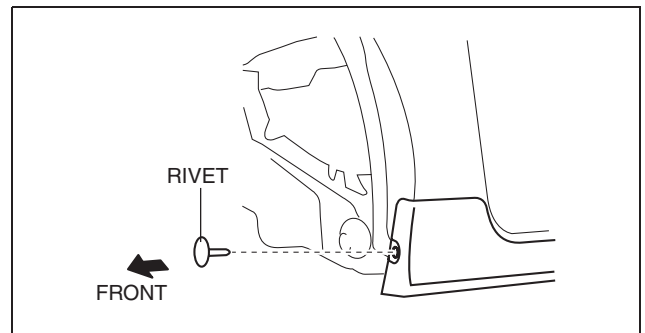
am2zzw0000451

4. Press the position shown in the figure.



am2zzw0000340

5. Install the rivet.

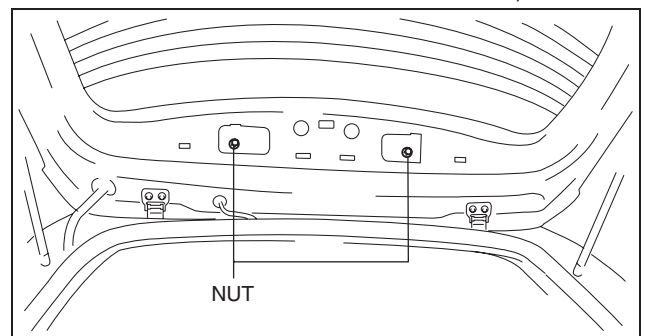


am2zzw0000451

## REAR SPOILER REMOVAL

id091600451500

1. Remove the liftgate upper trim. (See 09-17-78 LIFTGATE UPPER TRIM REMOVAL/INSTALLATION)
2. Remove the nuts.



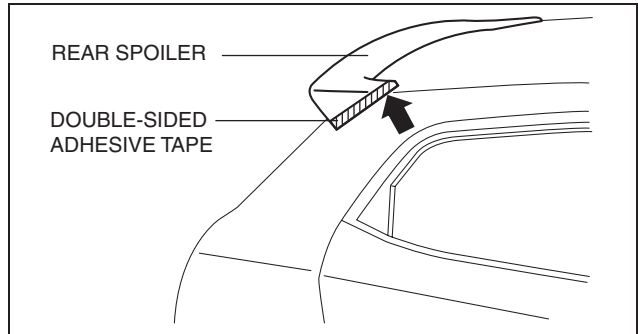
am2zzw0000192

## EXTERIOR TRIM

3. Peel off double-sided adhesive tape from the position shown in the figure using a utility knife.

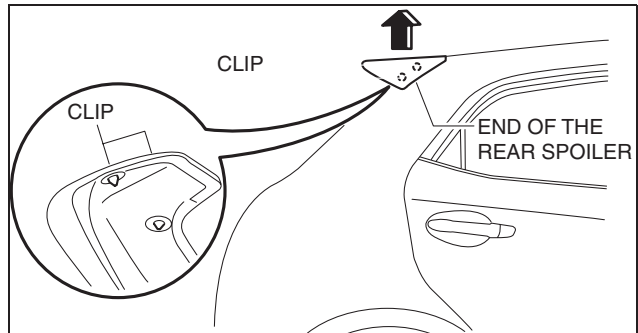
### Warning

- Using a utility knife with bare hands could cause injury. Always wear gloves when using a utility knife.



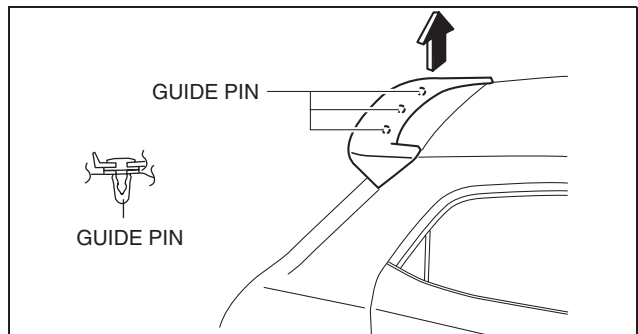
am2zzw0000192

4. Pull up the end of the rear spoiler in the direction of the arrow shown in the figure and remove the clips.



adejjw00003311

5. Pull up the rear spoiler in the direction of the arrow shown in the figure and remove it while detaching the guide pins.



am2zzw0000192

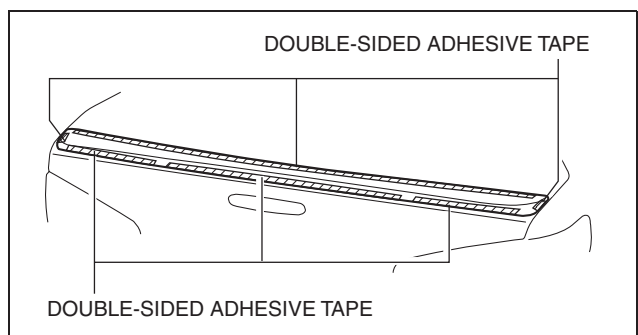
id0916004515z7

## REAR SPOILER REMOVAL [4SD]

1. Peel off double-sided adhesive tape from the position shown in the figure using a utility knife.

### Warning

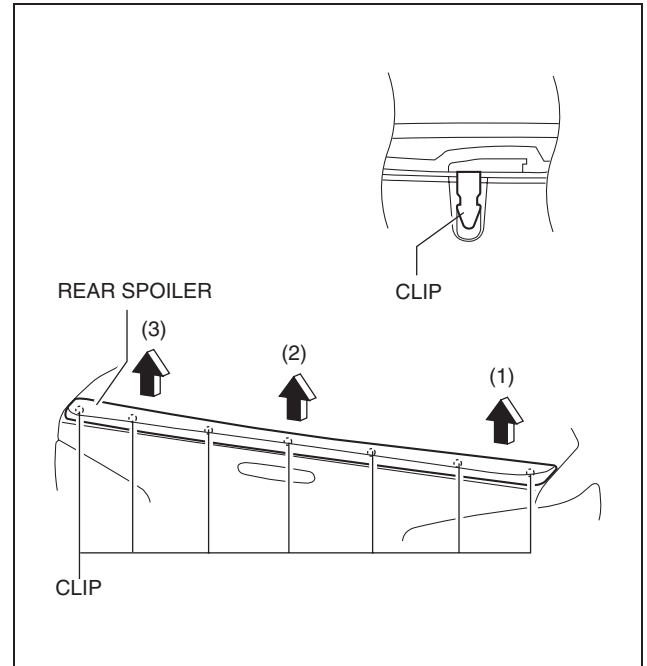
- Using a utility knife with bare hands could cause injury. Always wear gloves when using a utility knife.



am2zzw0000508

## EXTERIOR TRIM

2. Pull up the rear spoiler in the direction of the arrow (1), (2), (3) shown in the figure and remove the clips.
3. Remove the rear spoiler.



am2zzw0000508

### REAR SPOILER INSTALLATION

id091600451600

#### Warning

- Using a utility knife with bare hands could cause injury. Always wear gloves when using a utility knife.

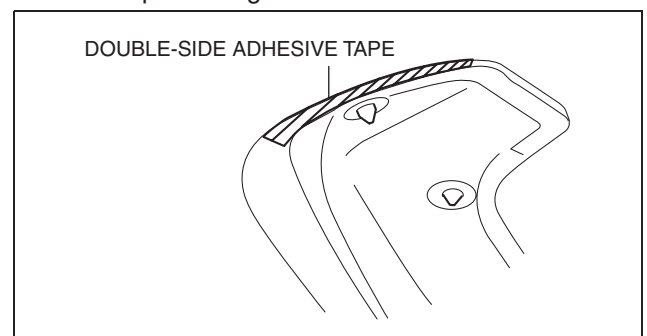
#### Note

- Double-sided adhesive tape has already been adhered to a new rear spoiler for installation.

1. When installing a new rear spoiler, perform the following procedure:
  1. Remove the double-sided adhesive tape on the liftgate.
  2. Remove any grease or dirt from the affixing surface of the liftgate.
2. If the rear spoiler is to be reused, perform the following procedure:
  1. Remove the double-sided adhesive tape remaining on the rear spoiler and liftgate after removal.
  2. Remove any grease and dirt from the double-sided adhesive tape affixing area.
  3. Affix double-sided adhesive tape to the position shown in the figure.

#### Note

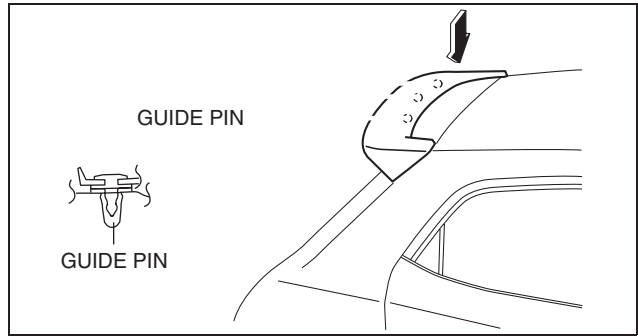
- Use the 3M 5079-type of double-sided adhesive tape, or the equivalent.



am2zzw0000192

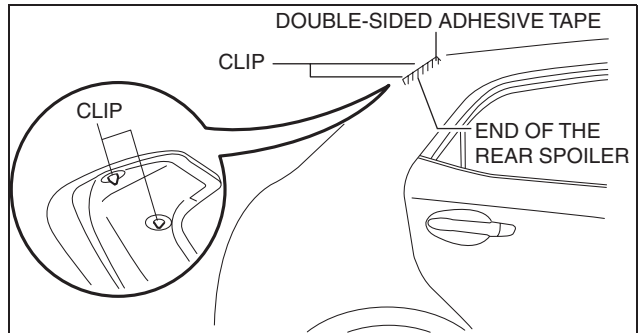
## EXTERIOR TRIM

3. Install the rear spoiler in the direction of the arrow shown in the figure while inserting the guide pins in the vehicle side.



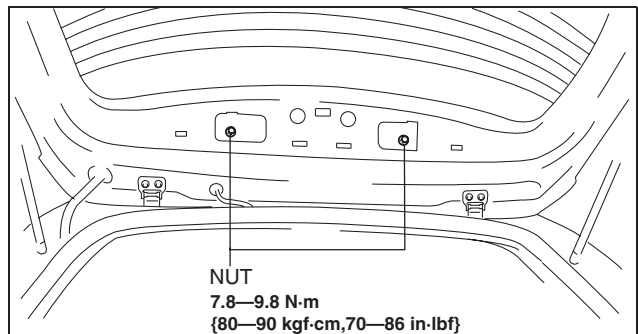
am2zzw0000192

4. Press the end of the rear spoiler and affix double-sided adhesive tape while installing the clips.



adejjw00003325

5. Tighten the nuts.
6. Install the liftgate upper trim. (See 09-17-78 LIFTGATE UPPER TRIM REMOVAL/INSTALLATION)



am2zzw0000193

### REAR SPOILER INSTALLATION [4SD]

id0916004516z7

#### Warning

- Using a utility knife with bare hands could cause injury. Always wear gloves when using a utility knife.

#### Note

- Double-sided adhesive tape has already been adhered to a new rear spoiler for installation.

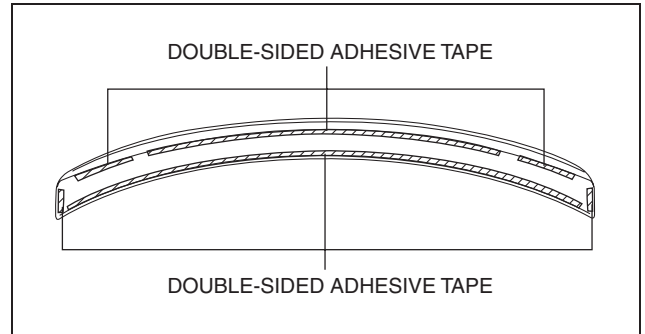
1. When installing a new rear spoiler, perform the following procedure:
  1. Remove the double-sided adhesive tape on the trunk lid.
  2. Remove any grease or dirt from the affixing surface of the trunk lid.
2. If the rear spoiler is to be reused, perform the following procedure:
  1. Remove the double-sided adhesive tape remaining on the rear spoiler and trunk lid after removal.
  2. Remove any grease and dirt from the double-sided adhesive tape affixing area.

## EXTERIOR TRIM

3. Affix double-sided adhesive tape to the position shown in the figure.

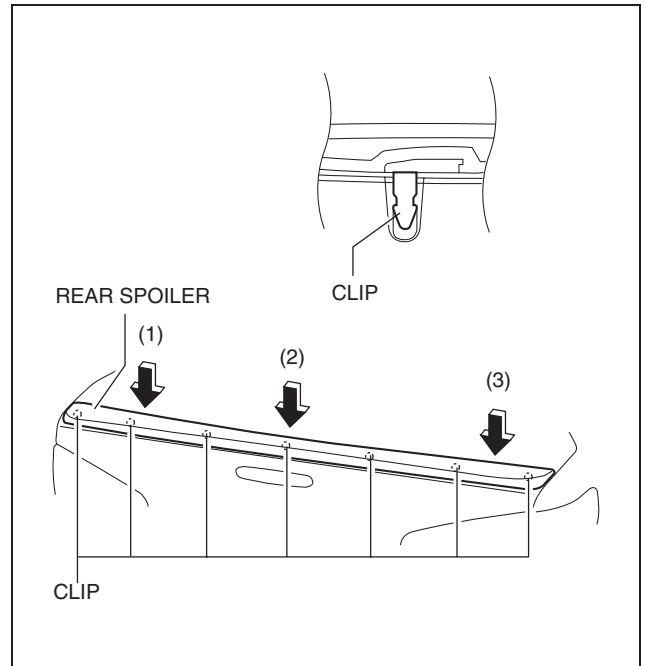
### Note

- Use the 3M GT7116-type of double-sided adhesive tape, or the equivalent.



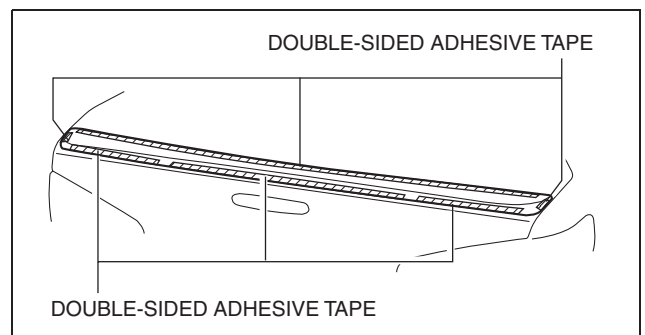
am2zzw0000497

3. Install the rear spoiler in the direction of the arrow (1), (2), (3) shown in the figure while inserting the clips in the vehicle side.



am2zzw0000497

4. Press the rear spoiler and affix double-sided adhesive tapes.



am2zzw0000498

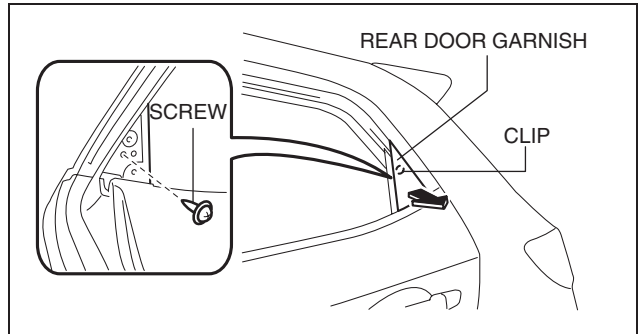
## REAR DOOR GARNISH REMOVAL/INSTALLATION

id091600445700

1. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION)

## EXTERIOR TRIM

2. Remove the screw from the inside of the vehicle.
3. Pull the rear door garnish in the direction of the arrow shown in the figure and remove it while detaching the clip.
4. Install in the reverse order of removal.



am2zzw0000192

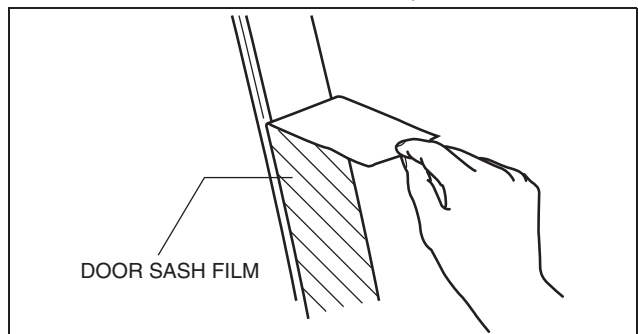
### DOOR SASH FILM REMOVAL

id091600445500

1. Partially peel back the glass run channel.
2. Partially peel back the door weatherstrip.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (3) Power outer mirror (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
  - (4) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (5) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (6) Front beltline molding (See 09-16-7 EXTRACTOR CHAMBER REMOVAL/INSTALLATION.)
  - (7) Rear beltline molding (See 09-16-10 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)
  - (8) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
4. Peel off the door sash film by pulling it outward from one end.

#### Note

- Slowly remove the door sash film because it could tear easily.



am2zzw0000192

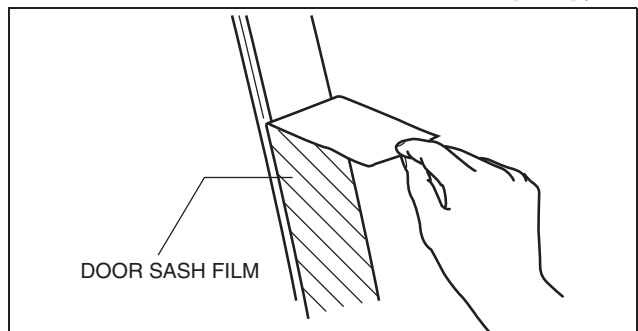
### DOOR SASH FILM REMOVAL [3HB]

id091600445523

1. Partially peel back the glass run channel.
2. Partially peel back the door weatherstrip.
3. Remove the following parts:
  - (1) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
  - (2) Front door trim (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
  - (3) Power outer mirror (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
  - (4) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (5) Front beltline molding (See 09-16-10 FRONT BELTLINE MOLDING REMOVAL/INSTALLATION [3HB].)
4. Peel off the door sash film by pulling it outward from one end.

#### Note

- Slowly remove the door sash film because it could tear easily.



am2zzw0000192

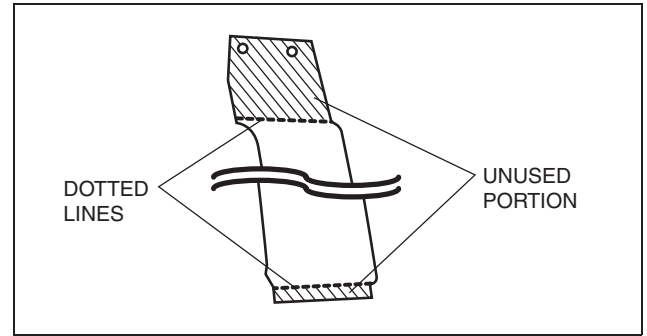
### DOOR SASH FILM INSTALLATION

id091600445600

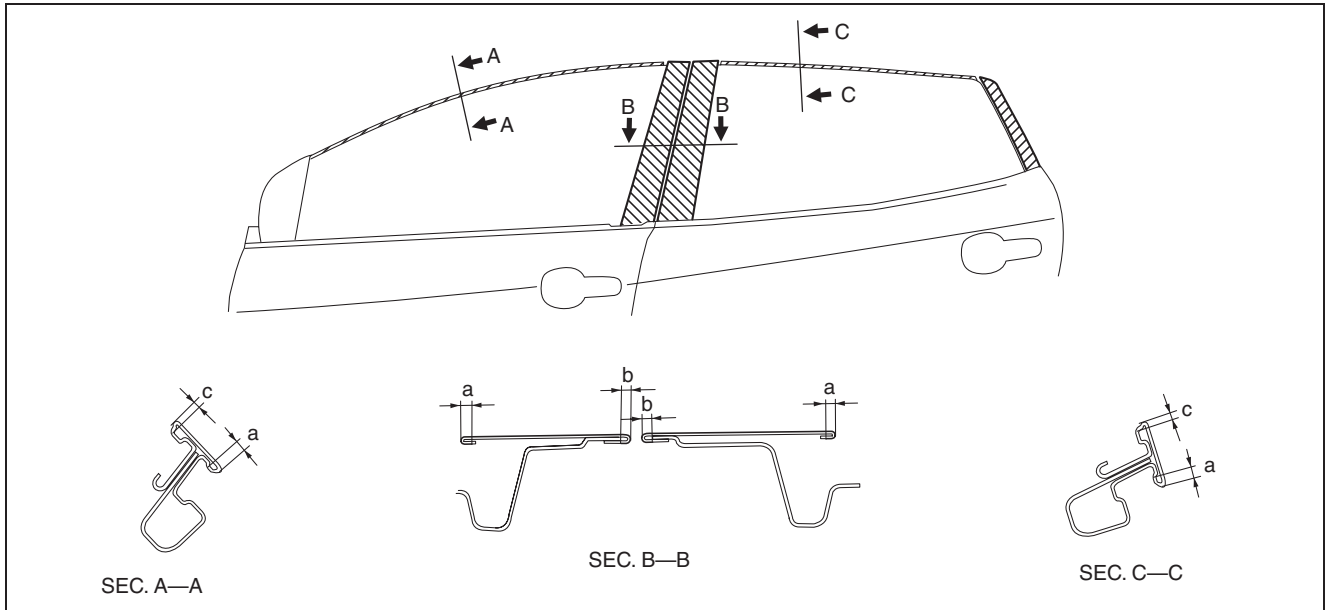
1. Remove any grease or dirt from the affixing surface of the door.

## EXTERIOR TRIM

2. Cut away the unused portion along the dotted lines.
3. Peel off the tape backing and attach the door sash film onto the door as shown in the figure.



am2zzw0000192



adejjw00003343

### Standard clearance

- a: 4.0 mm {0.16 in}
- b: 3.0—5.0 mm {0.12—0.19 in}
- c: 3.0 mm {0.12 in} or more

4. Peel off the transparent protective film on the door sash film.
5. Install the following parts:
  - (1) Rear door garnish (See 09-16-21 REAR DOOR GARNISH REMOVAL/INSTALLATION.)
  - (2) Rear beltline molding (See 09-16-10 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)
  - (3) Front beltline molding (See 09-16-9 FRONT BELTLINE MOLDING REMOVAL/INSTALLATION.)
  - (4) Rear door trim (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
  - (5) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (6) Power outer mirror (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
  - (7) Front door trim (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
  - (8) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)

### DOOR SASH FILM INSTALLATION [3HB]

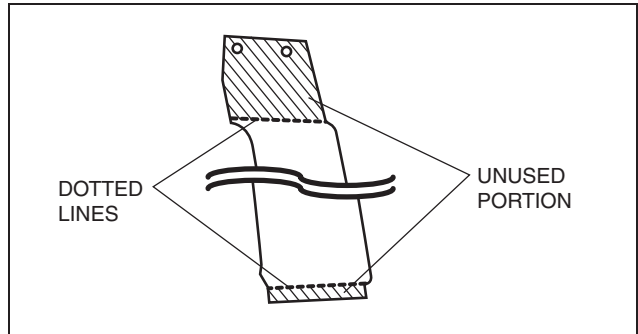
id0916004456z3

1. Remove any grease or dirt from the affixing surface of the door.

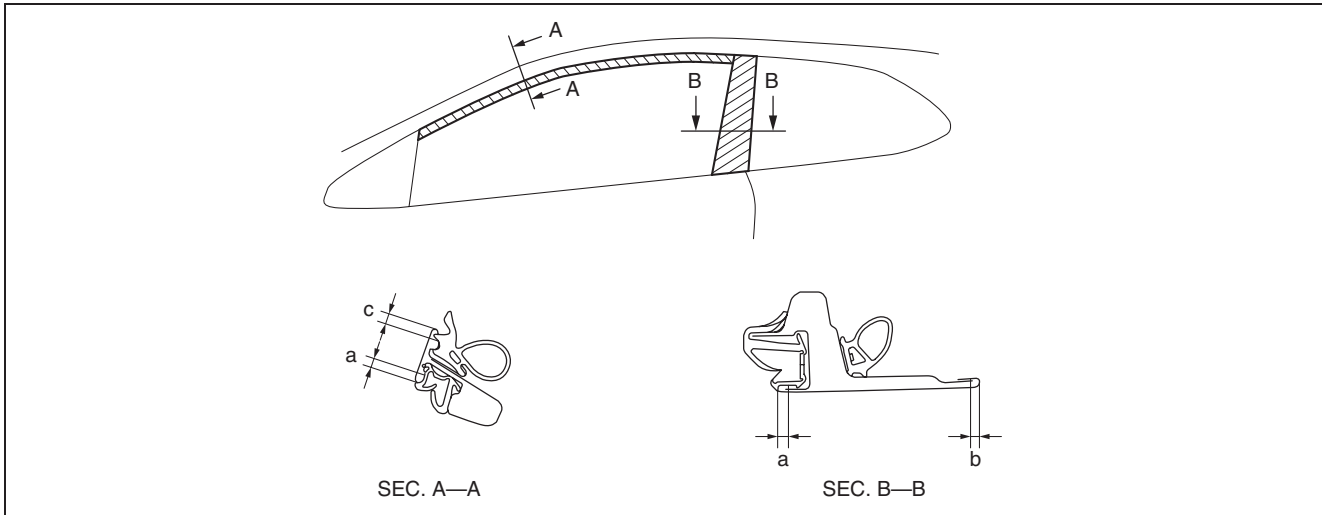


## EXTERIOR TRIM

2. Cut away the unused portion along the dotted lines.
3. Peel off the tape backing and attach the door sash film onto the door as shown in the figure.



am2zzw0000192



am2zzw0000339

### Standard clearance

- a: 4.0 mm {0.16 in}
- b: 3.0—5.0 mm {0.12—0.19 in}
- c: 3.0 mm {0.12 in} or more

4. Peel off the transparent protective film on the door sash film.
5. Install the following parts:
  - (1) Front beltline molding (See 09-16-10 FRONT BELTLINE MOLDING REMOVAL/INSTALLATION [3HB].)
  - (2) Sail inner garnish (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
  - (3) Power outer mirror (See 09-12-44 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
  - (4) Front door trim (See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)
  - (5) Inner garnish (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)

## 09-17 INTERIOR TRIM

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| 5HB .....        | 09-17-5 |
| 4SD .....        | 09-17-6 |
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### INTERIOR TRIM LOCATION INDEX

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### DASHBOARD REMOVAL/INSTALLATION

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### DASHBOARD REMOVAL/INSTALLATION

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|---------------------------------------------------------------------|----------|
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### DASHBOARD

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### METER HOOD

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### COLUMN COVER

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| REMOVAL/INSTALLATION ..... | 09-17-25 |
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|----------------------------|----------|
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### VENTILATOR GRILLE

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|----------------------------|----------|
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### SIDE PANEL

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|----------------------------|----------|
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### DASHBOARD UNDER COVER

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### FRONT CONSOLE COMPONENT

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|                            |          |
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| REMOVAL/INSTALLATION ..... | 09-17-44 |
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### B-PILLAR UPPER TRIM

|                                  |          |
|----------------------------------|----------|
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-45 |
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### B-PILLAR LOWER TRIM

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|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-46 |
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### C-PILLAR TRIM

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|----------------------------|----------|
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### SAIL INNER GARNISH

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| REMOVAL/INSTALLATION ..... | 09-17-53 |
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|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-53 |
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### FRONT SIDE TRIM

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|----------------------------------|----------|
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-55 |
|----------------------------------|----------|

### FRONT SIDE GARNISH

|                            |          |
|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-55 |
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### FRONT SCUFF PLATE

|                            |          |
|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-56 |
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### FRONT SCUFF PLATE

|                                  |          |
|----------------------------------|----------|
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-57 |
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### REAR SCUFF PLATE

|                            |          |
|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-58 |
|----------------------------|----------|

### FRONT DOOR TRIM

|                            |          |
|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-58 |
|----------------------------|----------|

### FRONT DOOR TRIM

|                                  |          |
|----------------------------------|----------|
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-59 |
|----------------------------------|----------|

### FRONT DOOR TRIM

|                            |          |
|----------------------------|----------|
| DISASSEMBLY/ASSEMBLY ..... | 09-17-60 |
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### FRONT DOOR TRIM

|                                  |          |
|----------------------------------|----------|
| DISASSEMBLY/ASSEMBLY [3HB] ..... | 09-17-63 |
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### REAR DOOR TRIM

|                            |          |
|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-65 |
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### REAR DOOR TRIM

|                            |          |
|----------------------------|----------|
| DISASSEMBLY/ASSEMBLY ..... | 09-17-66 |
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### TIRE HOUSE TRIM

|                                         |          |
|-----------------------------------------|----------|
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### TRUNK SIDE TRIM

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|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-70 |
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### TRUNK SIDE TRIM

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|----------------------------------|----------|
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-73 |
|----------------------------------|----------|

### TRUNK END TRIM

|                            |          |
|----------------------------|----------|
| REMOVAL/INSTALLATION ..... | 09-17-75 |
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INTERIOR TRIM

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|                                  |          |
|----------------------------------|----------|
| 4SD .....                        | 09-17-75 |
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| REMOVAL/INSTALLATION .....       | 09-17-78 |
| <b>LIFTGATE LOWER TRIM</b>       |          |
| REMOVAL/INSTALLATION .....       | 09-17-79 |
| <b>LIFTGATE RECESS</b>           |          |
| REMOVAL/INSTALLATION .....       | 09-17-79 |
| <b>SUNVISOR</b>                  |          |
| REMOVAL/INSTALLATION .....       | 09-17-80 |
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| REMOVAL/INSTALLATION .....       | 09-17-80 |
| Removal .....                    | 09-17-80 |
| Installation .....               | 09-17-81 |

|                                  |          |
|----------------------------------|----------|
| <b>HEADLINER</b>                 |          |
| REMOVAL/INSTALLATION .....       | 09-17-81 |
| 4SD .....                        | 09-17-81 |
| 5HB .....                        | 09-17-84 |
| <b>HEADLINER</b>                 |          |
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-86 |
| <b>SHOCK ABSORBING PAD</b>       |          |
| REMOVAL/INSTALLATION .....       | 09-17-88 |
| 4SD .....                        | 09-17-88 |
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| REMOVAL/INSTALLATION [3HB] ..... | 09-17-90 |
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| REMOVAL/INSTALLATION .....       | 09-17-91 |
| <b>FLOOR COVERING</b>            |          |
| REMOVAL/INSTALLATION [3HB] ..... | 09-17-93 |

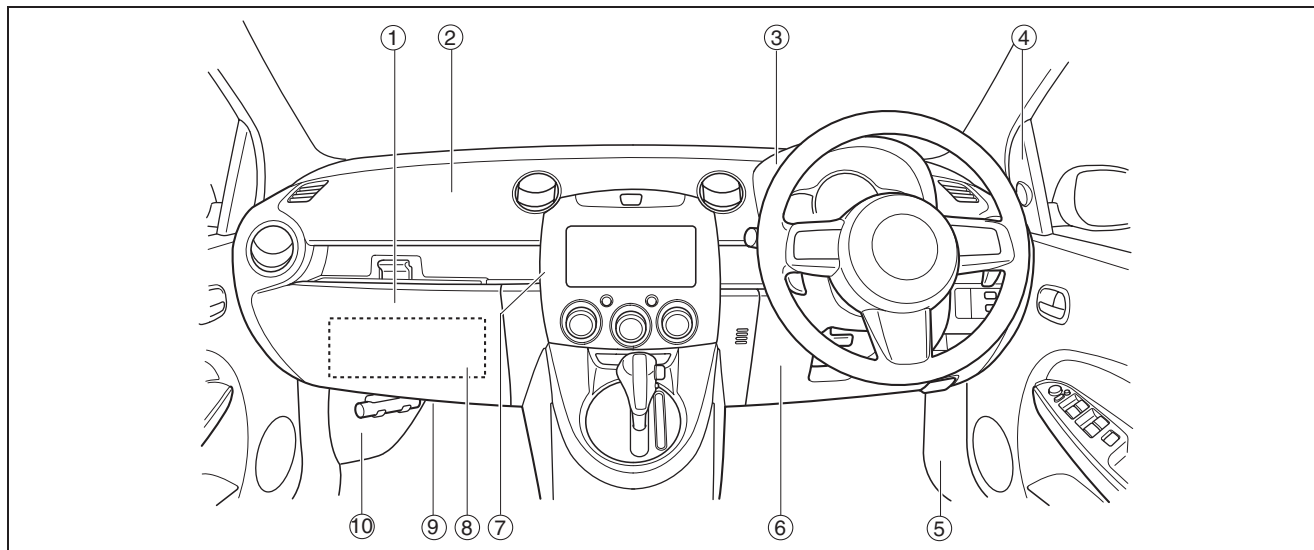
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## INTERIOR TRIM

### INTERIOR TRIM LOCATION INDEX [4SD, 5HB]

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R.H.D.



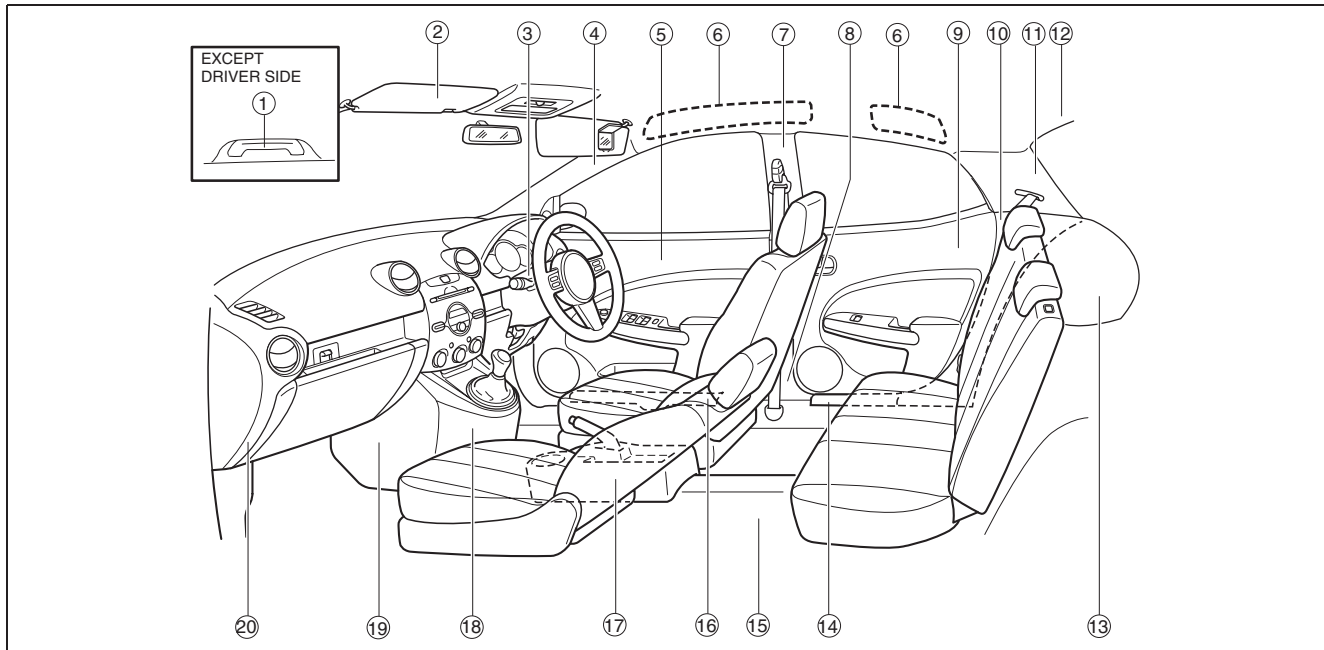
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|   |                                                                                                                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Glove compartment<br>(See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)                                                                                                                                                                                                    |
| 2 | Dashboard<br>(See 09-17-18 DASHBOARD REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)<br>(See 09-17-14 DASHBOARD REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].)<br>(See 09-17-22 DASHBOARD DISASSEMBLY/ASSEMBLY.) |
| 3 | Meter hood<br>(See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)                                                                                                                                                                                                                  |
| 4 | Inner garnish<br>(See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)                                                                                                                                                                                                            |

|    |                                                                                                   |
|----|---------------------------------------------------------------------------------------------------|
| 5  | Front side trim<br>(See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)                           |
| 6  | Lower panel<br>(See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)                                   |
| 7  | Center panel (vehicles without audio unit)<br>(See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)   |
| 8  | Glove compartment cover<br>(See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)           |
| 9  | Dashboard under cover<br>(See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)               |
| 10 | Front side garnish (Vehicles with CVT)<br>(See 09-17-55 FRONT SIDE GARNISH REMOVAL/INSTALLATION.) |

## INTERIOR TRIM

R.H.D.



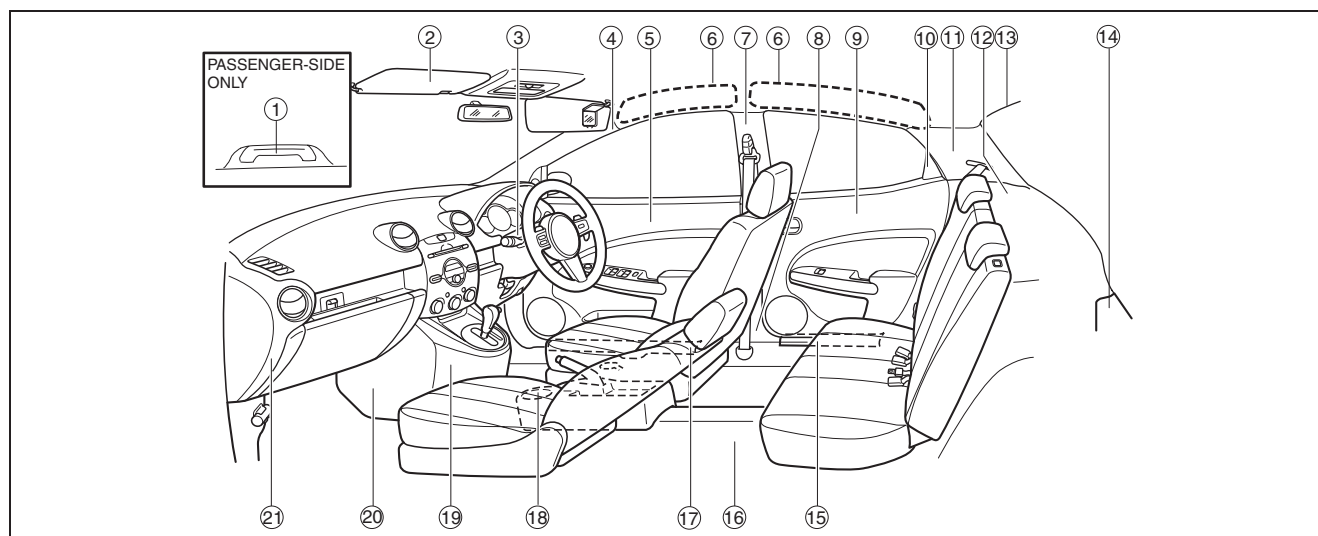
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|    |                                                                                                                                 |
|----|---------------------------------------------------------------------------------------------------------------------------------|
| 1  | Assist handle<br>(See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)                                                             |
| 2  | Sunvisor<br>(See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)                                                                       |
| 3  | Column cover<br>(See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)                                                               |
| 4  | A-pillar trim<br>(See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)                                                             |
| 5  | Front door trim<br>(See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)<br>(See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.) |
| 6  | Shock-absorbing pad<br>(See 09-17-88 SHOCK ABSORBING PAD REMOVAL/INSTALLATION.)                                                 |
| 7  | B-pillar upper trim<br>(See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)                                                 |
| 8  | B-pillar lower trim<br>(See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)                                                 |
| 9  | Rear door trim<br>(See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)<br>(See 09-17-66 REAR DOOR TRIM DISASSEMBLY/ASSEMBLY.)    |
| 10 | Tire house trim<br>(See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)                                                   |

|    |                                                                                                                                                         |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11 | C-pillar trim<br>(See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)                                                                                     |
| 12 | Headliner<br>(See 09-17-81 HEADLINER REMOVAL/INSTALLATION.)                                                                                             |
| 13 | Rear package trim<br>(See 09-17-68 REAR PACKAGE TRIM REMOVAL/INSTALLATION [4SD].)                                                                       |
| 14 | Rear scuff plate<br>(See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)                                                                               |
| 15 | Floor covering<br>(See 09-17-91 FLOOR COVERING REMOVAL/INSTALLATION.)                                                                                   |
| 16 | Front scuff plate<br>(See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)                                                                             |
| 17 | Rear console<br>(See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)                                                                                       |
| 18 | Front console component<br>(See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)<br>(See 09-17-38 FRONT CONSOLE COMPONENT DISASSEMBLY/ASSEMBLY.) |
| 19 | Side wall<br>(See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)                                                                                             |
| 20 | Side panel<br>(See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION.)                                                                                           |

## INTERIOR TRIM

5HB  
R.H.D.



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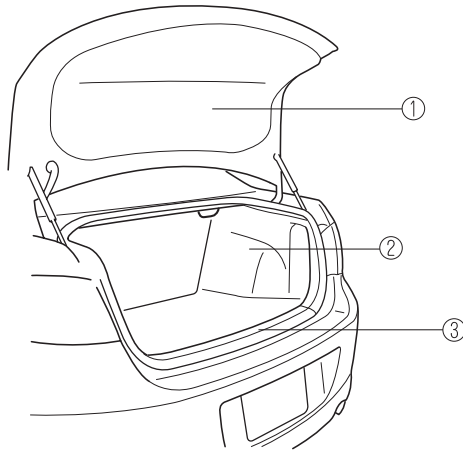
|   |                                                                                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------------------|
| 1 | Assist handle<br>(See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)                                                             |
| 2 | Sunvisor<br>(See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)                                                                       |
| 3 | Column cover<br>(See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)                                                               |
| 4 | A-pillar trim<br>(See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)                                                             |
| 5 | Front door trim<br>(See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)<br>(See 09-17-60 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY.) |
| 6 | Shock absorbing pad<br>(See 09-17-88 SHOCK ABSORBING PAD REMOVAL/INSTALLATION.)                                                 |

|    |                                                                                                                              |
|----|------------------------------------------------------------------------------------------------------------------------------|
| 7  | B-pillar upper trim<br>(See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)                                              |
| 8  | B-pillar lower trim<br>(See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)                                              |
| 9  | Rear door trim<br>(See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)<br>(See 09-17-66 REAR DOOR TRIM DISASSEMBLY/ASSEMBLY.) |
| 10 | Sail inner garnish<br>(See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)                                                |
| 11 | C-pillar trim<br>(See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)                                                          |
| 12 | Trunk side trim<br>(See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)                                                      |

## INTERIOR TRIM

|    |                                                                                                                                                               |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 | Headliner<br>(See 09-17-81 HEADLINER REMOVAL/<br>INSTALLATION.)                                                                                               |
| 14 | Trunk end trim<br>(See 09-17-75 TRUNK END TRIM REMOVAL/<br>INSTALLATION.)                                                                                     |
| 15 | Rear scuff plate<br>(See 09-17-58 REAR SCUFF PLATE REMOVAL/<br>INSTALLATION.)                                                                                 |
| 16 | Floor covering<br>(See 09-17-91 FLOOR COVERING REMOVAL/<br>INSTALLATION.)                                                                                     |
| 17 | Front scuff plate<br>(See 09-17-56 FRONT SCUFF PLATE REMOVAL/<br>INSTALLATION.)                                                                               |
| 18 | Rear console<br>(See 09-17-41 REAR CONSOLE REMOVAL/<br>INSTALLATION.)                                                                                         |
| 19 | Front console component<br>(See 09-17-36 FRONT CONSOLE COMPONENT<br>REMOVAL/INSTALLATION.)<br>(See 09-17-38 FRONT CONSOLE COMPONENT<br>DISASSEMBLY/ASSEMBLY.) |
| 20 | Side wall<br>(See 09-17-33 SIDE WALL REMOVAL/<br>INSTALLATION.)                                                                                               |
| 21 | Side panel<br>(See 09-17-34 SIDE PANEL REMOVAL/<br>INSTALLATION.)                                                                                             |

### 4SD



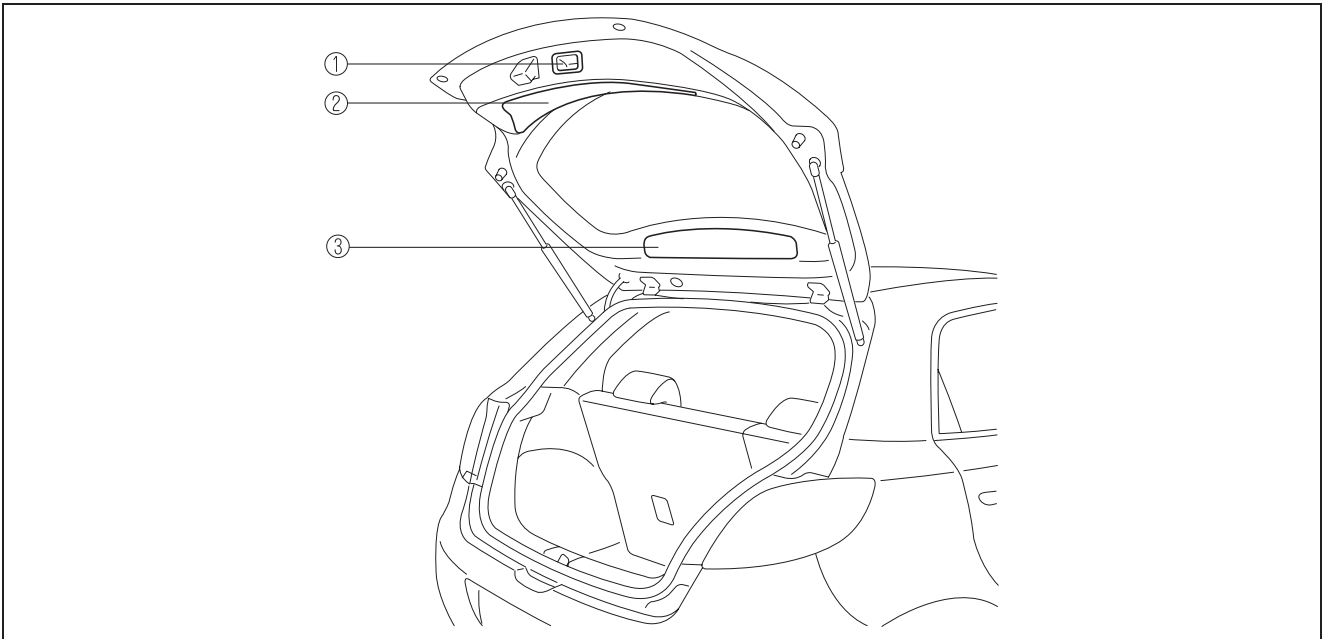
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|   |                                                                                 |
|---|---------------------------------------------------------------------------------|
| 1 | Trunk lid trim<br>(See 09-17-77 TRUNK LID TRIM REMOVAL/<br>INSTALLATION [4SD].) |
| 2 | Trunk end trim<br>(See 09-17-75 TRUNK END TRIM REMOVAL/<br>INSTALLATION.)       |

|   |                                                                             |
|---|-----------------------------------------------------------------------------|
| 3 | Trunk side trim<br>(See 09-17-70 TRUNK SIDE TRIM REMOVAL/<br>INSTALLATION.) |
|---|-----------------------------------------------------------------------------|

# INTERIOR TRIM

5HB



adejjw00003361

|   |                                                                                    |
|---|------------------------------------------------------------------------------------|
| 1 | Liftgate recess<br>(See 09-17-79 LIFTGATE RECESS REMOVAL/<br>INSTALLATION.)        |
| 2 | Liftgate lower trim<br>(See 09-17-79 LIFTGATE LOWER TRIM<br>REMOVAL/INSTALLATION.) |

|   |                                                                                     |
|---|-------------------------------------------------------------------------------------|
| 3 | Liftgate upper trim<br>(See 09-17-78 LIFTGATE UPPER TRIM REMOVAL/<br>INSTALLATION.) |
|---|-------------------------------------------------------------------------------------|

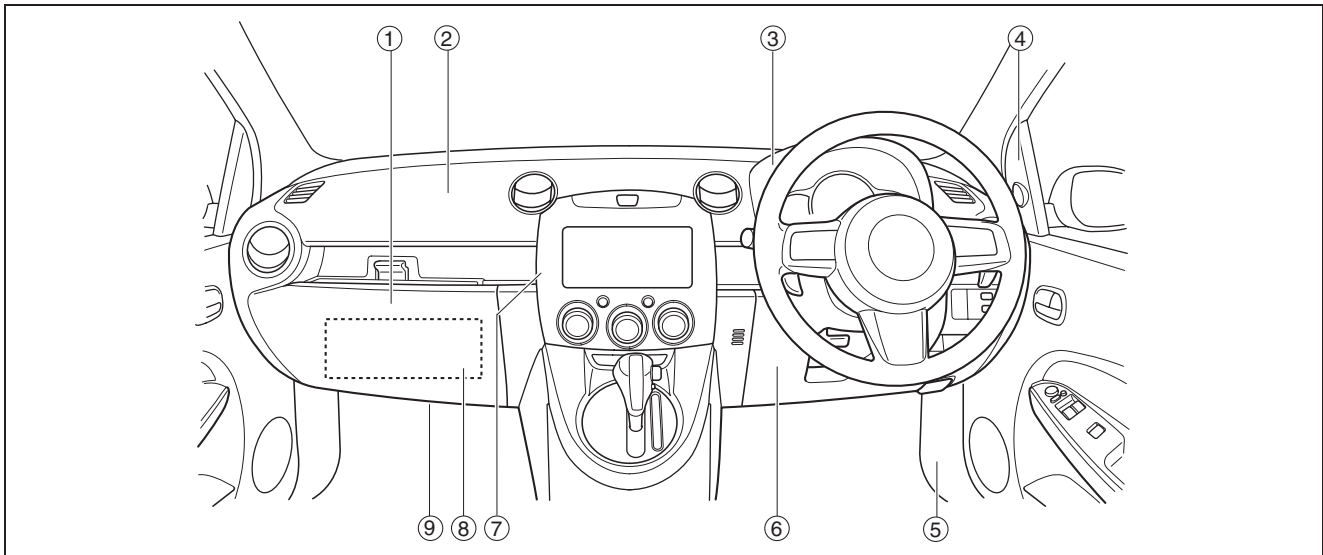
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## INTERIOR TRIM

### INTERIOR TRIM LOCATION INDEX [3HB]

R.H.D.



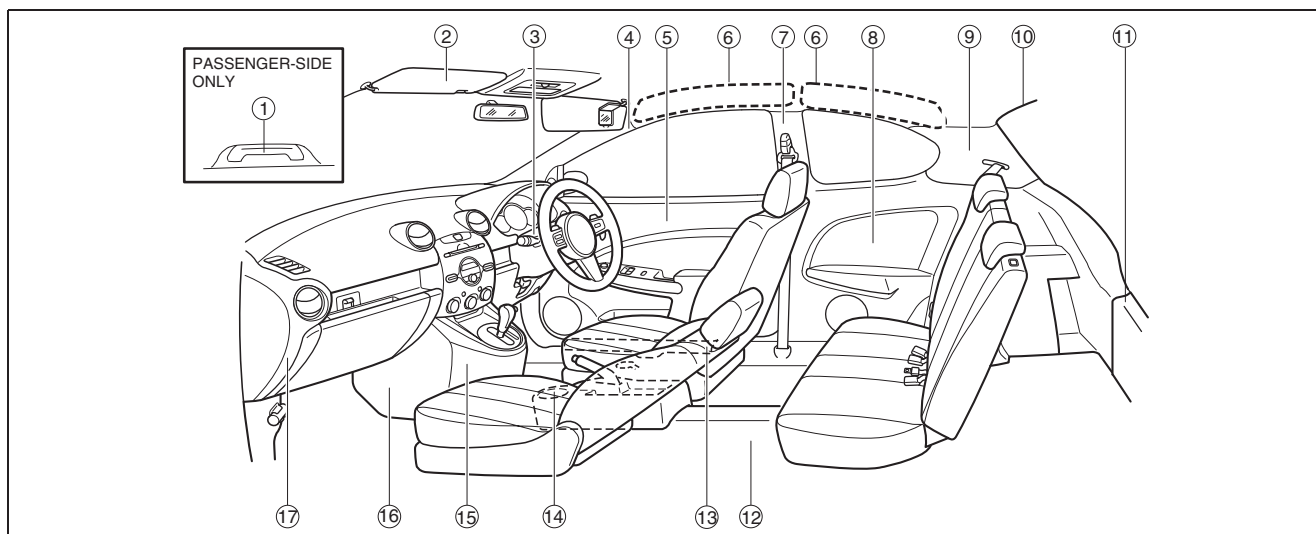
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|   |                                                                                                                     |
|---|---------------------------------------------------------------------------------------------------------------------|
| 1 | Glove compartment<br>(See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)                                         |
| 2 | Dashboard<br>(See 09-17-10 DASHBOARD REMOVAL/INSTALLATION [3HB].)<br>(See 09-17-22 DASHBOARD DISASSEMBLY/ASSEMBLY.) |
| 3 | Meter hood<br>(See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)                                                       |
| 4 | Inner garnish<br>(See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)                                                 |

|   |                                                                                                 |
|---|-------------------------------------------------------------------------------------------------|
| 5 | Front side trim<br>(See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)                         |
| 6 | Lower panel<br>(See 09-17-55 FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB].)                       |
| 7 | Center panel (vehicles without audio unit)<br>(See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.) |
| 8 | Glove compartment cover<br>(See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)         |
| 9 | Dashboard under cover<br>(See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)             |

## INTERIOR TRIM

### R.H.D.

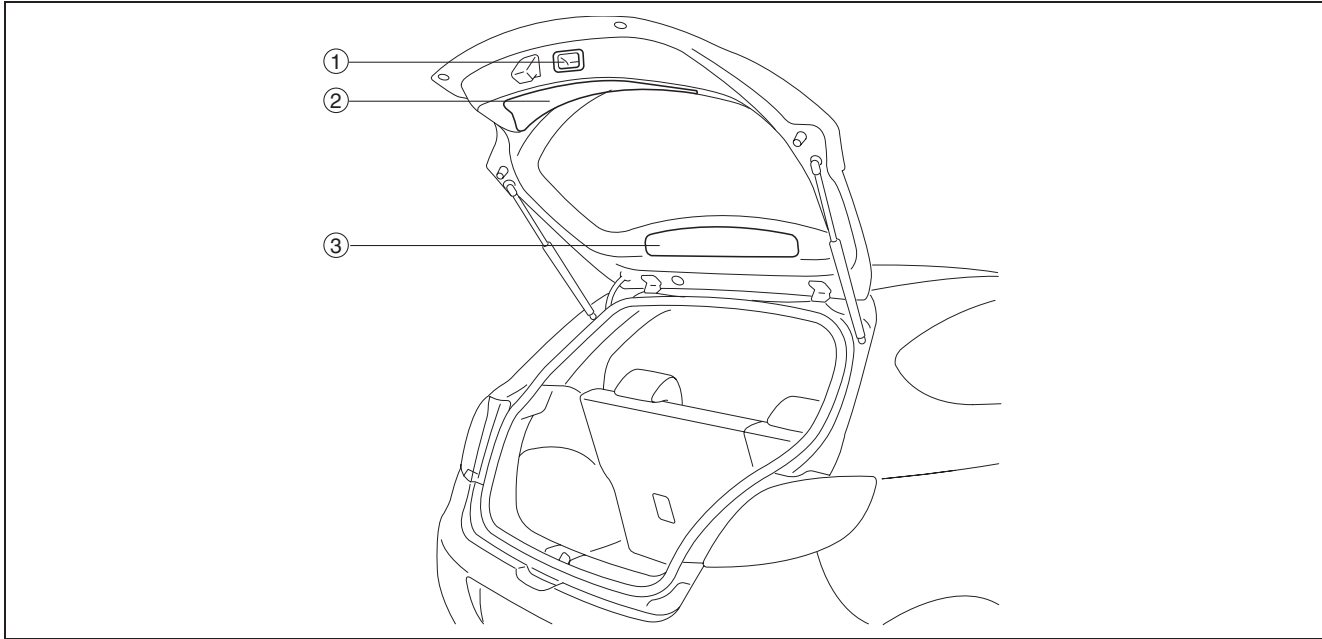


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|   |                                                                                                                                             |
|---|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Assist handle<br>(See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)                                                                         |
| 2 | Sunvisor<br>(See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)                                                                                   |
| 3 | Column cover<br>(See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)                                                                           |
| 4 | A-pillar trim<br>(See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)                                                                         |
| 5 | Front door trim<br>(See 09-17-59 FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB].)<br>(See 09-17-63 FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB].) |
| 6 | Shock absorbing pad<br>(See 09-17-90 SHOCK ABSORBING PAD REMOVAL/INSTALLATION [3HB].)                                                       |
| 7 | B-pillar upper trim<br>(See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)                                                       |
| 8 | Trunk side trim<br>(See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)                                                                     |
| 9 | C-pillar trim<br>(See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)                                                                   |

|    |                                                                                                                                                         |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Headliner<br>(See 09-17-81 HEADLINER REMOVAL/INSTALLATION.)                                                                                             |
| 11 | Trunk end trim<br>(See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)                                                                                   |
| 12 | Floor covering<br>(See 09-17-93 FLOOR COVERING REMOVAL/INSTALLATION [3HB].)                                                                             |
| 13 | Front scuff plate<br>(See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)                                                                       |
| 14 | Rear console<br>(See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)                                                                                       |
| 15 | Front console component<br>(See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)<br>(See 09-17-38 FRONT CONSOLE COMPONENT DISASSEMBLY/ASSEMBLY.) |
| 16 | Side wall<br>(See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)                                                                                             |
| 17 | Side panel<br>(See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION.)                                                                                           |

## INTERIOR TRIM



adejjw00003362

|   |                                                                                 |
|---|---------------------------------------------------------------------------------|
| 1 | Liftgate recess<br>(See 09-17-79 LIFTGATE RECESS REMOVAL/INSTALLATION.)         |
| 2 | Liftgate lower trim<br>(See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.) |

|   |                                                                                 |
|---|---------------------------------------------------------------------------------|
| 3 | Liftgate upper trim<br>(See 09-17-78 LIFTGATE UPPER TRIM REMOVAL/INSTALLATION.) |
|---|---------------------------------------------------------------------------------|

## DASHBOARD REMOVAL/INSTALLATION [3HB]

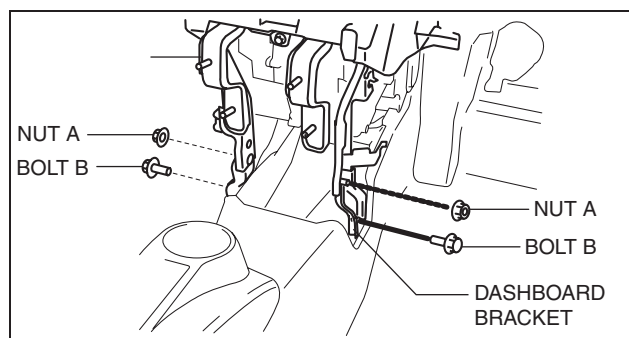
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1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (2) Glove compartment cover (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
  - (3) Dashboard under cover (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)
  - (4) Heat duct (passenger side).
  - (5) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (6) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (7) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (8) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (9) Front side trim (See 09-17-55 FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (10) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (11) Driver-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (12) Driver-side air bag module.
  - (13) Steering wheel (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (14) Column cover (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
  - (15) Meter hood (See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)
  - (16) Instrument cluster (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
  - (17) Combination switch (See 09-18-32 COMBINATION SWITCH REMOVAL/INSTALLATION.)
  - (18) Center panel unit (vehicles with audio unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (19) Center panel (vehicles without audio unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (20) Climate control unit

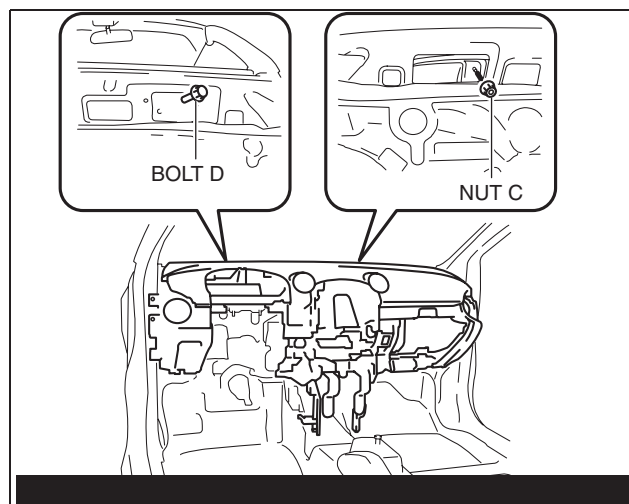
## INTERIOR TRIM

- (21) Shift lever (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (22) Selector lever (ATX)
  - (23) Interlock cable (ATX)
  - (24) Passenger-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (25) Side panel (See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION.)
  - (26) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (27) Windshield wiper arm and blade (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
  - (28) Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
  - (29) Windshield wiper motor (L.H.D.)
  - (30) Sail garnish (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
  - (31) Steering shaft cover (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (32) Steering shaft (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
3. Disconnect antenna feeder No.2 from the antenna feeder No.1. (See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/INSTALLATION)
  4. Disconnect antenna feeder No.1 clip from the A-pillar inner panel.
  5. Disconnect the dashboard wiring harness connectors.
  6. Remove nuts A and bolts B then remove the dashboard bracket.
  7. Remove nut C and bolt D from the outside of the vehicle (upper dashboard area).

**L.H.D.**



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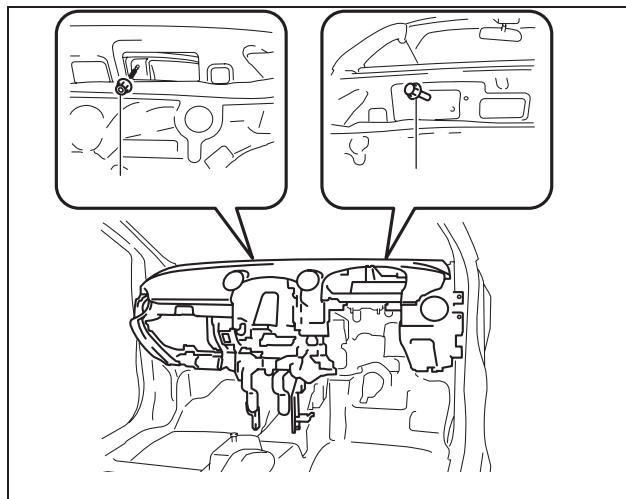


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## INTERIOR TRIM

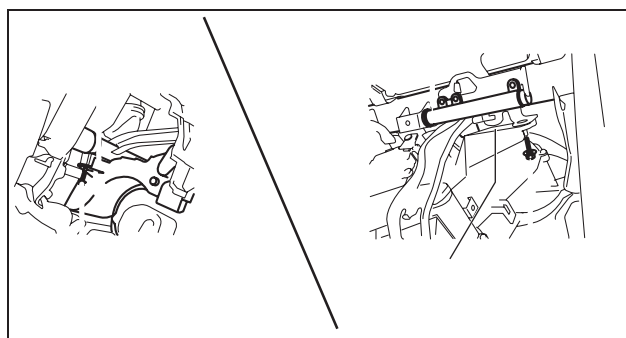
### R.H.D.

8. Remove nuts E and F shown in the figure.



am2zzw0000149

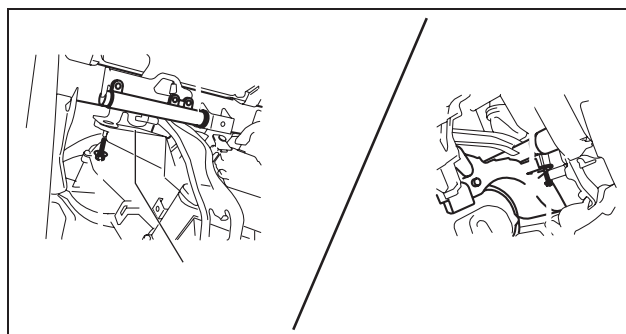
### L.H.D.



am2zzw0000026

### R.H.D.

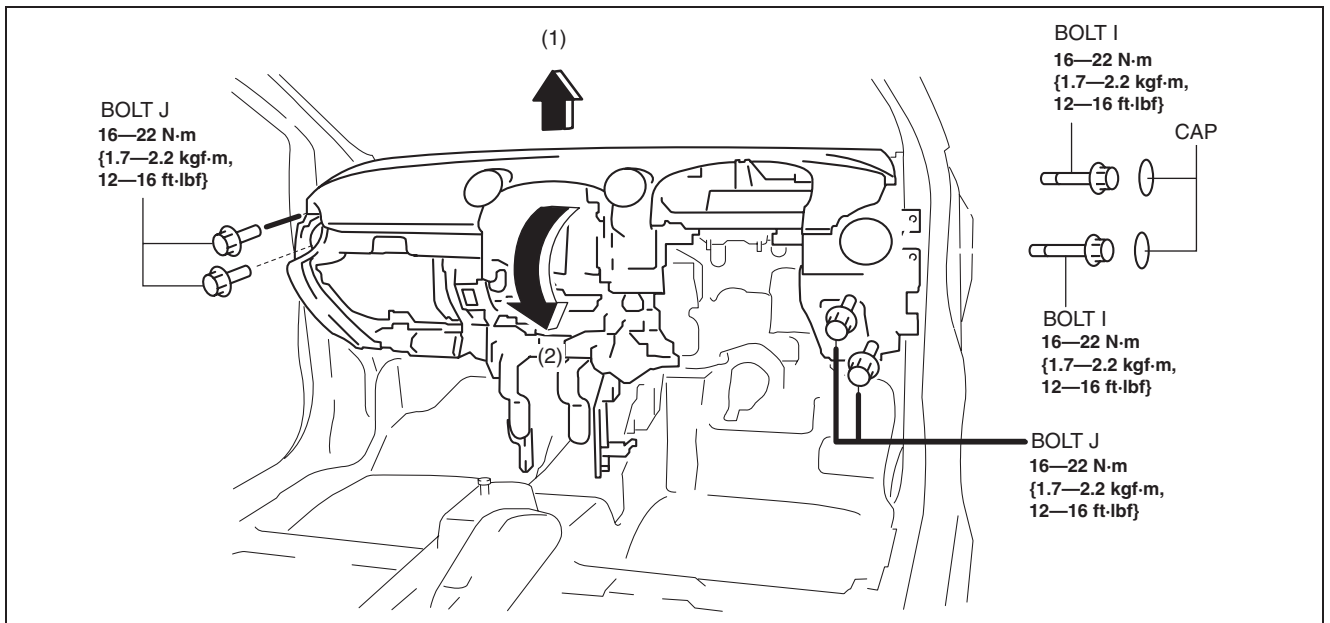
9. Disconnect the A/C unit related connector.
10. Remove the caps, remove bolts I and J. (See 09-17-14 Bolt I Removal/Installation Note)



am2zzw0000149

## INTERIOR TRIM

R.H.D.



11. Lift the dashboard in the direction of the arrow (1) shown in the figure, disconnect the A/C unit, and then rotate the dashboard in the direction of the arrow (2) and remove it from the vehicle. (See 09-17-13 Dashboard Removal Note)
12. Install in the reverse order of removal.

### Dashboard Removal Note

#### Warning

- When the dashboard is removed from the vehicle, it could fall and cause injury. Always perform the procedure with at least another person to prevent the dashboard from falling.

#### Caution

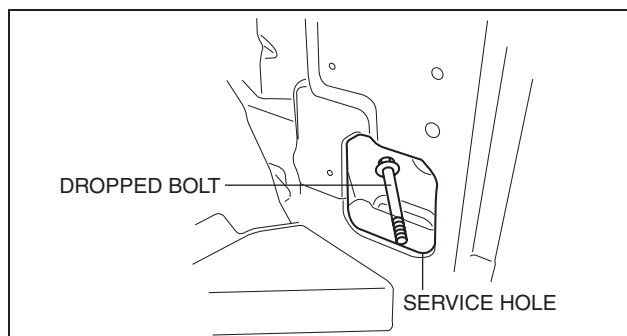
- When the dashboard is removed from the vehicle, be careful not to damage the door and surrounding area.

1. Take the dashboard out through the opened front door.

## INTERIOR TRIM

### Bolt I Removal/Installation Note

1. If the bolt falls off during the removal and installation procedure, remove it from the service hole shown in the figure.

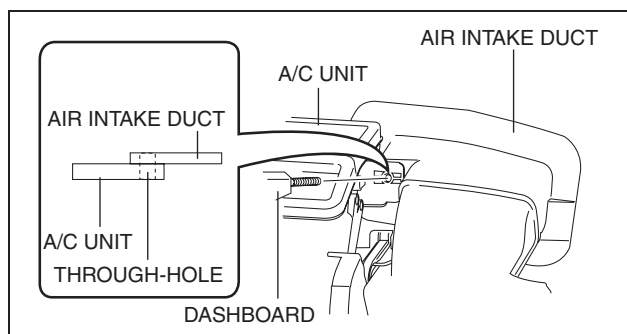


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### Dashboard Installation Note

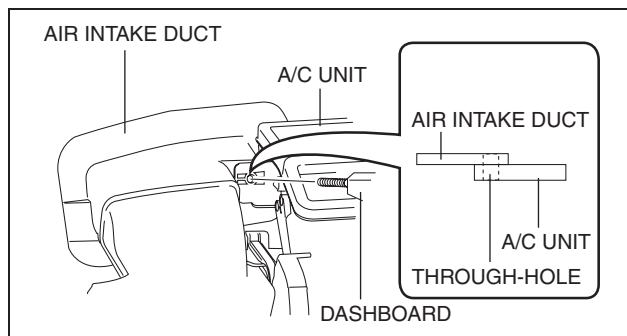
1. When inserting the bolt on the dashboard side, verify that the through-hole positions of the air intake duct and A/C unit are aligned.

#### L.H.D.



am2zzw0000150

#### R.H.D.



am2zzw0000150

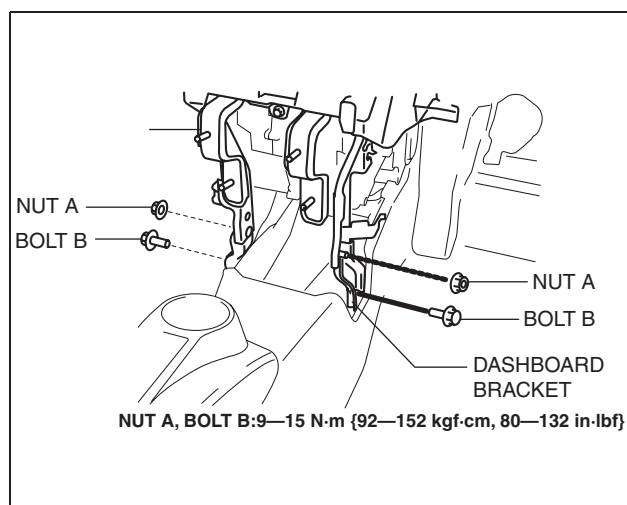
### DASHBOARD REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles]

id0917004535z5

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (2) Glove compartment cover (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
  - (3) Dashboard under cover (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)
  - (4) Heat duct (passenger side)
  - (5) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (6) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (7) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (8) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (9) Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - (10) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (11) Driver-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (12) Driver-side air bag module
  - (13) Steering wheel (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)

## INTERIOR TRIM

- (14)Column cover (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
  - (15)Meter hood (See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)
  - (16)Instrument cluster (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
  - (17)Combination switch (See 09-18-32 COMBINATION SWITCH REMOVAL/INSTALLATION.)
  - (18)Center panel unit (vehicles with audio unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (19)Center panel (vehicles without audio unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (20)Climate control unit (See 07-40A-32 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07-40B-24 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)
  - (21)Shift lever (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (22)Selector lever (ATX/CVT)
  - (23)Interlock cable (ATX/CVT)
  - (24)Passenger-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (25)Side panel (See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION.)
  - (26)A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (27)Windshield wiper arm and blade (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
  - (28)Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
  - (29)Sail garnish (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
  - (30)Windshield wiper motor (L.H.D.) (See 09-19-9 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION.)
  - (31)Steering shaft cover (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (32)Steering shaft (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
- 3. Disconnect antenna feeder No.2 from the antenna feeder No.1. (See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/INSTALLATION)
  - 4. Disconnect antenna feeder No.1 clip from the A-pillar inner panel.
  - 5. Disconnect the dashboard wiring harness connectors.
  - 6. Remove nuts A and bolts B then remove the dashboard bracket.
  - 7. Remove nut C and bolt D from the outside of the vehicle (upper dashboard area).



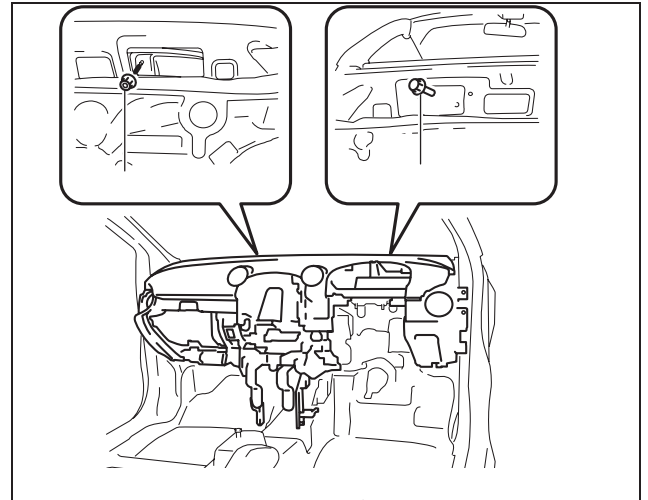
am2zzw0000500



## INTERIOR TRIM

### R.H.D.

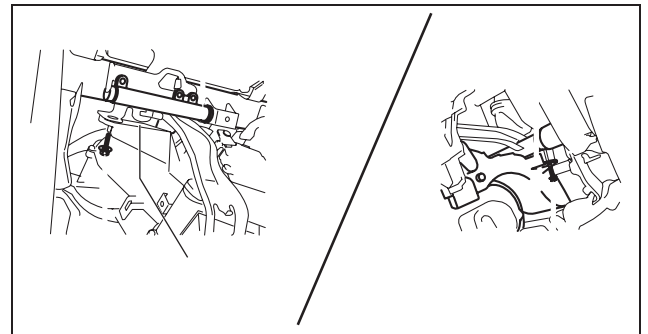
8. Remove nuts E and F shown in the figure.



am2zzw0000500

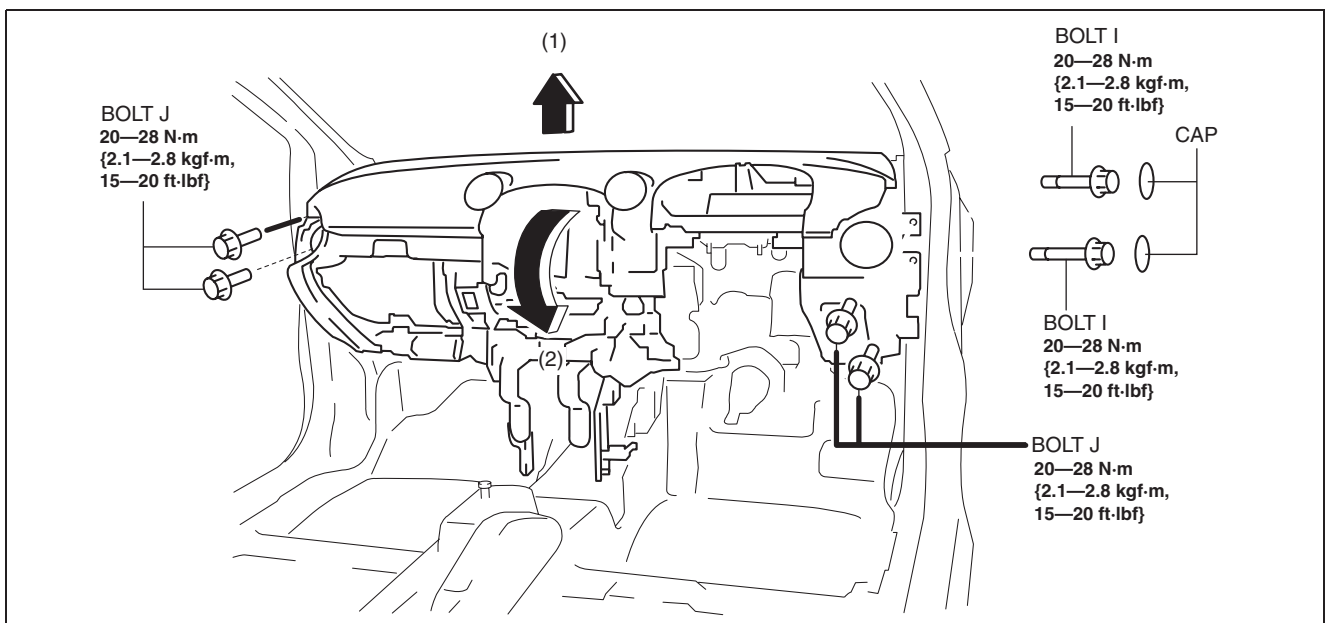
### R.H.D.

9. Disconnect the A/C unit related connector.  
10. Remove the caps, remove bolts I and J. (See 09-17-18 Bolt I Removal/Installation Note)



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### R.H.D.



am2zzw0000500

11. Lift the dashboard in the direction of the arrow (1) shown in the figure, disconnect the A/C unit, and then rotate the dashboard in the direction of the arrow (2) and remove it from the vehicle. (See 09-17-18 Dashboard Removal Note)

## INTERIOR TRIM

12. Install in the reverse order of removal.

### Dashboard Removal Note

#### Warning

- When the dashboard is removed from the vehicle, it could fall and cause injury. Always perform the procedure with at least another person to prevent the dashboard from falling.

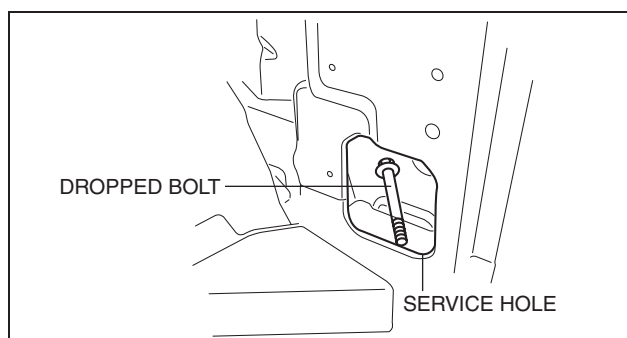
#### Caution

- When the dashboard is removed from the vehicle, be careful not to damage the door and surrounding area.

1. Take the dashboard out through the opened front door.

### Bolt I Removal/Installation Note

1. If the bolt falls off during the removal and installation procedure, remove it from the service hole shown in the figure.

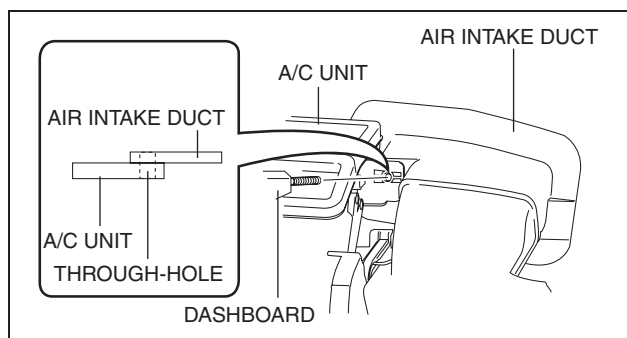


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### Dashboard Installation Note

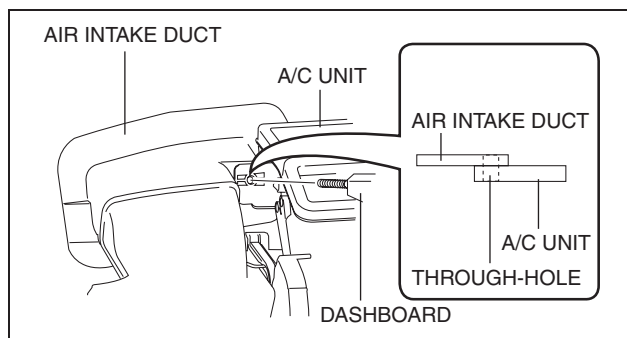
1. When inserting the bolt on the dashboard side, verify that the through-hole positions of the air intake duct and A/C unit are aligned.

#### L.H.D.



am2zzw0000150

#### R.H.D.



am2zzw0000150

### DASHBOARD REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles]

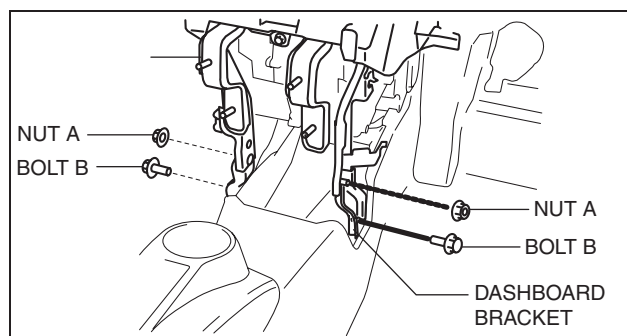
id0917004535z6

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (2) Glove compartment cover (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)

## 09-17-18

## INTERIOR TRIM

- (3) Dashboard under cover (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)
  - (4) Heat duct (passenger side)
  - (5) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (6) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (7) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (8) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (9) Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - (10) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (11) Driver-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (12) Driver-side air bag module
  - (13) Steering wheel (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.] )
  - (14) Column cover (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
  - (15) Meter hood (See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)
  - (16) Instrument cluster (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
  - (17) Combination switch (See 09-18-32 COMBINATION SWITCH REMOVAL/INSTALLATION.)
  - (18) Center panel unit (vehicles with audio unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (19) Center panel (vehicles without audio unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (20) Climate control unit (See 07-40A-32 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07-40B-24 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)
  - (21) Shift lever (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (22) Selector lever (ATX)
  - (23) Interlock cable (ATX)
  - (24) Passenger-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (25) Side panel (See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION.)
  - (26) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (27) Windshield wiper arm and blade (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
  - (28) Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
  - (29) Sail garnish (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
  - (30) Windshield wiper motor (L.H.D.)
  - (31) Steering shaft cover (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.] )
  - (32) Steering shaft (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.] )
3. Disconnect antenna feeder No.2 from the antenna feeder No.1. (See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/INSTALLATION)
  4. Disconnect antenna feeder No.1 clip from the A-pillar inner panel.
  5. Disconnect the dashboard wiring harness connectors.
  6. Remove nuts A and bolts B then remove the dashboard bracket.
  7. Remove nut C and bolt D from the outside of the vehicle (upper dashboard area).

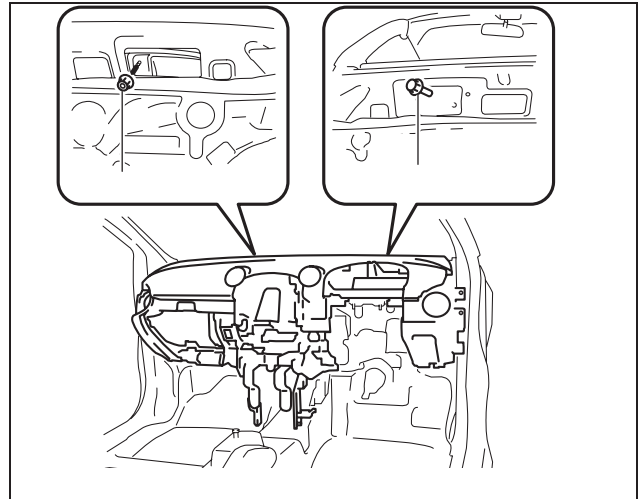


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## INTERIOR TRIM

### R.H.D.

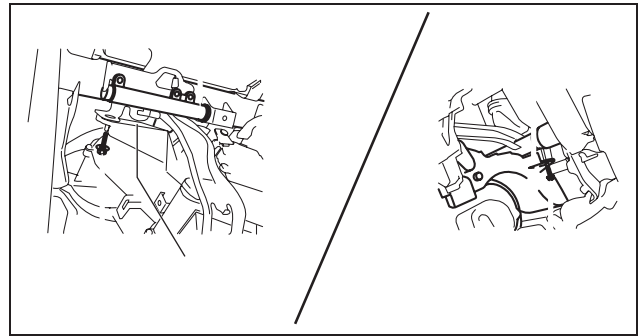
8. Remove nuts E and F shown in the figure.



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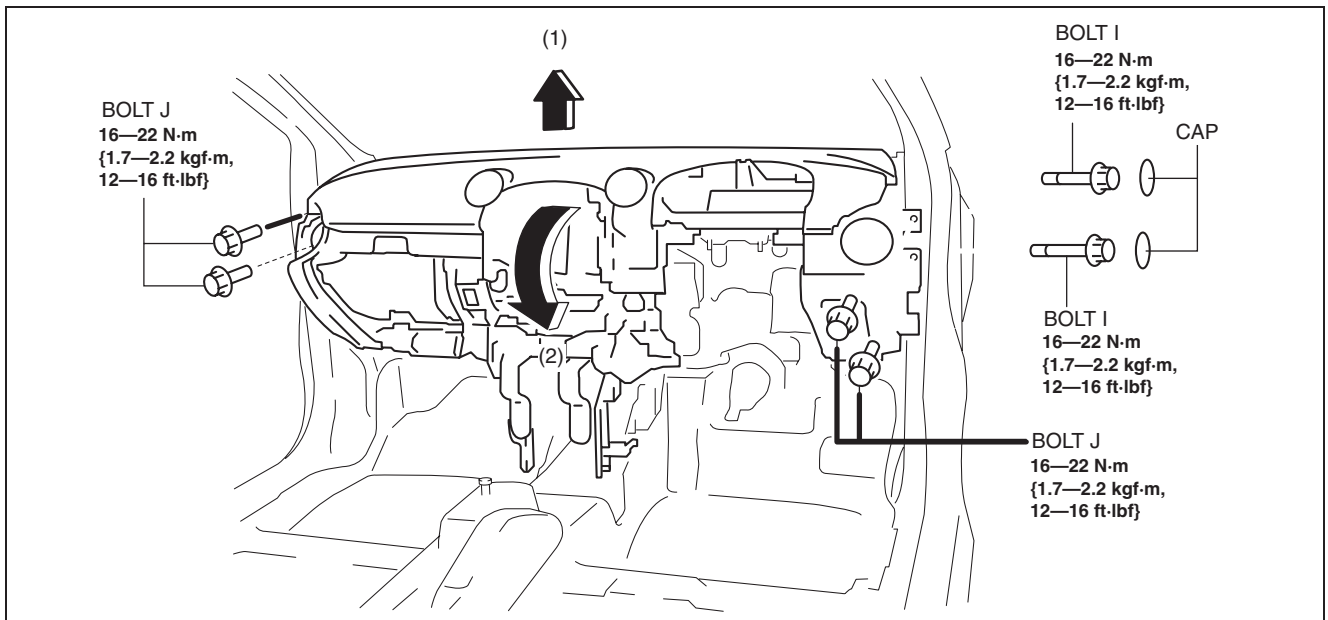
### R.H.D.

9. Disconnect the A/C unit related connector.  
10. Remove the caps, remove bolts I and J. (See 09-17-22 Bolt I Removal/Installation Note)



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### R.H.D.



am2zzw0000180

11. Lift the dashboard in the direction of the arrow (1) shown in the figure, disconnect the A/C unit, and then rotate the dashboard in the direction of the arrow (2) and remove it from the vehicle. (See 09-17-22 Dashboard Removal Note)

## INTERIOR TRIM

12. Install in the reverse order of removal.

### Dashboard Removal Note

#### Warning

- When the dashboard is removed from the vehicle, it could fall and cause injury. Always perform the procedure with at least another person to prevent the dashboard from falling.

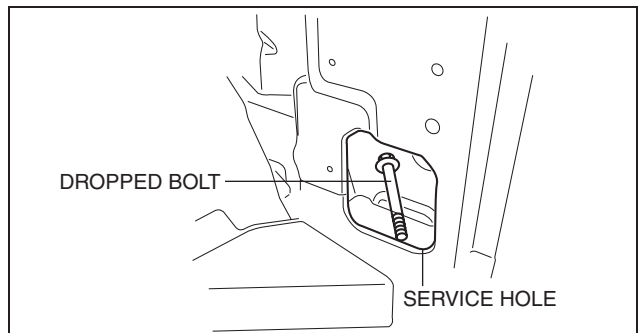
#### Caution

- When the dashboard is removed from the vehicle, be careful not to damage the door and surrounding area.

1. Take the dashboard out through the opened front door.

### Bolt I Removal/Installation Note

1. If the bolt falls off during the removal and installation procedure, remove it from the service hole shown in the figure.

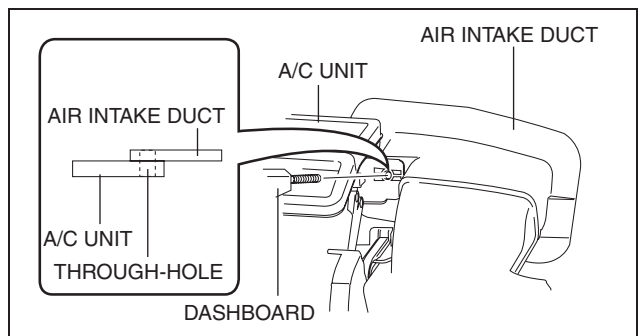


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### Dashboard Installation Note

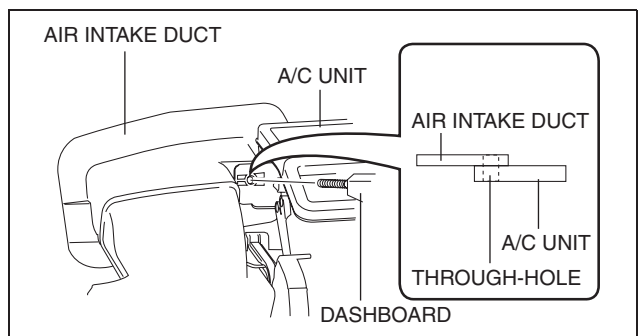
1. When inserting the bolt on the dashboard side, verify that the through-hole positions of the air intake duct and A/C unit are aligned.

#### L.H.D.



am2zzw0000150

#### R.H.D.



am2zzw0000150

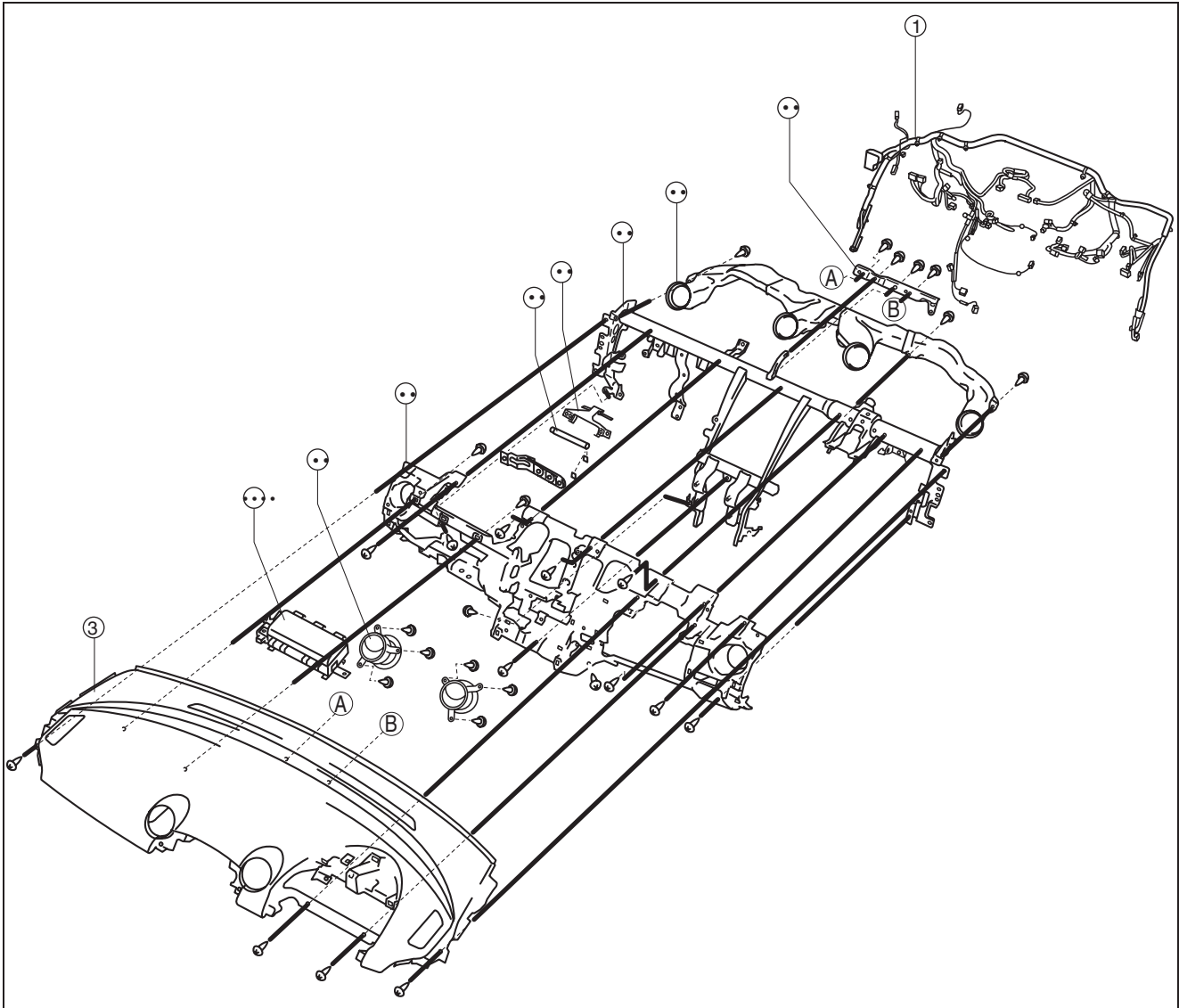
### DASHBOARD DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.

id091700453600

# INTERIOR TRIM

R.H.D.



am2zzw0000150

|   |                          |
|---|--------------------------|
| 1 | Dashboard wiring harness |
| 2 | Dashboard bracket        |
| 3 | Upper garnish            |
| 4 | Duct                     |
| 5 | Dashboard member         |
| 6 | Dashboard                |
| 7 | Center ventilator grille |

|    |                                                                                                |
|----|------------------------------------------------------------------------------------------------|
| 8  | Glove compartment damper                                                                       |
| 9  | Glove compartment striker (See 08-10-7 PASSENGER-SIDE AIR BAG MODULE REMOVAL/ INSTALLATION)    |
| 10 | Passenger-side airbag module (See 08-10-7 PASSENGER-SIDE AIR BAG MODULE REMOVAL/ INSTALLATION) |

2. Assemble in the reverse order of disassembly.

## METER HOOD REMOVAL/INSTALLATION

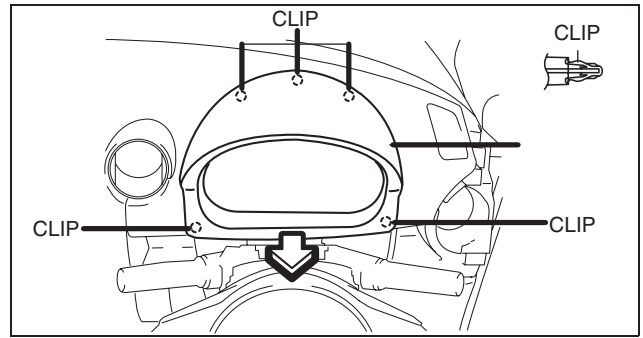
id091700454300

1. Pull the meter hood in the direction of the arrow shown in the figure and remove it while detaching the clips.

## INTERIOR TRIM

### R.H.D.

2. Install in the reverse order of removal.



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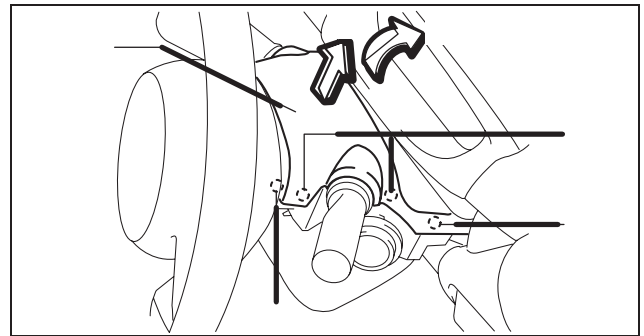
### COLUMN COVER REMOVAL/INSTALLATION

id091700453700

1. Pull down the steering wheel.
2. Remove the key cylinder cap. (Vehicles with advanced keyless and start system)
3. Pull the upper column cover in the direction of the arrow in the order of (1) and (2), then remove the upper column cover while detaching the tabs and pin.

### R.H.D.

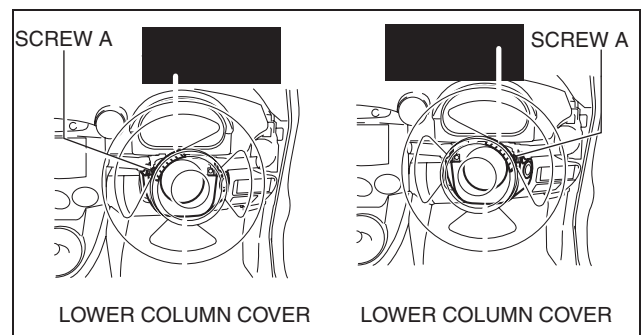
4. Rotate the steering wheel to the left and right until it reaches the positions shown in the figure and remove screws A.



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### R.H.D.

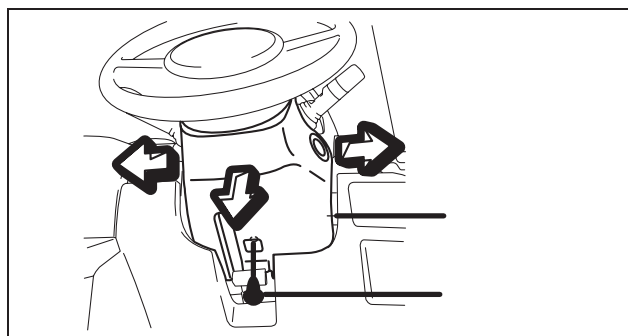
5. Pull up the steering wheel.
6. Remove screw B, then remove the lower column cover in the direction of the arrow (4) while keeping it open in the direction of the arrow (3) shown in the figure.



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**R.H.D.**

7. Install in the reverse order of removal.



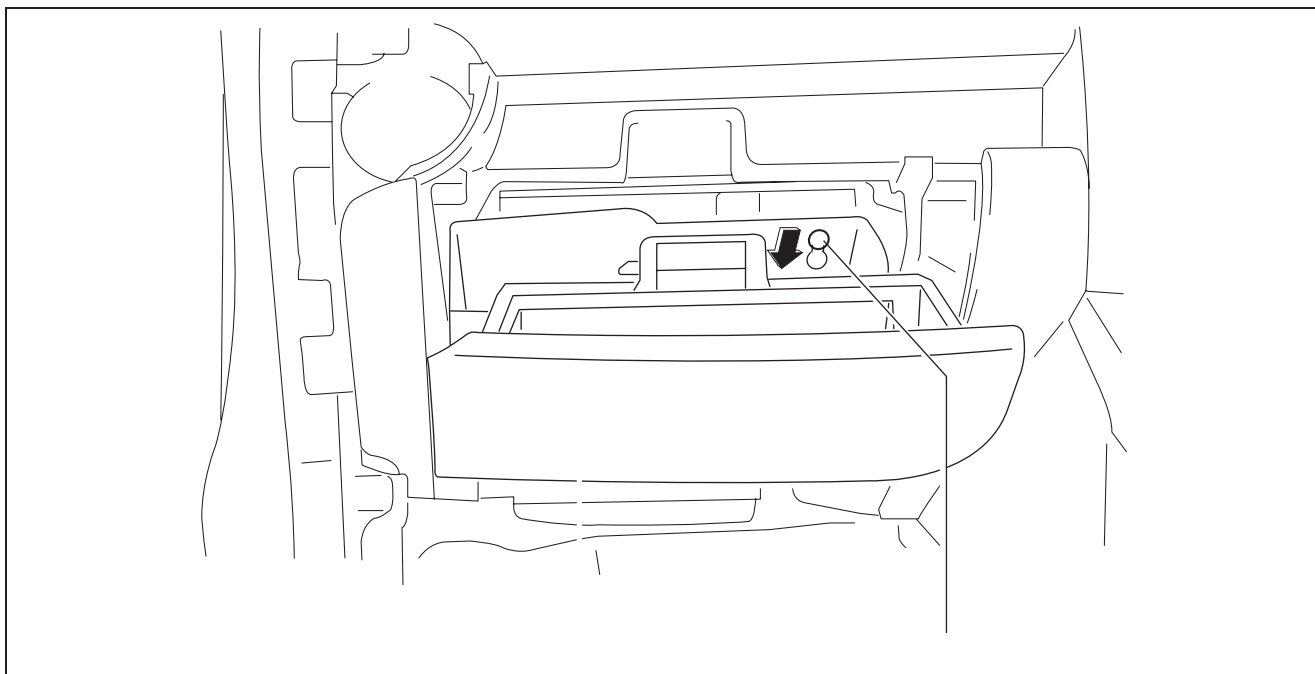
adejjw00003369

**GLOVE COMPARTMENT REMOVAL/INSTALLATION**

id091700453800

1. Move the hook in the direction of the arrow in the order of remove them.

**R.H.D.**



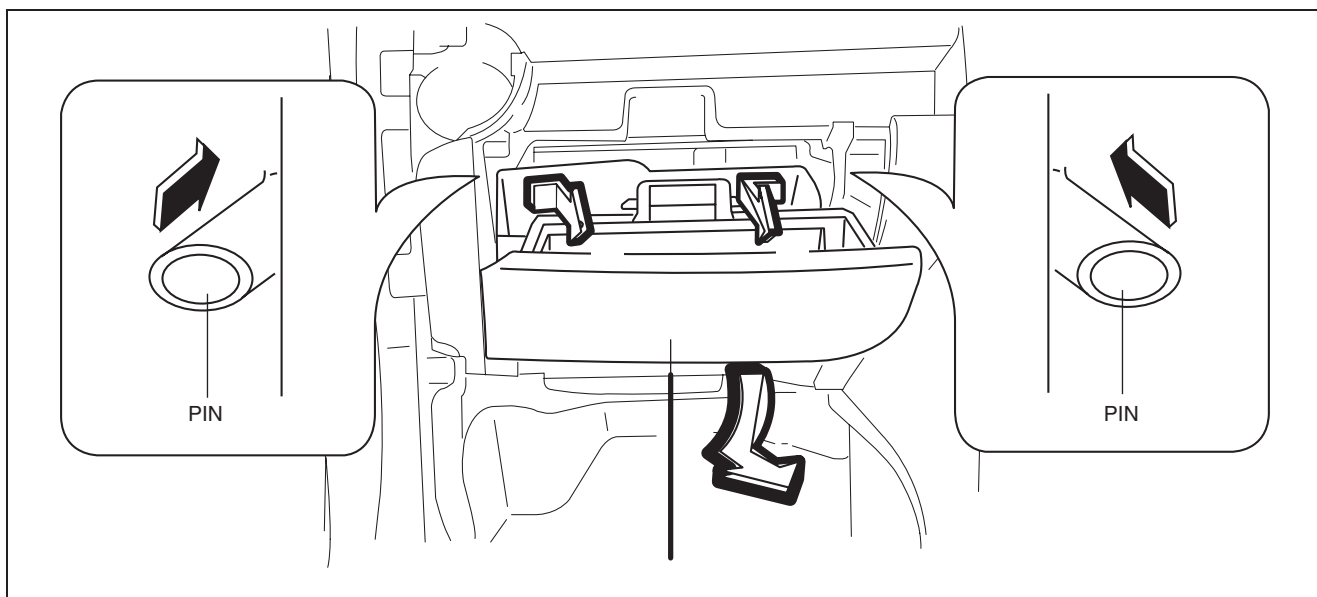
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2. Push both ends of the inner-side glove compartment in the direction of the arrow (1) shown in the figure, detach the pins from the dashboard, and remove the glove compartment in the direction of the arrow (2).



## INTERIOR TRIM

R.H.D.



am2zzw0000150

3. Install in the reverse order of removal.

### GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION

id091700466700

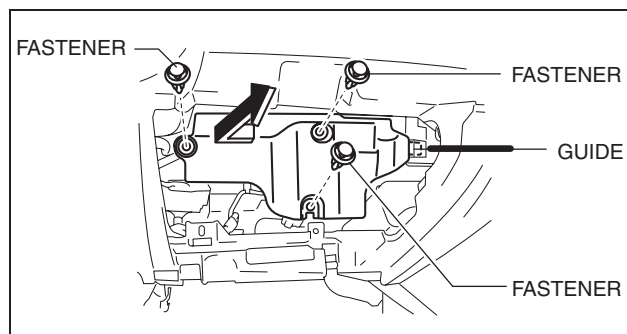
1. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION)
2. Remove the fasteners, then remove the glove compartment cover in the direction of the arrow shown in the figure.

R.H.D.

#### Caution

- Be careful not to damage the guide during removal.

3. Install in the reverse order of removal.



am2zzw0000028

### LOWER PANEL REMOVAL/INSTALLATION

id091700453900

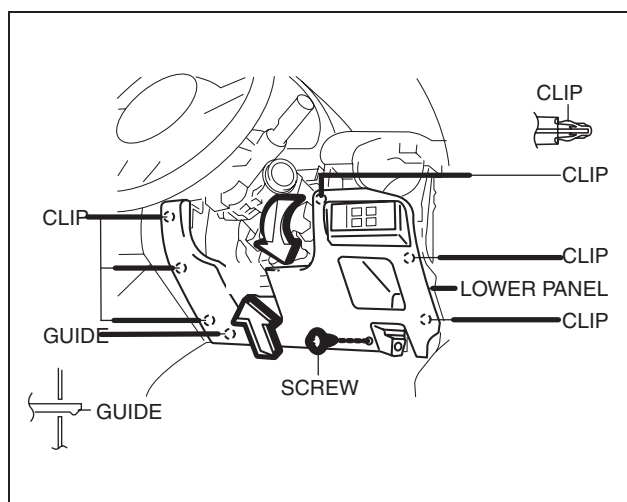
#### Driver's Side

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
  - (2) Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION)
  - (3) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (4) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION)
  - (5) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (6) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION)
3. Remove the screw, pull the lower panel in the direction of the arrow in the order of (1) and (2), and remove the lower panel while detaching the clips.

## INTERIOR TRIM

### R.H.D.

4. Disconnect the switch connector.
5. Install in the reverse order of removal.

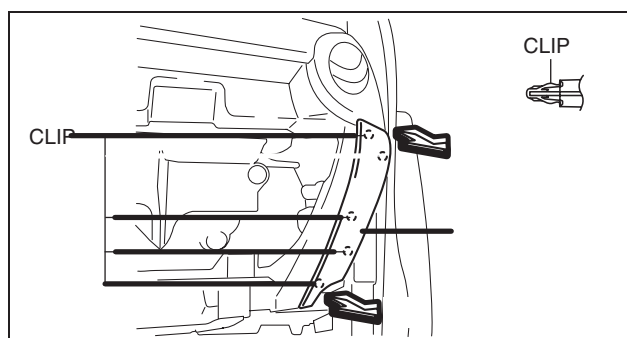


adejjw00003103

### Passenger's Side

1. Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
2. Remove the front side trim. (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION)
3. Pull the lower panel in the direction of the arrow in the order of (1) and (2), then remove it while detaching the clips.

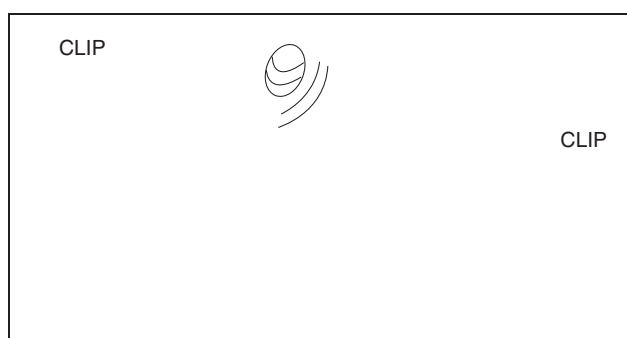
### L.H.D.



am2zzw0000444

### R.H.D.

4. Install in the reverse order of removal.



am2zzw0000444

### LOWER PANEL REMOVAL/INSTALLATION [3HB]

id0917004539z3

#### Driver's Side

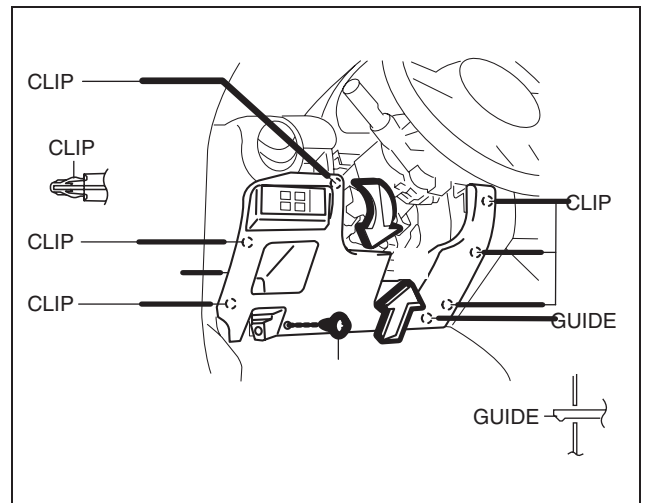
1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB])
  - (2) Front side trim (See 09-17-55 FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB])
  - (3) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (4) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION)
  - (5) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)

## INTERIOR TRIM

(6) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION)

3. Remove the screw, pull the lower panel in the direction of the arrow in the order of (1) and (2), and remove the lower panel while detaching the clips.

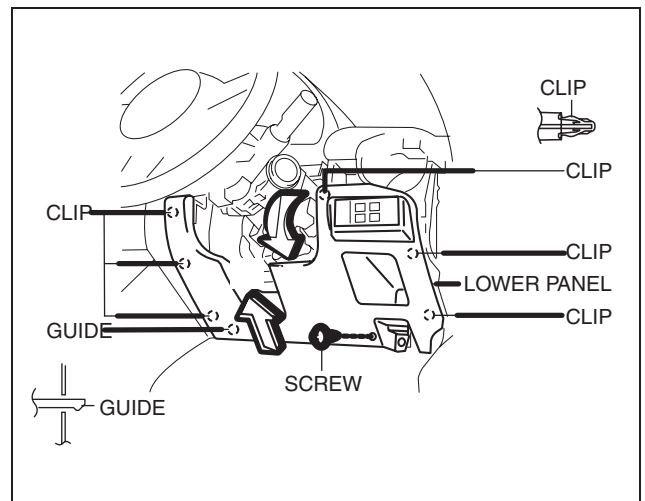
**L.H.D.**



am2zzw0000180

**R.H.D.**

4. Disconnect the switch connector.
5. Install in the reverse order of removal.

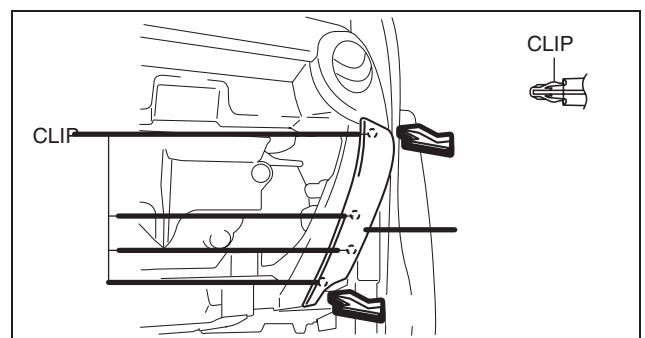


adejiw00003103

### Passenger's Side

1. Remove the front scuff plate. (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB])
2. Remove the front side trim. (See 09-17-55 FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB])
3. Pull the lower panel in the direction of the arrow in the order of (1) and (2), then remove it while detaching the clips.

**L.H.D.**

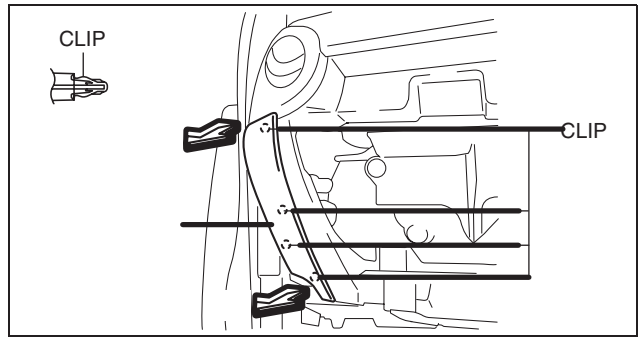


am2zzw0000180

## INTERIOR TRIM

### R.H.D.

4. Install in the reverse order of removal.



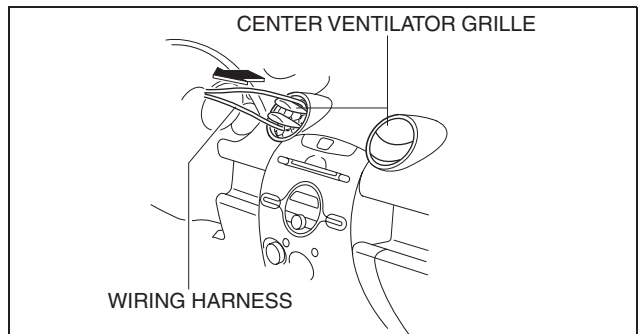
am2zzw0000180

### CENTER VENTILATOR GRILLE REMOVAL/INSTALLATION

id091700454800

1. Route the wiring harness as shown in the figure and pull on the center ventilator grille in the direction of the arrow to remove it.

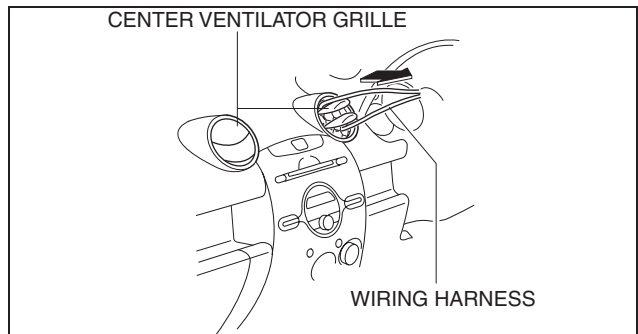
### L.H.D.



am2zzw0000151

### R.H.D.

2. When installing the center ventilator grille, press it in the dashboard.



am2zzw0000151

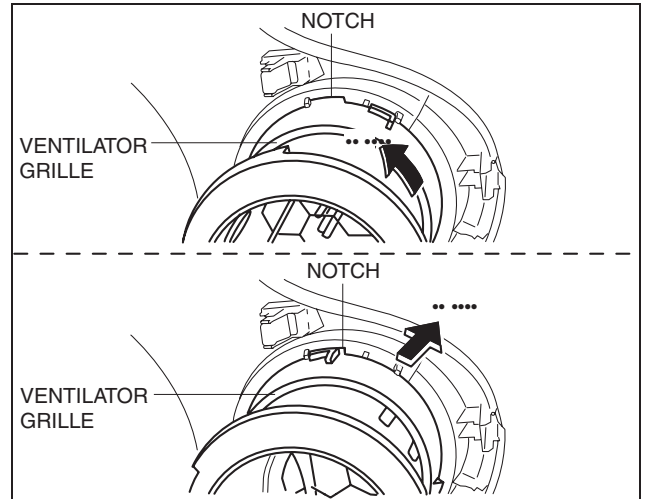
### VENTILATOR GRILLE REMOVAL/INSTALLATION

id091700454100

1. Remove the side panel. (See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION)

## INTERIOR TRIM

2. Rotate the ventilator grille to the notch in the direction of the arrow (1) shown in the figure and pull it in the direction of the arrow (2) to remove it.
3. Install in the reverse order of removal.



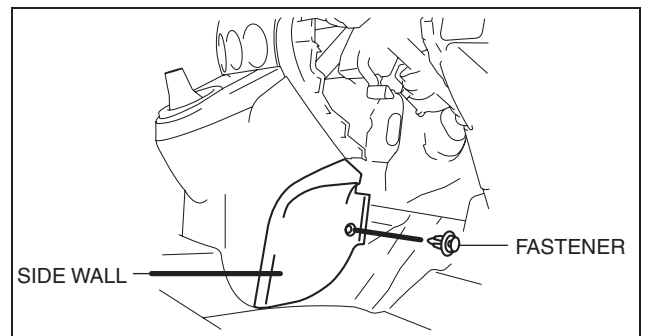
am2zzw0000151

## SIDE WALL REMOVAL/INSTALLATION

id091700454400

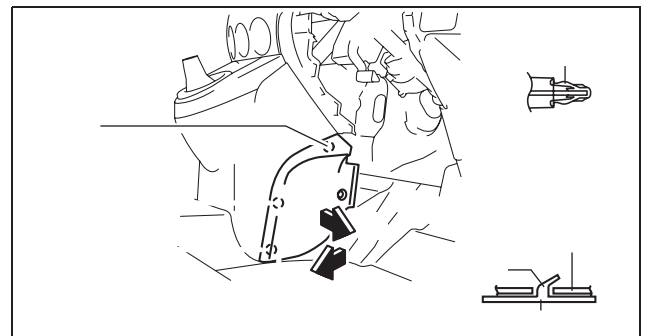
### Right-side

1. Remove the fastener.



adejjw00003381

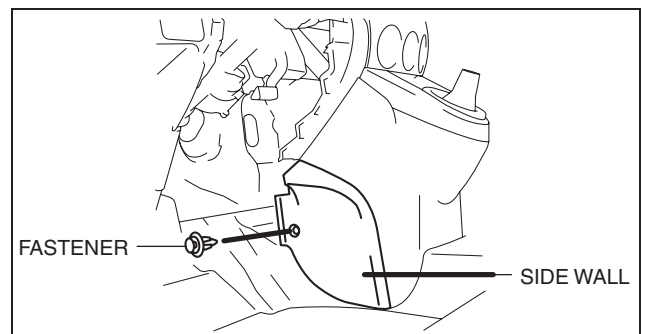
2. Pull the side wall in the direction of the arrow in the order of (1) and (2), then remove it while detaching clips A and tab B.
3. Install in the reverse order of removal.



am2zzw0000151

### Left-side

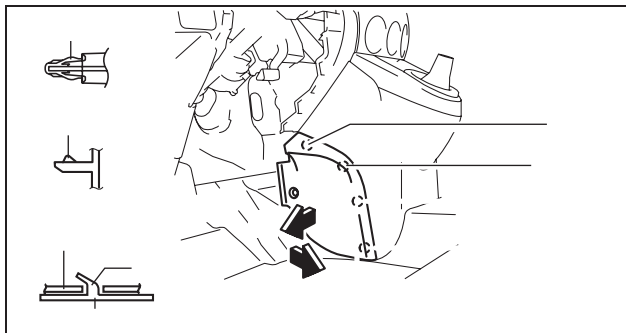
1. Remove the fastener.



am2zzw0000151

## INTERIOR TRIM

2. Pull the side wall in the direction of the arrow in the order of (1) and (2), then remove it while detaching clips A and B and tab C.
3. Install in the reverse order of removal.

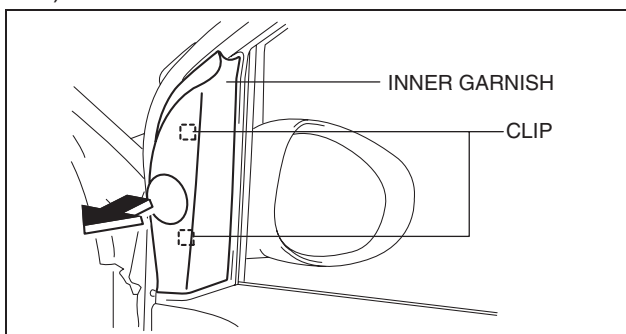


am2zzw0000151

### INNER GARNISH REMOVAL/INSTALLATION

id091700460500

1. Disconnect the negative battery cable (vehicles with tweeter).
2. Pull the inner garnish in the direction of the arrow shown in the figure and remove it while detaching the clips.
3. Disconnect the tweeter connector (vehicles with tweeter).
4. Install in the reverse order of removal.



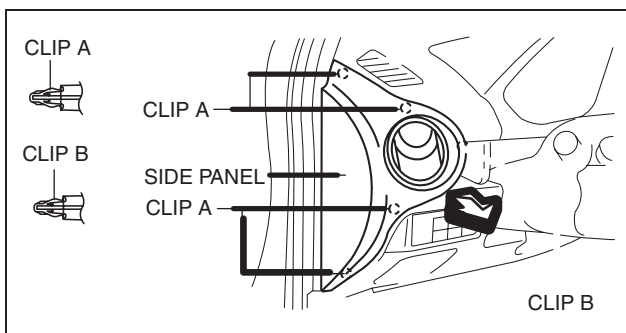
adejjw00002979

### SIDE PANEL REMOVAL/INSTALLATION

id091700454000

1. Partially peel back the seaming welt.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.) (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.) (See 09-17-55 FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (3) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (4) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (5) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (6) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (7) Lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION)
3. Pull the side panel in the direction of the arrow shown in the figure and remove it while detaching clips A and B.

L.H.D.

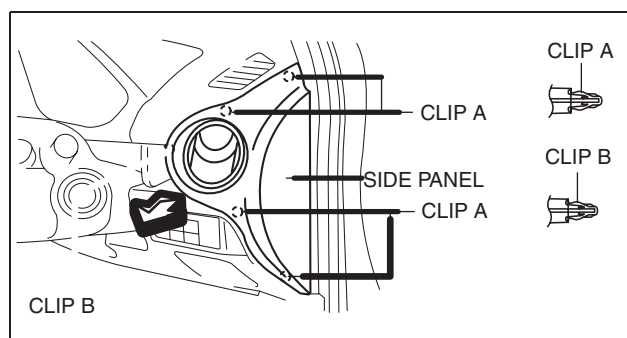


am2zzw0000180

## INTERIOR TRIM

### R.H.D.

4. Install in the reverse order of removal.

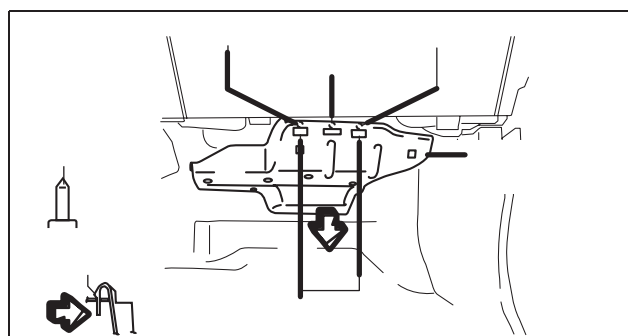


### DASHBOARD UNDER COVER REMOVAL/INSTALLATION

id091700470000

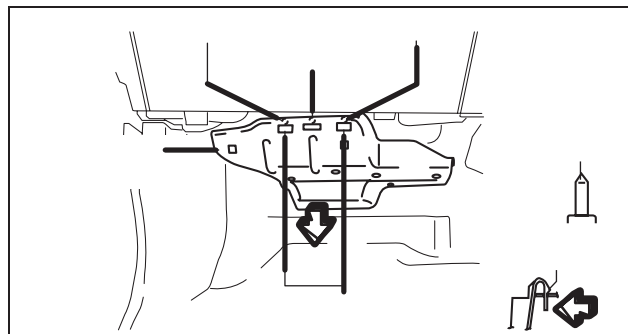
1. While pressing the hook inside the service hole in the direction of the arrow (1) shown in the figure, pull the dashboard under cover in the direction of the arrow (2), and then remove the hook and the guide pin.

### L.H.D.



### R.H.D.

2. Remove the dashboard under cover.
3. Install in the reverse order of removal.



### CENTER PANEL REMOVAL/INSTALLATION

id091700455200

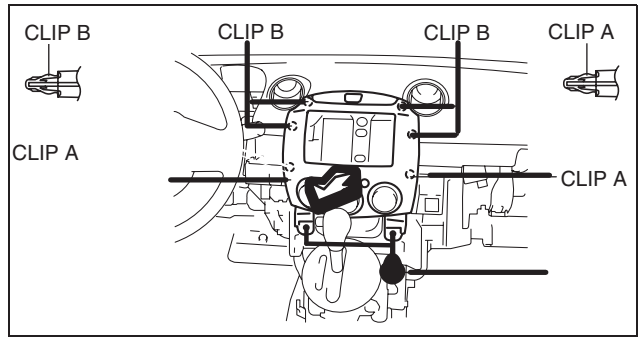
#### Note

- For vehicles with the audio unit, refer to the CENTER PANEL UNIT REMOVAL/INSTALLATION. (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION)

1. Disconnect the negative battery cable.
2. Remove the shift lever knob. (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R])
3. Remove the side wall. (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION)
4. Remove the front console component. (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
5. Remove the screw, pull the center panel in the direction of the arrow shown in the figure, and remove the center panel while detaching the clips A and B. (See 09-17-36 Center Panel Removal Note)

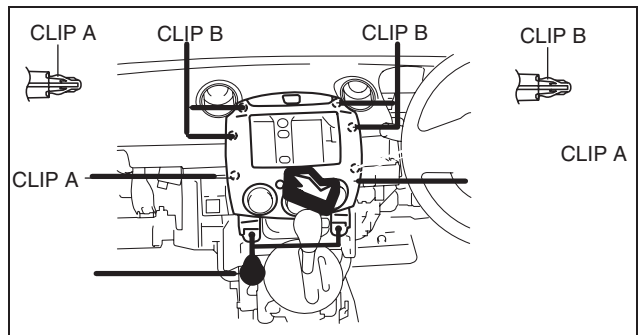
## INTERIOR TRIM

### L.H.D.



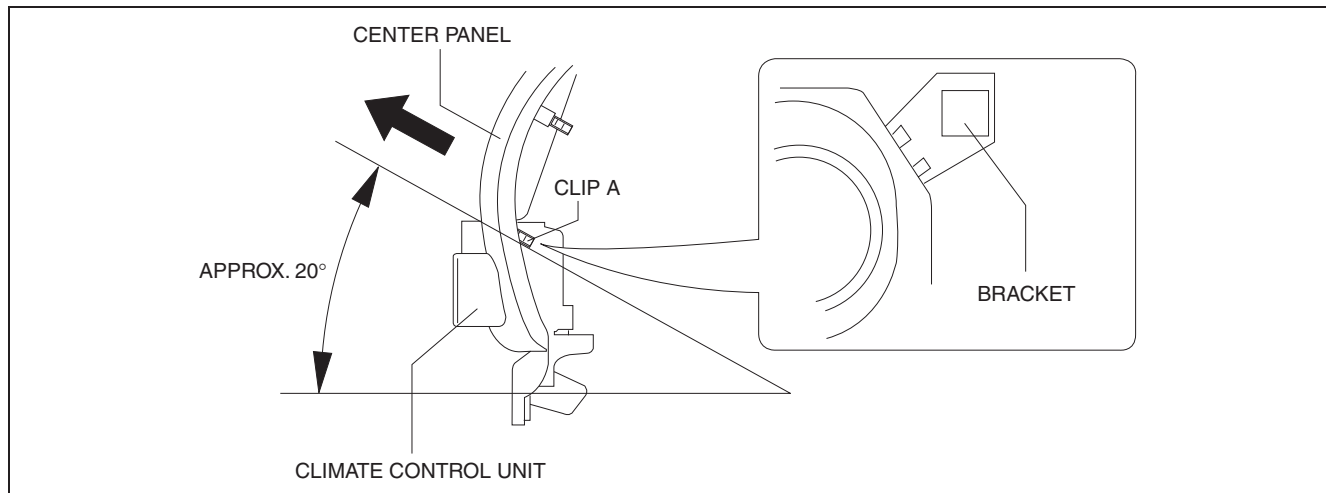
### R.H.D.

6. Disconnect the hazard warning switch connector.
7. Disconnect the passenger-side seat belt reminder indicator connector. (vehicles with passenger-side seat belt reminder indicator)
8. Install in the reverse order of removal.



### Center Panel Removal Note

1. When the center panel is removed, clips A could interfere with the climate control unit bracket and cause damage. Pull the center panel in the direction of the arrow shown in the figure (upward at a **approx. 20°** angle) when removing it.



### FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION

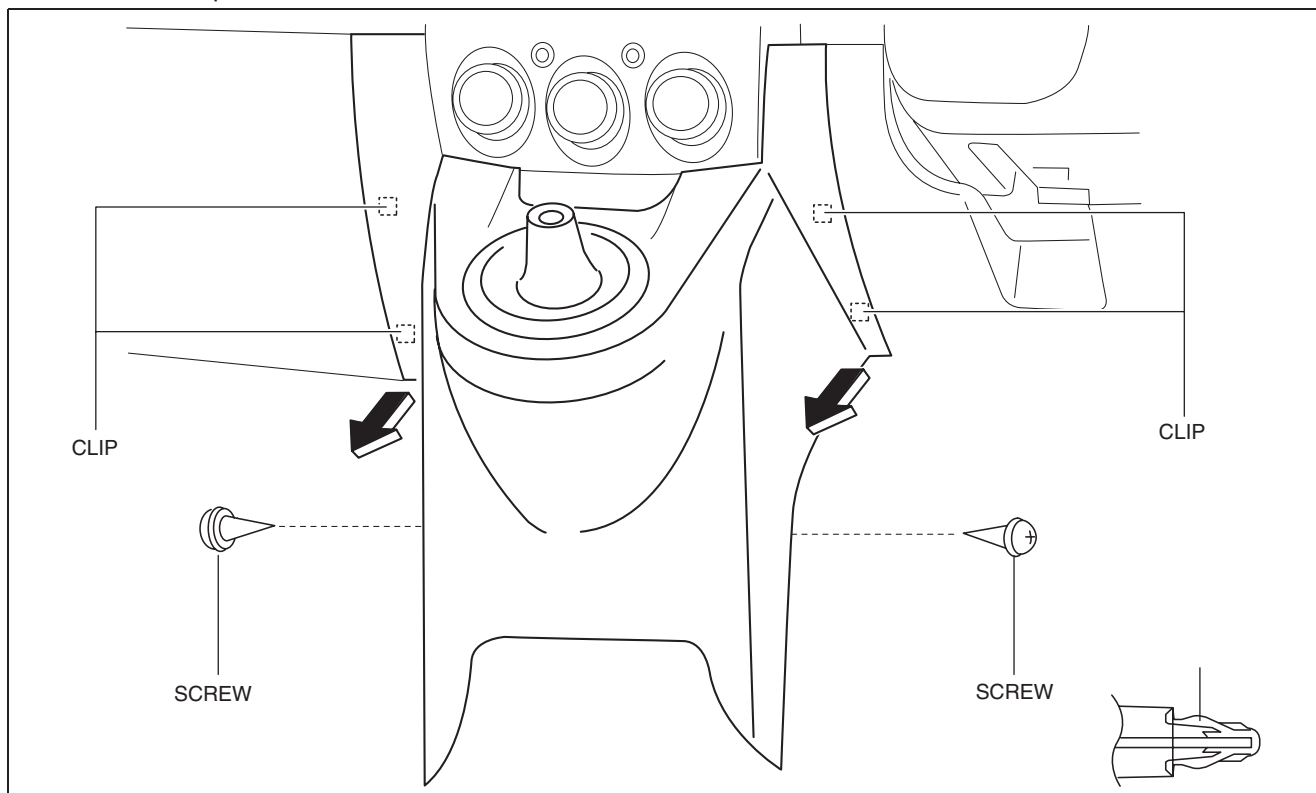
id091700458500

1. Shift lever to neutral position.
2. Remove the following parts:
  - (1) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (2) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)



## INTERIOR TRIM

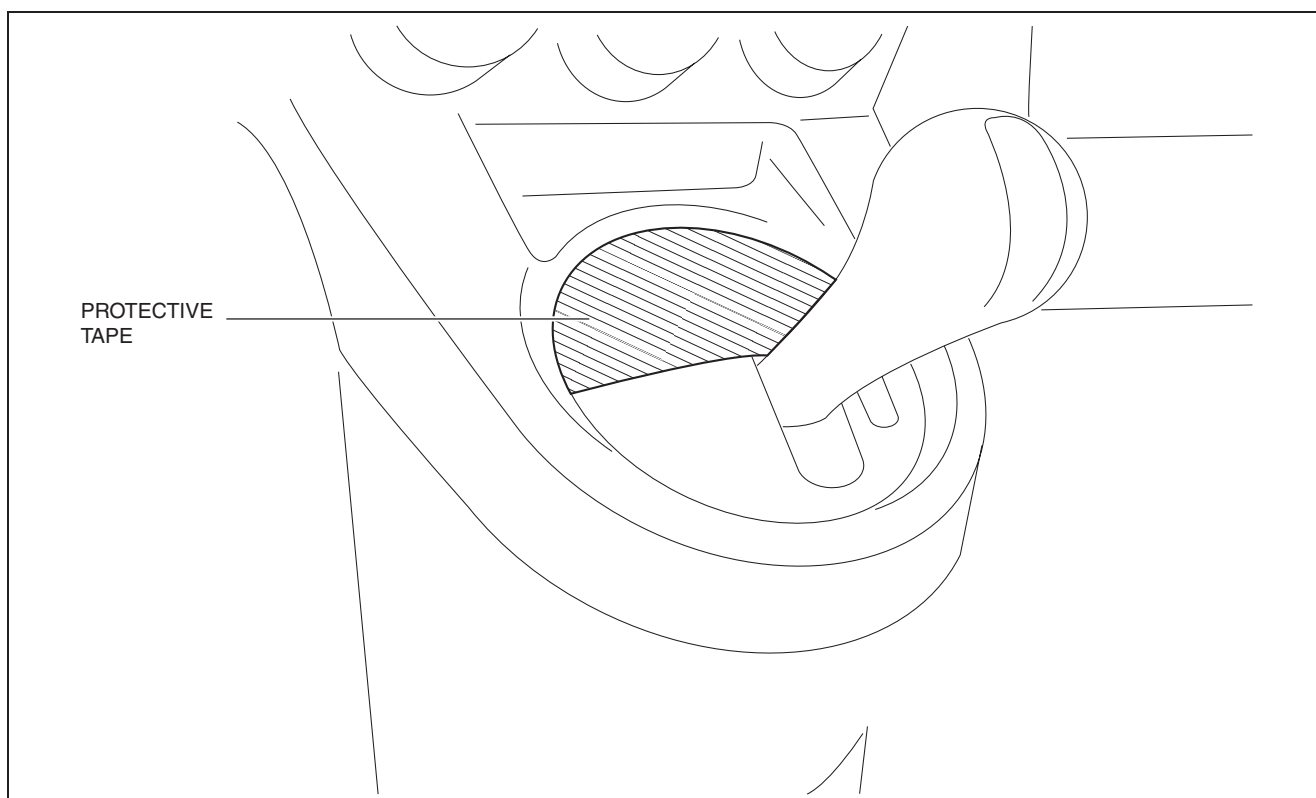
3. Remove the screws, pull the lower side of the front console component in the direction of the arrow, and remove the clips.



am2zzw0000500

### Caution

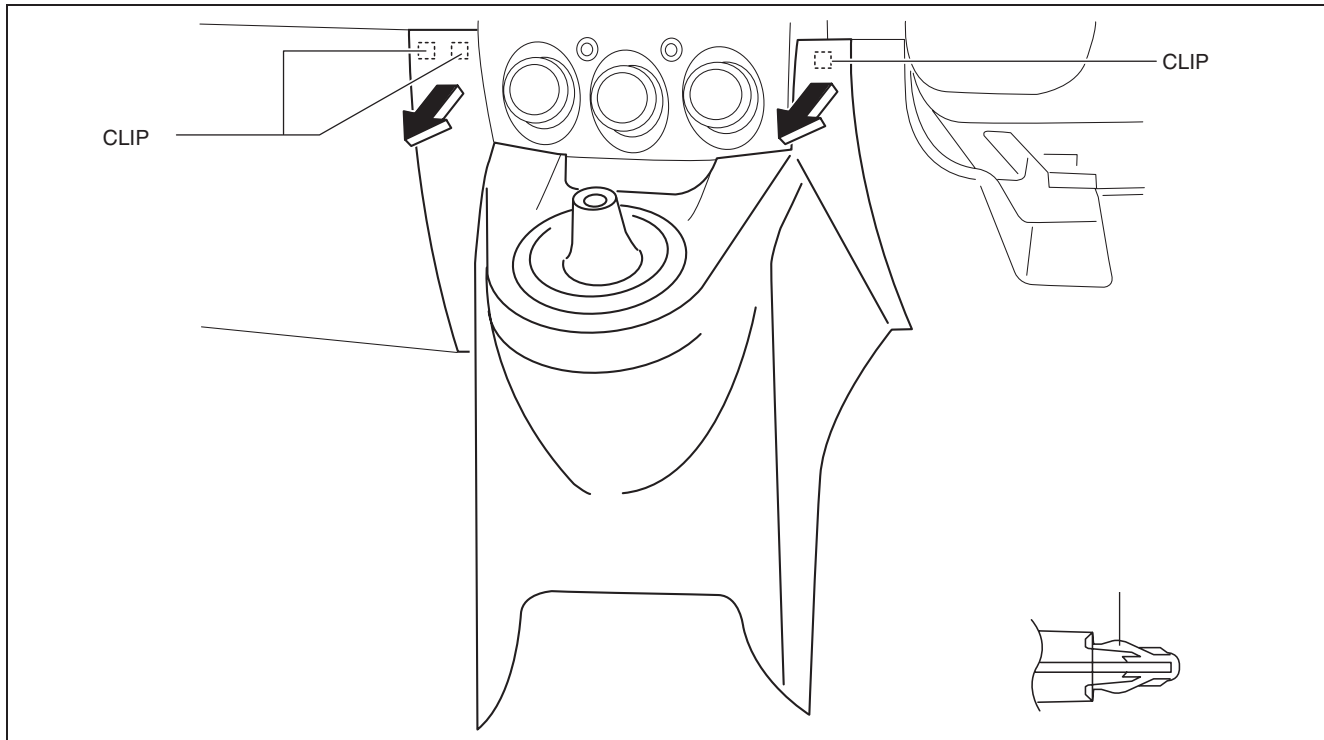
- Affix protective tape to the ATX/CVT shift panel to prevent scratches or damage. (ATX/CVT)



am2zzw0000265

## INTERIOR TRIM

4. Pull the front console assembly in the direction of the arrow in the figure and remove it while detaching the clips.



am2zzw0000500

5. Install the boot panel and front console as a single unit.
6. Install in the reverse order of removal.

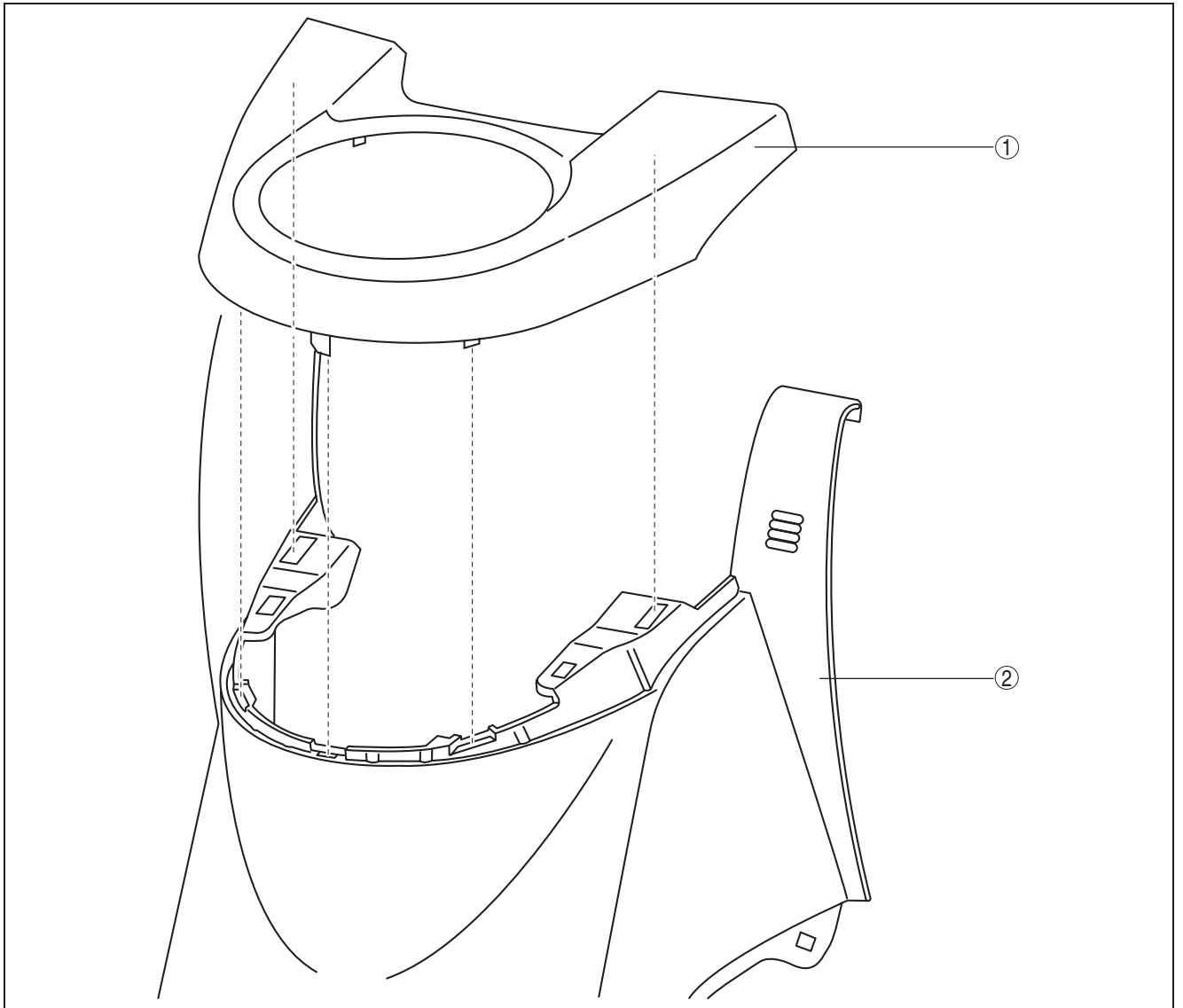
### FRONT CONSOLE COMPONENT DISASSEMBLY/ASSEMBLY

id091700458600

#### ATX/CVT

1. Disassemble in the order indicated in the table.

## INTERIOR TRIM



am2zzw0000265

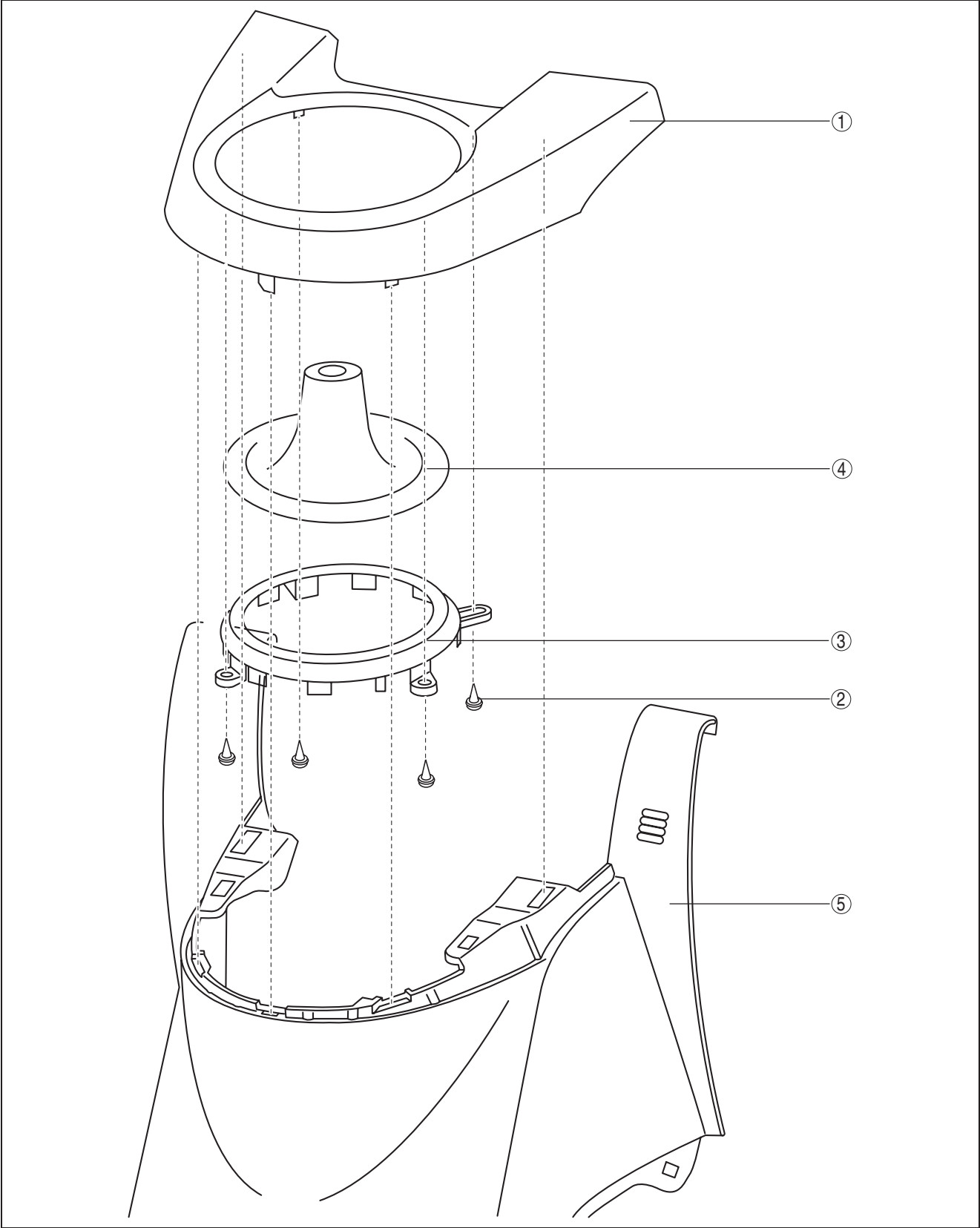
|   |               |
|---|---------------|
| 1 | Boot panel    |
| 2 | Front console |

2. Assemble in the reverse order of disassembly.

### MTX

1. Disassemble in the order indicated in the table.

INTERIOR TRIM



am2zzw0000502

|   |            |
|---|------------|
| 1 | Boot panel |
| 2 | Screw      |
| 3 | Set panel  |

|   |               |
|---|---------------|
| 4 | Boot          |
| 5 | Front console |

## INTERIOR TRIM

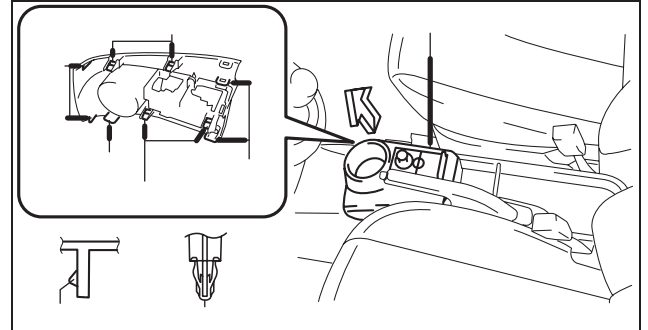
2. Assemble in the reverse order of disassembly.

### REAR CONSOLE REMOVAL/INSTALLATION

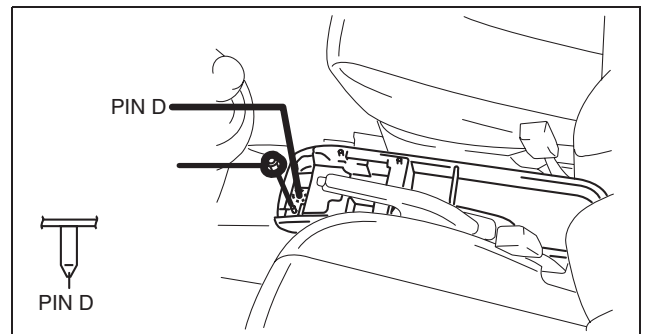
id091700457500

#### L.H.D.

1. Disconnect the negative battery cable.
2. Pull the console in the direction of the arrow shown in the figure and remove it while detaching clips A, hooks B, and the tab.
3. Disconnect the cigarette lighter connector and auxiliary jack connector (vehicles with auxiliary jack).



4. Remove nut C.

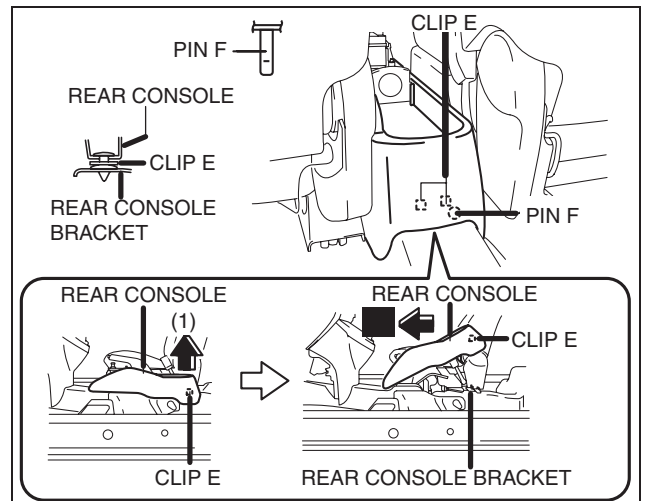


5. Pull up the rear console in the direction of the arrow (1) shown in the figure, remove clips E, move the rear console in the direction of the arrow (2), and remove it avoiding the parking brake lever.

#### Caution

- When moving the rear console in the direction of the arrow (2), be careful not to damage pins D and F.

6. Install in the reverse order of removal.

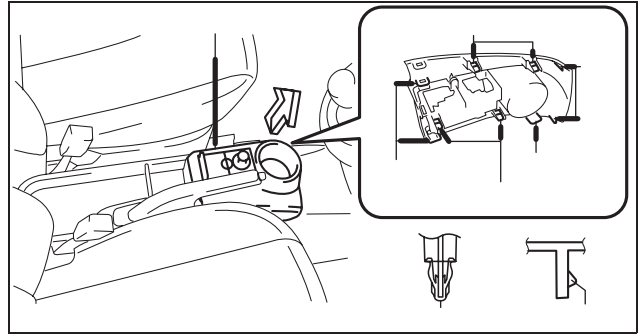


#### R.H.D.

1. Disconnect the negative battery cable.

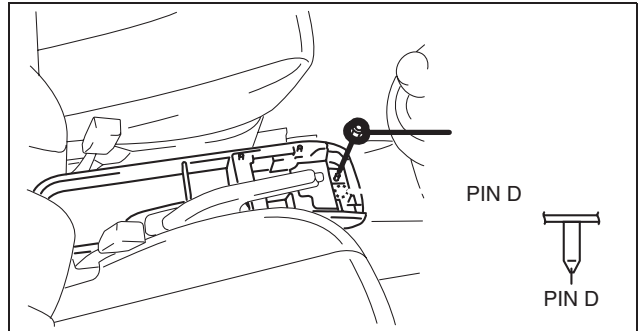
## INTERIOR TRIM

2. Pull the console in the direction of the arrow shown in the figure and remove it while detaching clips A, hooks B, and the tab.
3. Disconnect the cigarette lighter connector and auxiliary jack connector (vehicles with auxiliary jack).



adejjw00003120

4. Remove nut C.



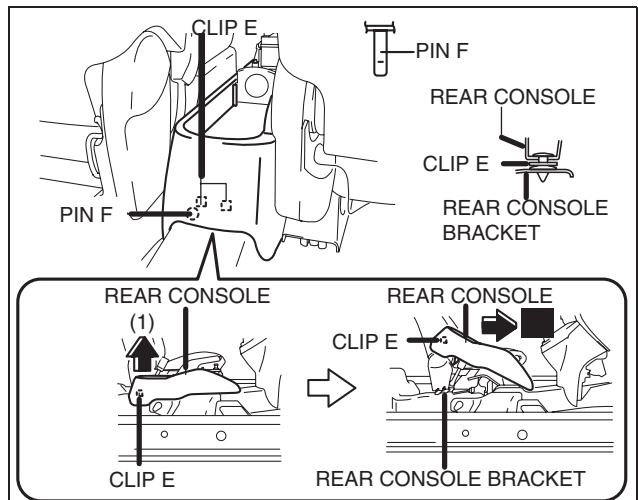
am2zzw0000181

5. Pull up the rear console in the direction of the arrow (1) shown in the figure, remove clips E, move the rear console in the direction of the arrow (2), and remove it avoiding the parking brake lever.

### Caution

- When moving the rear console in the direction of the arrow (2), be careful not to damage pins D and F.

6. Install in the reverse order of removal.



adejjw00003122

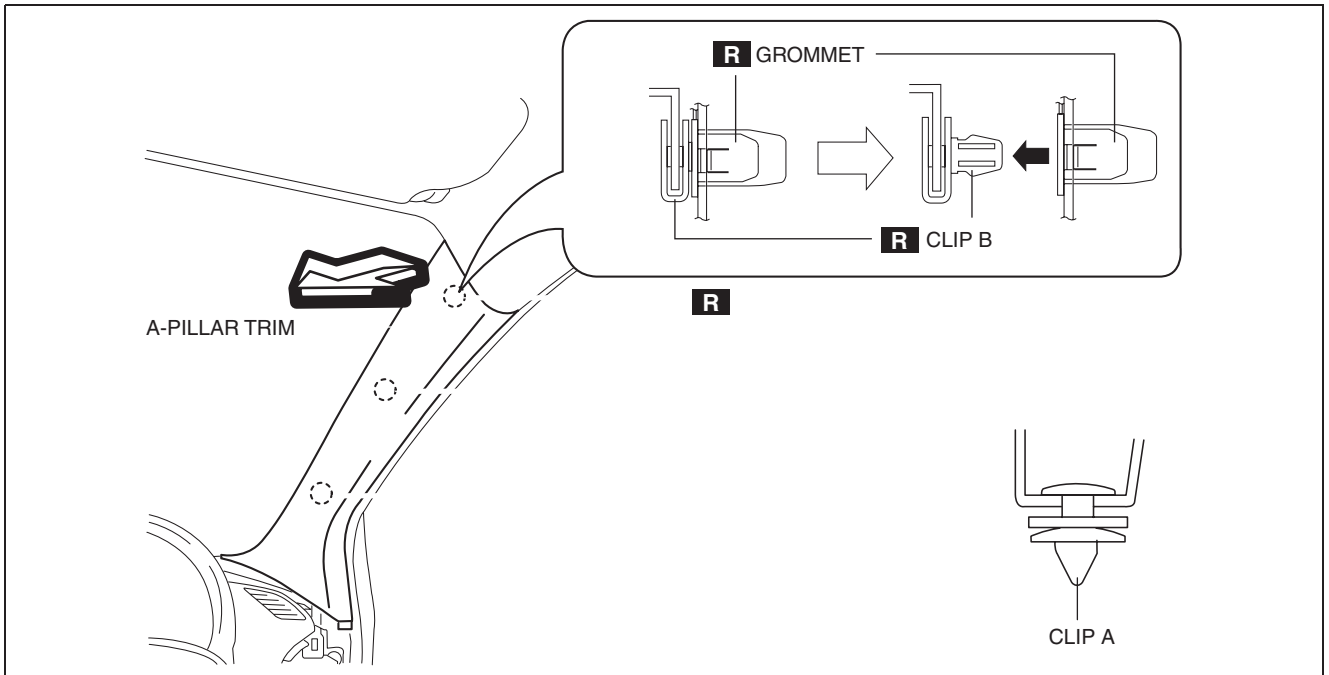
## A-PILLAR TRIM REMOVAL/INSTALLATION

id091700458700

1. Partially peel back the seaming welt.

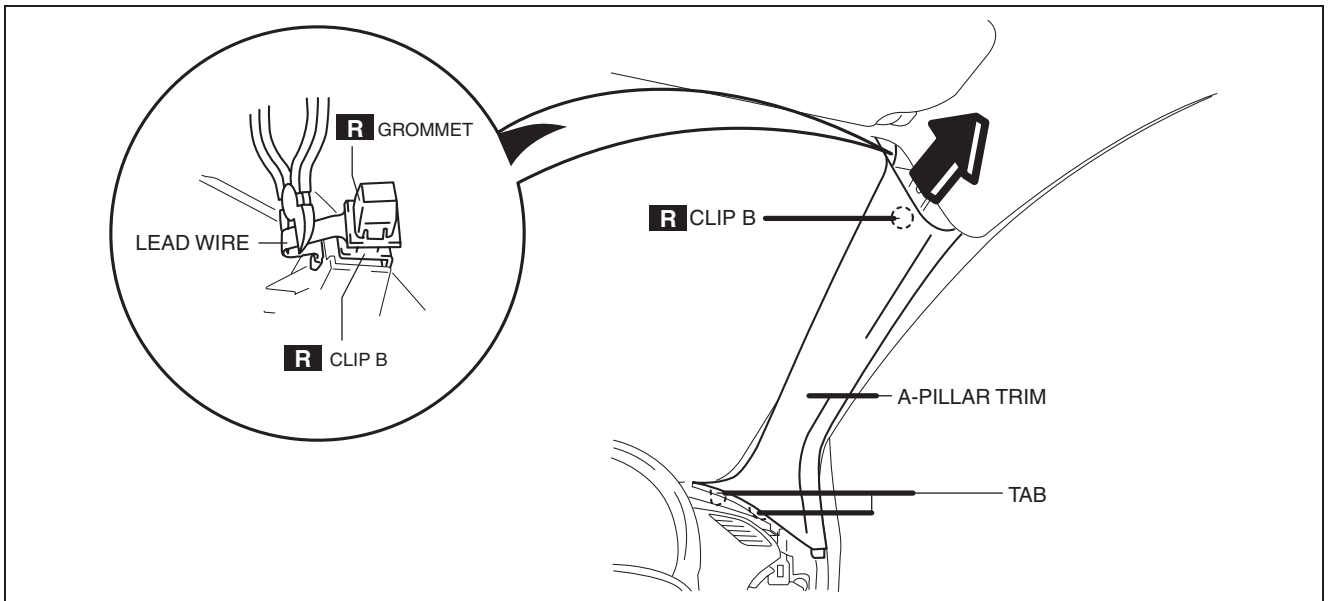
## INTERIOR TRIM

2. Pull the upper end of the A-pillar trim in the direction of the arrow shown in the figure and remove clips A and B.



am2zzw0000181

3. Cut the lead wire connecting clip B and grommet using a nipper and pull out the A-pillar trim in the direction of the arrow shown in the figure.



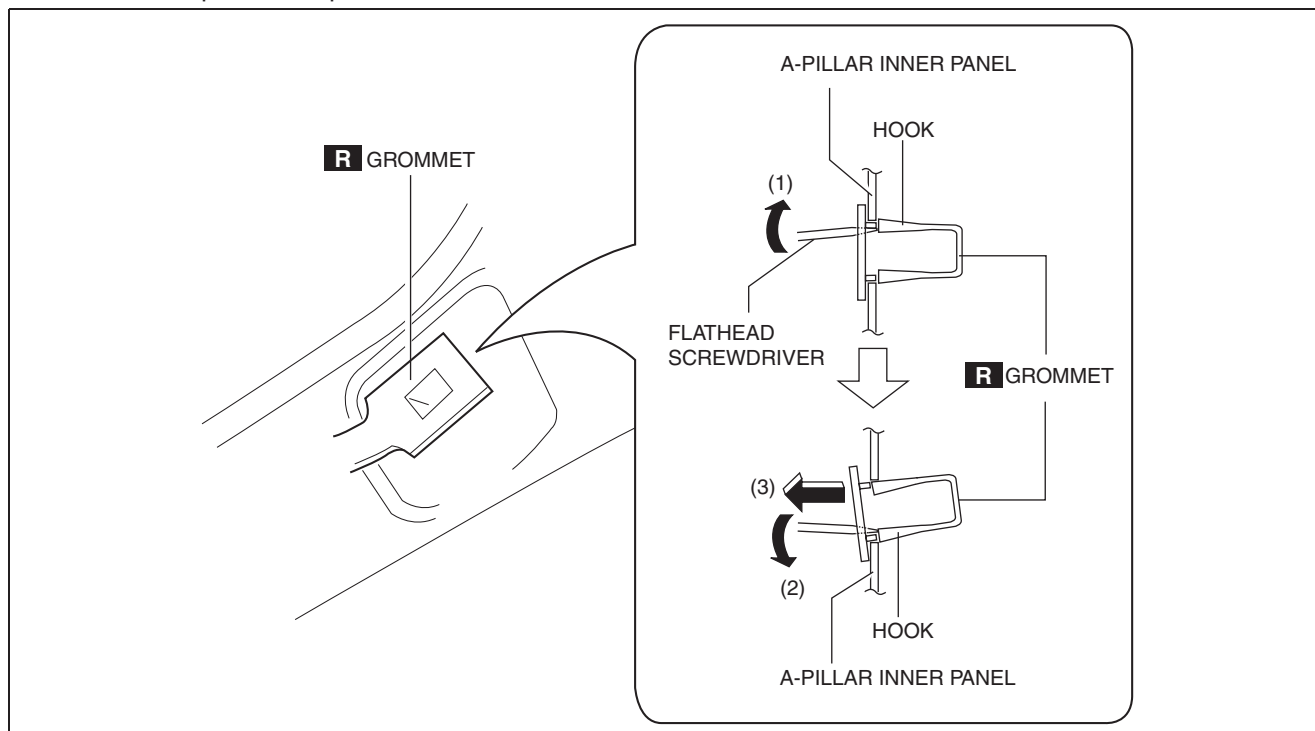
am2zzw0000181

### Caution

- When pulling out the A-pillar trim, be careful not to damage the tabs.

## INTERIOR TRIM

4. Move the hook in the direction of arrows (1) and (2) shown in the figure using a flathead screwdriver and detach it from the A-pillar inner panel.



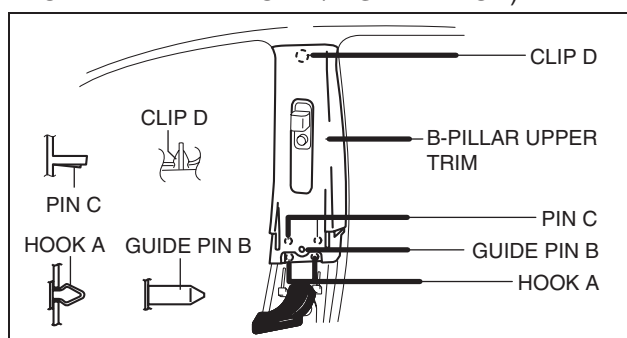
am2zzw0000231

5. Remove the grommet in the direction of the arrow (3) shown in the figure.
6. When installing the A-pillar trim, install the new clip B and grommet to the A-pillar trim in advance.
7. Install in the reverse order of removal.

### B-PILLAR UPPER TRIM REMOVAL/INSTALLATION

id091700459000

1. Remove the adjuster anchor cover.
2. Remove the upper anchor installation bolts of the front seat belt.
3. Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
4. Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION)
5. Partially peel back the seaming welt.
6. Remove the B-pillar lower trim. (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION)
7. Grasp the lower end of the B-pillar upper trim, pull it in the direction of the arrow shown in the figure, and remove hook A, guide pin B, pin C, and clip D.



am2zzw0000181

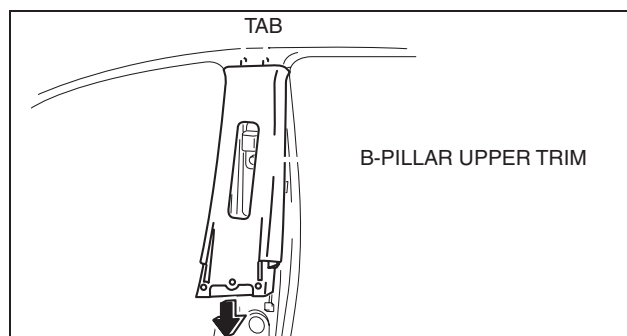


## INTERIOR TRIM

8. Remove the B-pillar upper trim in the direction of the arrow shown in the figure.

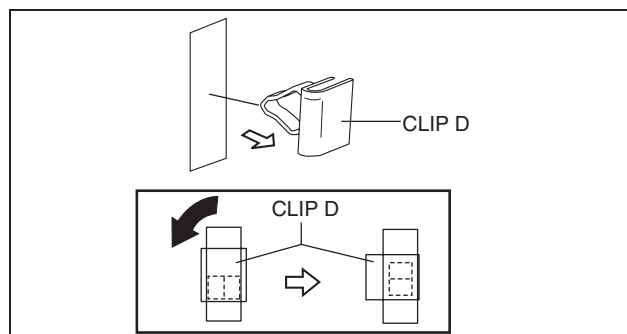
### Caution

- When removing the B-pillar upper trim, be careful not to damage the tabs.



adejiw00003390

9. If there is a remaining clip D, rotate it 90° in the direction of the arrow shown in the figure and remove it.
10. Remove clip D and install it to the B-pillar upper trim.
11. Install in the reverse order of removal.

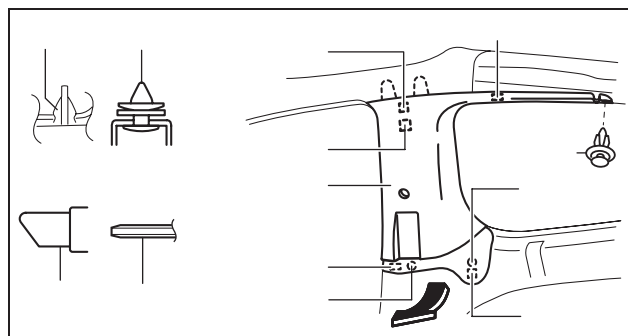


am2zzw0000182

### B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB]

id0917004590z3

1. Remove the following parts:
  - (1) Front seat belt adjuster anchor cover
  - (2) Front seat belt upper anchor installation bolt
  - (3) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (4) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (5) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (6) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
2. Partially peel back the seaming welt.
3. Remove the trunk side trim. (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
4. Remove the C-pillar trim. (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
5. Remove the fastener.
6. Grasp the lower end of the B-pillar upper trim, pull it in the direction of the arrow shown in the figure, and remove clip A, clip B, tab C, and pin D.



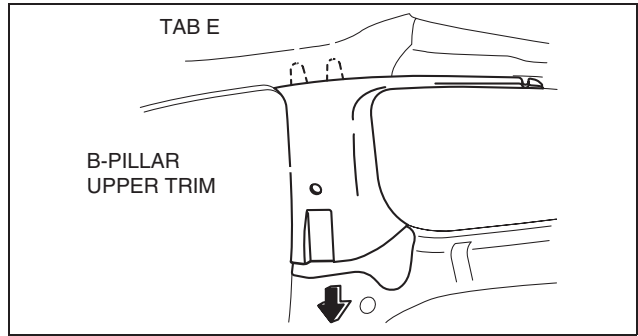
am2zzw0000341

## INTERIOR TRIM

- Remove the B-pillar upper trim in the direction of the arrow shown in the figure.

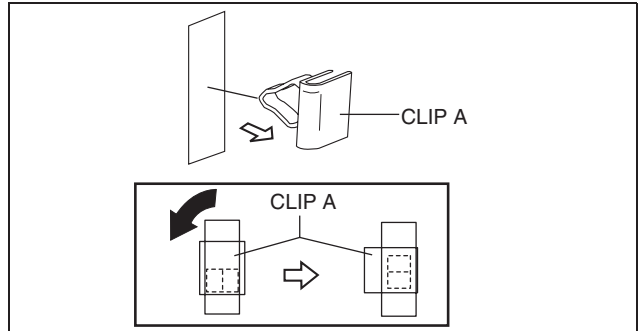
### Caution

- When removing the B-pillar upper trim, be careful not to damage the tabs E.



am2zzw0000341

- If there is a remaining clip A, rotate it 90° in the direction of the arrow shown in the figure and remove it.
- Remove clip A and install it to the B-pillar upper trim.
- Install in the reverse order of removal.

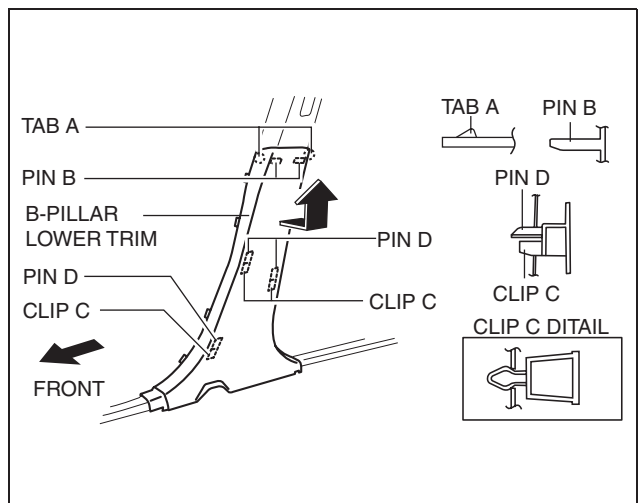


am2zzw0000341

### B-PILLAR LOWER TRIM REMOVAL/INSTALLATION

id091700458900

- Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
- Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION)
- Partially peel back the seaming welt.
- Pull the B-pillar lower trim in the direction of the arrow shown in the figure, detach tab A, pin B, clip C, pin D, then remove the B-pillar lower trim.
- Install in the reverse order of removal.



am2zzw0000182

### C-PILLAR TRIM REMOVAL/INSTALLATION

id091700459100

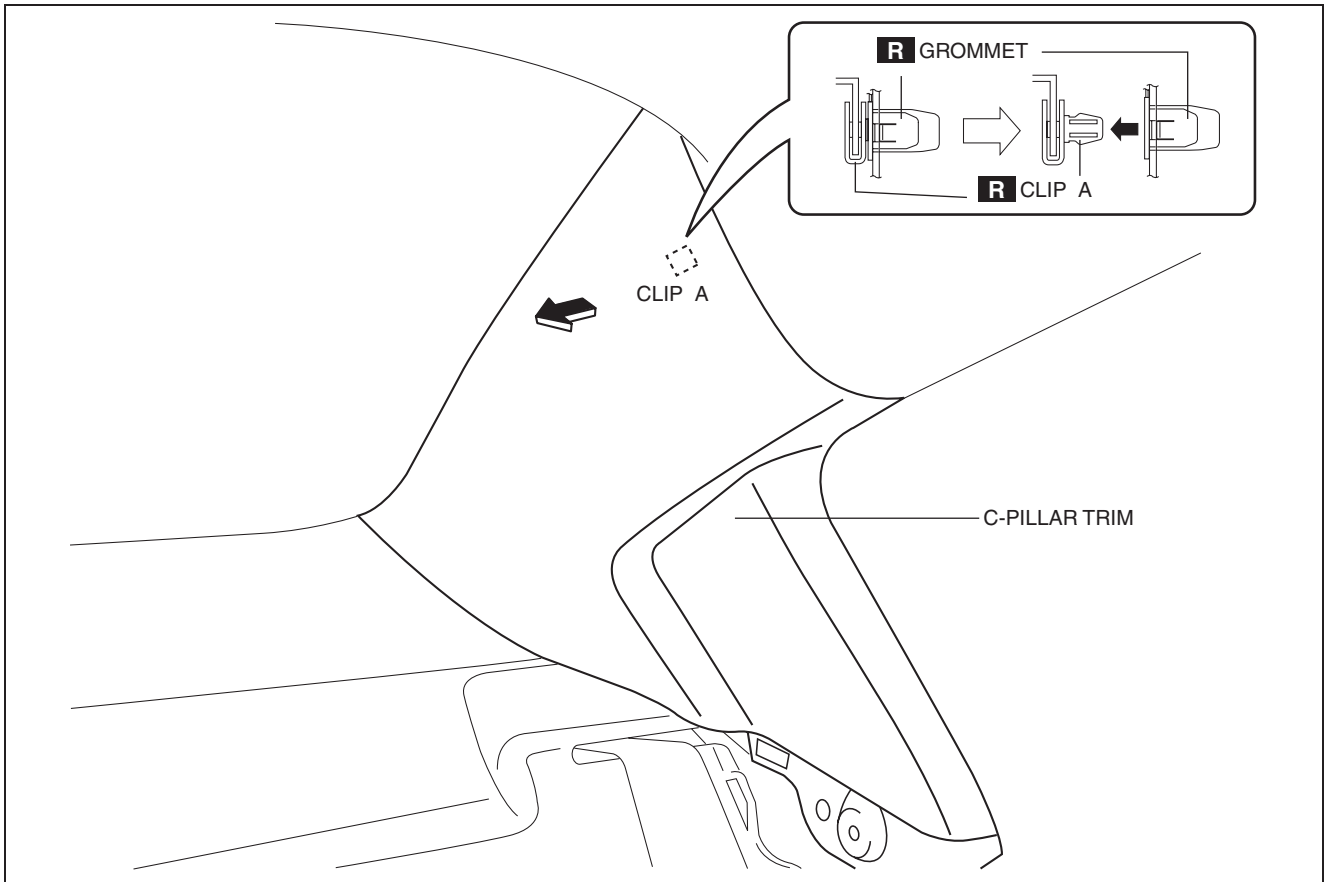
#### 4SD

#### Removal

- Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION)
- Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION)
- Remove the tire house trim. (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD])
- Partially peel back the seaming welt.

## INTERIOR TRIM

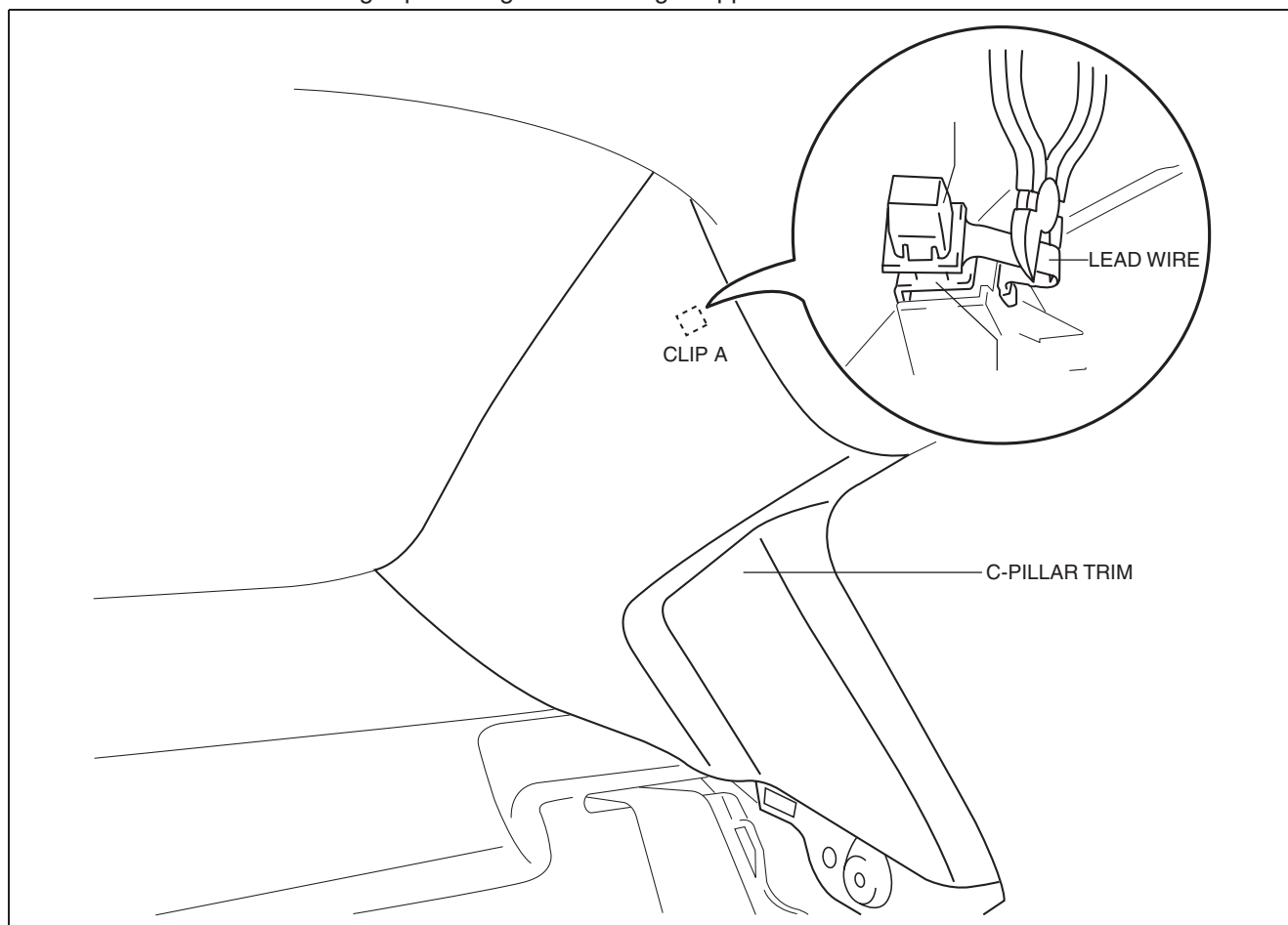
5. Pull the C-pillar trim in the direction of the arrow shown in the figure and remove clip A.



am2ccw0000010

## INTERIOR TRIM

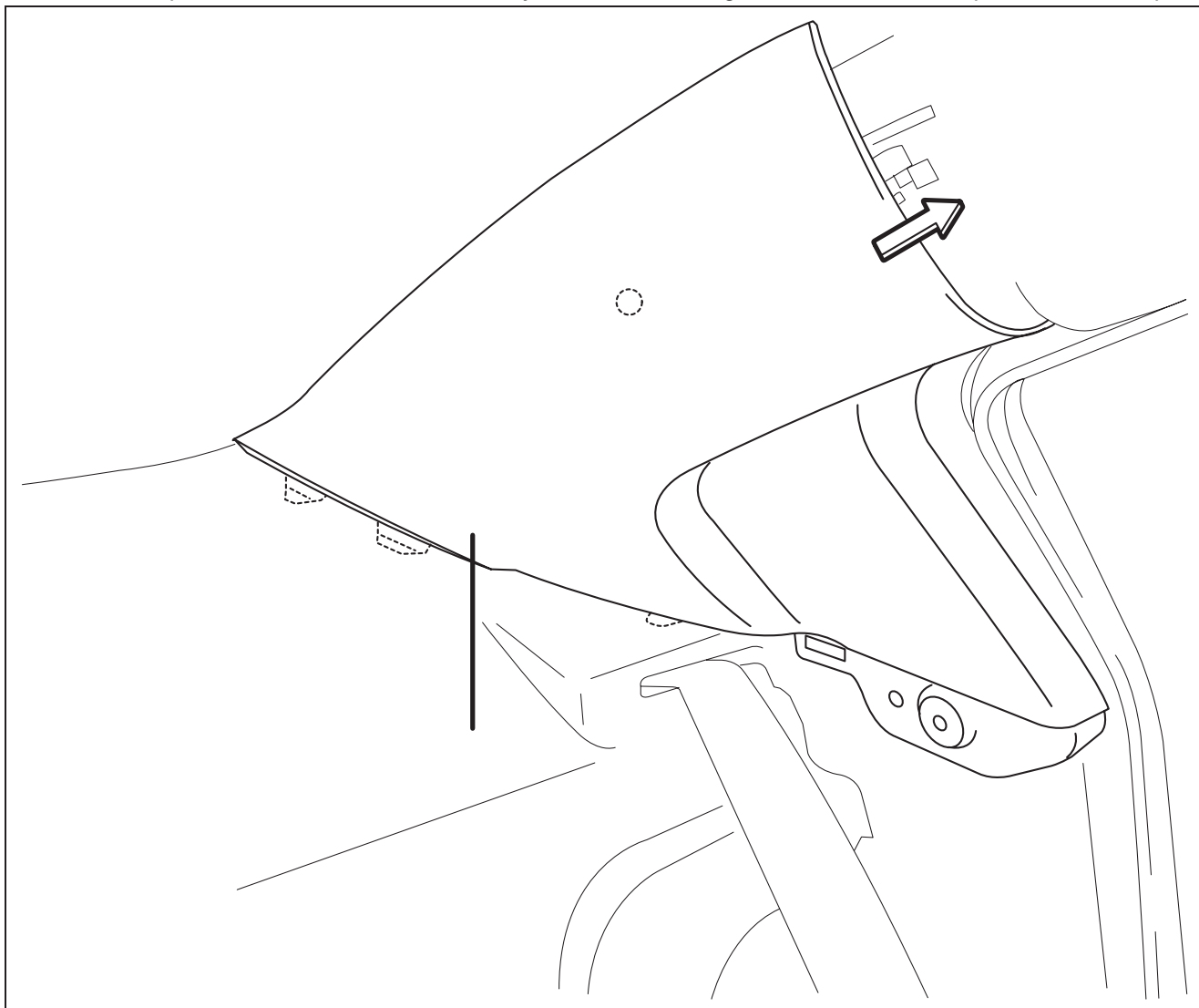
6. Cut the lead wire connecting clip A and grommet using a nipper.



am2ccw0000016

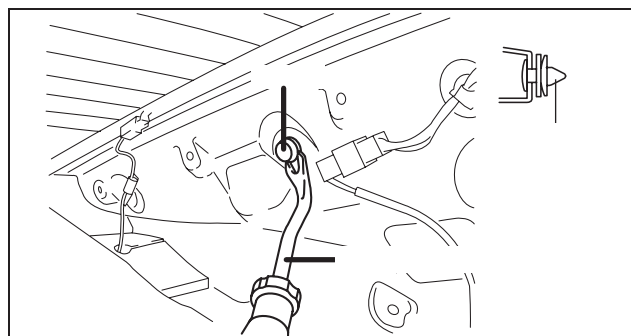
## INTERIOR TRIM

7. Slide the C-pillar trim in the direction shown by the arrow in the figure and remove the C-pillar trim from clip B.



am2ccw0000010

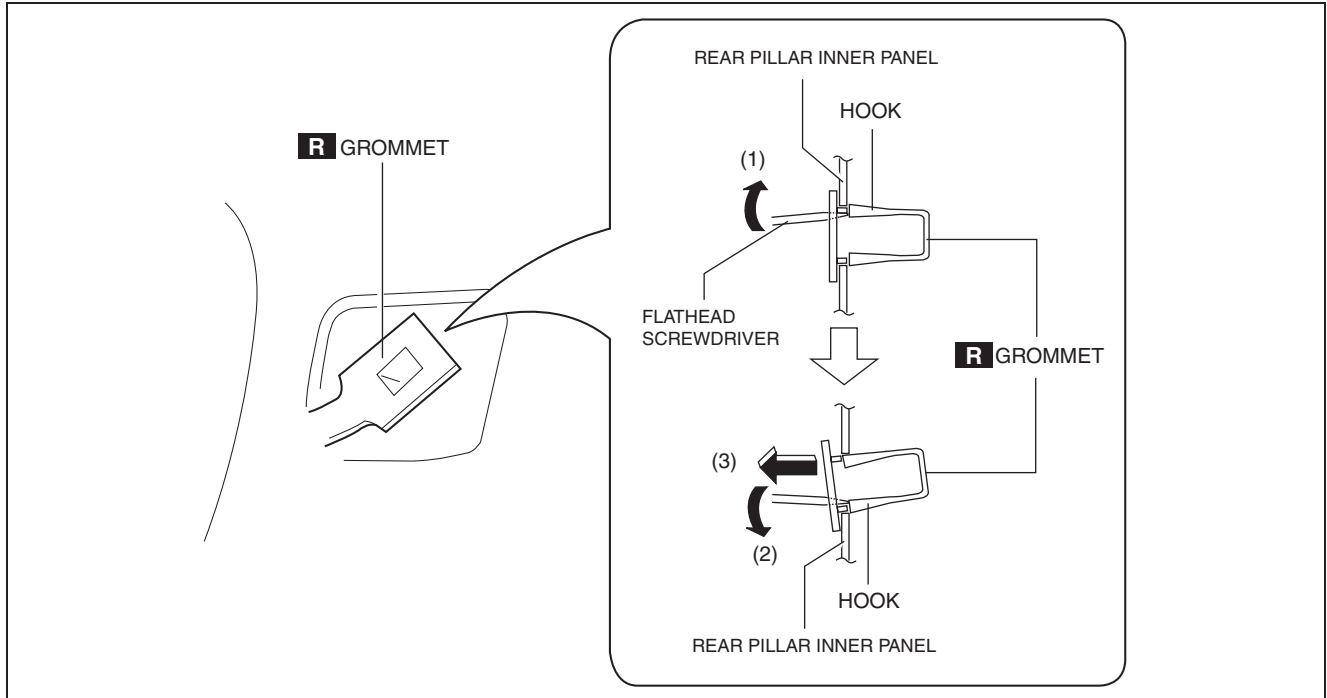
8. Remove the C-pillar trim.  
9. Remove clip B from the positions shown in the figure using a fastener remover and install the C-pillar trim.



am2zzw0000503

## INTERIOR TRIM

10. Move the hook in the direction of arrows (1) and (2) shown in the figure using a flathead screwdriver and detach it from the rear pillar inner panel.

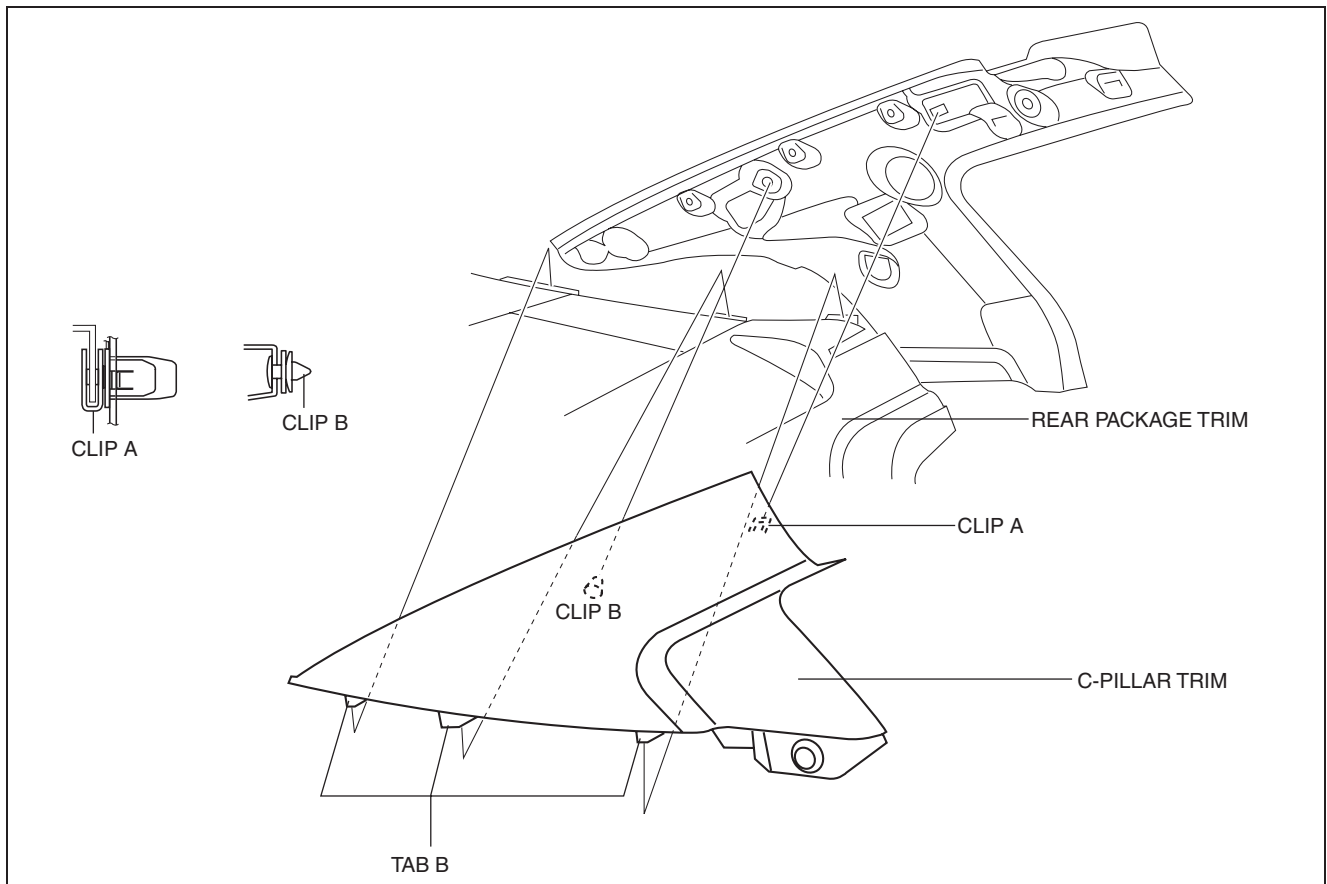


am2ccw0000016

11. Remove the grommet in the direction of the arrow (3) shown in the figure.  
12. When installing the C-pillar trim, install the new clip and new grommet to the C-pillar trim in advance.

### Installation

1. Insert the tabs into the rear package trim in the positions shown in the figure.



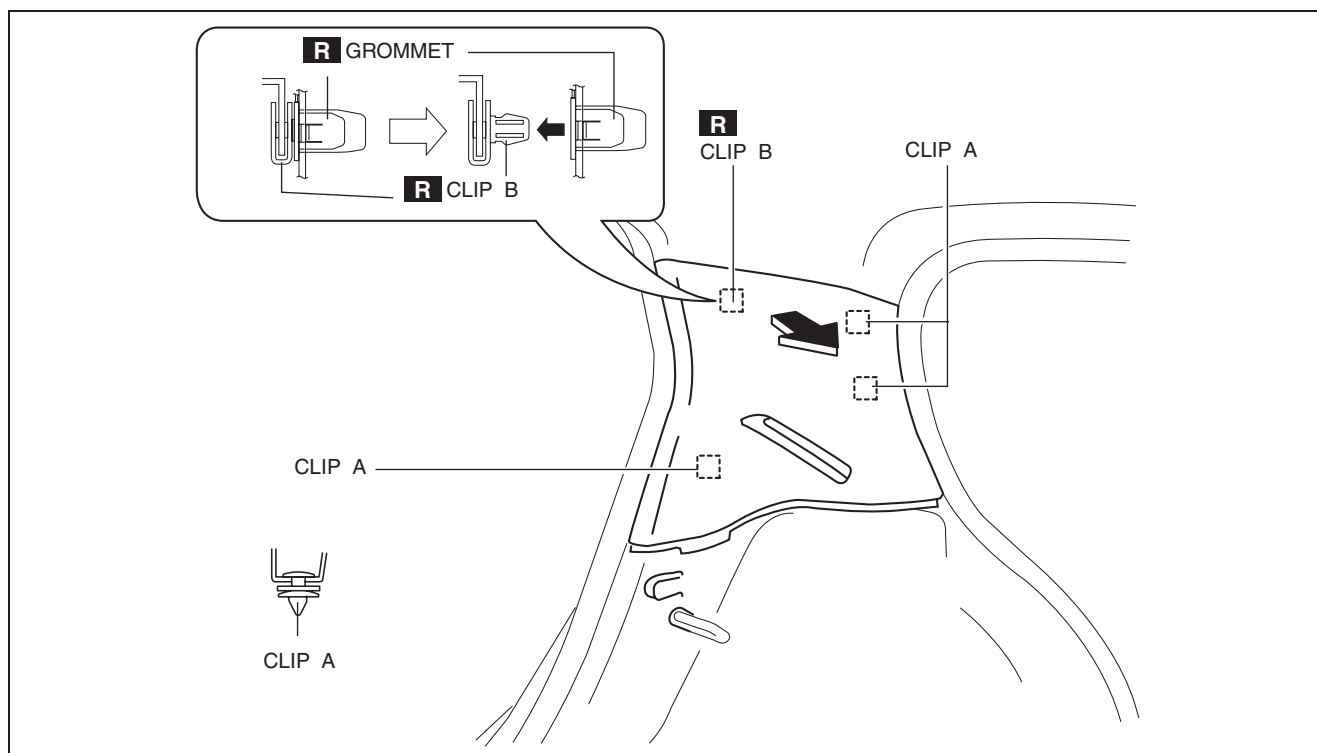
am2zzw0000503

## INTERIOR TRIM

2. Install clip A and B to the body.
3. Install the tire house trim. (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
4. Install the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION)
5. Install the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION)

### 5HB

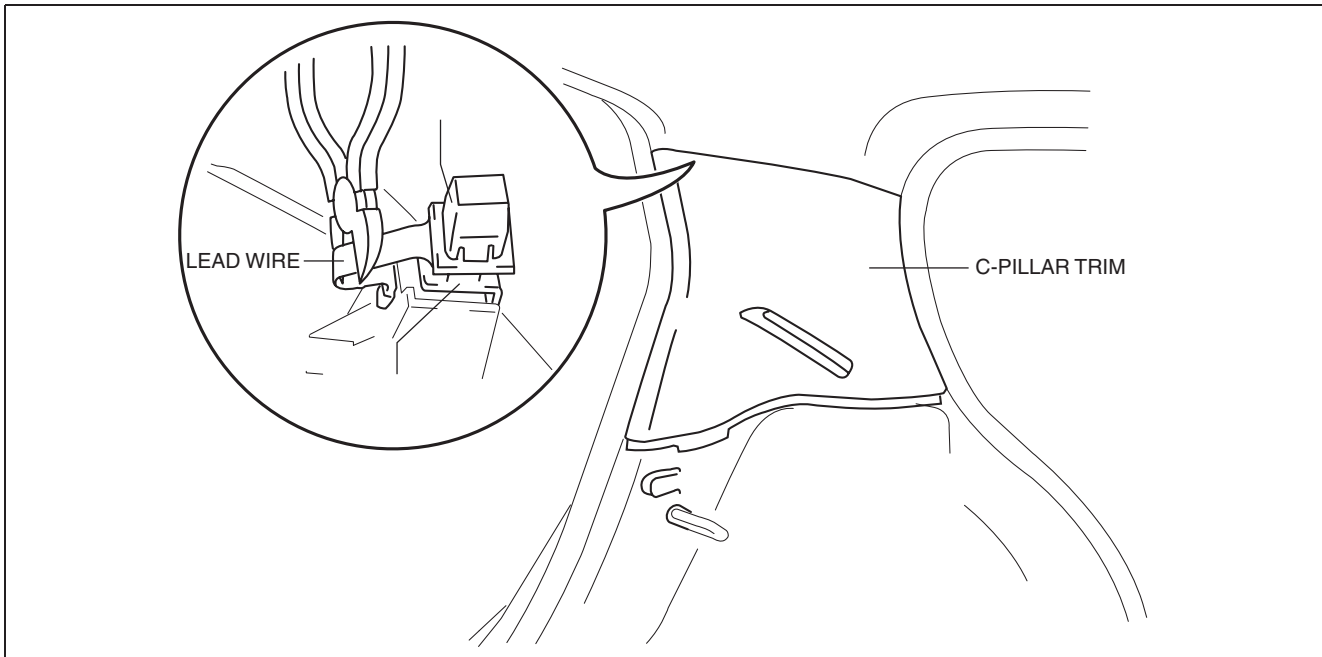
1. Remove the following parts:
  - (1) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION)
  - (2) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION)
  - (4) Lower anchor installation bolts of the rear seat belt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION)
  - (5) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION)
2. Partially peel back the seaming welt.
3. Remove the trunk side trim. (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION)
4. Pull the C-pillar trim in the direction of the arrow shown in the figure and remove it while detaching clips A and B.



am2zzw0000182

## INTERIOR TRIM

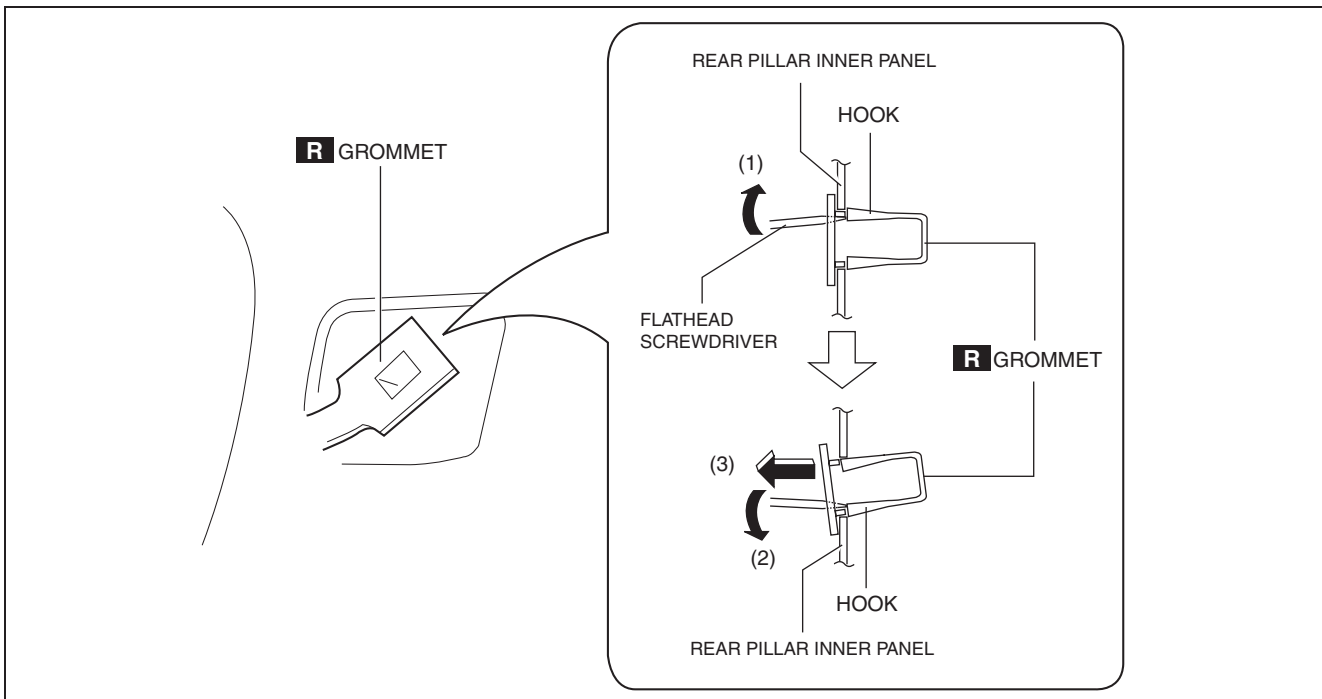
5. Cut the lead wire connecting clip B and grommet using a nipper.



am2zzw0000374

6. Pull out the rear seat belt lower anchor and remove the C-pillar trim.

7. Move the hook in the direction of arrows (1) and (2) shown in the figure using a flathead screwdriver and detach it from the rear pillar inner panel.



am2zzw0000181

8. Remove the grommet in the direction of the arrow (3) shown in the figure.

9. When installing the C-pillar trim, install the new clip and new grommet to the C-pillar trim in advance.

10. Install in the reverse order of removal.

### C-PILLAR TRIM REMOVAL/INSTALLATION [3HB]

id0917004591z3

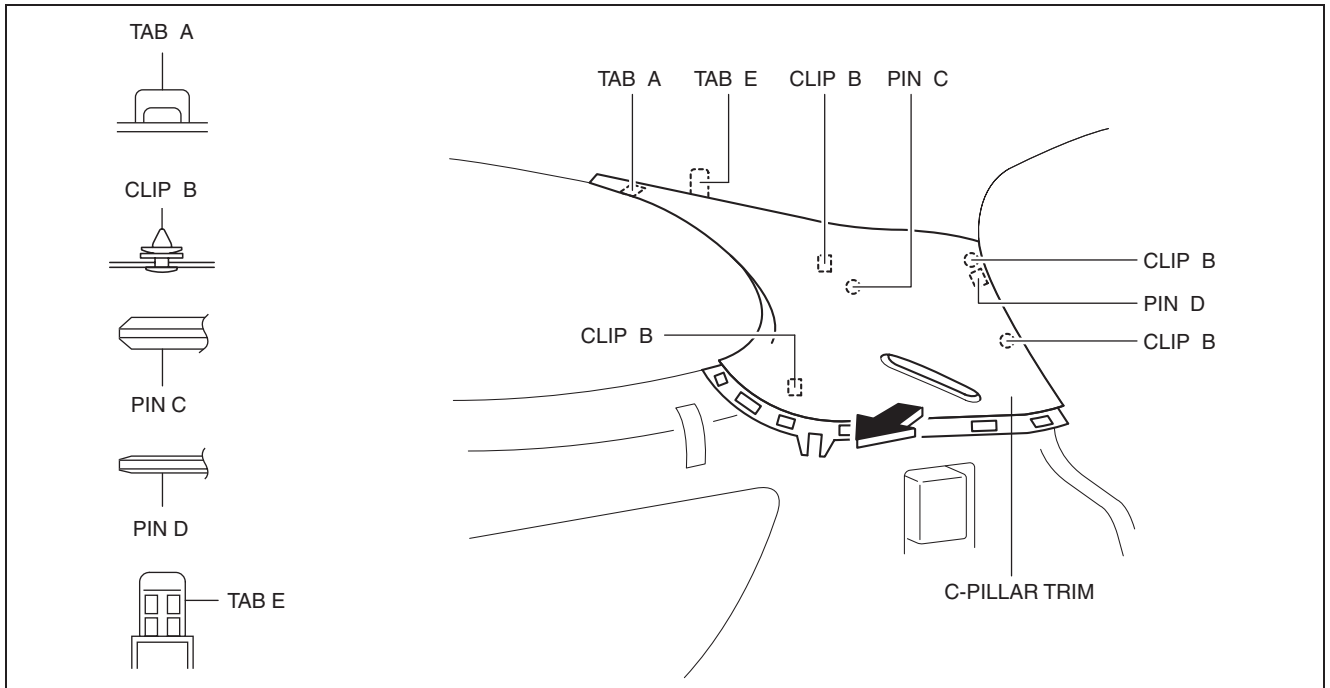
1. Remove the following parts:

- (1) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION)
- (2) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)



## INTERIOR TRIM

- (3) Lower anchor installation bolts of the rear seat belt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION)
- (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION)
2. Partially peel back the seaming welt.
3. Remove the trunk side trim. (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB])
4. Pull the C-pillar trim in the direction of the arrow shown in the figure and remove it while detaching tab A, clips B, pin C, pin D and tab E.



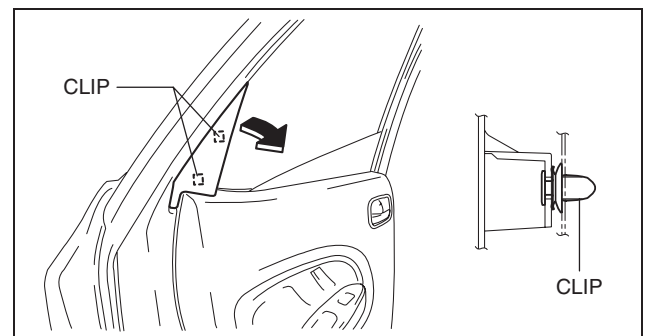
am2zzw0000341

5. Pull out the rear seat belt lower anchor and remove the C-pillar trim.
6. Install in the reverse order of removal.

### SAIL INNER GARNISH REMOVAL/INSTALLATION

id091700467100

1. Grasp the upper end of the sail inner garnish, pull the sail inner garnish in the direction of the arrow shown in the figure, and remove it while detaching the clips.
2. Install in the reverse order of removal.



am2zzw0000184

### FRONT SIDE TRIM REMOVAL/INSTALLATION

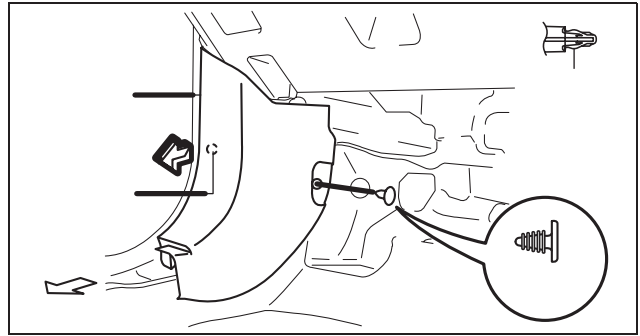
id091700459600

#### Driver-side

1. Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
2. Partially peel back the seaming welt.
3. Remove the fastener.

## INTERIOR TRIM

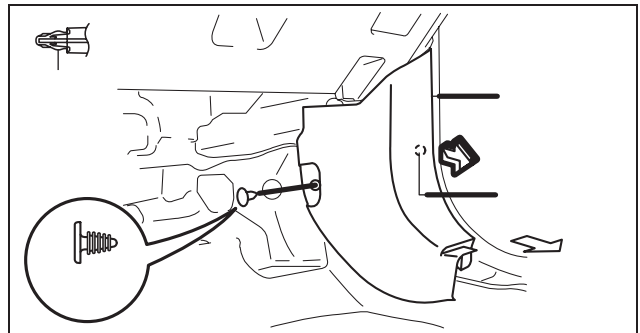
### L.H.D.



am2zzw0000459

### R.H.D.

4. Pull the front side trim in the direction of the arrow shown in the figure and remove it while detaching the clips.
5. Install in the reverse order of removal.

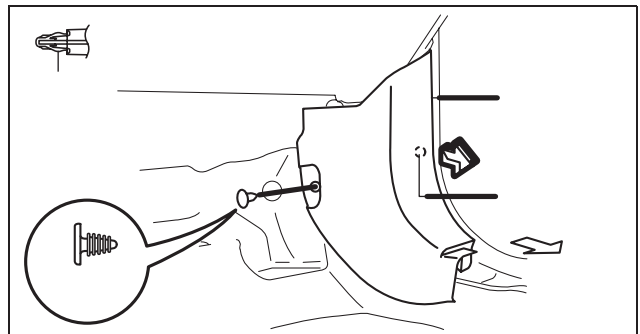


am2zzw0000459

### Passenger-side Vehicles without CVT

1. Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
2. Partially peel back the seaming welt.
3. Remove the fastener.

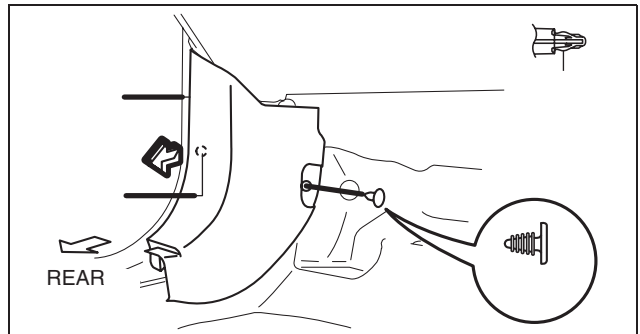
### L.H.D.



adejjw00001828

### R.H.D.

4. Pull the front side trim in the direction of the arrow shown in the figure and remove it while detaching the clips.
5. Install in the reverse order of removal.



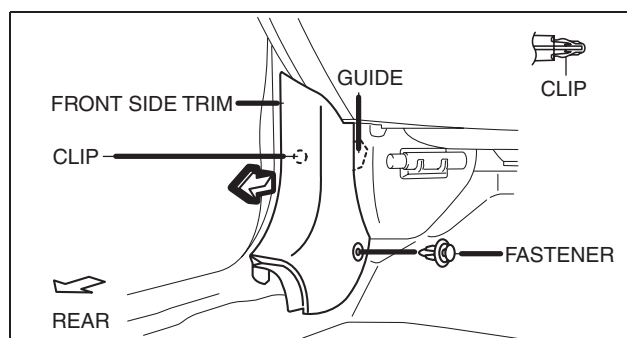
adejjw00001829

### Vehicles with CVT

1. Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)

## INTERIOR TRIM

2. Partially peel back the seaming welt.
3. Remove the fastener.
4. Pull the front side trim in the direction of the arrow shown in the figure and remove it while detaching the clips.
5. Install in the reverse order of removal.



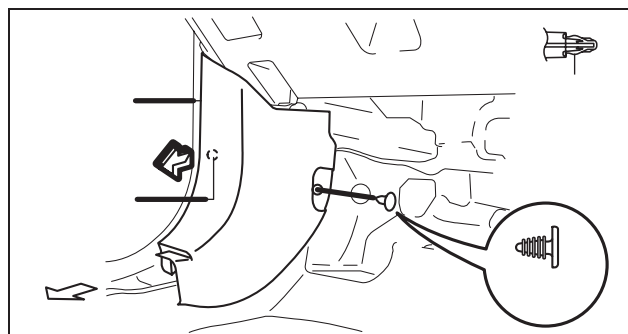
am2zzw0000446

### FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB]

id0917004596z3

1. Remove the front scuff plate. (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB])
2. Partially peel back the seaming welt.
3. Remove the fastener.

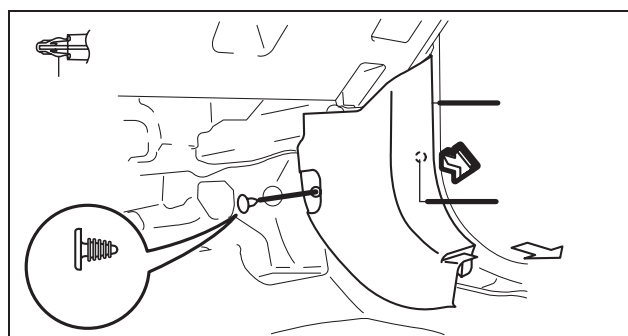
#### L.H.D.



am2zzw0000459

#### R.H.D.

4. Pull the front side trim in the direction of the arrow shown in the figure and remove it while detaching the clips.
5. Install in the reverse order of removal.

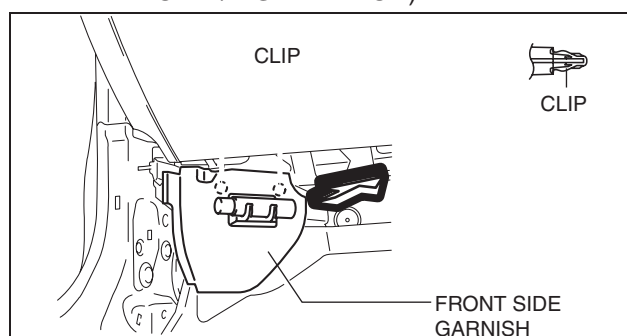


am2zzw0000460

### FRONT SIDE GARNISH REMOVAL/INSTALLATION

id091700467400

1. Remove the front scuff plate. (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
2. Remove the front side trim. (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION)
3. Pull the front side garnish in the direction of the arrow shown in the figure while remove the clips
4. Remove the front side garnish.
5. Install in the reverse order of removal.



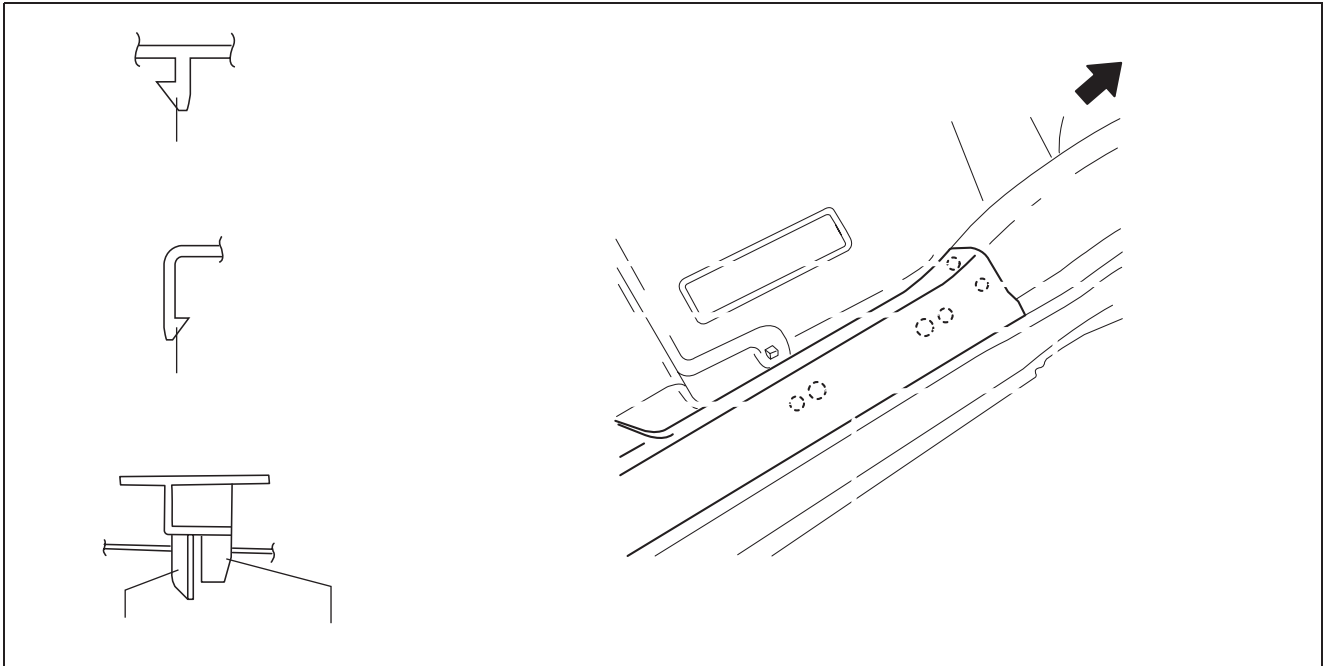
am2zzw0000442

## INTERIOR TRIM

### FRONT SCUFF PLATE REMOVAL/INSTALLATION

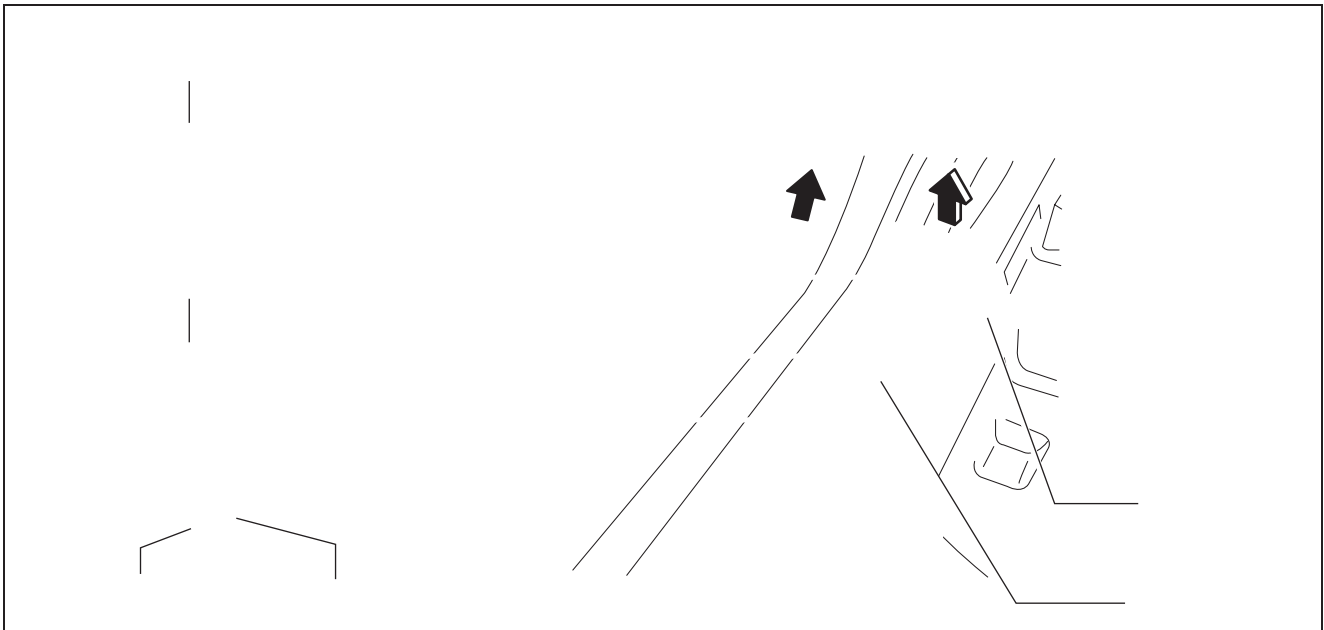
id091700457900

1. Detach tab A while pulling the front scuff plate in the direction of the arrow (1) shown in the figure, then detach tab B, pin C, and clip D while pulling in the direction of the arrow (2).



am2zzw0000460

2. Detach tab A while pulling the front scuff plate in the direction of the arrow (3) shown in the figure, pull the front scuff plate in the direction of the arrow (4), and remove it while detaching tab B, pin C, and clip D.



am2zzw0000460

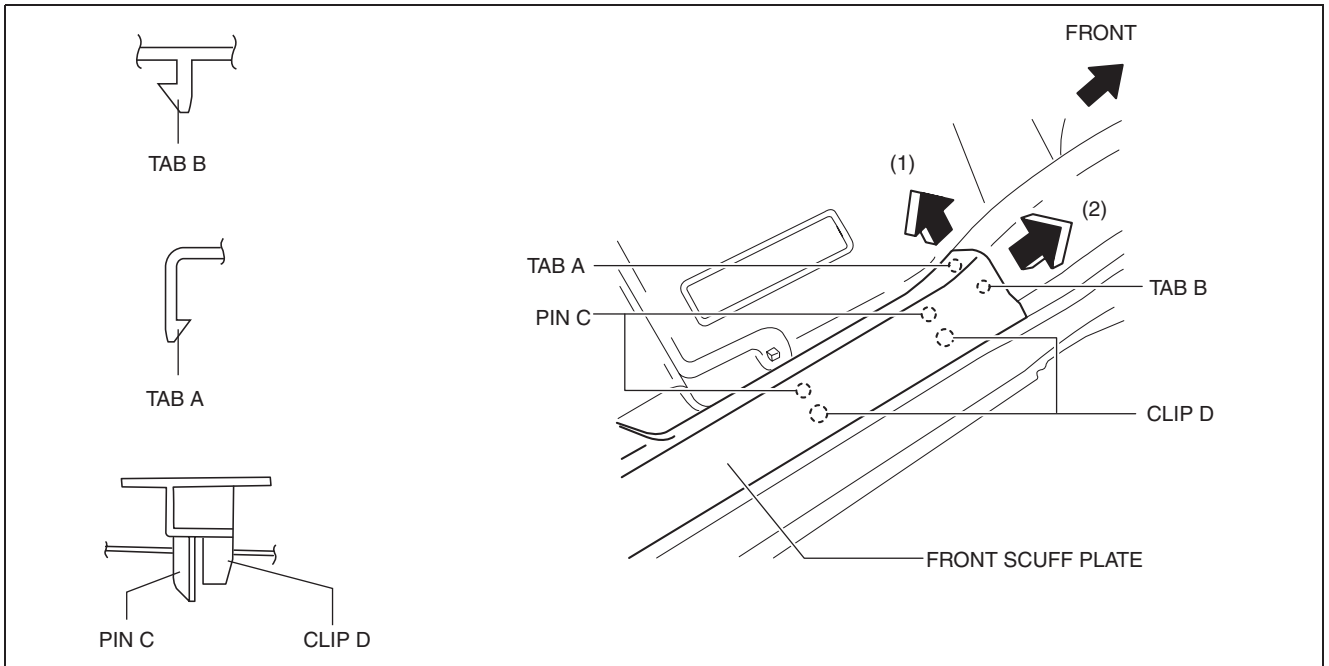
3. Install in the reverse order of removal.

## INTERIOR TRIM

### FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB]

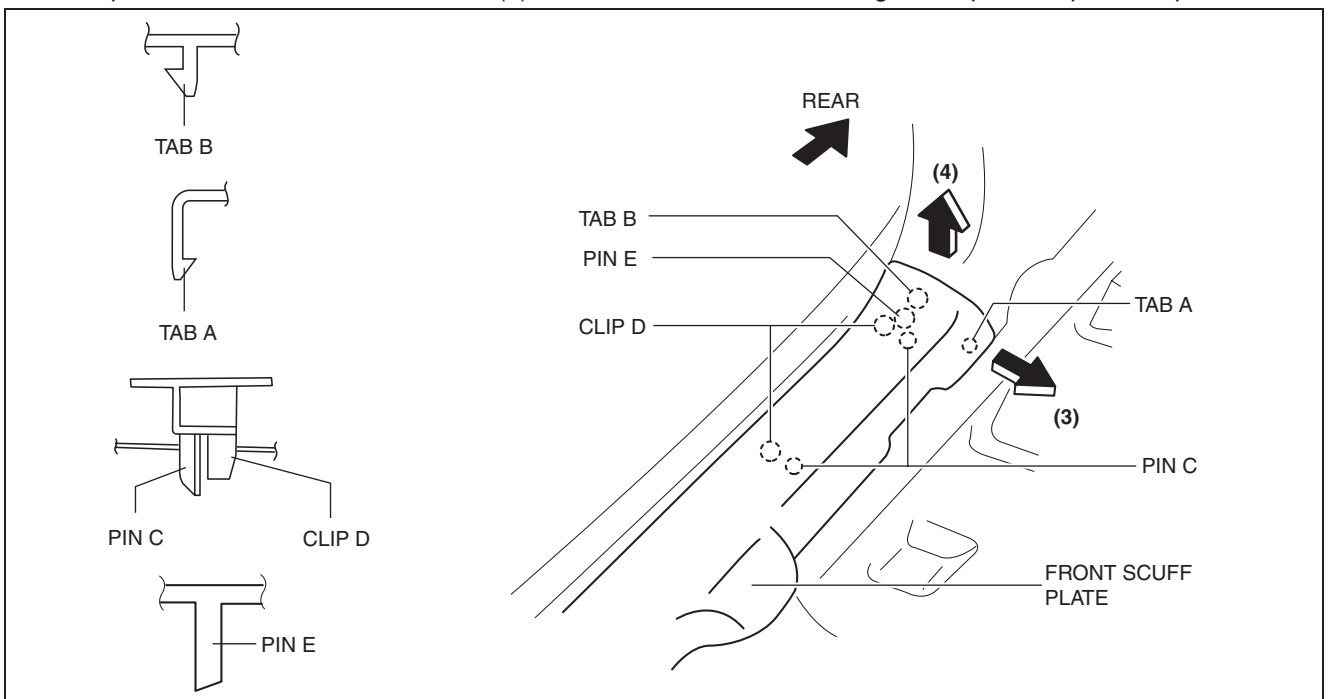
id0917004579z3

1. Detach tab A while pulling the front scuff plate in the direction of the arrow (1) shown in the figure, then detach tab B, pin C, and clip D while pulling in the direction of the arrow (2).



am2zzw0000460

2. Detach tab A while pulling the front scuff plate in the direction of the arrow (3) shown in the figure, pull the front scuff plate in the direction of the arrow (4), and remove it while detaching tab B, pin C, clip D, and pin E.



am2zzw0000460

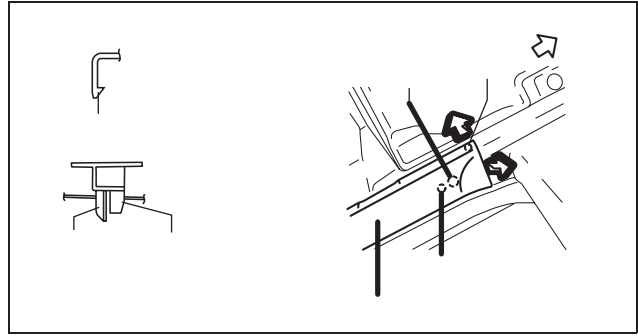
3. Install in the reverse order of removal.

## INTERIOR TRIM

### REAR SCUFF PLATE REMOVAL/INSTALLATION

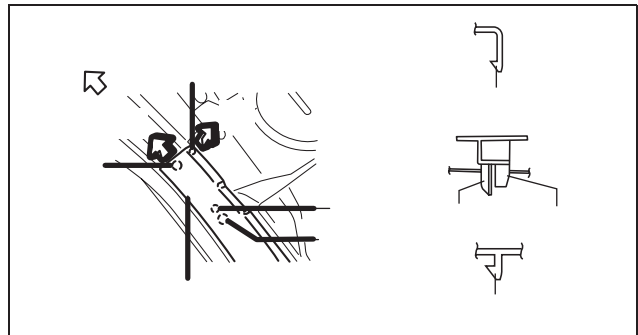
id091700458000

1. Detach tab A while pulling the rear scuff plate in the direction of the arrow (1) shown in the figure, then detach clip B, and pin C while pulling in the direction of the arrow (2).



am2zzw0000460

2. Detach tab A while pulling the rear scuff plate in the direction of the arrow (3) shown in the figure, pull the rear scuff plate in the direction of the arrow (4), and remove it while detaching clip B, pin C and tab D.
3. Install in the reverse order of removal.

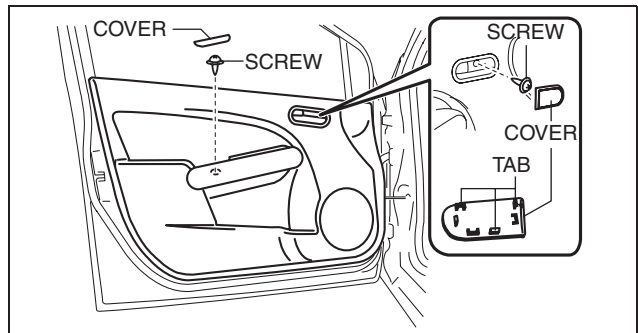


am2zzw0000460

### FRONT DOOR TRIM REMOVAL/INSTALLATION

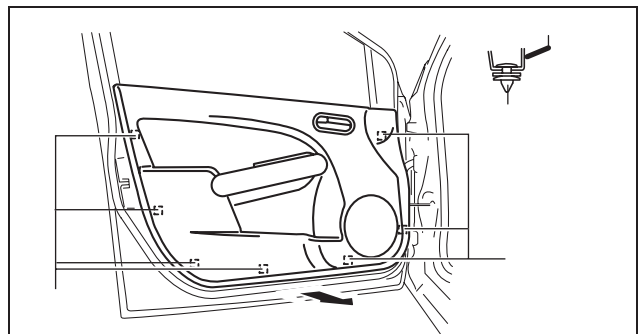
id091700459700

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION)
3. Pull the cover of inner handle while remove the tabs.
4. Remove the cover.
5. Remove the screw.



am2zzw0000261

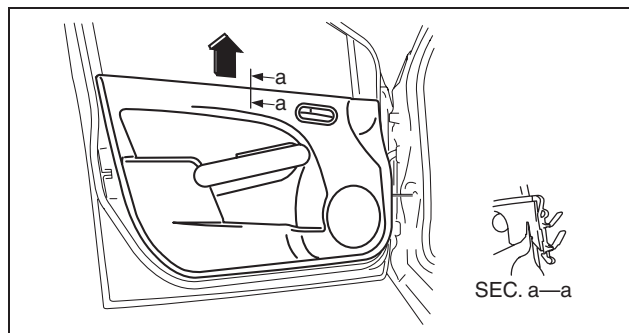
6. Pull in the direction of the arrow shown in the figure and remove clips A from the door inner panel using a fastener remover.



adejjw00003404

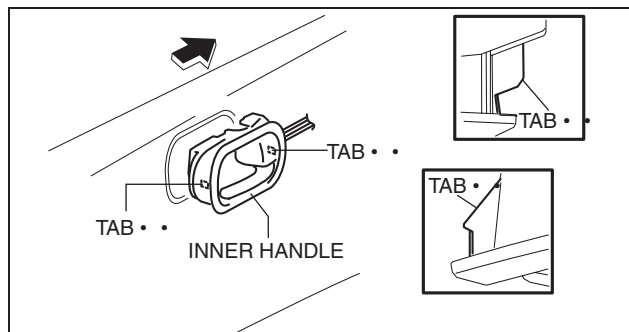
## INTERIOR TRIM

- Remove the front door trim in the direction of the arrow shown in the figure.



am2zzw0000249

- Remove the inner handle and move the front door trim in the direction of the arrow shown in the figure.



am2zzw0000249

- Turn the inner handle 90° in the direction of the arrow and remove it from the front door trim.
- Disconnect the driver-side power outer mirror switch connector, driver-side power window main switch connector, and passenger-side power window subswitch connector.
- Install in the reverse order of removal.

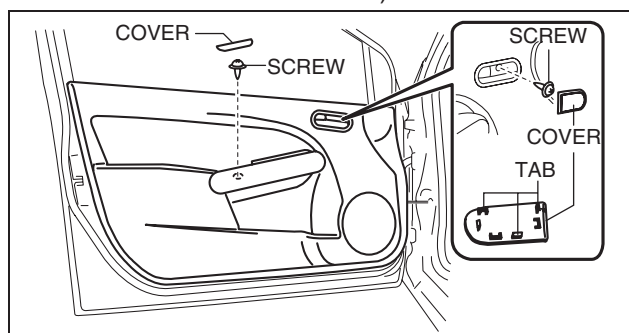


am2zzw0000249

### FRONT DOOR TRIM REMOVAL/INSTALLATION [3HB]

id0917004597z3

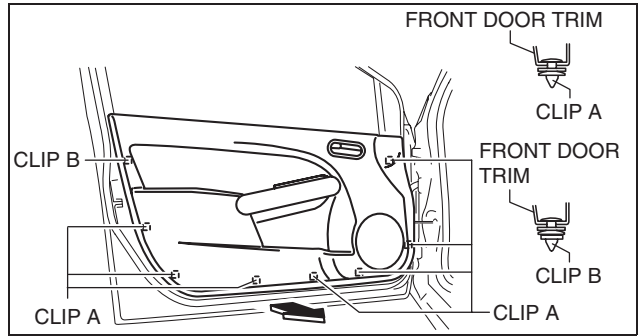
- Disconnect the negative battery cable.
- Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION)
- Pull the cover of inner handle while remove the tabs.
- Remove the screw.



am2zzw0000341

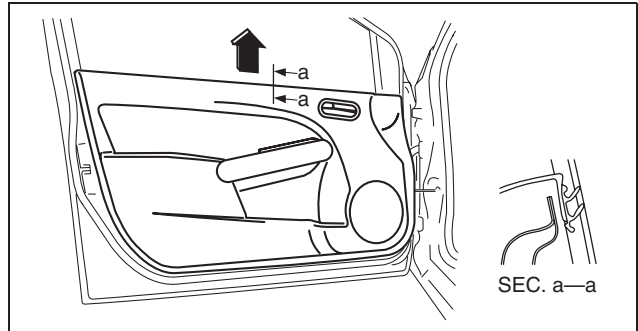
## INTERIOR TRIM

5. Pull in the direction of the arrow shown in the figure and remove clips A and B from the door inner panel using a fastener remover.



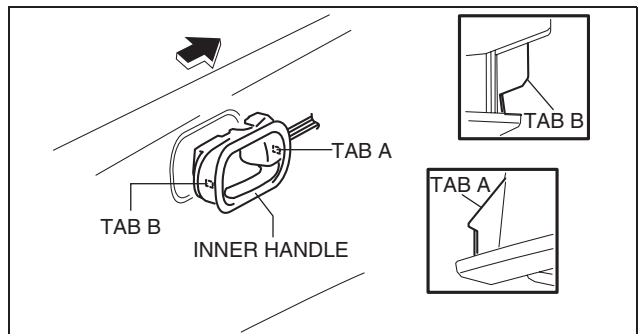
am2zzw0000341

6. Remove the front door trim in the direction of the arrow shown in the figure.



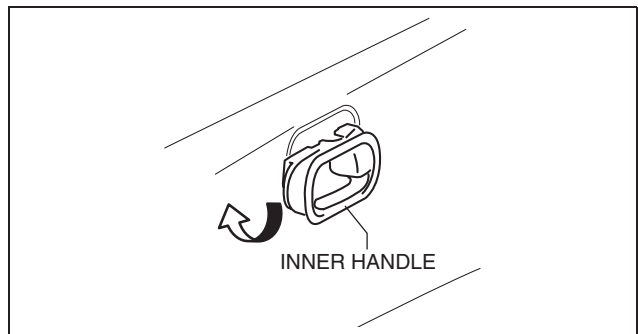
am2zzw0000341

7. Remove the inner handle and move the front door trim in the direction of the arrow shown in the figure.



am2zzw0000342

8. Turn the inner handle 90° in the direction of the arrow and remove it from the front door trim.
9. Disconnect the driver-side power outer mirror switch connector, driver-side power window main switch connector, and passenger-side power window subswitch connector.
10. Install in the reverse order of removal.



am2zzw0000342

### FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY

1. Disassemble in the order shown in the figure.

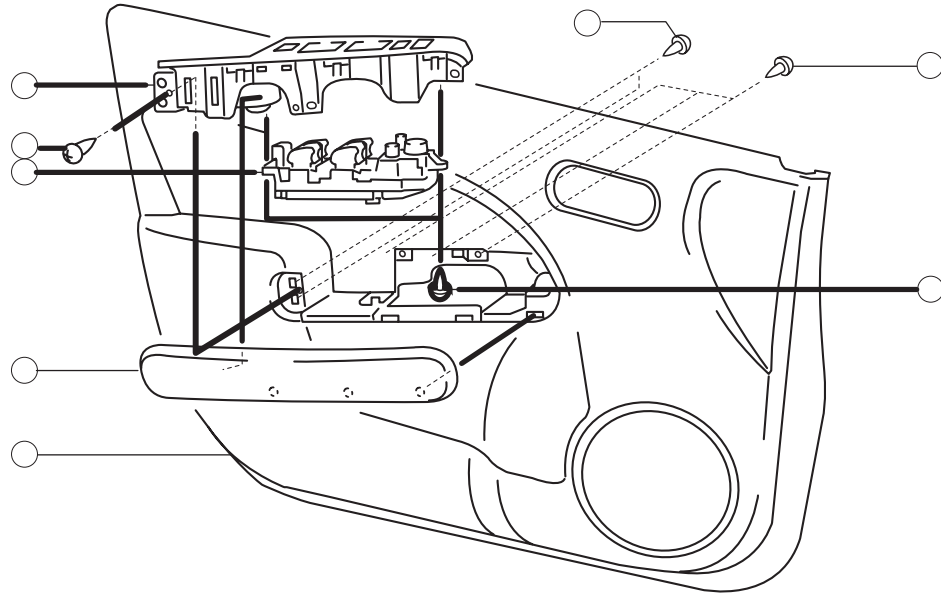
id091700720000



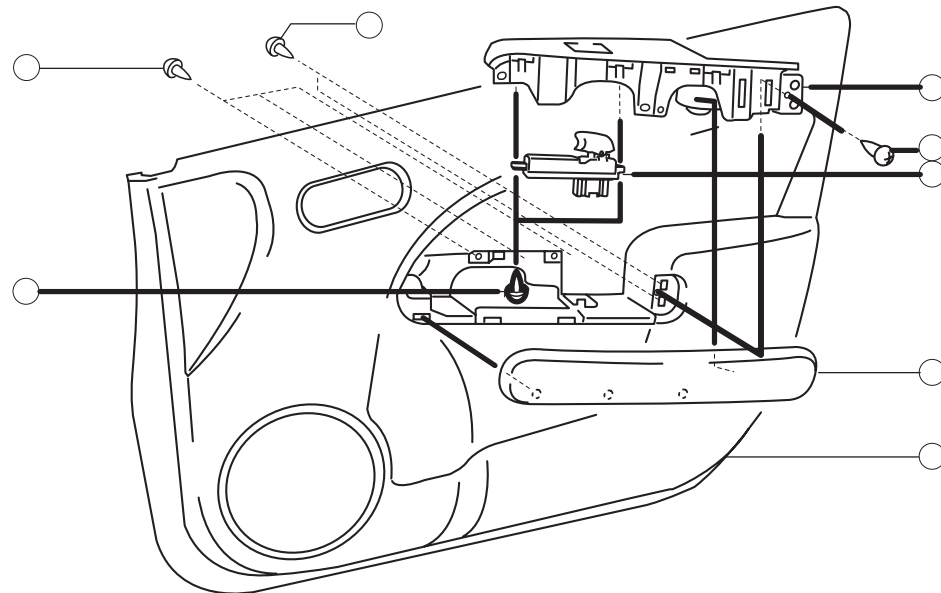
## INTERIOR TRIM

L.H.D.

DRIVER-SIDE



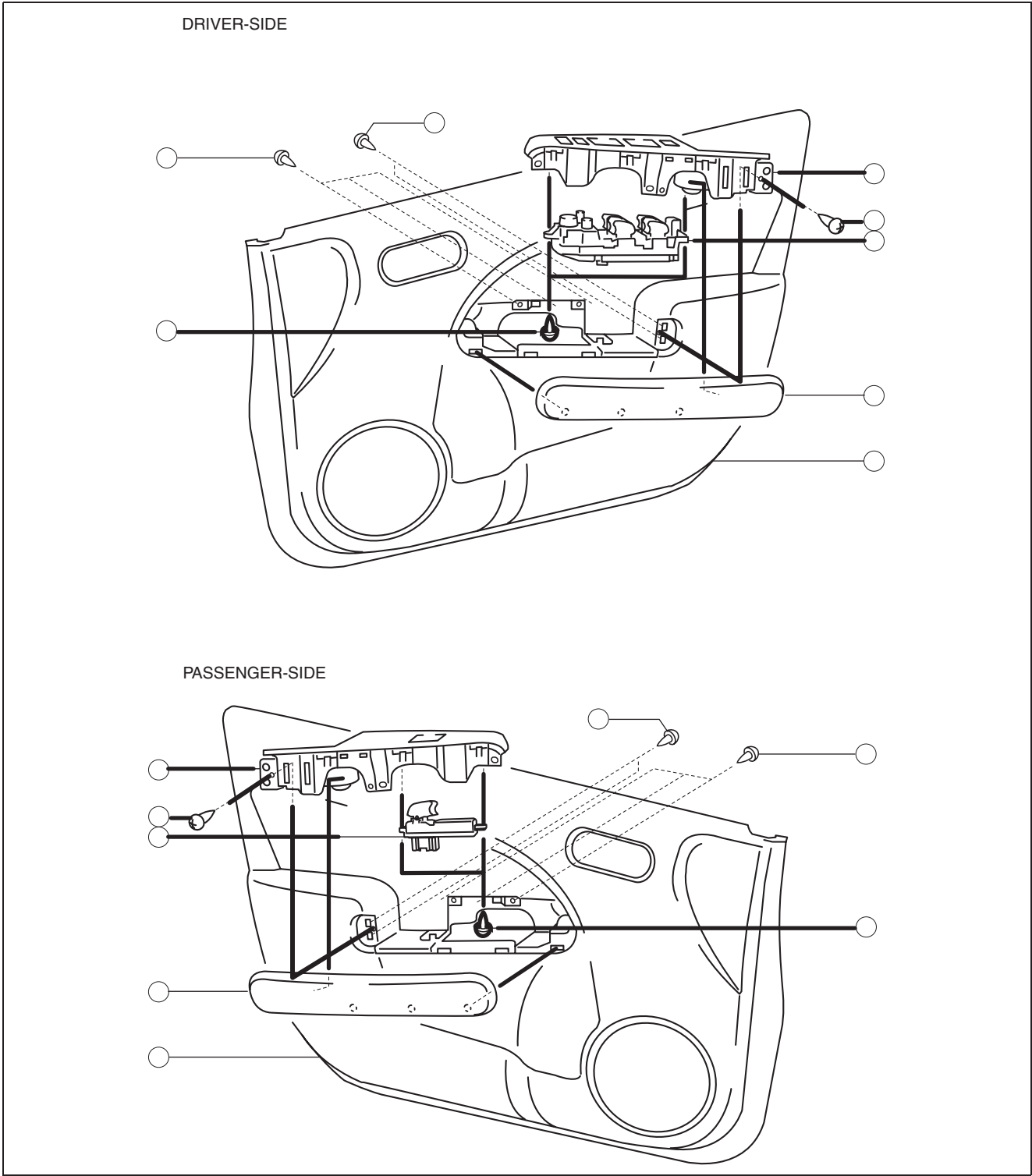
PASSENGER-SIDE



am2zzw0000195

INTERIOR TRIM

R.H.D.



am2zzw0000196

|   |                             |
|---|-----------------------------|
| 1 | Front door trim             |
| 2 | Screw A                     |
| 3 | Front door decoration panel |
| 4 | Screw B                     |
| 5 | Screw C                     |

|   |                          |
|---|--------------------------|
| 6 | Switch panel             |
| 7 | Screw D                  |
| 8 | Power window main switch |
| 9 | Power window subswitch   |

2. Assemble in the reverse order of disassembly.

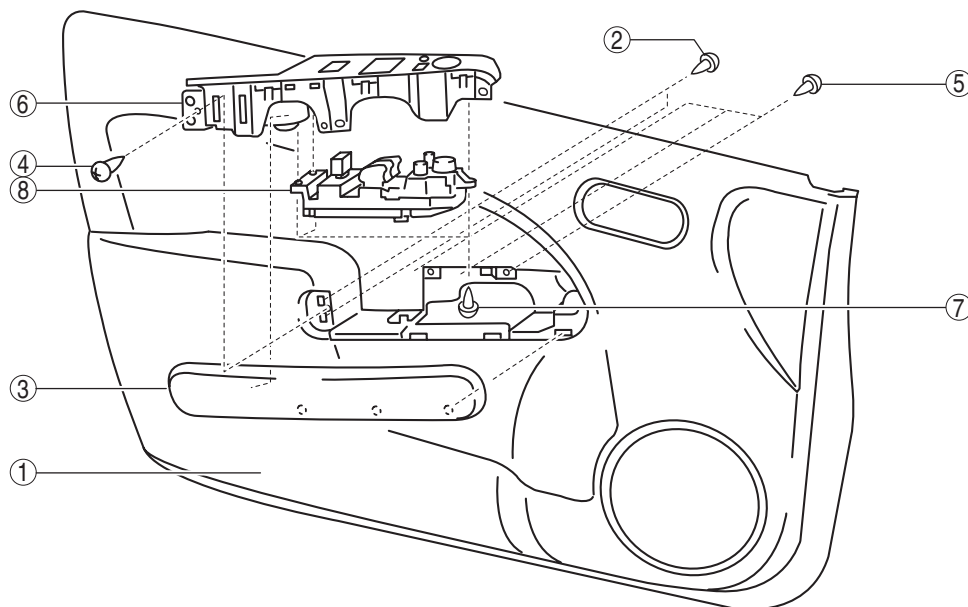
## INTERIOR TRIM

### FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY [3HB]

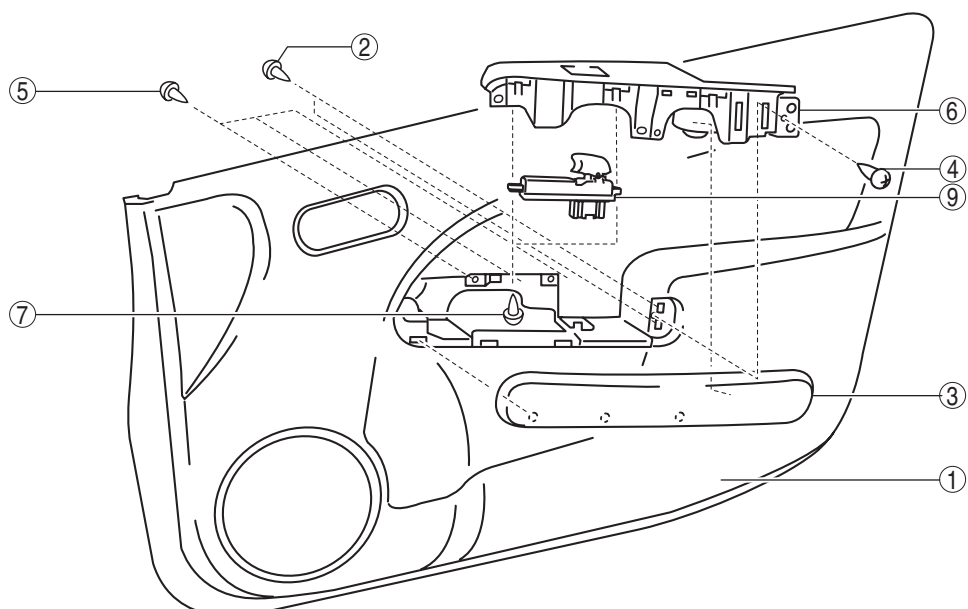
id0917007200z3

1. Disassemble in the order shown in the figure.  
**L.H.D.**

DRIVER-SIDE



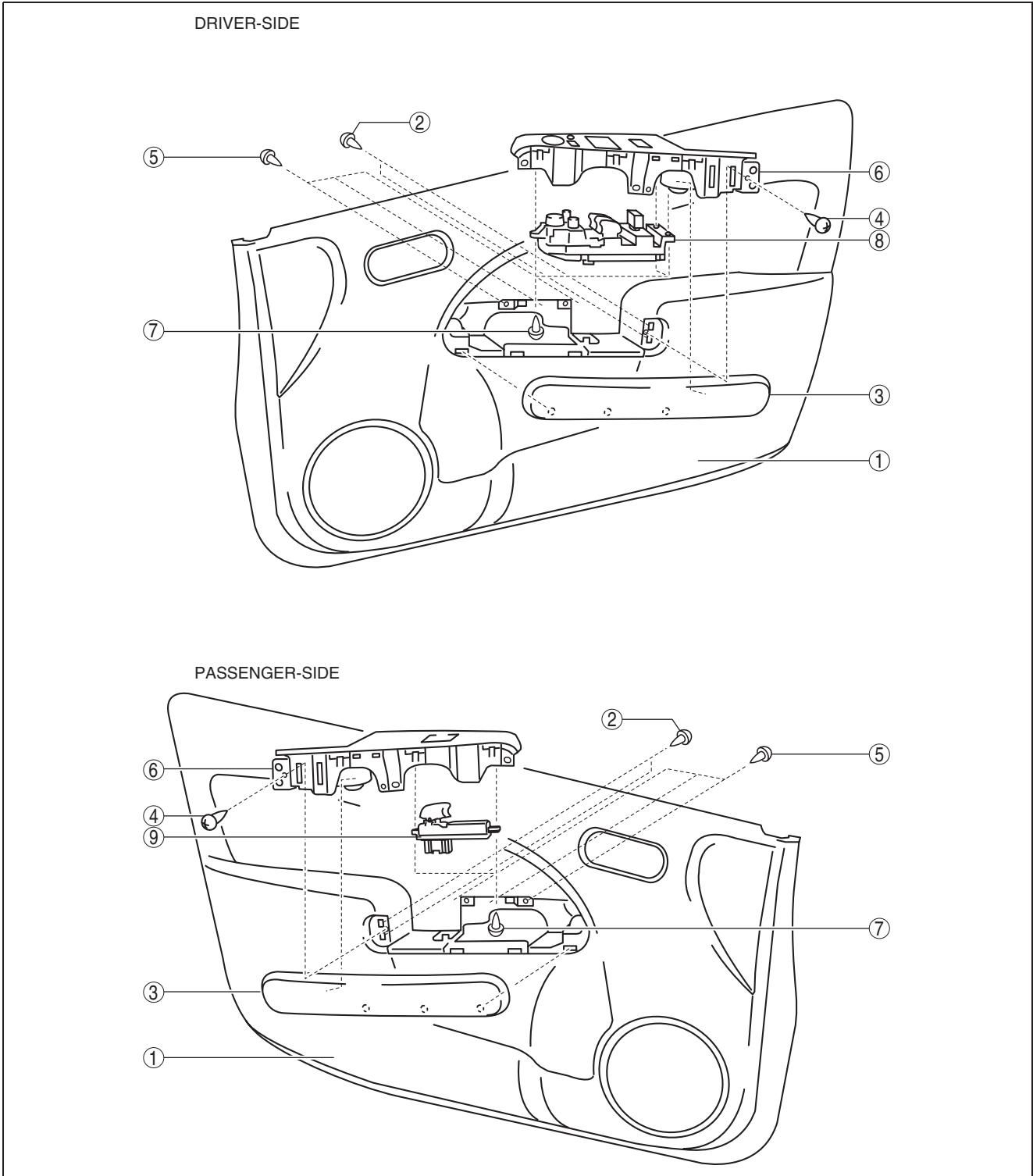
PASSENGER-SIDE



am2zzw0000342

INTERIOR TRIM

R.H.D.



am2zzw0000342

|   |                             |
|---|-----------------------------|
| 1 | Front door trim             |
| 2 | Screw A                     |
| 3 | Front door decoration panel |
| 4 | Screw B                     |
| 5 | Screw C                     |

|   |                          |
|---|--------------------------|
| 6 | Switch panel             |
| 7 | Screw D                  |
| 8 | Power window main switch |
| 9 | Power window subswitch   |

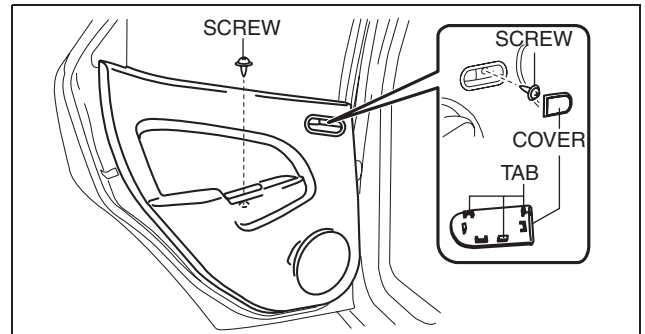
2. Assemble in the reverse order of disassembly.

## INTERIOR TRIM

### REAR DOOR TRIM REMOVAL/INSTALLATION

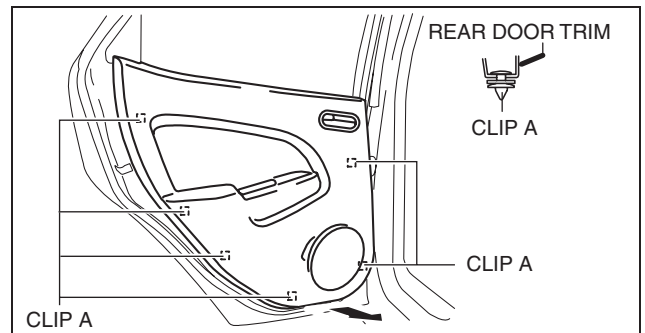
id091700460000

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION)
3. Pull the cover of inner handle while remove the tabs.
4. Remove the screw.



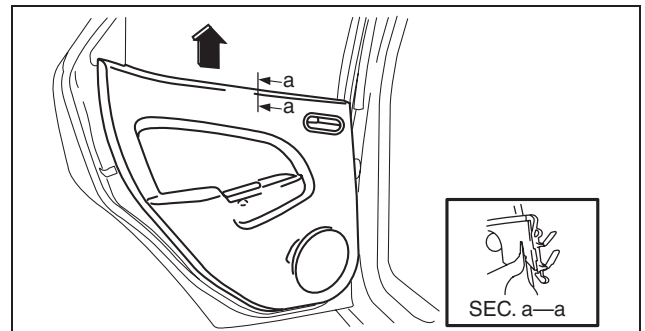
am2zzw0000261

5. Pull in the direction of the arrow shown in the figure and remove clips A from the door inner panel using a fastener remover.



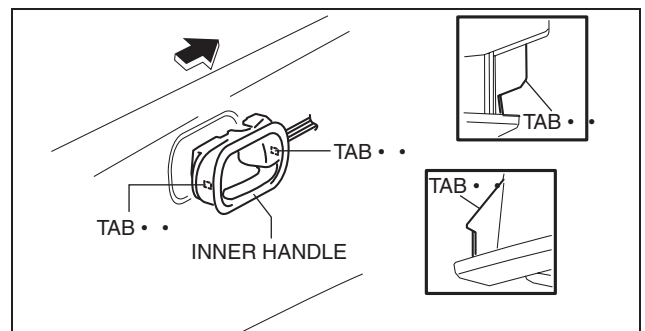
adejjw00003405

6. Remove the rear door trim in the direction of the arrow shown in the figure.



am2zzw0000249

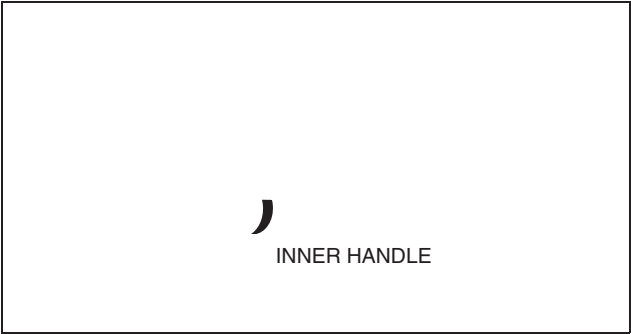
7. Remove the inner handle and move the rear door trim in the direction of the arrow shown in the figure.



adejjw00003399

## INTERIOR TRIM

- Turn the inner handle 90° in the direction of the arrow and remove it from the rear door trim.
- Disconnect the power window subswitch connector.
- Install in the reverse order of removal.

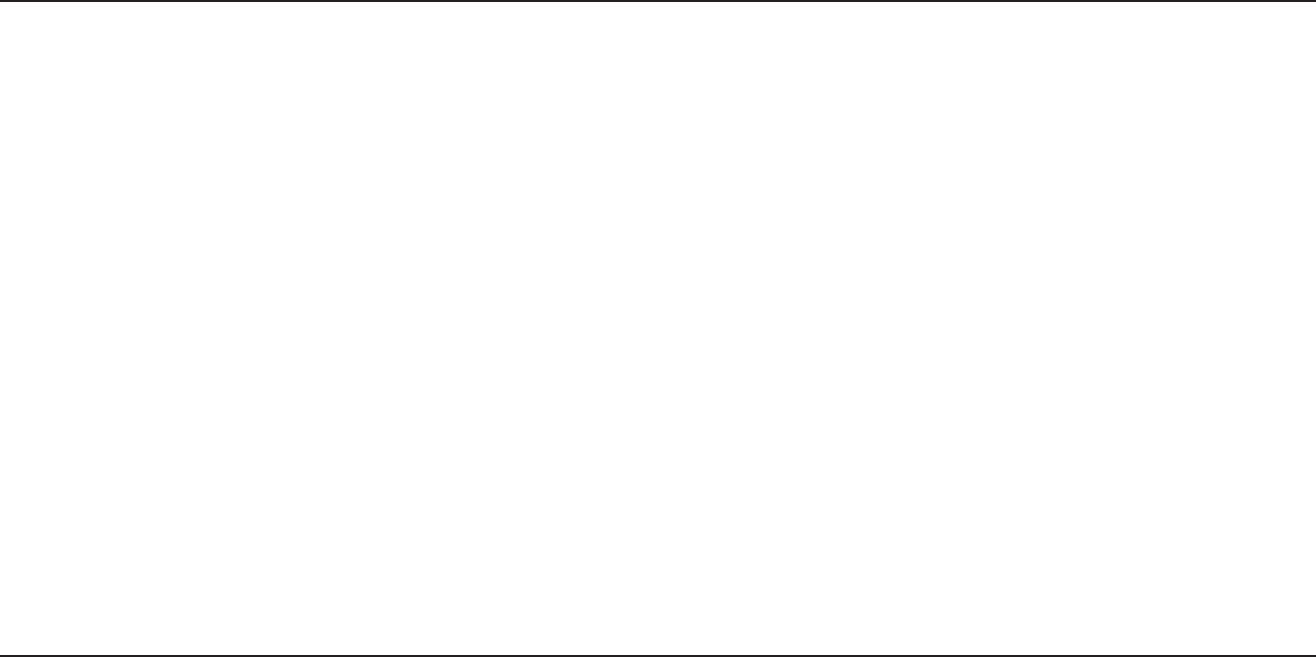


am2zzw0000184

### REAR DOOR TRIM DISASSEMBLY/ASSEMBLY

id091700463300

- Disassemble in the order indicated in the figure.



am2zzw0000252

|   |                              |
|---|------------------------------|
| 1 | Rear door trim               |
| 2 | Screw A                      |
| 3 | Power window subswitch panel |

|   |                        |
|---|------------------------|
| 4 | Screw B                |
| 5 | Power window subswitch |

- Assemble in the reverse order of disassembly.

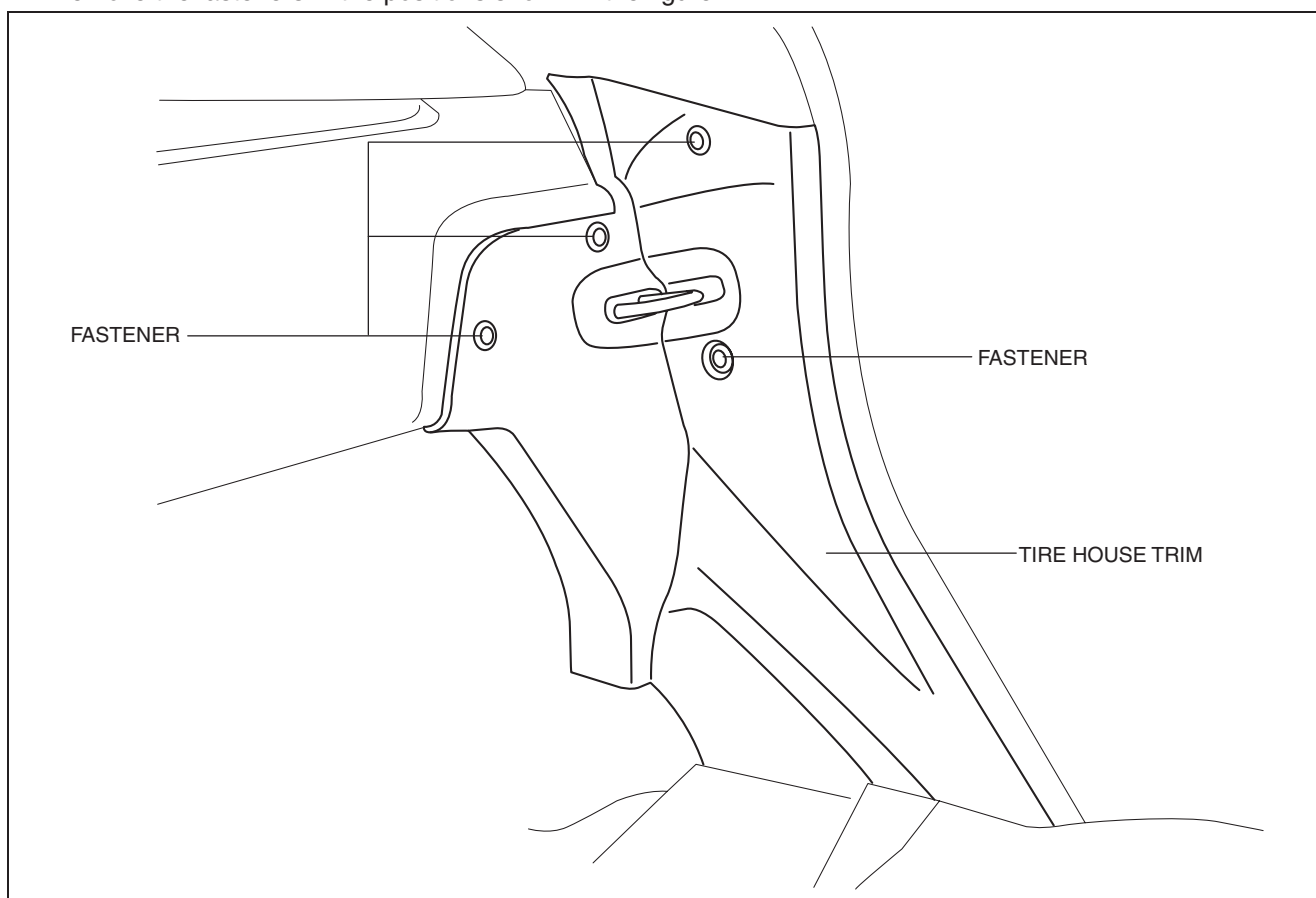
### TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD]

id0917008027a3

- Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
- Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
- Lower the rear seatbacks.

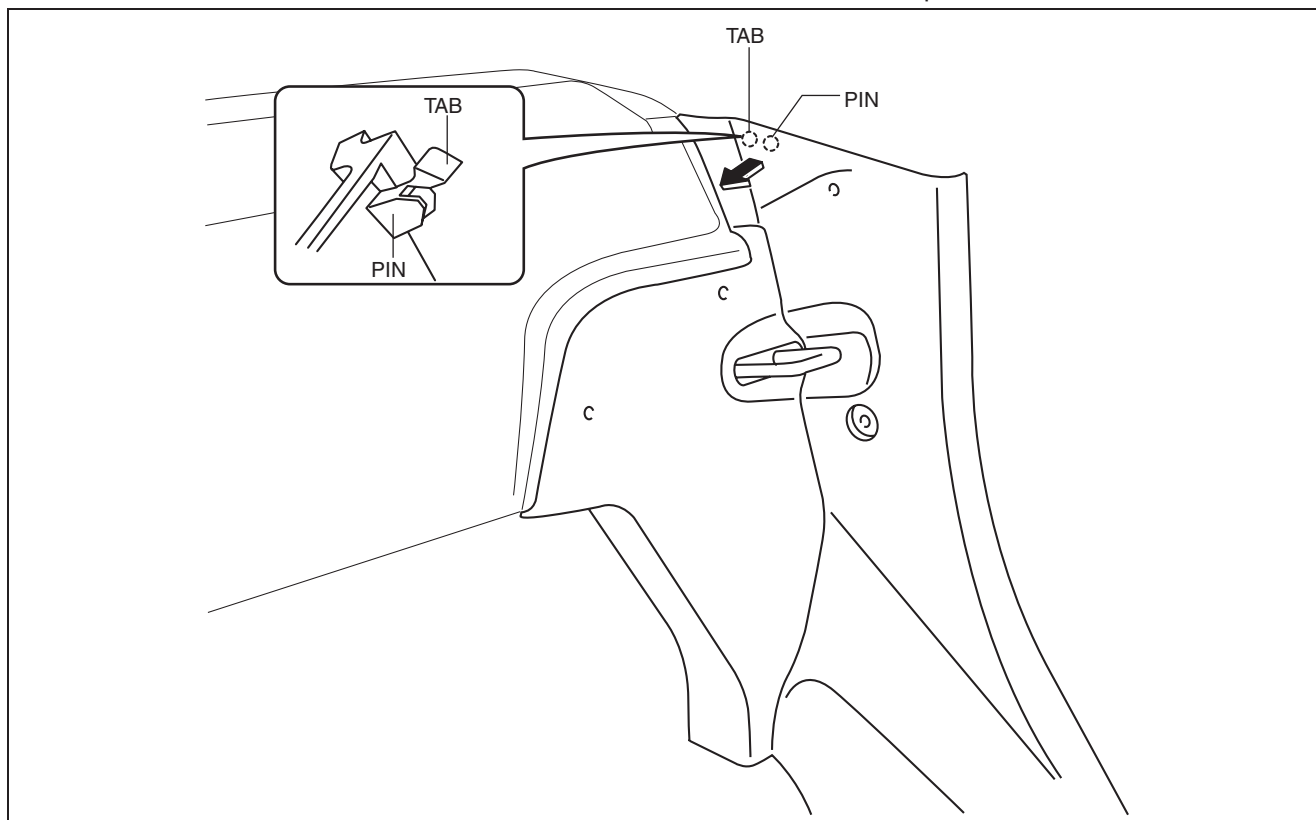
## INTERIOR TRIM

4. Remove the fasteners in the positions shown in the figure.



am2ccw0000016

5. Partially peel back the seaming welt.  
6. Pull the tire house trim in the direction of the arrow and remove the tab and pin.



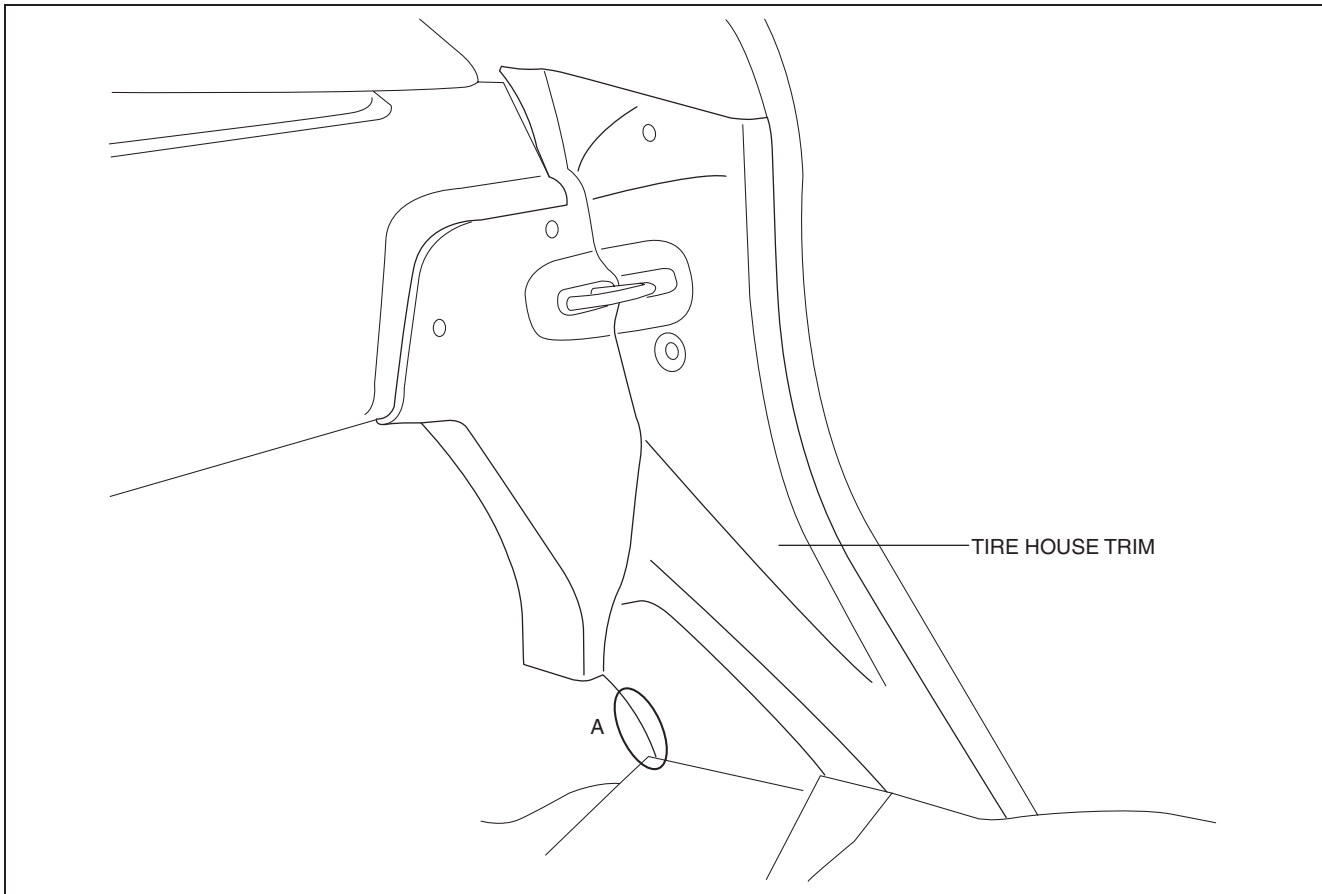
am2ccw0000016

## INTERIOR TRIM

7. Set the rear seat backs out of the way while removing the tire house trim.
8. Install in the reverse order of removal. (See 09-17-68 Tire House Trim Installation Note.)

### Tire House Trim Installation Note

1. Verify that part A is inserted into the trunk side trim as shown in the figure.

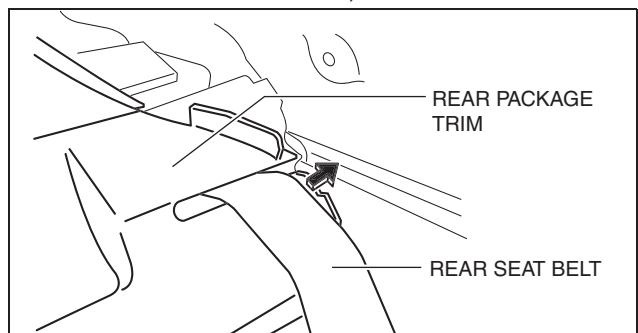


am2ccw0000024

### REAR PACKAGE TRIM REMOVAL/INSTALLATION [4SD]

id0917008028a3

1. Remove the rear scuff plate. (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
2. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
3. Remove the tire house trim. (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
4. Remove the C-pillar trim. (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
5. Pull out the left and right rear seat belts from the slit areas of the rear package trim.

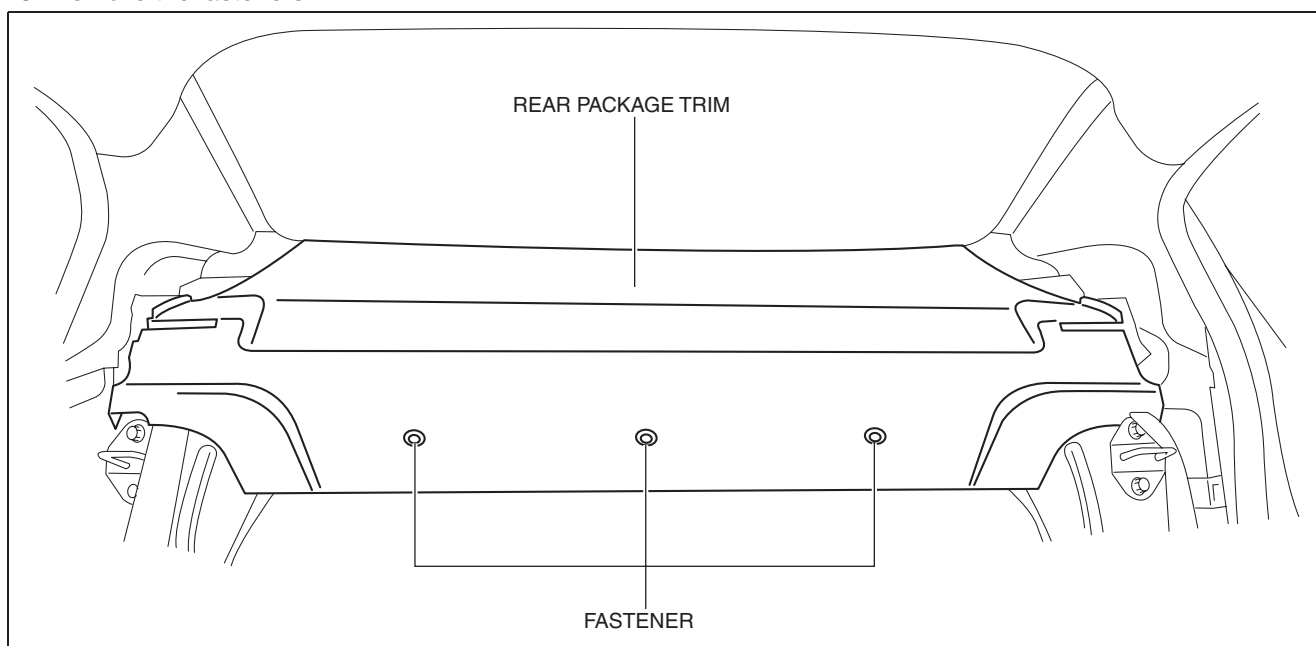


am2ccw0000016



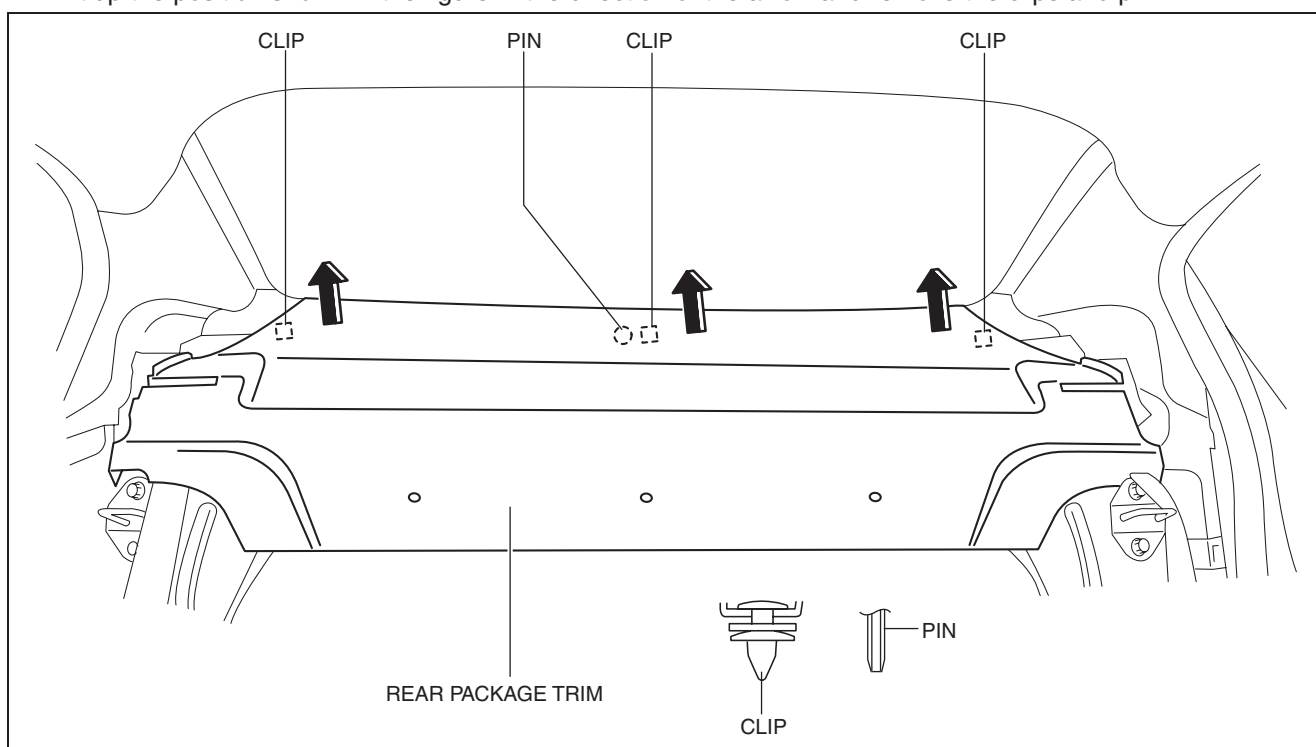
## INTERIOR TRIM

6. Remove the fasteners.



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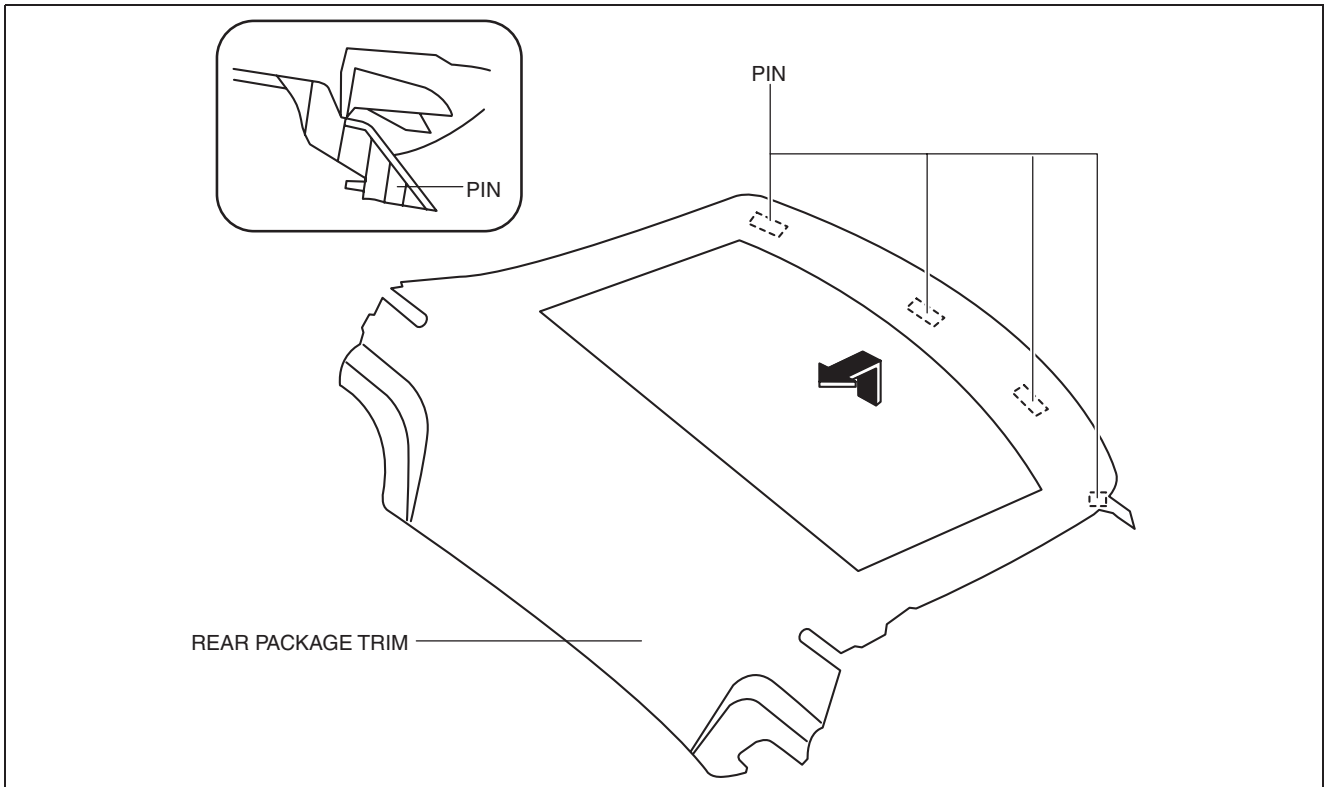
7. Lift up the position shown in the figure in the direction of the arrow and remove the clips and pin.



am2ccw0000016

## INTERIOR TRIM

8. Slide the rear package trim in the direction shown by the arrow in the figure and remove the pins from the body.



am2ccw0000016

9. Remove the rear package trim.

10. Install in the reverse order of removal.

### TRUNK SIDE TRIM REMOVAL/INSTALLATION

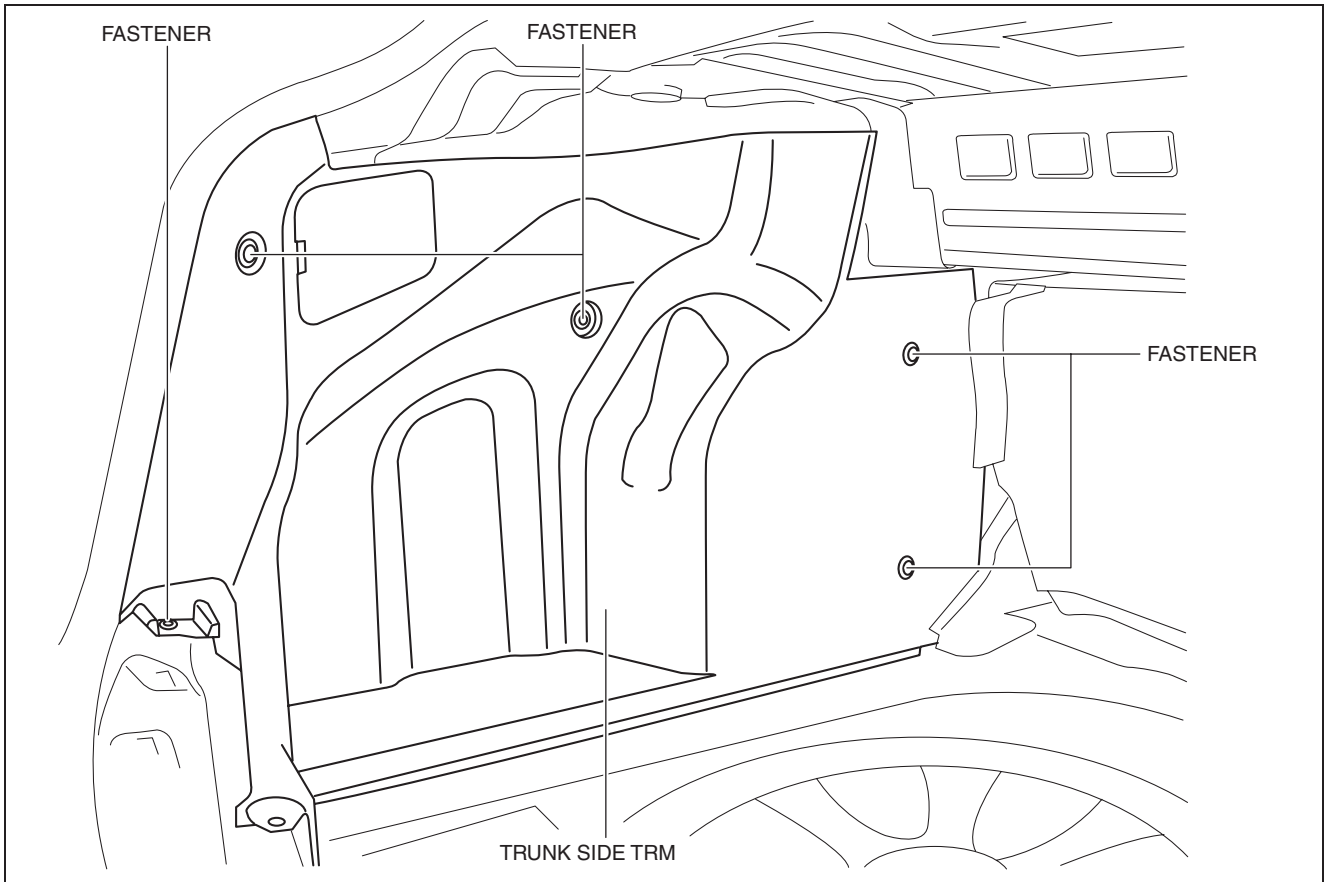
id091700462300

#### 4SD

1. Open the trunk lid.
2. Remove the following parts:
  - (1) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (3) Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
  - (4) Trunk mat.
  - (5) Trunk board.
  - (6) Trunk end trim. (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION)

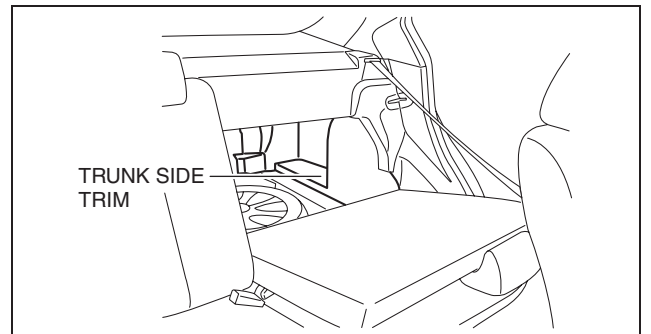
## INTERIOR TRIM

3. Remove the fasteners in the positions shown in the figure.



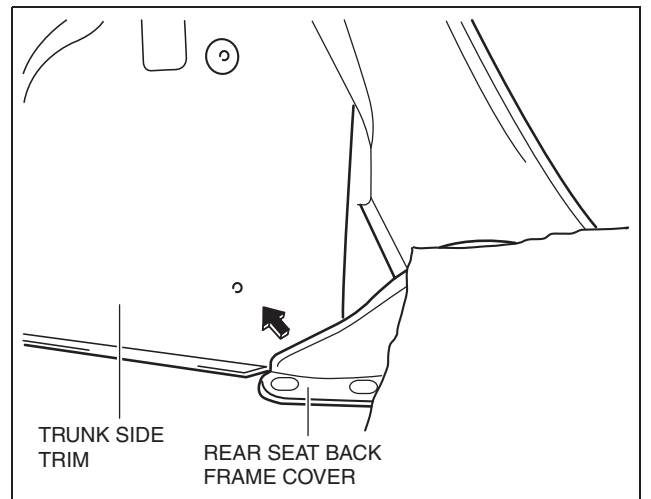
am2ccw0000012

4. Lower the rear seat backs and make the trunk side trim visible from the vehicle interior.



am2ccw0000012

5. Set the trunk side trim away from the rear seat back frame cover.  
6. Remove the trunk side trim.  
7. Install in the reverse order of removal.

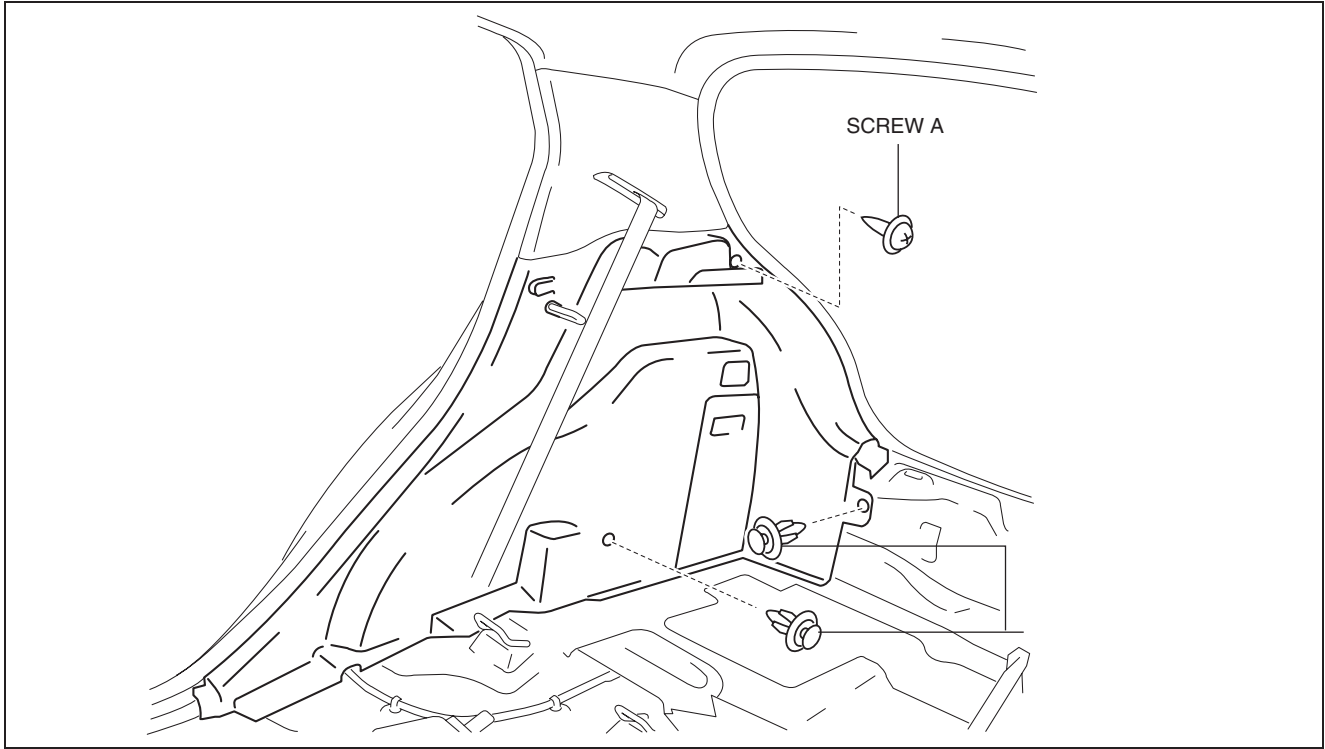


am2ccw0000012

## INTERIOR TRIM

### 5HB

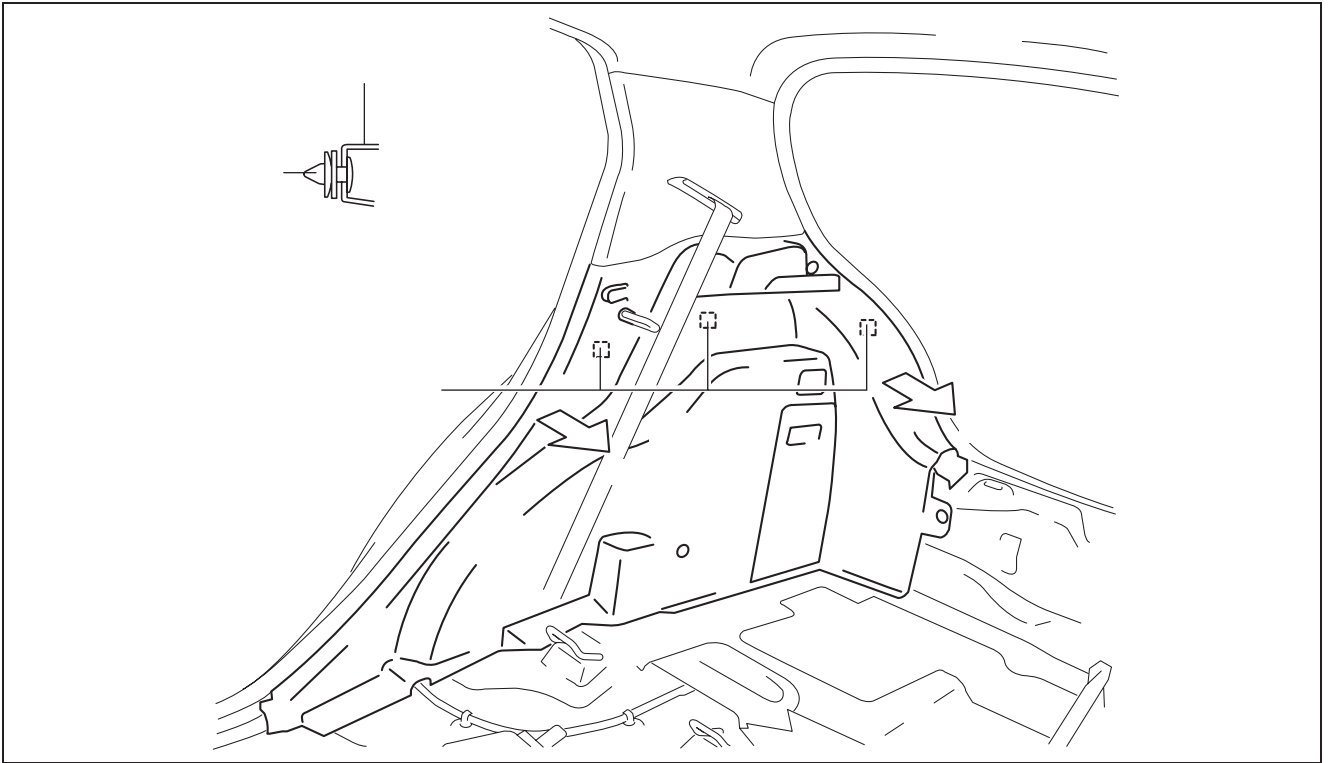
1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION)
  - (2) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION)
3. Remove the screw A and fastener B.



am2zzw0000374

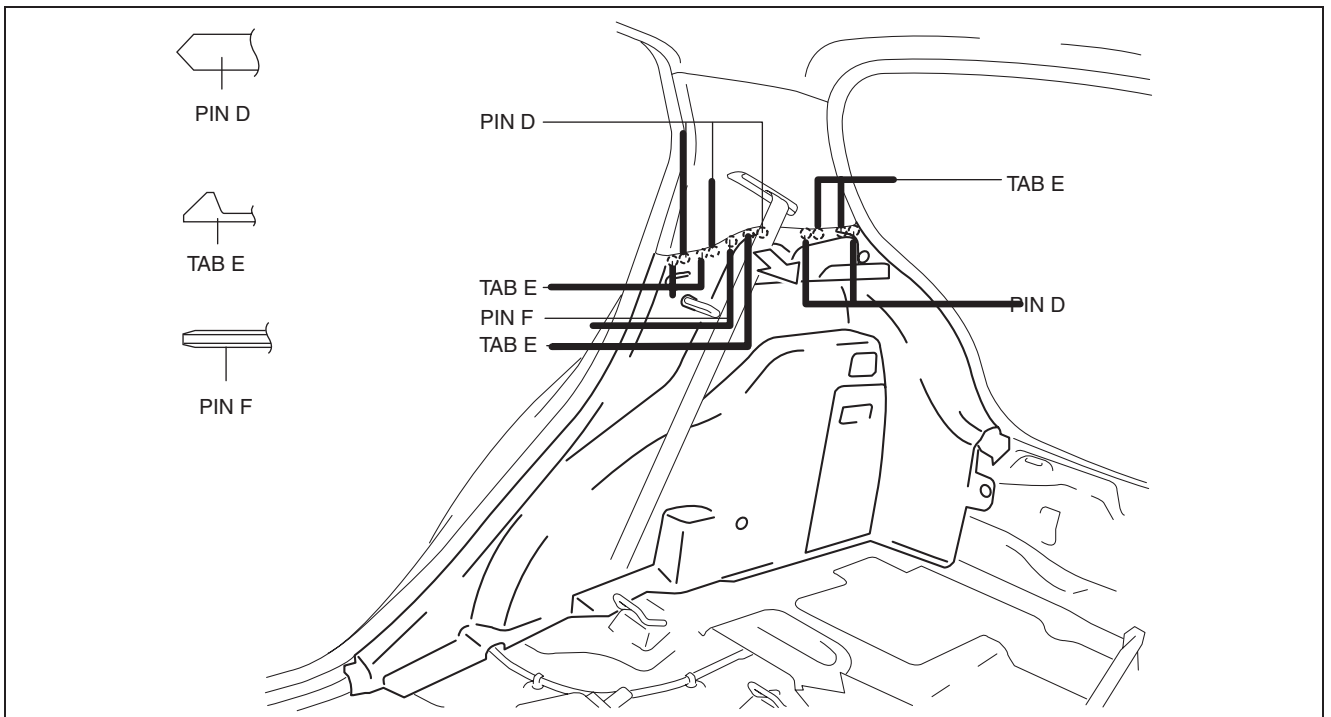
## INTERIOR TRIM

4. Pull the trunk side trim in the direction of the arrow in the order of (1) and (2), then remove the clips C.



am2zzw0000182

5. Pull the trunk side trim in the direction of the arrow in the order of (3) and remove it while detaching pins D, tabs E, and pin F.



am2zzw0000182

6. Disconnect the cargo compartment light connector.
7. Install in the reverse order of removal.

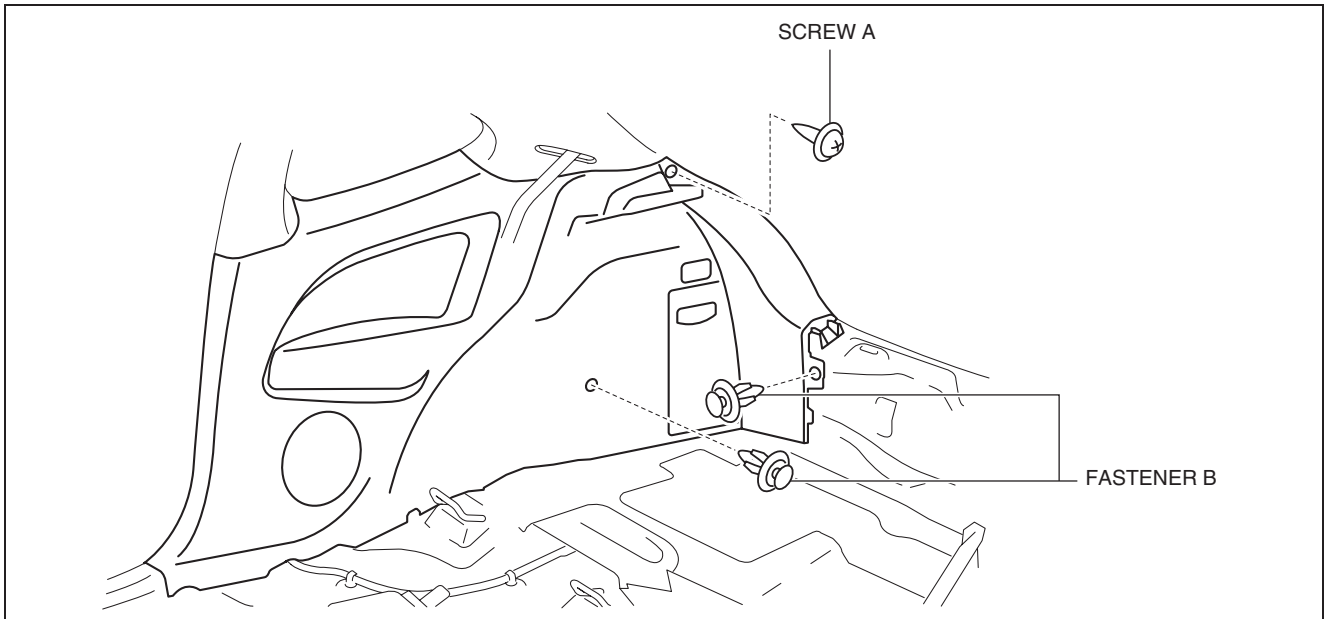
### TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB]

id0917004623z3

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)

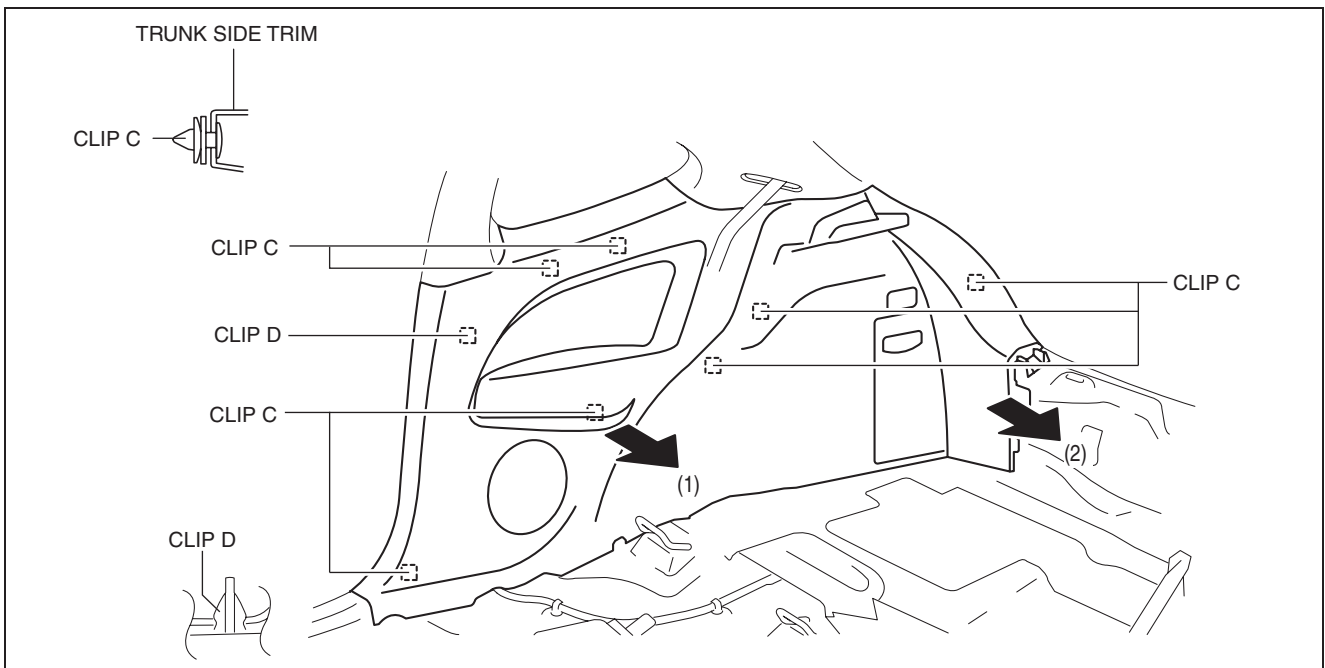
## INTERIOR TRIM

- (2) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
3. Remove the screw A and fastener B.



am2zzw0000348

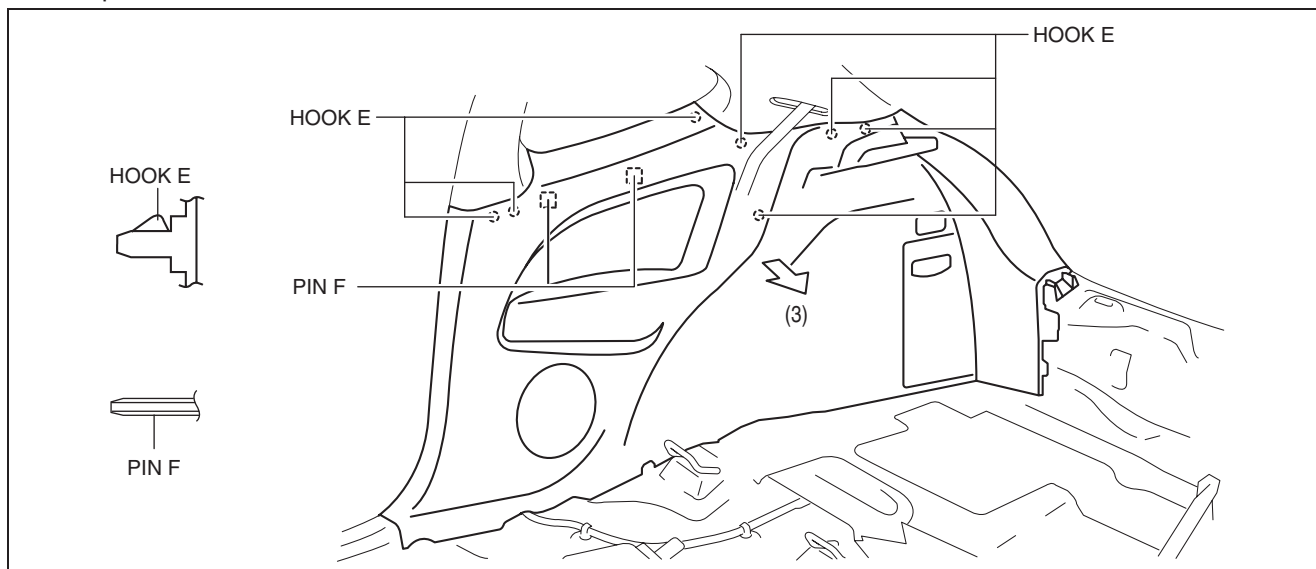
4. Pull the trunk side trim in the direction of the arrow in the order of (1) and (2), then remove the clips C and clip D.



am2zzw0000348

## INTERIOR TRIM

5. Pull the trunk side trim in the direction of the arrow in the order of (3) and remove it while detaching hooks E, and pins F.



am2zzw0000460

6. Disconnect the cargo compartment light connector.
7. Install in the reverse order of removal.

### TRUNK END TRIM REMOVAL/INSTALLATION

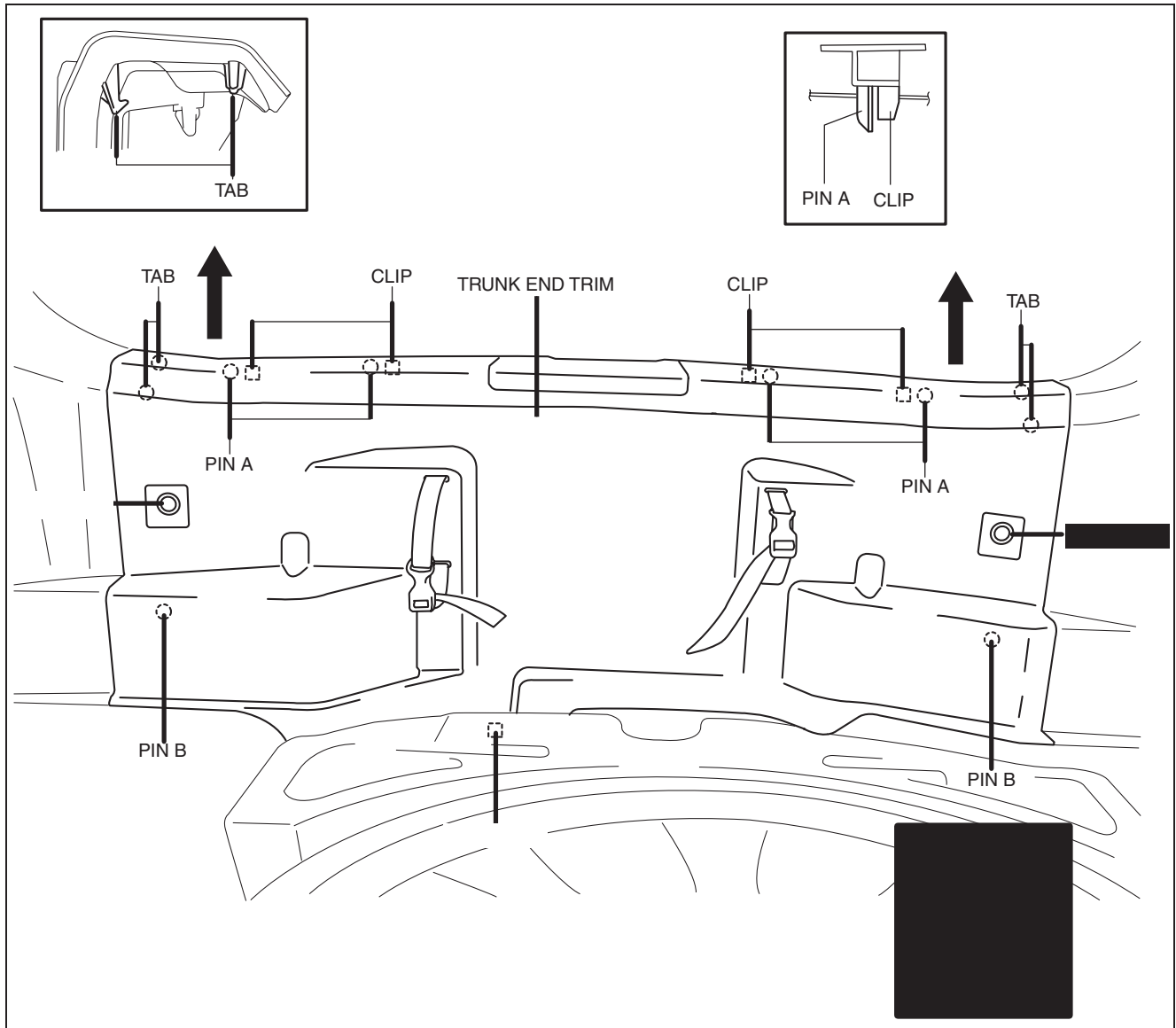
id091700462400

#### 4SD

1. Open the trunk lid.
2. Remove the trunk mat.
3. Remove the trunk board.

## INTERIOR TRIM

### 4. Remove the fasteners.



am2zzw0000519

5. Pull the trunk end trim in the direction of the arrow shown in the figure and remove it while detaching the tabs, clips, and pins A, B.
6. Install in the reverse order of removal.

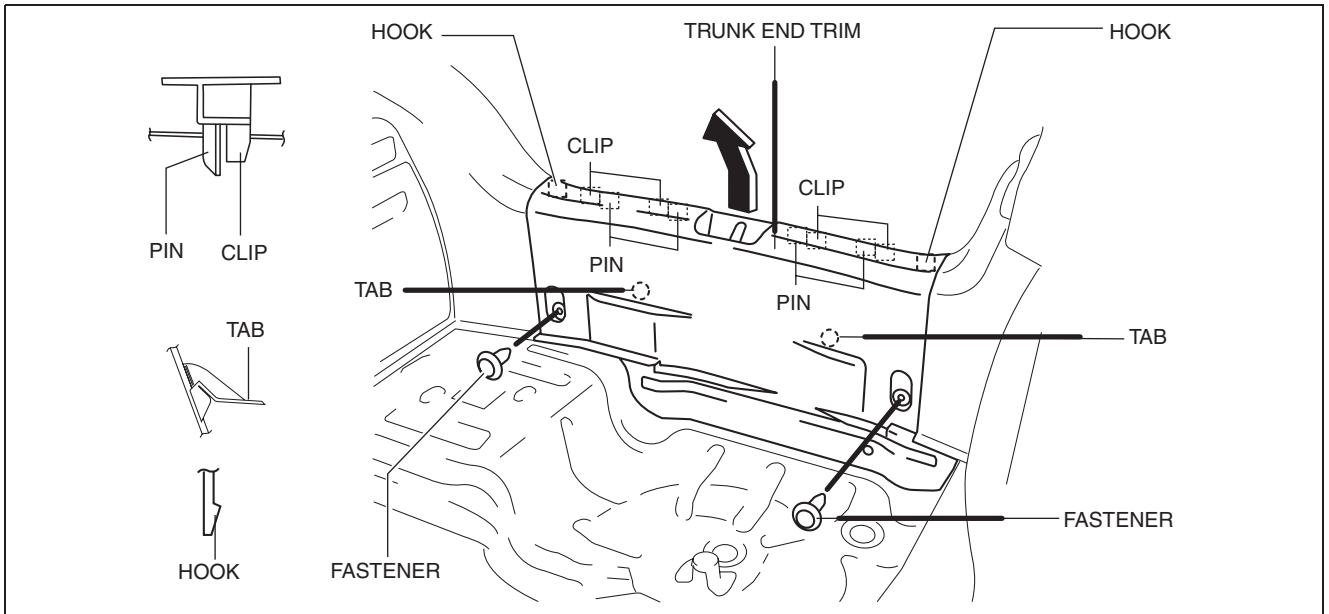
### 5HB, 3HB

1. Open the liftgate.
2. Remove the trunk mat.
3. Partially peel back the seaming welt.



## INTERIOR TRIM

4. Remove the fasteners.



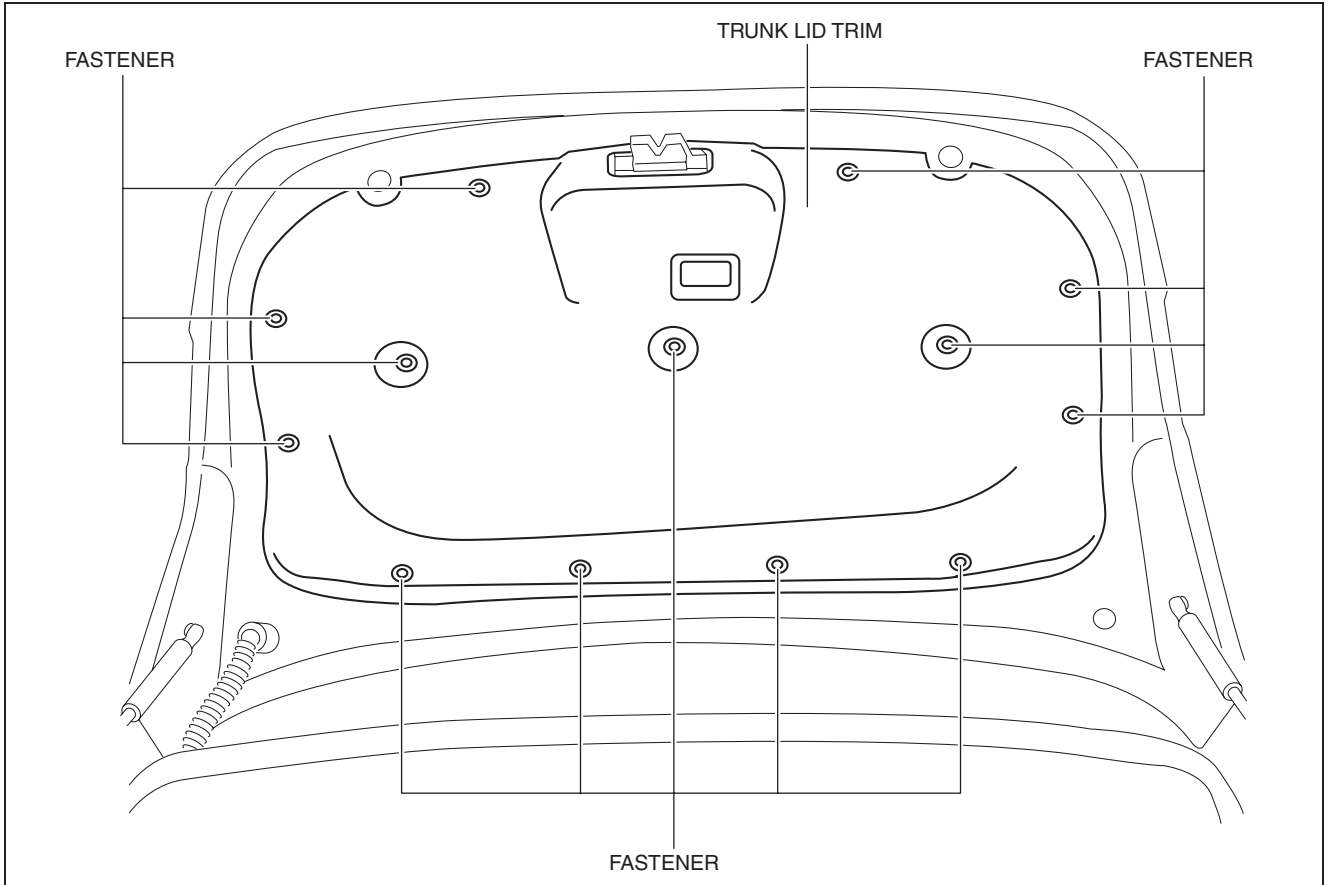
am2zzw0000184

5. Pull the trunk end trim in the direction of the arrow shown in the figure and remove it while detaching the hooks, tabs, clips, and pins.
6. Install in the reverse order of removal.

### TRUNK LID TRIM REMOVAL/INSTALLATION [4SD]

id0917008035a3

1. Open the trunk lid.
2. Remove the fasteners.



am2ccw0000016

3. Remove the trunk lid trim.

## INTERIOR TRIM

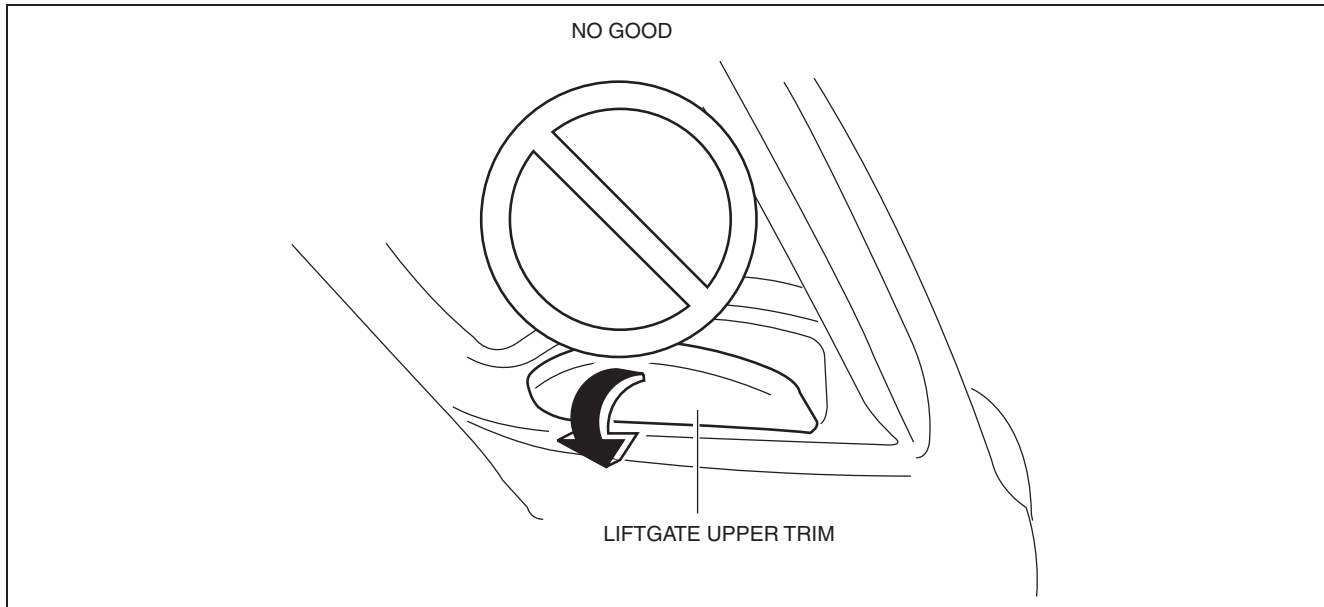
4. Install in the reverse order of removal.

### LIFTGATE UPPER TRIM REMOVAL/INSTALLATION

id091700462900

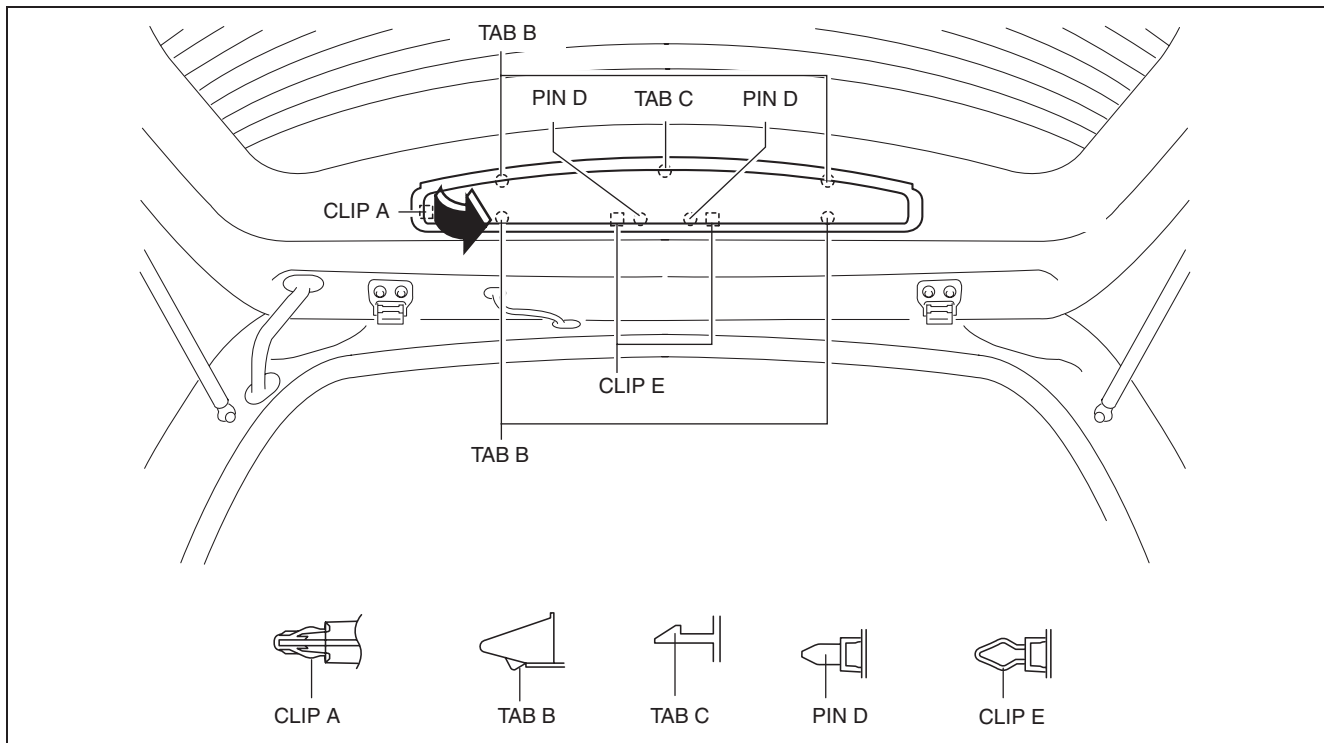
#### Caution

- Do not remove the liftgate upper trim by rotating as shown in the figure as it could damage clip A and F.



am2zzw0000357

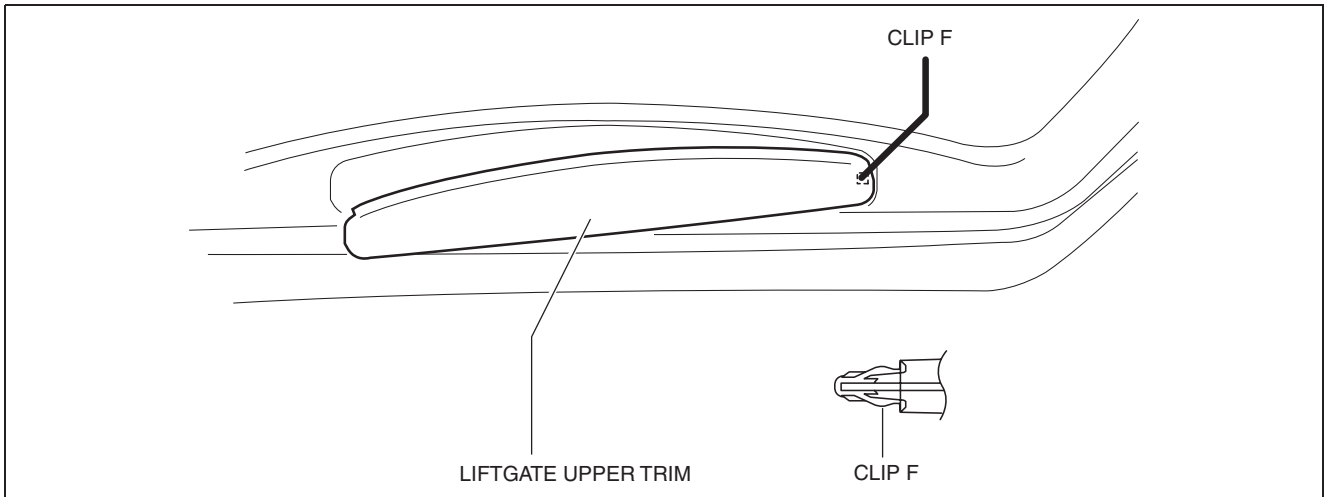
1. Pull the end of liftgate upper trim outward and detach clip A, tabs B, C, pins D, and clips E.



am2zzw0000357

## INTERIOR TRIM

2. Remove the clip F then remove the liftgate upper trim.



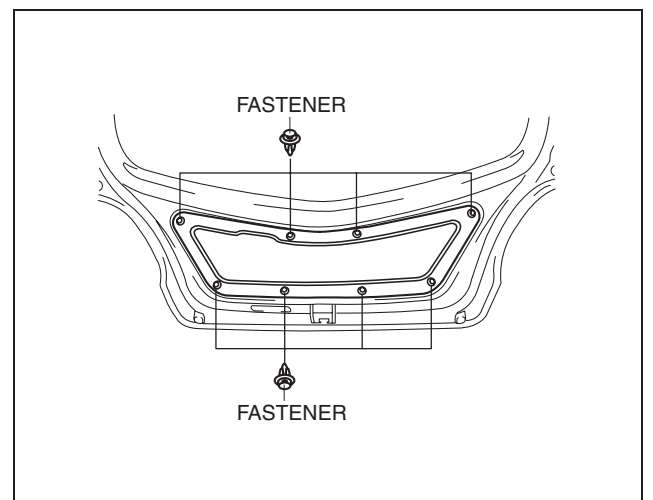
am2zzw0000357

3. Install in the reverse order of removal.

### LIFTGATE LOWER TRIM REMOVAL/INSTALLATION

id091700463100

1. Remove the fasteners.
2. Remove the liftgate lower trim.
3. Install in the reverse order of removal.

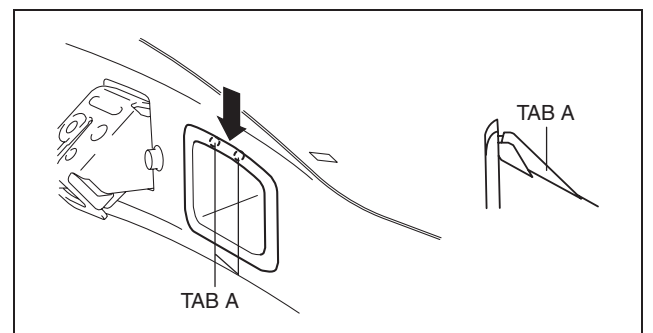


am2zzw0000185

### LIFTGATE RECESS REMOVAL/INSTALLATION

id091700467500

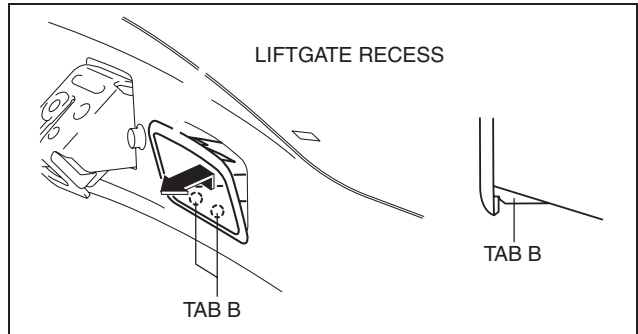
1. Insert a fastener remover in the position indicated by the arrow in the figure and detach tabs A.



am2zzw0000185

## INTERIOR TRIM

2. Remove the liftgate recess in the direction of the arrow shown in the figure avoiding tabs B.
3. Install in the reverse order of removal.

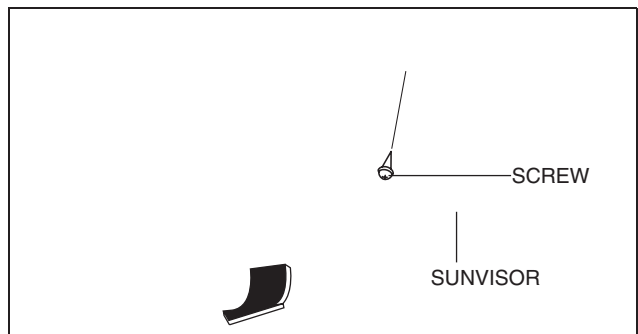


am2zzw0000503

id091700458100

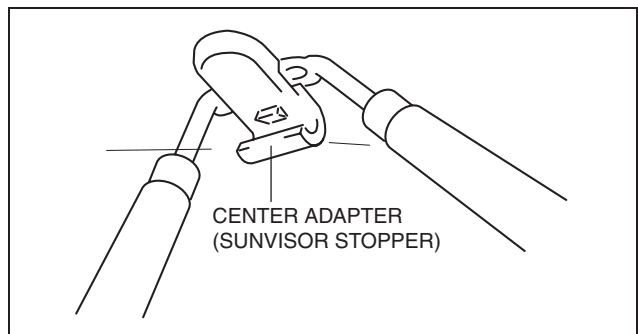
### SUNVISOR REMOVAL/INSTALLATION

1. Remove the screw, move the sunvisor in the direction of the arrow, and remove the sunvisor.



adejjw00002681

2. Remove the center adaptor (sunvisor stopper) from the body using a fastener remover.
3. Install in the reverse order of removal.



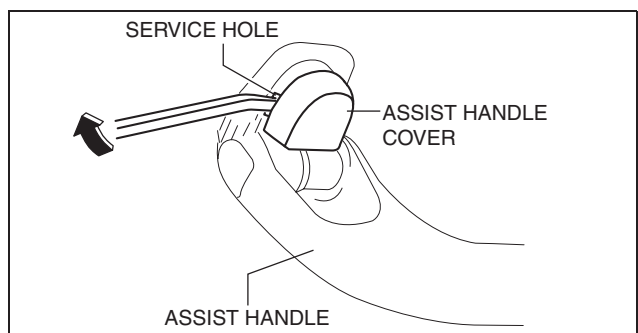
am2zzw0000186

id091700458200

### ASSIST HANDLE REMOVAL/INSTALLATION

#### Removal

1. Insert a fastener remover into the assist handle service hole and remove the assist handle cover.



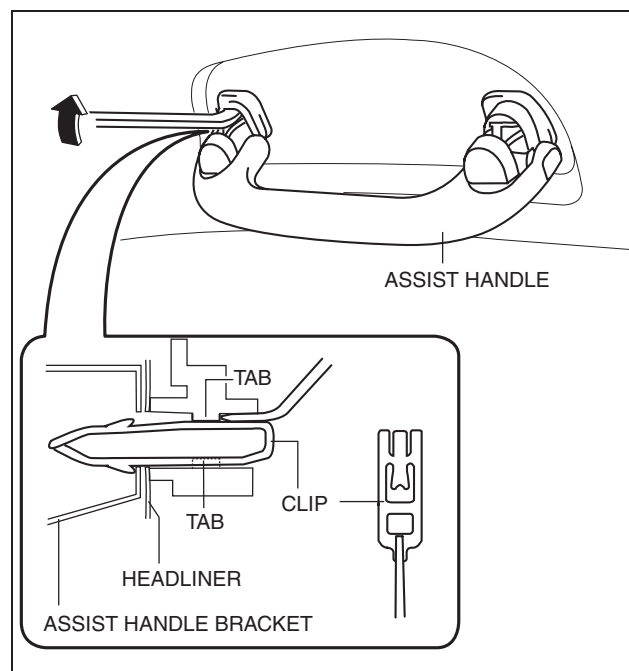
am2zzw0000186

## INTERIOR TRIM

2. Insert the fastener remover in the position indicated by the arrow shown in the figure, push down the clip by moving the fastener remover in the direction of the arrow, and remove the assist handle from the assist handle bracket while shaking the assist handle up and down.

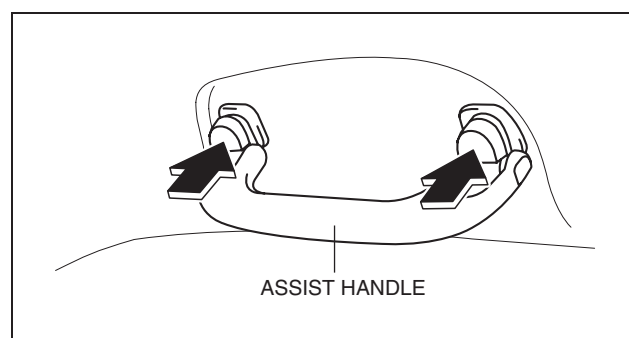
### Caution

- When inserting a fastener remover, be careful not to damage the tabs.



### Installation

1. Insert the assist handle in the assist handle bracket.
2. Push the assist handle cover in the direction of the arrow shown in the figure to install the assist handle.



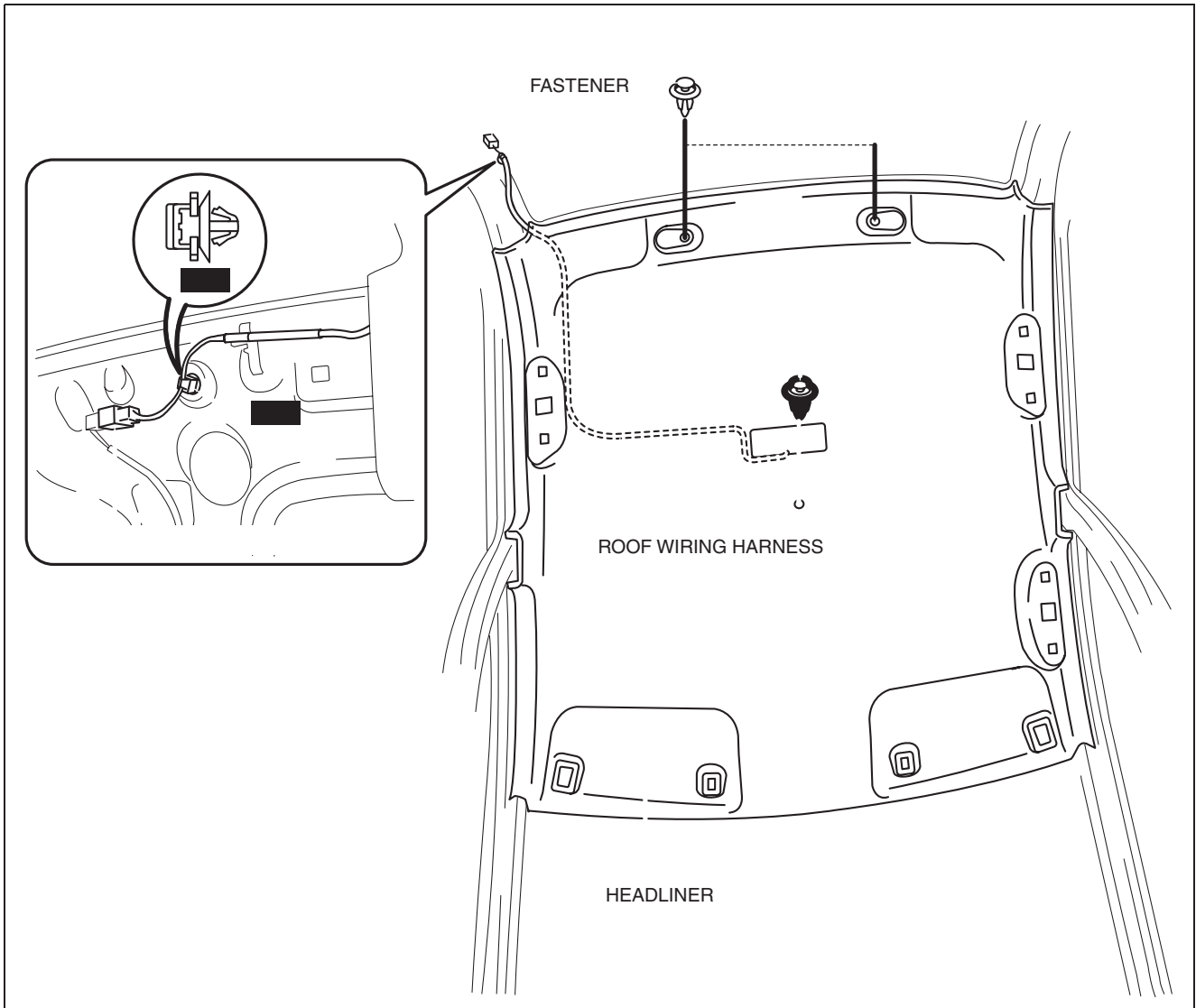
## HEADLINER REMOVAL/INSTALLATION

### 4SD

1. Disconnect the negative battery cable.
2. Partially peel back the seaming welt.
3. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (4) B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (5) Front seat belt upper anchor installation bolt
  - (6) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
  - (9) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (10) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (11) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)

## INTERIOR TRIM

4. Disconnect the roof wire link wiring harness and remove the clip.

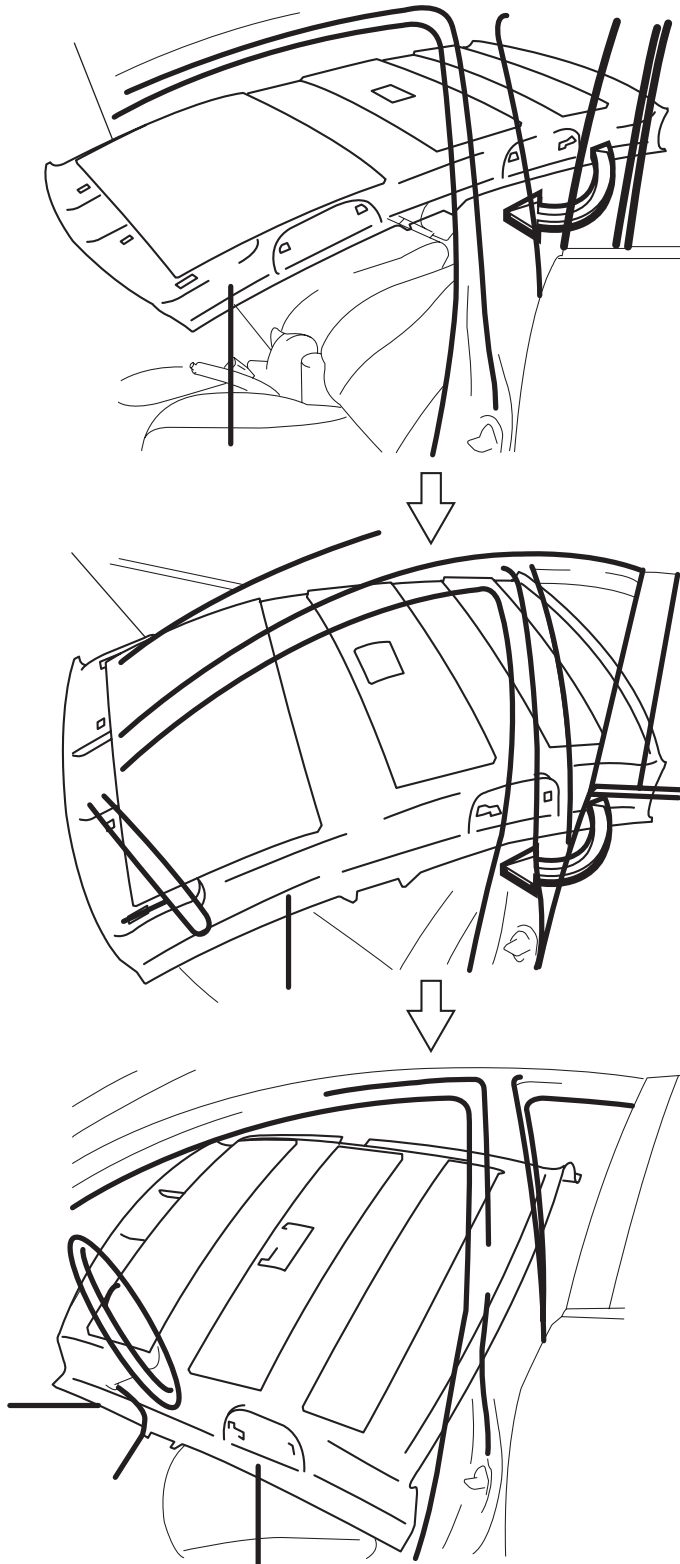


am2zzw0000503

5. Remove the fasteners.

## INTERIOR TRIM

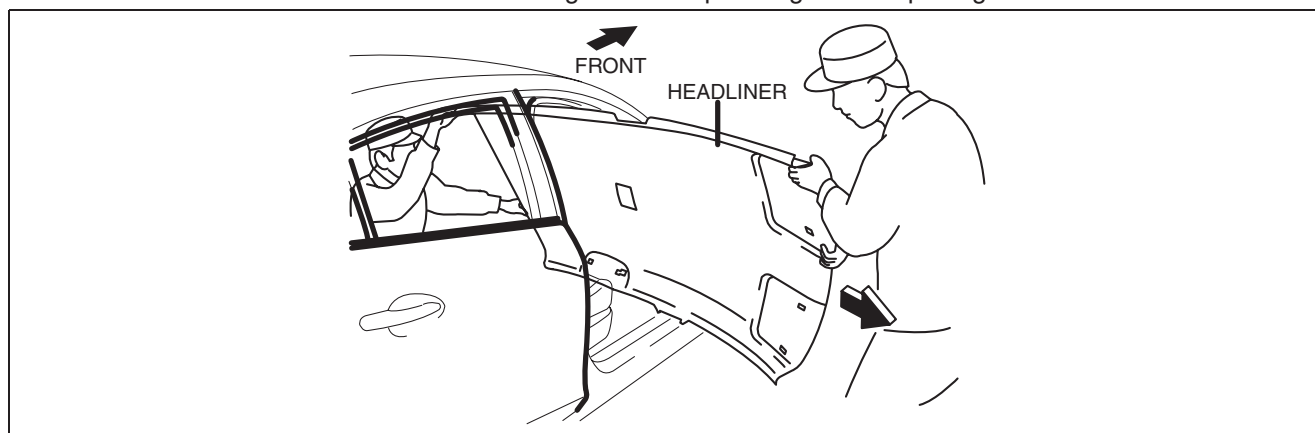
6. Open all the doors and rotate the headliner in the vehicle so that it is as shown in the figure.



am2ccw000009

## INTERIOR TRIM

7. Remove the headliner from the vehicle through the front passenger door opening.



am2ccw0000014

8. Install in the reverse order of removal.

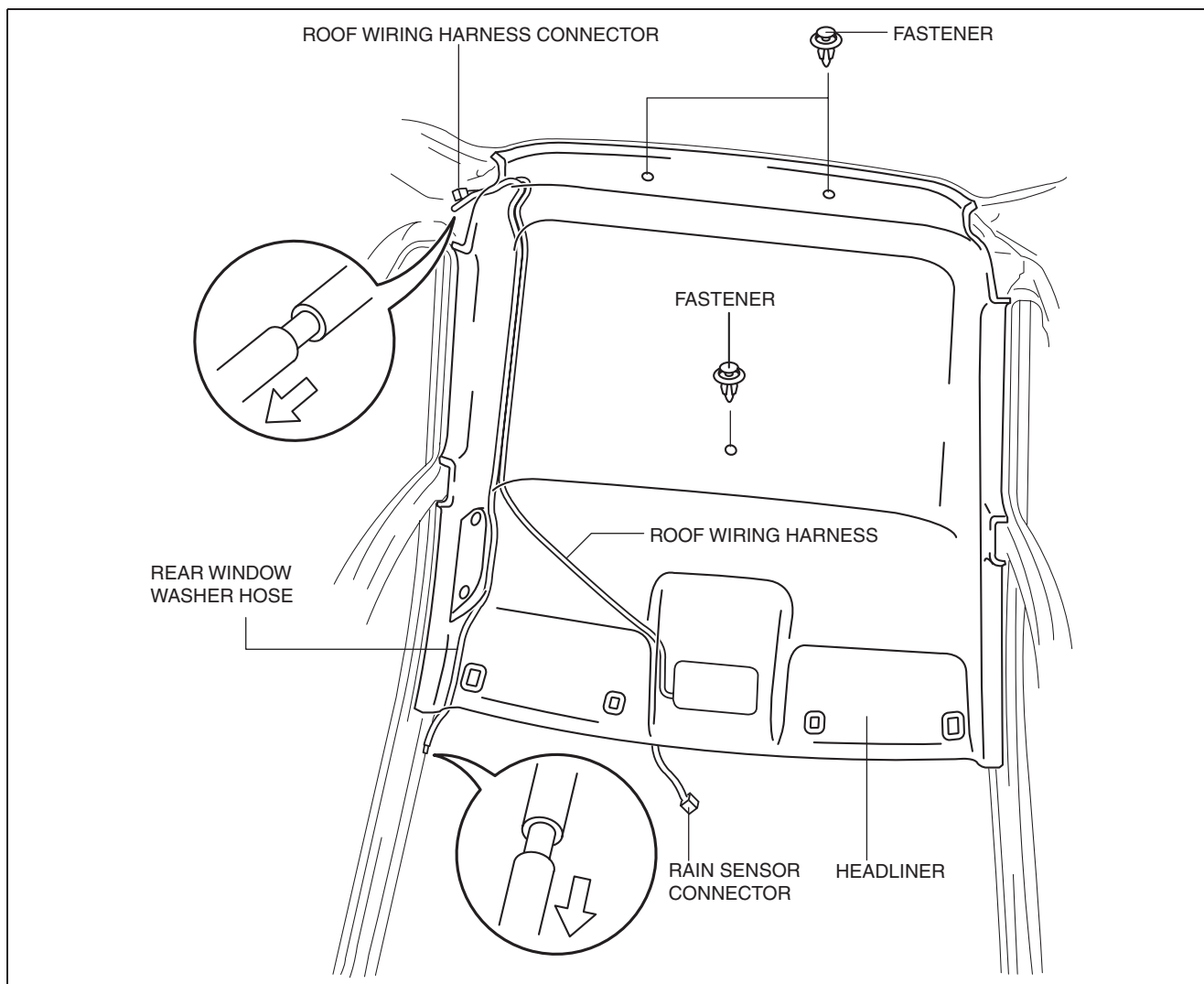
### 5HB

1. Disconnect the negative battery cable.
2. Partially peel back the seaming welt.
3. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (4) B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (5) Front seat belt upper anchor installation bolt.
  - (6) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (9) Rear seat belt lower anchor installation bolt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (10) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (11) Trunk side trim (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
  - (12) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (13) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (14) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (15) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
4. Disconnect the rain sensor connector (vehicles with auto light / wiper system).



## INTERIOR TRIM

5. Disconnect the rear window washer hose.

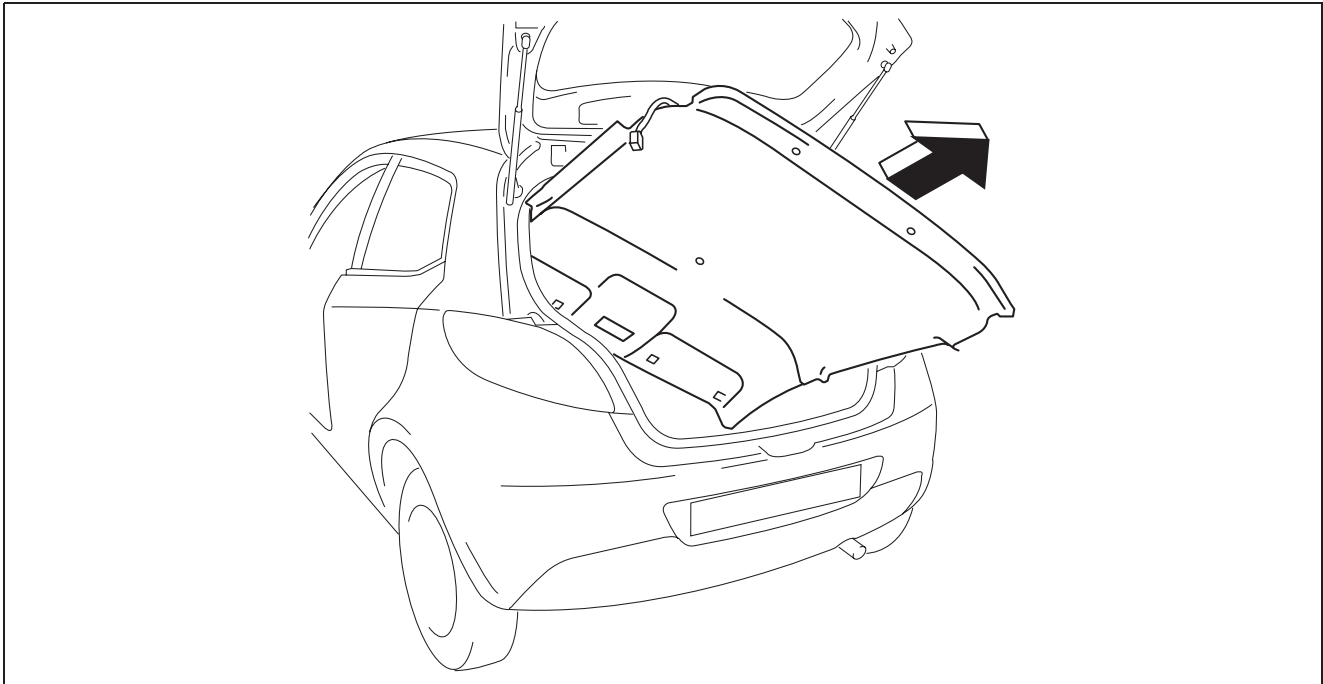


6. Disconnect the roof wiring harness connector.

7. Remove the fasteners.

## INTERIOR TRIM

8. Take the headliner out from the opened liftgate.



am2zzw0000491

9. Install in the reverse order of removal.

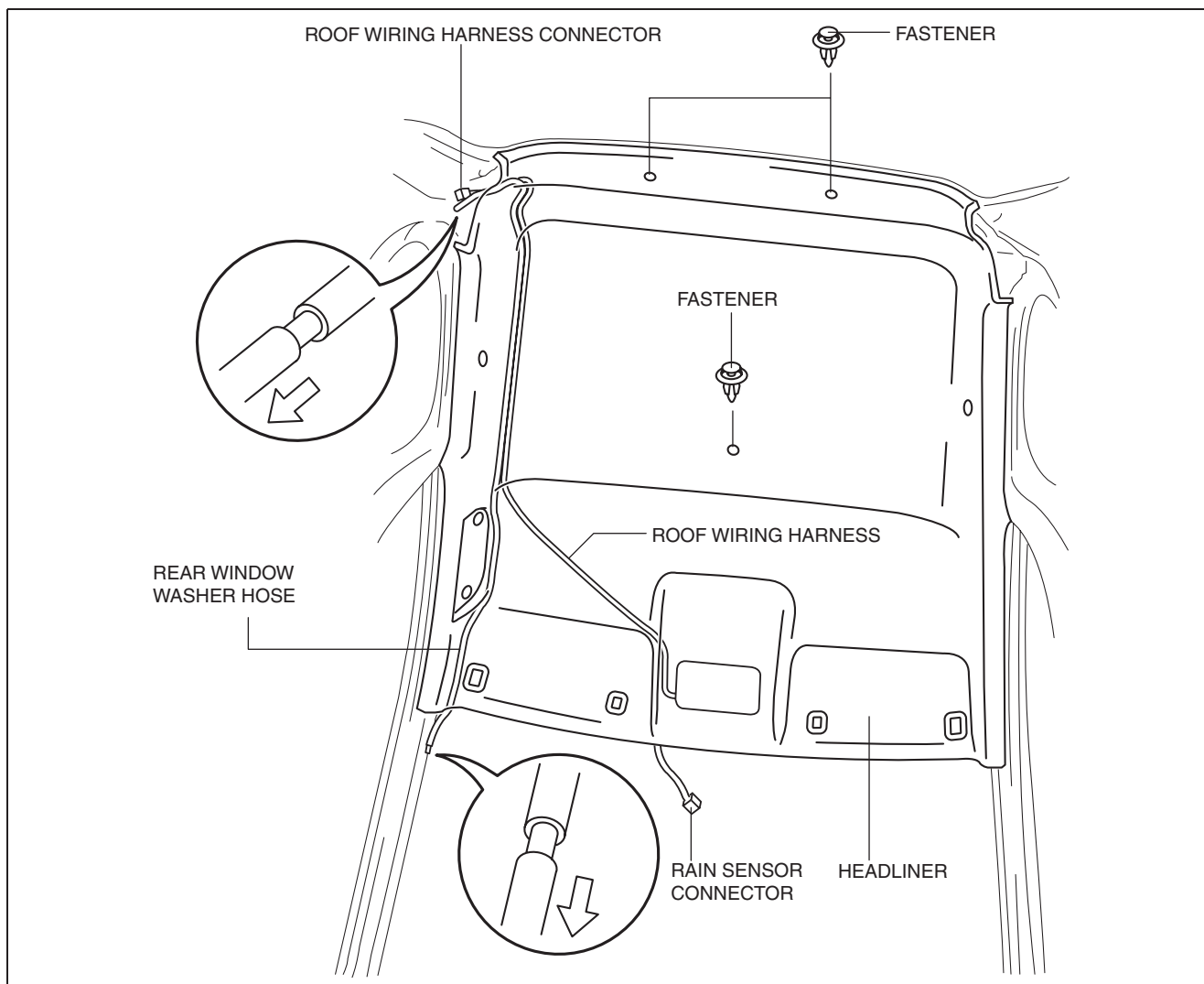
### HEADLINER REMOVAL/INSTALLATION [3HB]

id0917004583z3

1. Disconnect the negative battery cable.
2. Partially peel back the seaming welt.
3. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (5) Rear seat belt lower anchor installation bolt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (6) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (7) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (8) C-pillar trim (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (9) Front seat belt upper anchor installation bolt.
  - (10) B-pillar upper trim (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (11) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (12) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (13) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
4. Disconnect the rain sensor connector (vehicles with auto light / wiper system).

## INTERIOR TRIM

5. Disconnect the rear window washer hose.

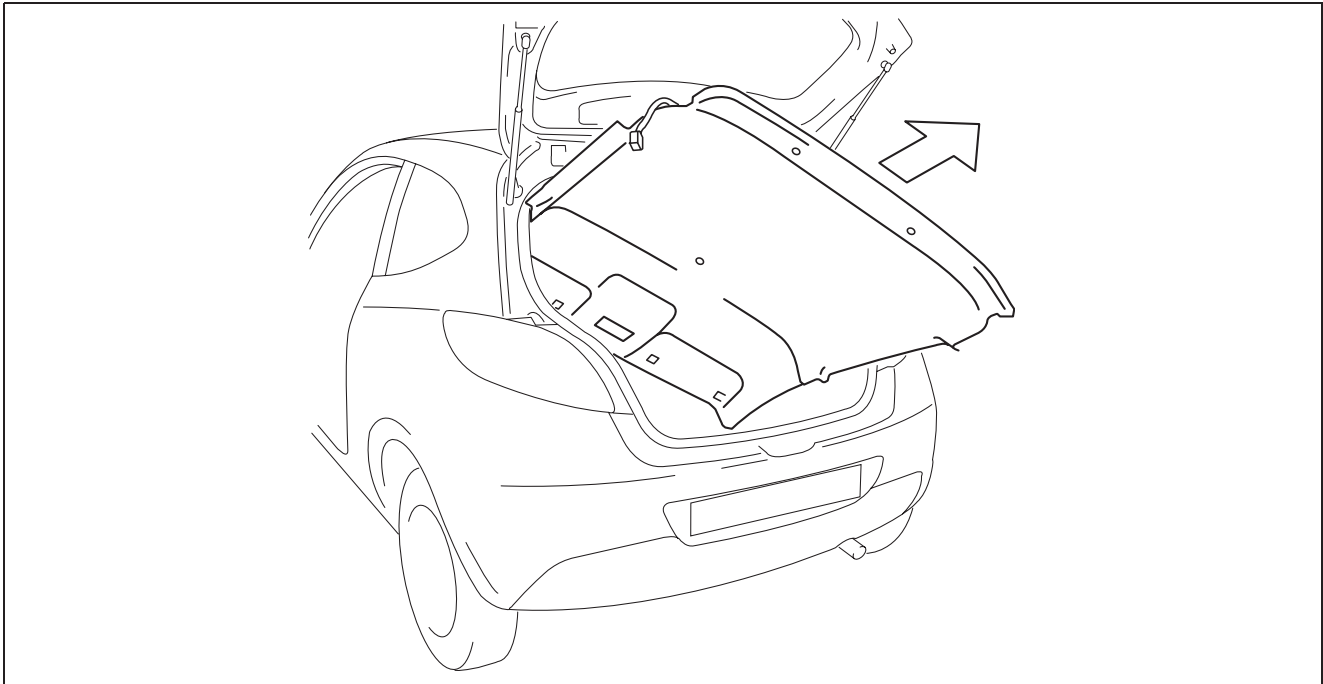


am2zzw0000341

6. Disconnect the roof wiring harness connector.
7. Remove the fasteners.

## INTERIOR TRIM

8. Take the headliner out from the opened liftgate.



am2zzw0000341

9. Install in the reverse order of removal.

### SHOCK ABSORBING PAD REMOVAL/INSTALLATION

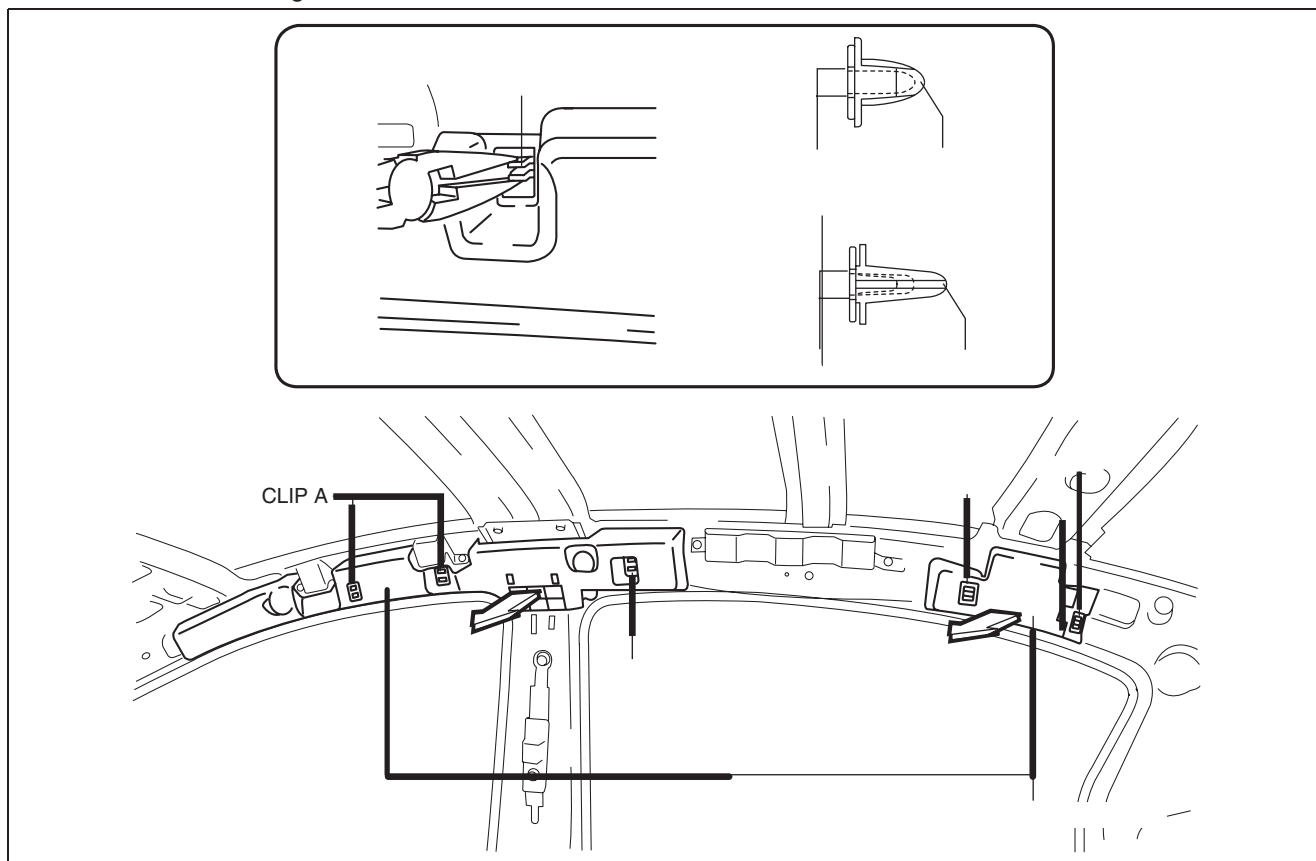
id091700453300

#### 4SD

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (4) B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (5) Front seat belt upper anchor installation bolt
  - (6) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Tire house trim (See 09-17-66 TIRE HOUSE TRIM REMOVAL/INSTALLATION [4SD].)
  - (9) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (10) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (11) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (12) Headliner (See 09-17-81 HEADLINER REMOVAL/INSTALLATION.)

## INTERIOR TRIM

3. Pinch the tab using pincers, remove clips A and B, then remove the shock-absorbing pad in the direction of the arrow shown in the figure.



am2ccw0000003

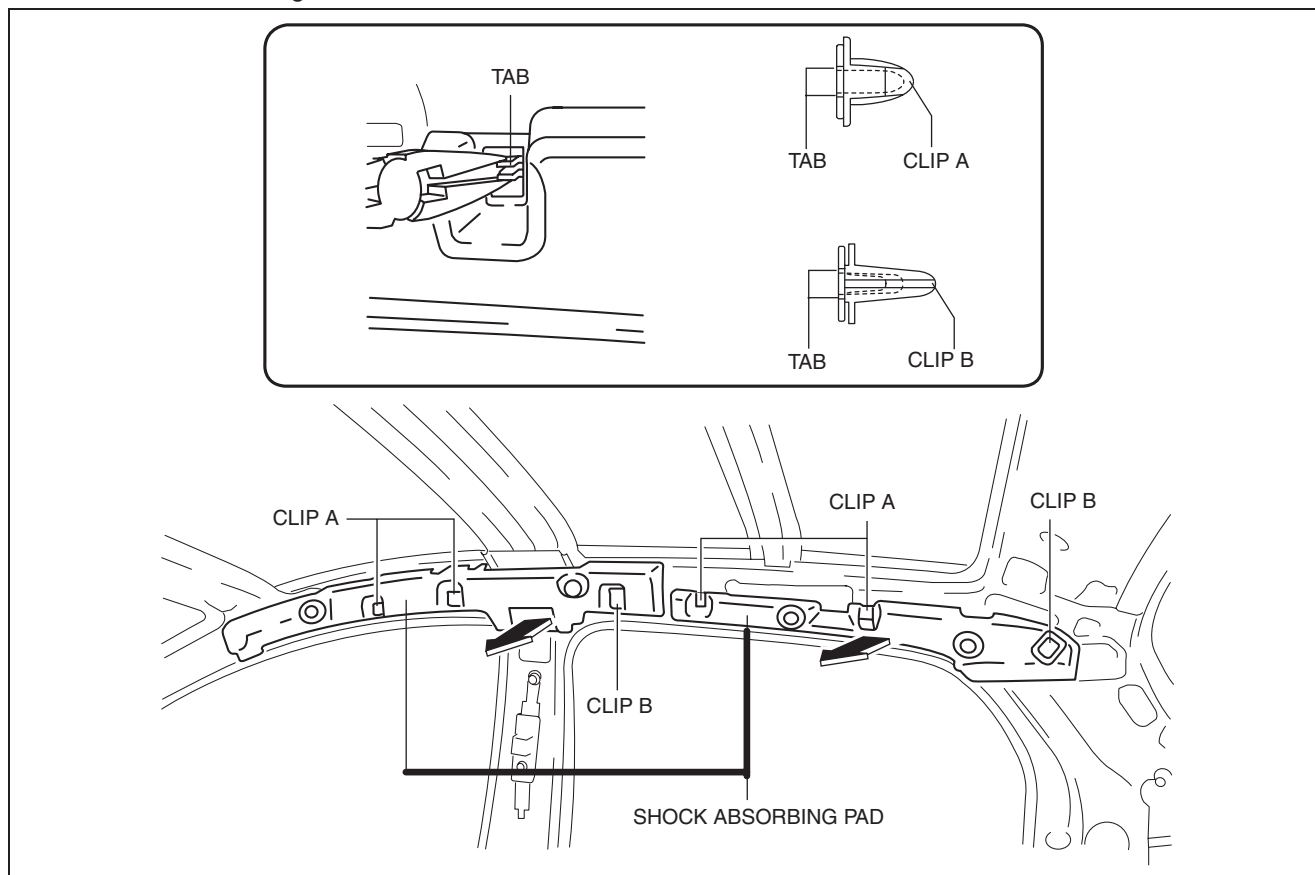
4. Install in the reverse order of removal.

### 5HB

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (4) B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (5) Front seat belt upper anchor installation bolt.
  - (6) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (9) Rear seat belt lower anchor installation bolt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (10) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (11) Trunk side trim (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
  - (12) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (13) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (14) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (15) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (16) Headliner (See 09-17-81 HEADLINER REMOVAL/INSTALLATION.)

## INTERIOR TRIM

3. Pinch the tab using pincers, remove clips A and B, then remove the shock-absorbing pad in the direction of the arrow shown in the figure.



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4. Install in the reverse order of removal.

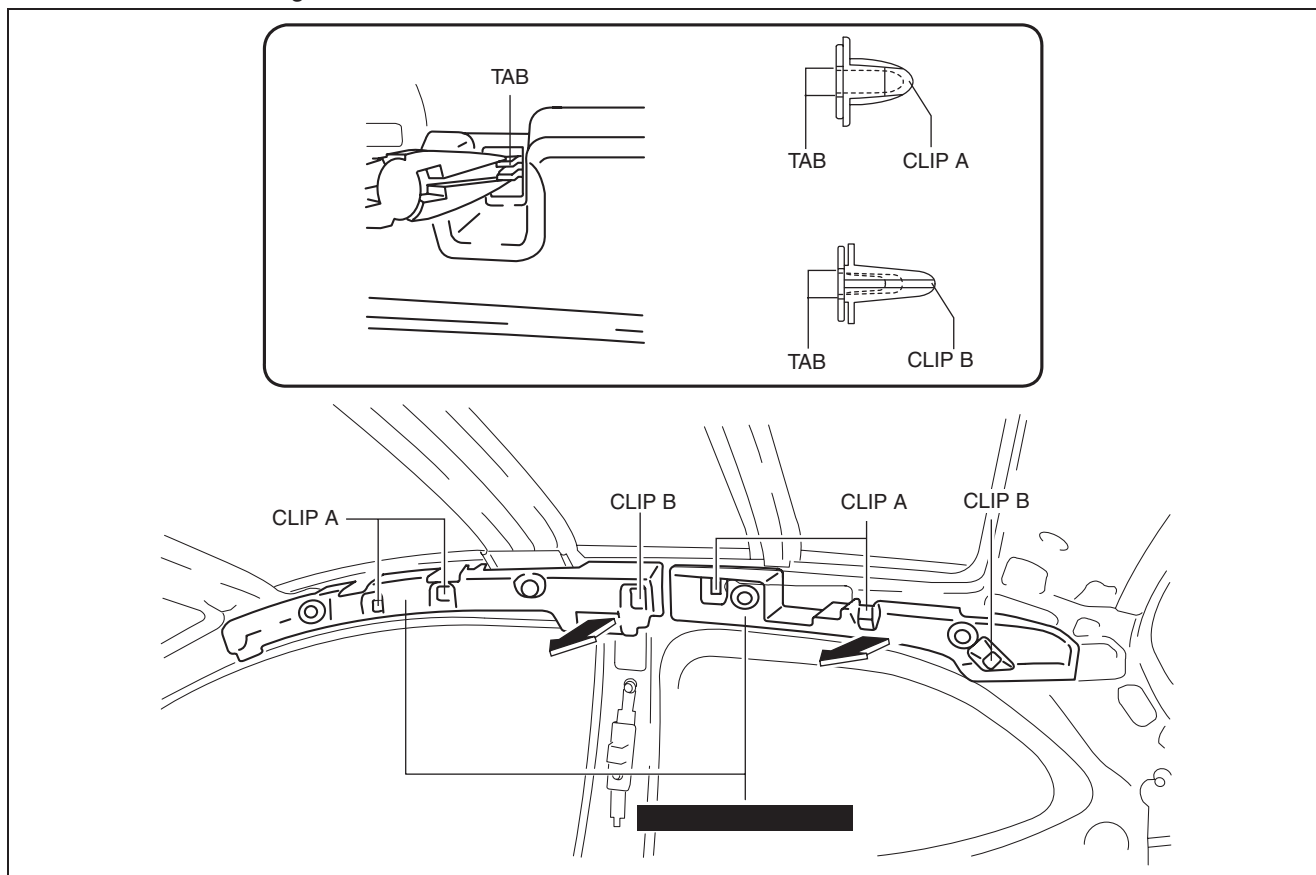
### SHOCK ABSORBING PAD REMOVAL/INSTALLATION [3HB]

id0917004533z3

1. Remove the following parts:
- (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (3) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (4) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (5) Rear seat belt lower anchor installation bolt (See 08-11-5 REAR SEAT BELT REMOVAL/INSTALLATION.)
  - (6) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (7) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (8) C-pillar trim (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (9) Front seat belt upper anchor installation bolt
  - (10) B-pillar upper trim (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (11) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (12) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (13) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (14) Headliner (See 09-17-86 HEADLINER REMOVAL/INSTALLATION [3HB].)

## INTERIOR TRIM

- Pinch the tab using pincers, remove clips A and B, then remove the shock-absorbing pad in the direction of the arrow shown in the figure.



am2zzw0000340

- Install in the reverse order of removal.

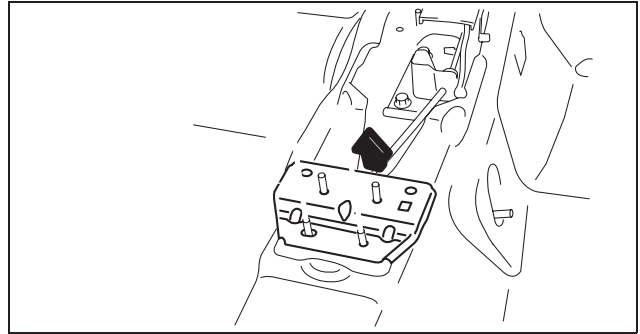
## FLOOR COVERING REMOVAL/INSTALLATION

id091700461900

- Disconnect the negative battery cable.
- Remove the following parts:
  - Front seat (See 09-13-4 FRONT SEAT REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - Rear console (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
  - Steering shaft cover (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - Front side garnish (CVT) (See 09-17-55 FRONT SIDE GARNISH REMOVAL/INSTALLATION.)
  - B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - Lower anchor installation bolts on the front seat belt.

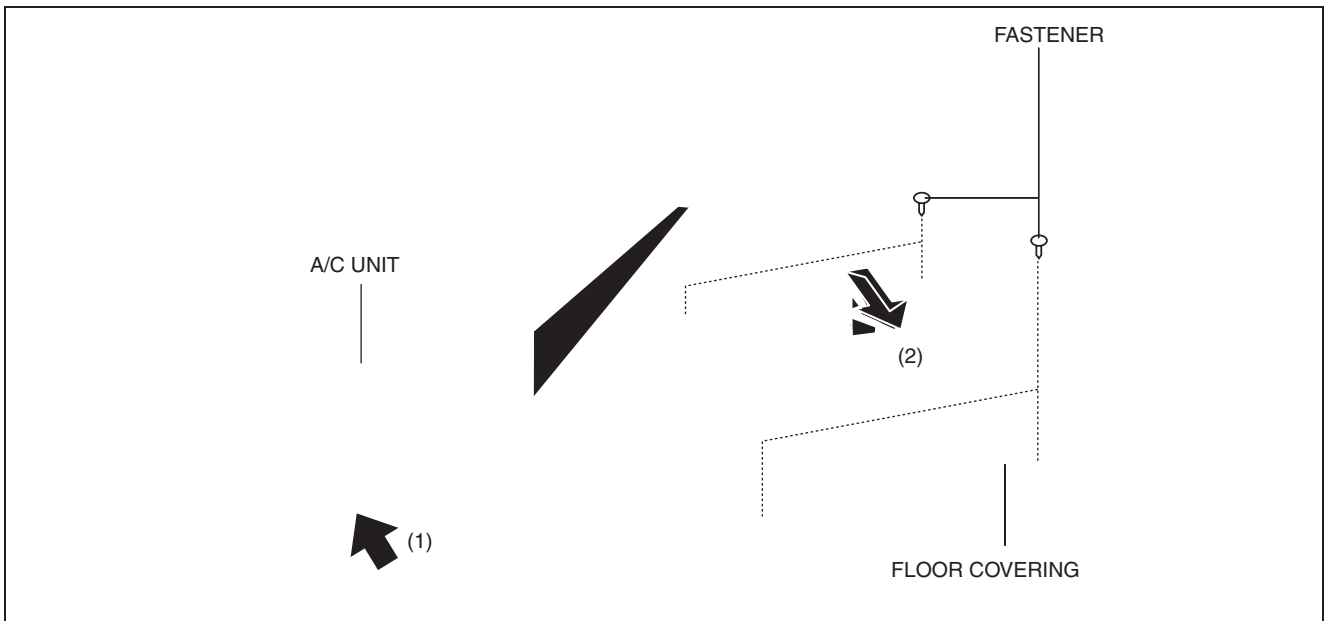
## INTERIOR TRIM

3. Remove the nuts, then remove the rear console bracket in the direction of the arrow shown in the figure.
4. Cut the floor covering at the position indicated by the arrow (1) in the figure using scissors, detach the fasteners, then remove the floor covering in the direction of the arrow (2).



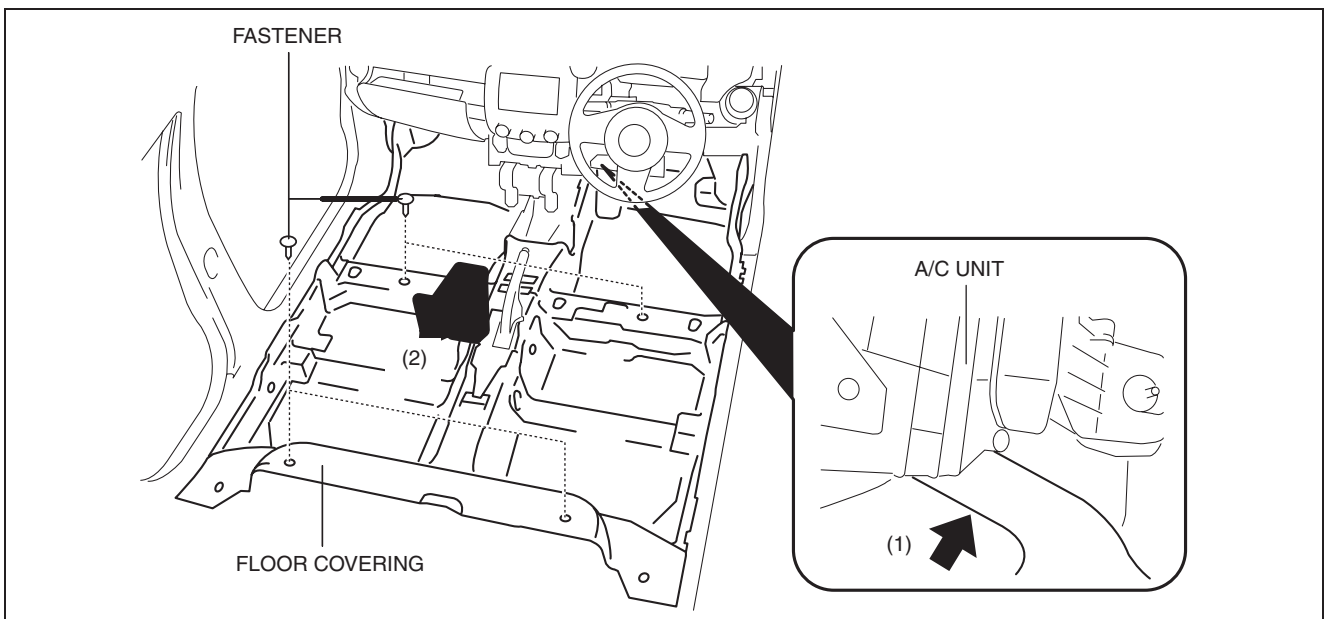
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### L.H.D.



am2zzw0000187

### R.H.D.



am2zzw0000187

#### Note

- The cut part does not need to match up when installing the floor covering.



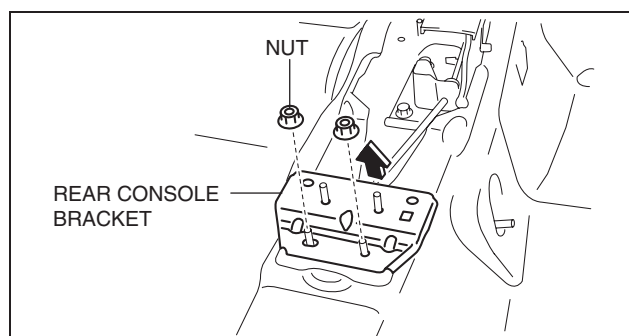
## INTERIOR TRIM

5. Take the floor covering out from the opened liftgate.
6. Install in the reverse order of removal.

### FLOOR COVERING REMOVAL/INSTALLATION [3HB]

id0917004619z3

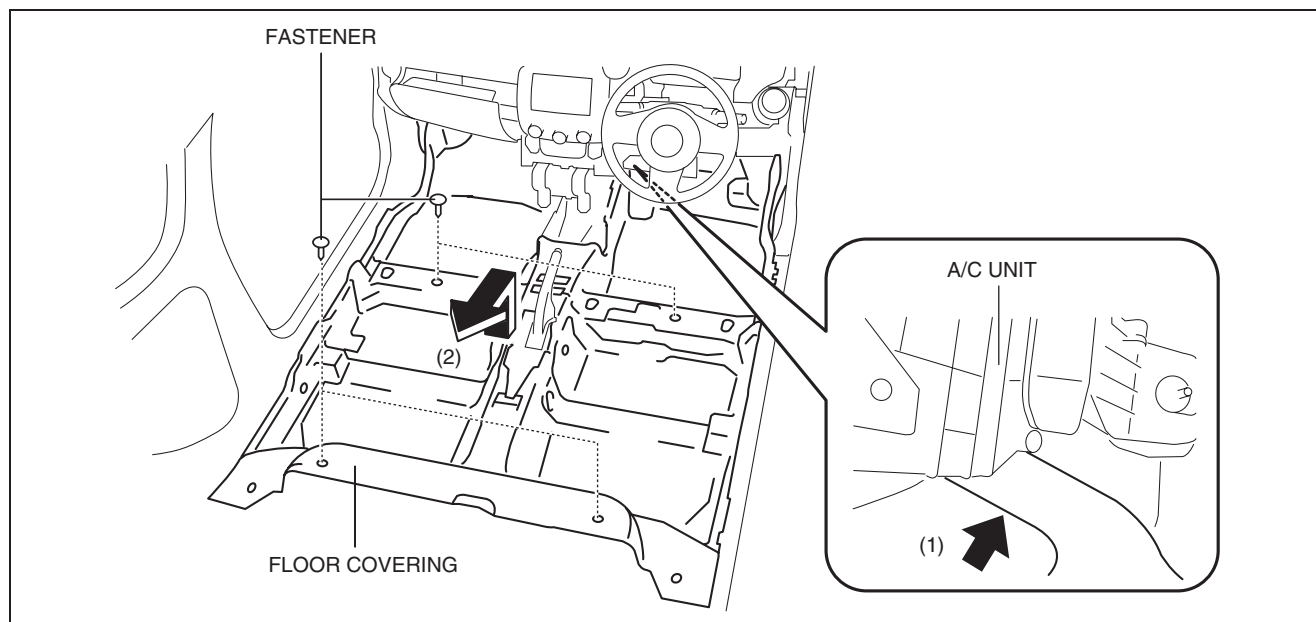
1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front seat (See 09-13-6 FRONT SEAT REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (3) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (4) Front side trim (See 09-17-55 FRONT SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (5) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].)  
) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (6) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (7) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (8) Rear console (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
  - (9) Steering shaft cover (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (10) Rear seat back (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (11) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (12) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (13) Lower anchor installation bolts on the front seat belt
3. Remove the nuts, then remove the rear console bracket in the direction of the arrow shown in the figure.
4. Cut the floor covering at the position indicated by the arrow (1) in the figure using scissors, detach the fasteners, then remove the floor covering in the direction of the arrow (2).



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## INTERIOR TRIM

R.H.D.



am2zzw0000342

### Note

- The cut part does not need to match up when installing the floor covering.

5. Take the floor covering out from the opened liftgate.
6. Install in the reverse order of removal.

## **09-18 LIGHTING SYSTEMS**

### **LIGHTING SYSTEMS LOCATION**

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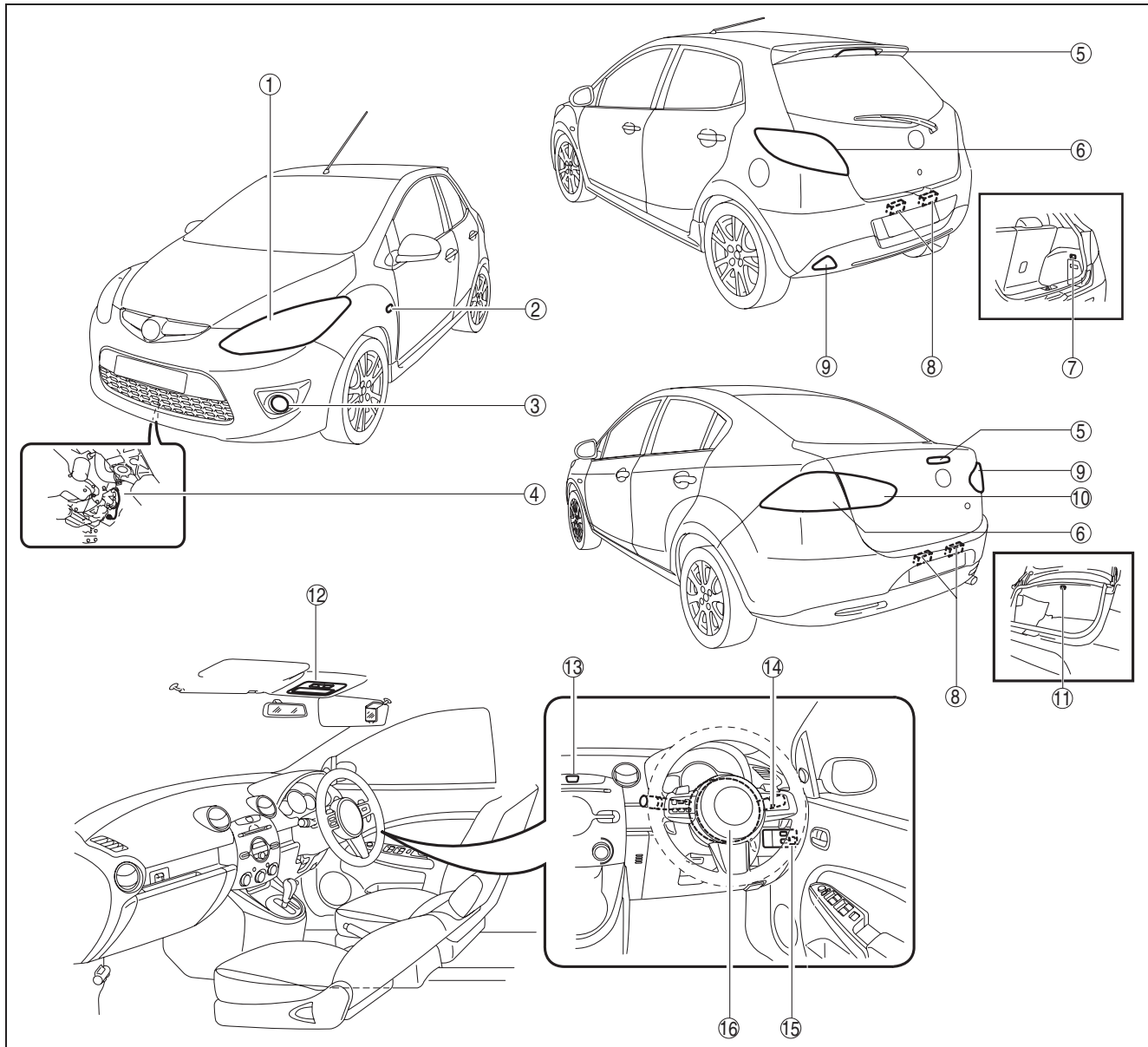
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## LIGHTING SYSTEMS

### LIGHTING SYSTEMS LOCATION INDEX

R.H.D.



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|   |                                                                                                                                                                 |
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## LIGHTING SYSTEMS

|    |                                                                                                                                                                                                                       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7  | Cargo compartment light<br>(See 09-18-46 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)<br>(See 09-18-46 CARGO COMPARTMENT LIGHT BULB REMOVAL/INSTALLATION.)<br>(See 09-18-46 CARGO COMPARTMENT LIGHT INSPECTION.)    |
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| 9  | Rear fog light<br>(See 09-18-26 REAR FOG LIGHT REMOVAL/INSTALLATION.)<br>(See 09-18-27 REAR FOG LIGHT BULB REMOVAL/INSTALLATION.)                                                                                     |
| 10 | Inboard light<br>(See 09-18-25 INBOARD LIGHT REMOVAL/INSTALLATION [4SD].)<br>(See 09-18-26 INBOARD LIGHT BULB REMOVAL/INSTALLATION [4SD].)                                                                            |
| 11 | Trunk compartment Light<br>(See 09-18-47 TRUNK COMPARTMENT LIGHT REMOVAL/INSTALLATION [4SD].)                                                                                                                         |
| 12 | Interior light<br>(See 09-18-43 INTERIOR LIGHT REMOVAL/INSTALLATION.)<br>(See 09-18-44 INTERIOR LIGHT INSPECTION.)<br>(See 09-18-44 INTERIOR LIGHT BULB REMOVAL/INSTALLATION.)                                        |
| 13 | Hazard warning switch<br>(See 09-18-40 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.)<br>(See 09-18-41 HAZARD WARNING SWITCH INSPECTION.)                                                                               |
| 14 | Light switch<br>(See 09-18-35 LIGHT SWITCH REMOVAL/INSTALLATION.)<br>(See 09-18-35 LIGHT SWITCH INSPECTION.)<br>(See 09-18-38 FRONT FOG LIGHT SWITCH INSPECTION.)<br>(See 09-18-39 REAR FOG LIGHT SWITCH INSPECTION.) |
| 15 | Headlight leveling switch<br>(See 09-18-41 HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION.)<br>(See 09-18-42 HEADLIGHT LEVELING SWITCH INSPECTION.)                                                                   |
| 16 | Combination switch<br>(See 09-18-32 COMBINATION SWITCH REMOVAL/INSTALLATION.)<br>(See 09-18-34 COMBINATION SWITCH DISASSEMBLY/ASSEMBLY.)                                                                              |

### FRONT COMBINATION LIGHT REMOVAL/INSTALLATION

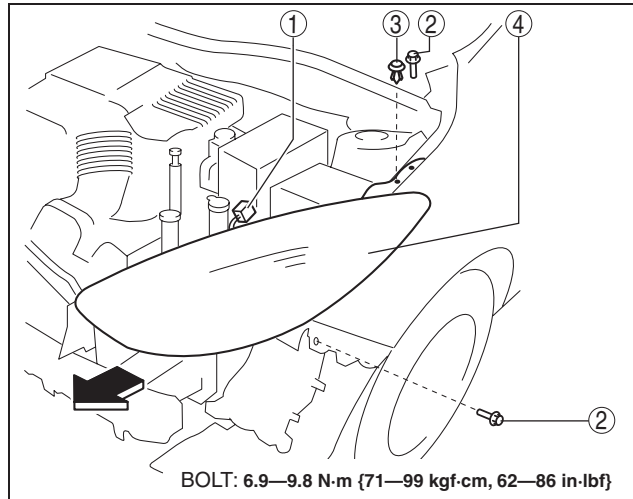
id091800800700

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

## LIGHTING SYSTEMS

|   |                         |
|---|-------------------------|
| 1 | Connector               |
| 2 | Bolt                    |
| 3 | Fastener                |
| 4 | Front combination light |

4. Install in the reverse order of removal.
5. Adjust the headlight aiming. (See 09-18-7 HEADLIGHT AIMING.)



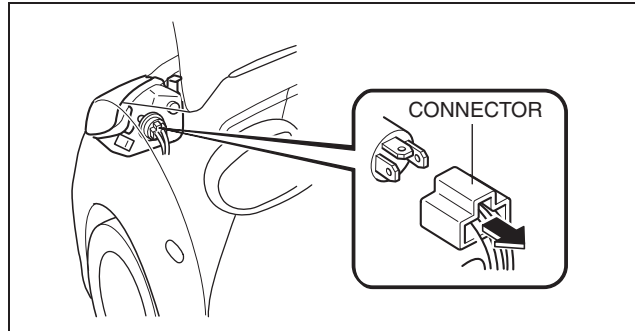
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### HEADLIGHT BULB REMOVAL/INSTALLATION

#### 2-Beam Type Headlight

1. Disconnect the negative battery cable.
2. Disconnect the connector.

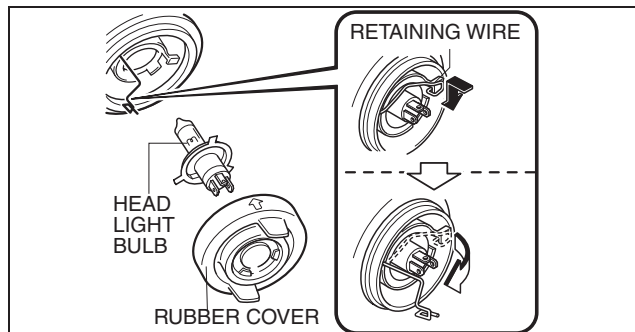


am2zzw0000248

3. Remove the rubber cover.
4. Press the bulb retaining wire in the direction of the arrow to release the lock.
5. Remove the headlight bulb.

#### Caution

- A bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, heat of higher temperature than normal will build, shortening the life of the bulb. When replacing the bulb, hold the metal flange, not the glass.



am2zzw0000248

6. Install in the reverse order of removal.

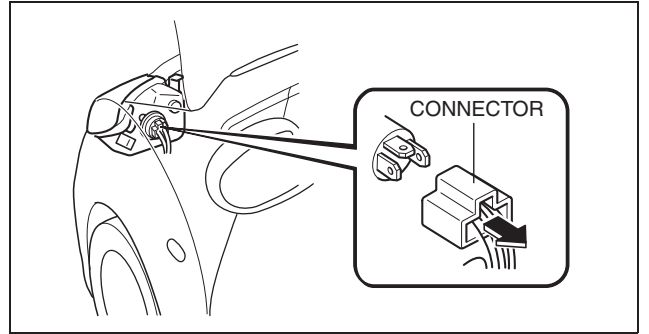
#### 4-Beam Type Headlight

##### Low-beam

1. Disconnect the negative battery cable.

## LIGHTING SYSTEMS

2. Disconnect the connector.

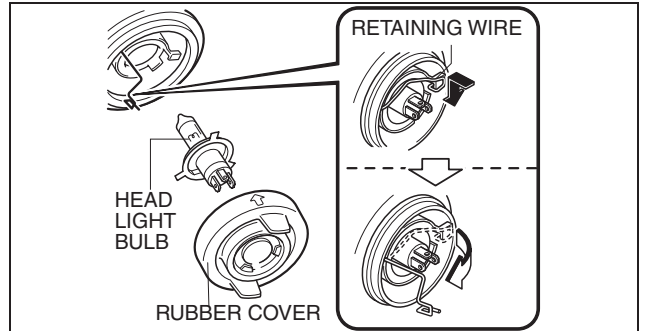


am2zzw0000248

3. Remove the rubber cover.
4. Press the bulb retaining wire in the direction of the arrow to release the lock.
5. Remove the headlight bulb.

### Caution

- A bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, heat of higher temperature than normal will build, shortening the life of the bulb. When replacing the bulb, hold the metal flange, not the glass.



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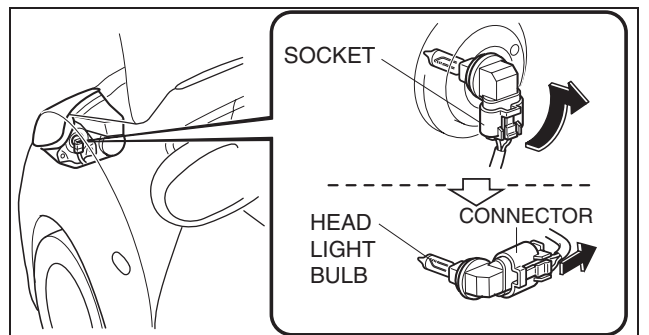
6. Install in the reverse order of removal.

### High-beam

1. Disconnect the negative battery cable.
2. Rotate the socket in the direction of the arrow shown in the figure to remove it.
3. Disconnect the connector.
4. Remove the headlight bulb.

### Caution

- A bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, heat of higher temperature than normal will build, shortening the life of the bulb. When replacing the bulb, hold the metal flange, not the glass.



am2zzw0000371

5. Install in the reverse order of removal.

### HEADLIGHT AIMING

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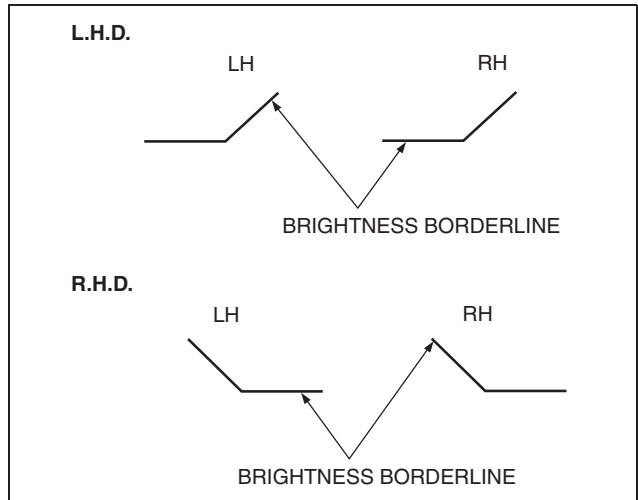
### Note

- The reflectors for the low and high beams are integrated. Therefore, perform the headlight aiming adjustment on either the low or high beam.

## LIGHTING SYSTEMS

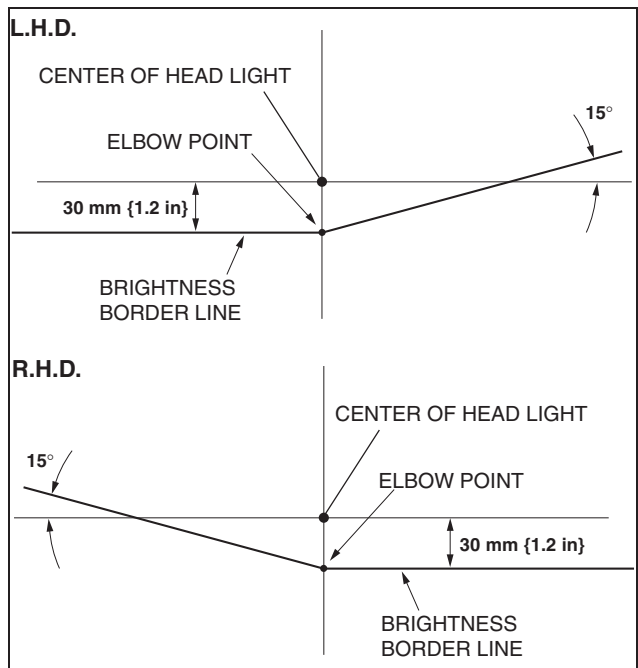
### 2-Beam Type Headlight Low-beam Adjustment

1. Point the headlight beams to a wall and verify that the headlight beams are as shown in the figure.



am2zzw0000335

2. Make a headlight adjustment screen as shown in the figure using double-weight, white paper.
3. Adjust the tire pressure to the specification.
4. Park the vehicle on level ground, in an unloaded condition.
5. Sit on the driver-side seat alone.
6. Put the white screen in front of the vehicle.
7. Line up the headlights with the white screen at a distance of **3 m {9.8 ft}** apart.



am2zzw0000335



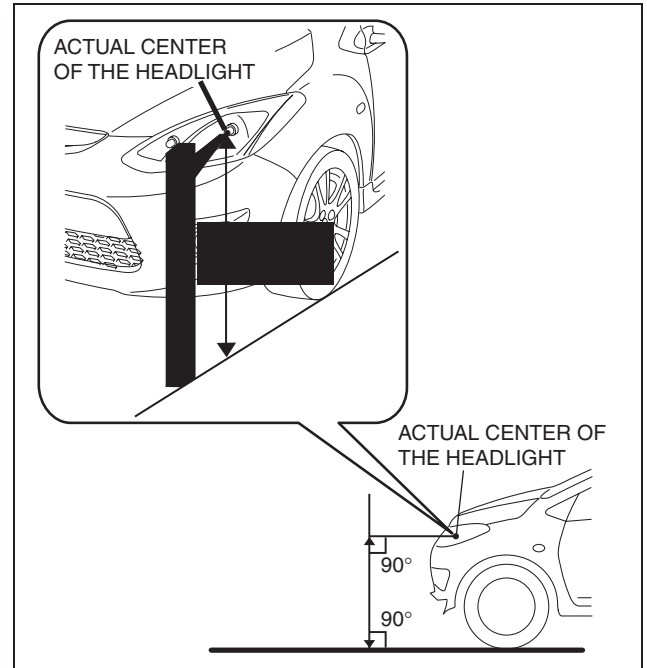
## LIGHTING SYSTEMS

8. Measure the height at the center of the headlight.

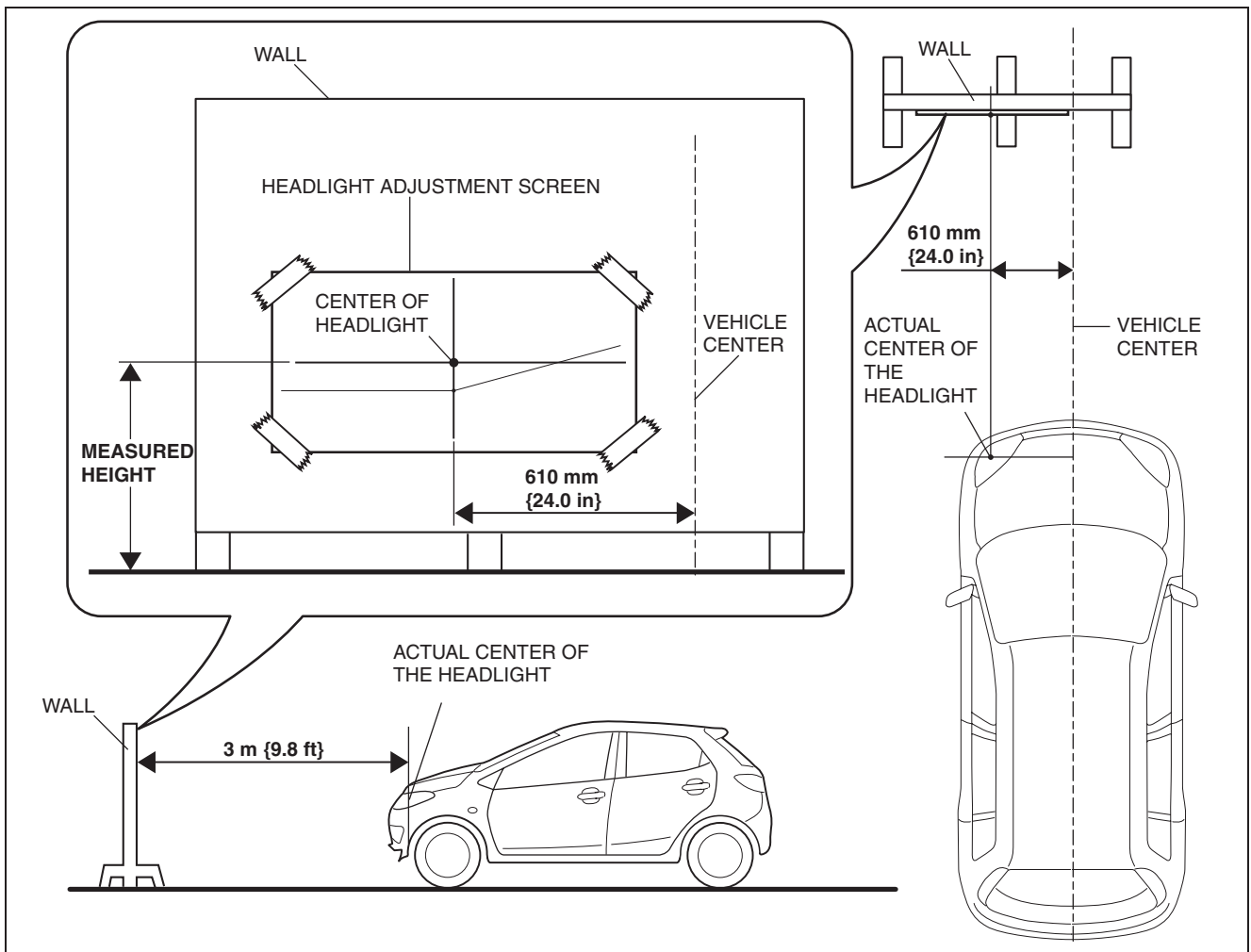
**Note**

- Since the height of the vehicle varies depending on the vehicle situation, measure the height of the center of the headlight using the actual vehicle.

9. Align the center of the adjustment screen with the position indicated in the figure, then affix the screen to the wall.



am2zzw0000371



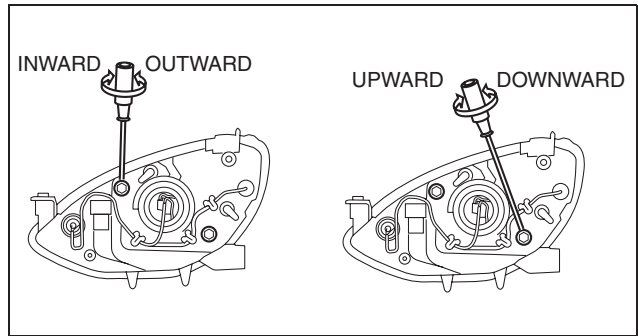
am2zzw0000335

10. Start the engine and charge the battery.
11. Turn on the headlight low beams.
12. Block the light of the headlight which is not adjusted.
13. Switch the headlight leveling switch at "0" position.

## LIGHTING SYSTEMS

14. Verify that the elbow point of the headlight is at the position indicated by the adjustment screen.

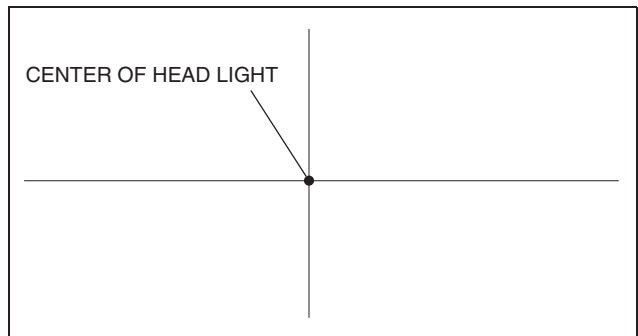
- If the elbow point is not at the position indicated by the adjustment screen, turn the adjustment screw as shown in the figure to adjust the elbow point to the position indicated by the adjustment screen.



am2zzw0000335

### High-beam Adjustment

1. Make a headlight adjustment screen as shown in the figure using double-weight, white paper.
2. Adjust the tire pressure to the specification.
3. Park the vehicle on level ground, in an unloaded condition.
4. Sit on the driver-side seat alone.
5. Put the wall in front of the vehicle.
6. Line up the headlights with the wall at a distance of 3 m {9.8 ft} apart.

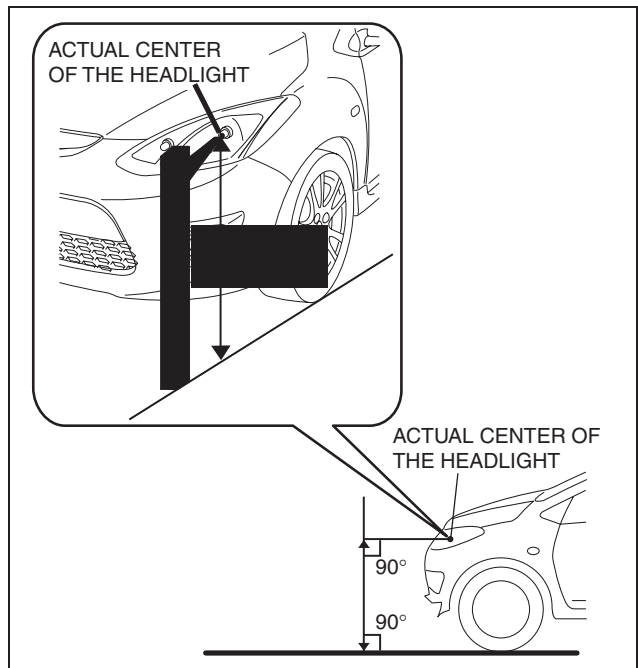


am2zzw0000335

7. Measure the height at the center of the headlight.

### Note

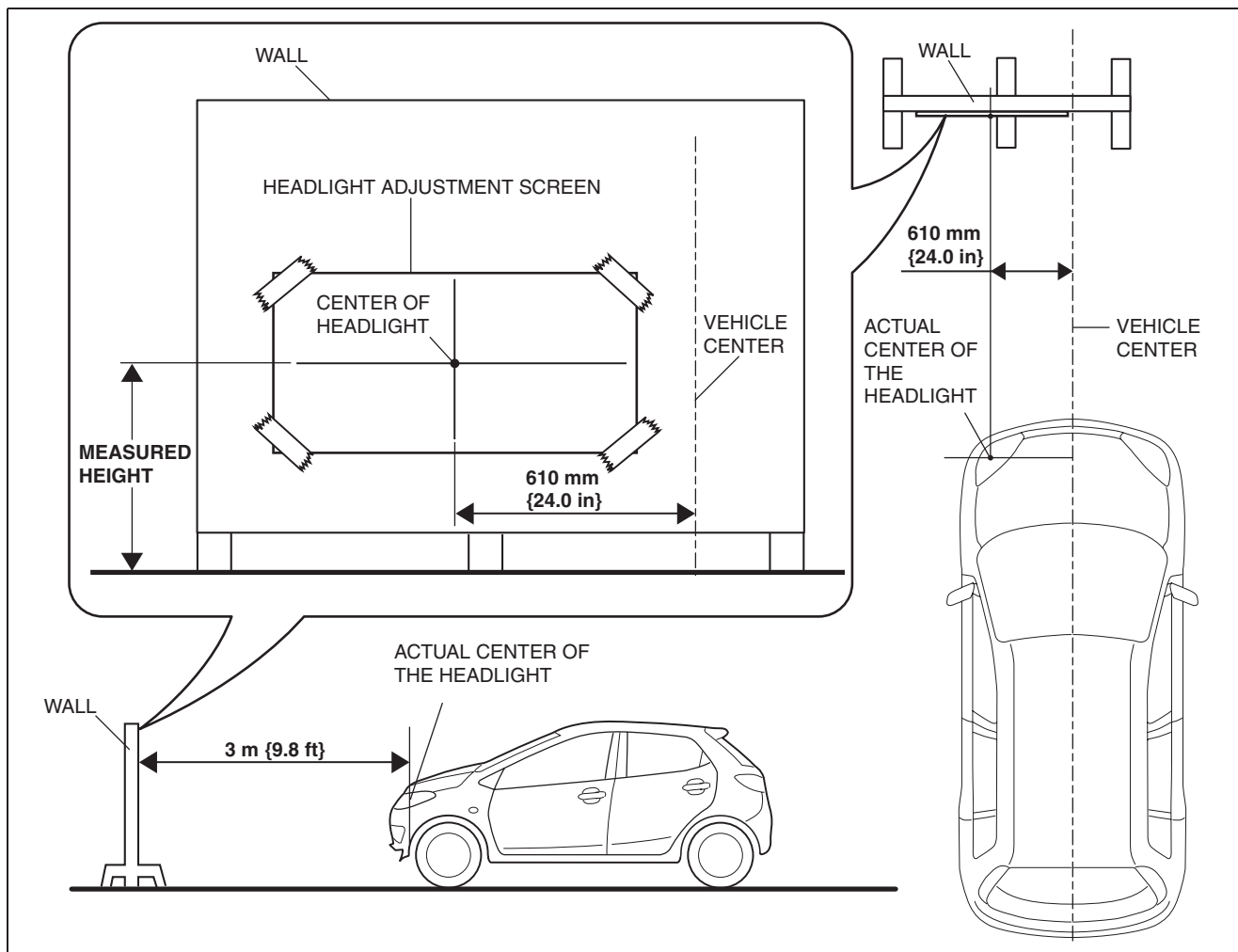
- Since the height of the vehicle varies depending on the vehicle situation, measure the height of the center of the headlight using the actual vehicle.



am2zzw0000371

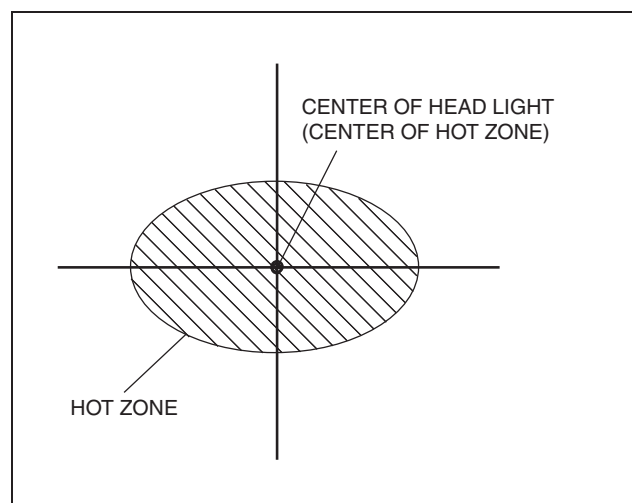
## LIGHTING SYSTEMS

8. Align the center of the adjustment screen with the position indicated in the figure, then affix the screen to the wall.



am2zzw0000335

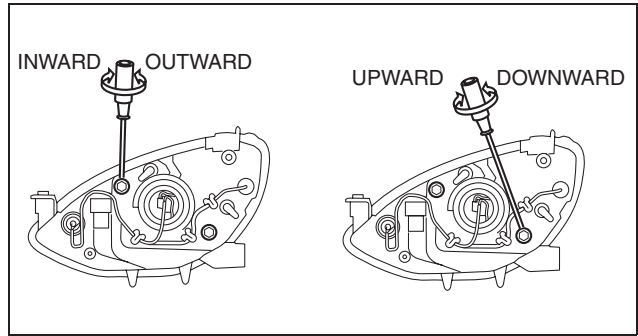
9. Start the engine and charge the battery.
10. Turn on the headlight high beams.
11. Block the light of the headlight which is not adjusted using a partition.
12. Switch the headlight leveling switch at "0" position.
13. Verify that the center of the hot zone (the bright part of high beam) is at the center of the headlight on the adjustment screen.



am2zzw0000335

## LIGHTING SYSTEMS

- If the center of the hot zone is not at the center of the headlight on the adjustment screen, turn the adjustment screw to adjust the center of the hot zone.

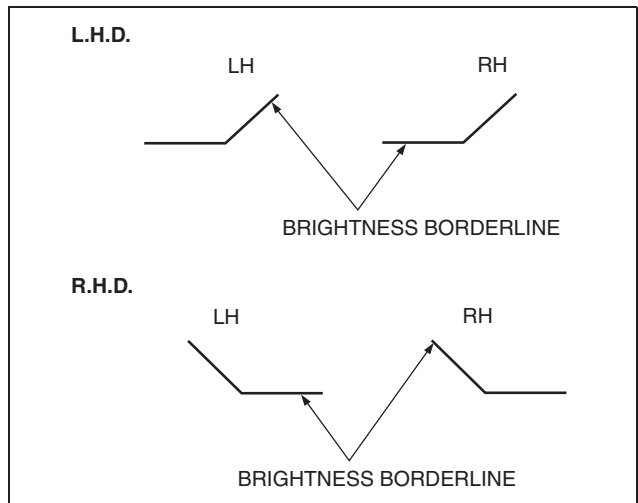


am2zzw0000336

### 4-Beam Type Headlight

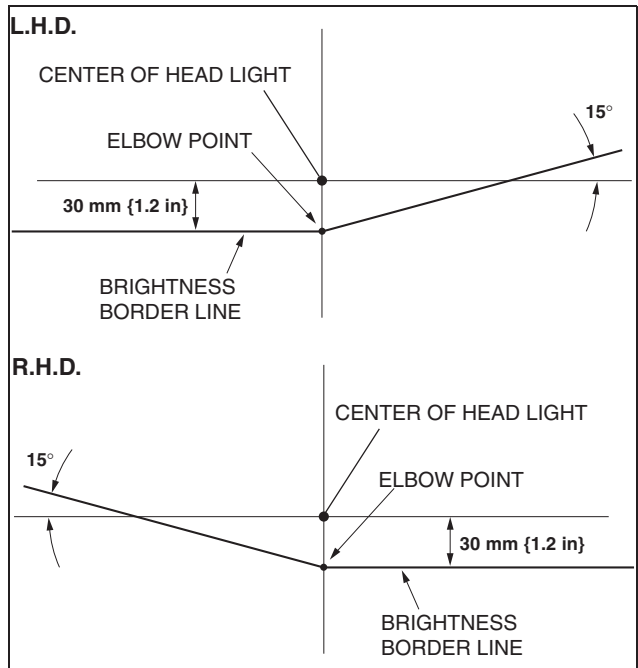
#### Low-beam Adjustment

- Point the headlight beams to a wall and verify that the headlight beams are as shown in the figure.



am2zzw0000335

- Make a headlight adjustment screen as shown in the figure using double-weight, white paper.
- Adjust the tire pressure to the specification.
- Park the vehicle on level ground, in an unloaded condition.
- Sit on the driver-side seat alone.
- Put the white screen in front of the vehicle.
- Line up the headlights with the white screen at a distance of **3 m {9.8 ft}** apart.



am2zzw0000335

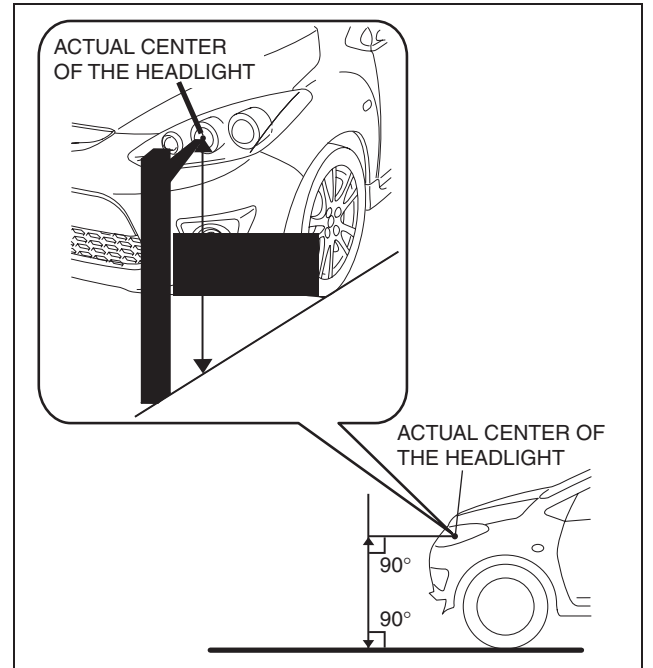
## LIGHTING SYSTEMS

8. Measure the height at the center of the headlight.

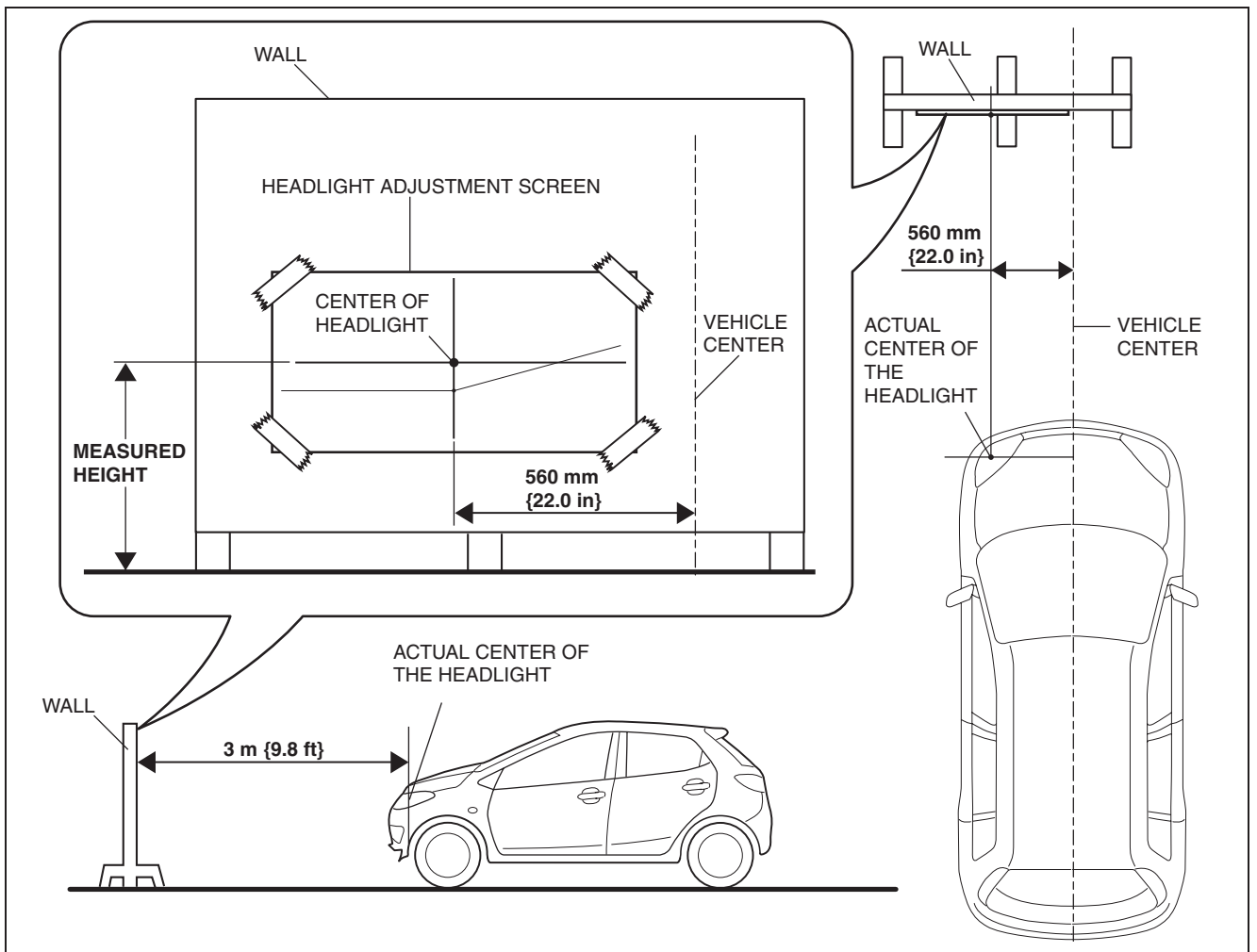
**Note**

- Since the height of the vehicle varies depending on the vehicle situation, measure the height of the center of the headlight using the actual vehicle.

9. Align the center of the adjustment screen with the position indicated in the figure, then affix the screen to the wall.



am2zzw0000372



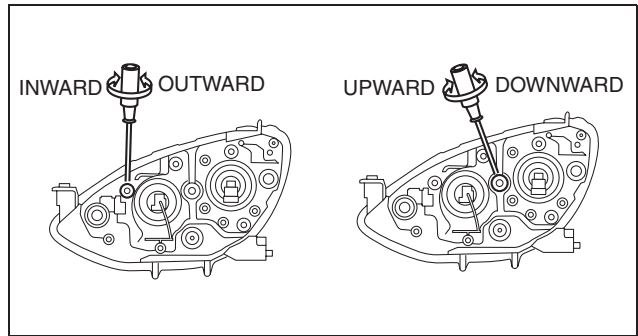
am2zzw0000371

10. Start the engine and charge the battery.
11. Turn on the headlight low beams.
12. Block the light of the headlight which is not adjusted.
13. Switch the headlight leveling switch at "0" position.

## LIGHTING SYSTEMS

14. Verify that the elbow point of the headlight is at the position indicated by the adjustment screen.

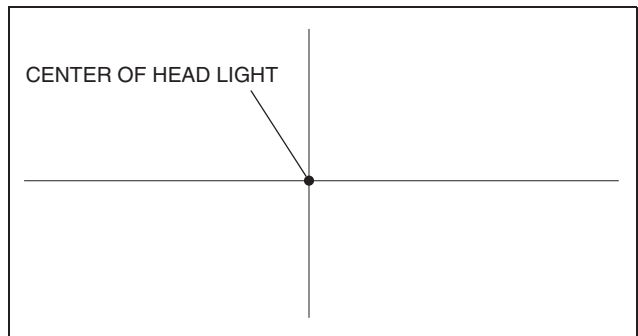
- If the elbow point is not at the position indicated by the adjustment screen, turn the adjustment screw as shown in the figure to adjust the elbow point to the position indicated by the adjustment screen.



am2zzw0000372

### High-beam Adjustment

1. Make a headlight adjustment screen as shown in the figure using double-weight, white paper.
2. Adjust the tire pressure to the specification.
3. Park the vehicle on level ground, in an unloaded condition.
4. Sit on the driver-side seat alone.
5. Put the wall in front of the vehicle.
6. Line up the headlights with the wall at a distance of **3 m {9.8 ft}** apart.

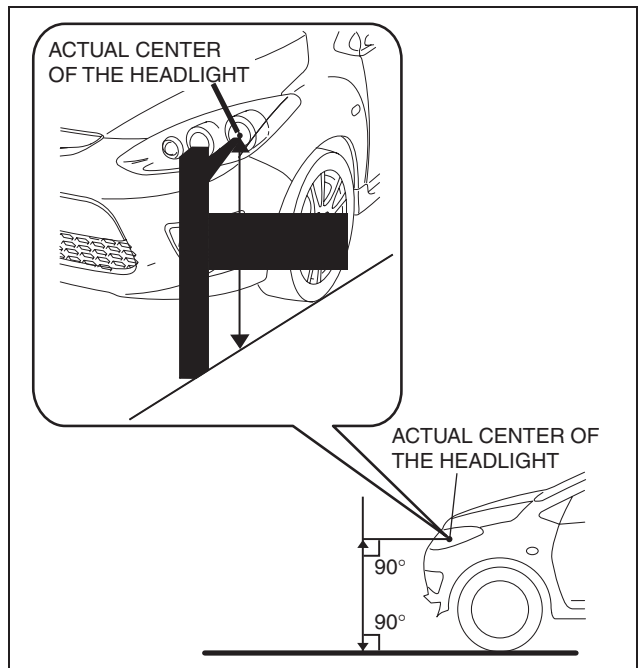


am2zzw0000335

7. Measure the height at the center of the headlight.

### Note

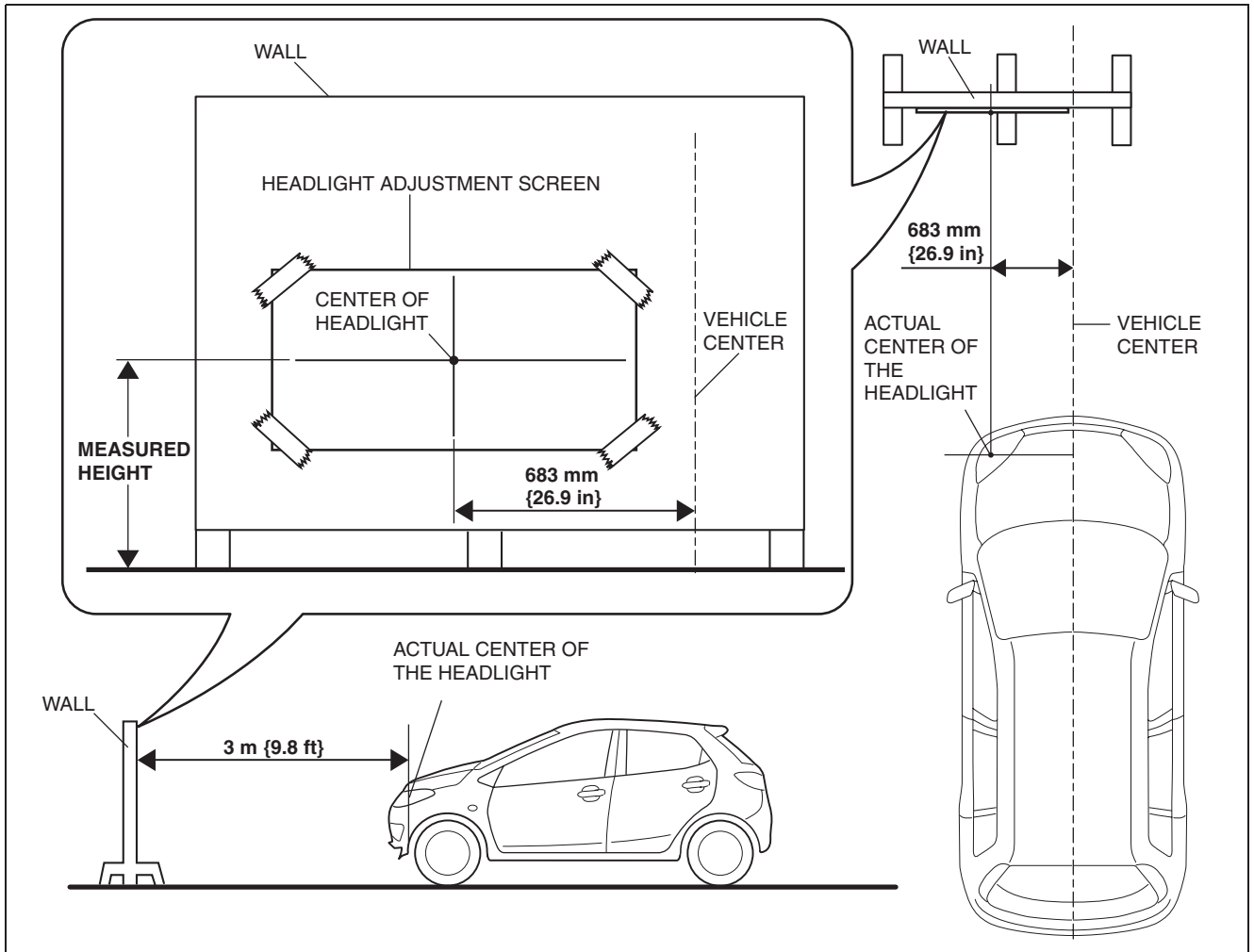
- Since the height of the vehicle varies depending on the vehicle situation, measure the height of the center of the headlight using the actual vehicle.



am2zzw0000372

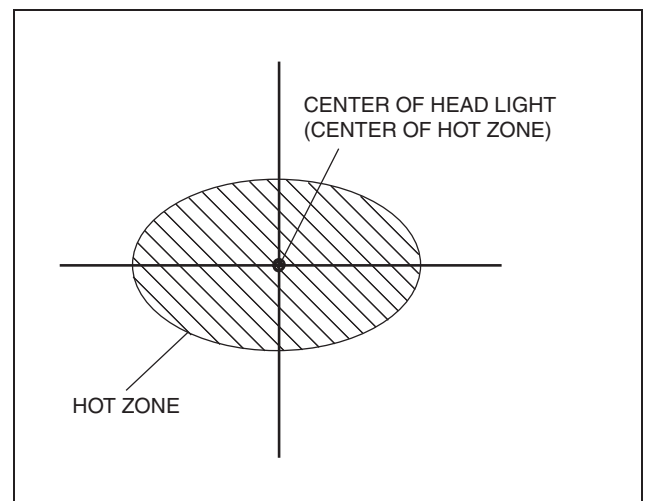
## LIGHTING SYSTEMS

8. Align the center of the adjustment screen with the position indicated in the figure, then affix the screen to the wall.



am2zzw0000371

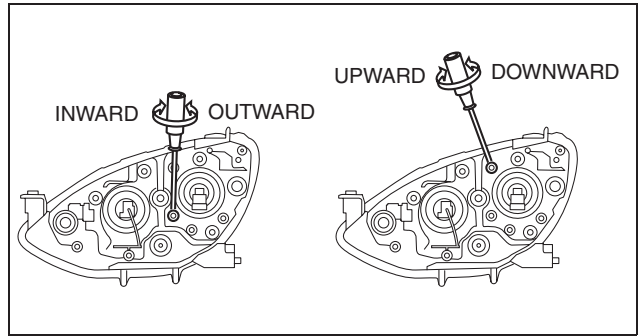
9. Start the engine and charge the battery.
10. Turn on the headlight high beams.
11. Block the light of the headlight which is not adjusted using a partition.
12. Switch the headlight leveling switch at "0" position.
13. Verify that the center of the hot zone (the bright part of high beam) is at the center of the headlight on the adjustment screen.



am2zzw0000335

## LIGHTING SYSTEMS

- If the center of the hot zone is not at the center of the headlight on the adjustment screen, turn the adjustment screw to adjust the center of the hot zone.

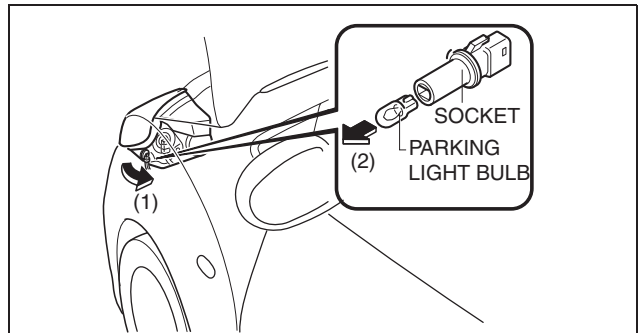


am2zzw0000372

### PARKING LIGHT BULB REMOVAL/INSTALLATION

id091800804200

1. Disconnect the negative battery cable.
2. Rotate the socket in the direction of the arrow (1) and remove it.
3. Remove the parking light bulb from the socket in the direction of the arrow (2).
4. Install in the reverse order of removal.

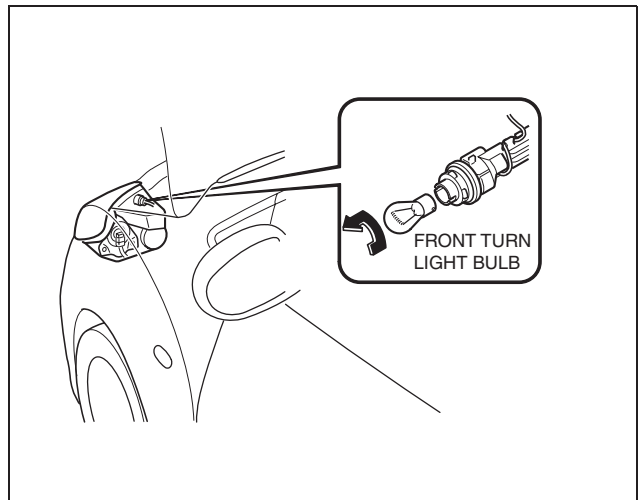


am2zzw0000248

### FRONT TURN LIGHT BULB REMOVAL/INSTALLATION

id091800805000

1. Disconnect the negative battery cable.
2. Rotate the socket in the direction of the arrow shown in the figure and remove it.
3. Remove the front turn light bulb.
4. Install in the reverse order of removal.



am2zzw0000239

### FRONT FOG LIGHT REMOVAL/INSTALLATION

id091800802100

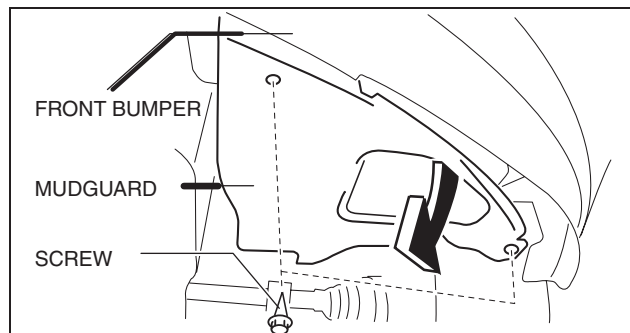
#### Except AutoAlliance Thailand (AAT) Manufactured Vehicles Standard type

1. Disconnect the negative battery cable.
2. Lift up the vehicle.



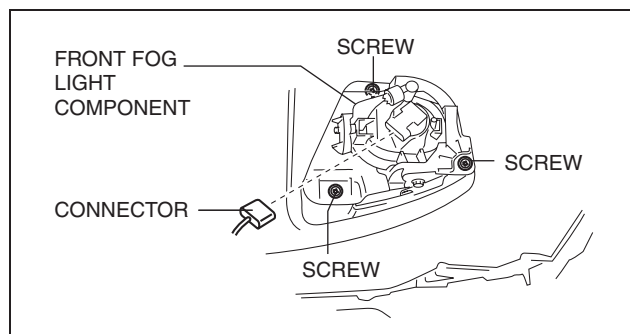
## LIGHTING SYSTEMS

- Remove the screws shown in the figure and bend back the mudguard in the direction of the arrow.



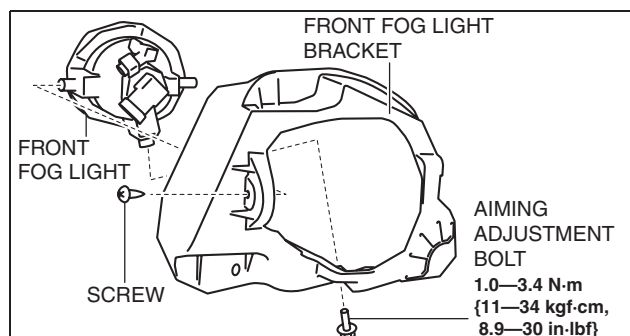
am2zzw0000250

- Disconnect the connector.
- Remove the screws, then remove the front fog light component.



am2zzw0000248

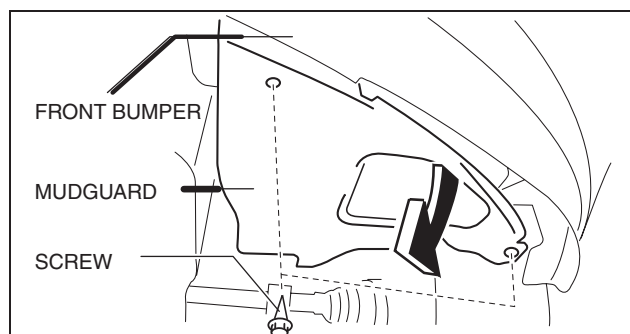
- Remove the aiming adjustment bolt.
- Remove the screw.
- Remove the front fog light.
- Install in the reverse order of removal.
- Adjust the front fog light aiming. (See 09-18-20 FRONT FOG LIGHT AIMING.)



am2zzw0000446

### Sport type

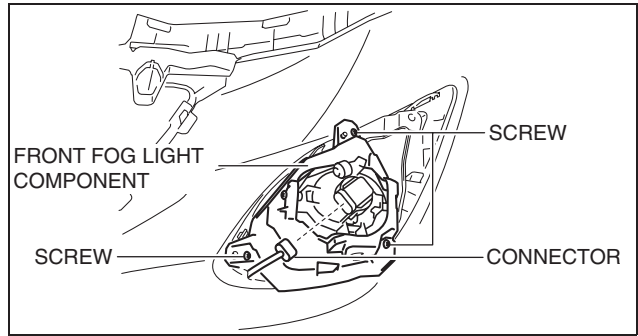
- Disconnect the negative battery cable.
- Lift up the vehicle.
- Remove the screws shown in the figure and bend back the mudguard in the direction of the arrow.



am2zzw0000250

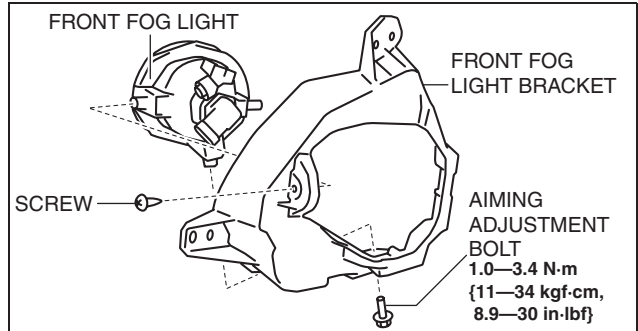
## LIGHTING SYSTEMS

4. Disconnect the connector.
5. Remove the screws, then remove the front fog light component.



am2zzw0000446

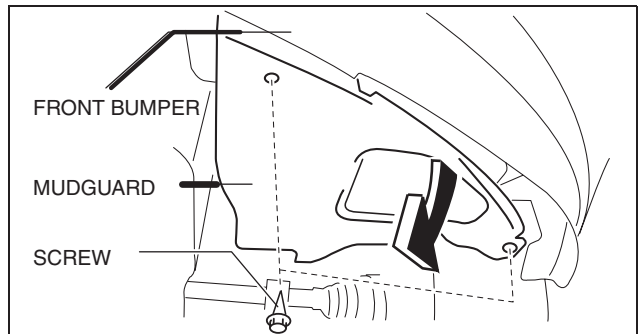
6. Remove the aiming adjustment bolt.
7. Remove the screw.
8. Remove the front fog light.
9. Install in the reverse order of removal.
10. Adjust the front fog light aiming. (See 09-18-20 FRONT FOG LIGHT AIMING.)



am2zzw0000446

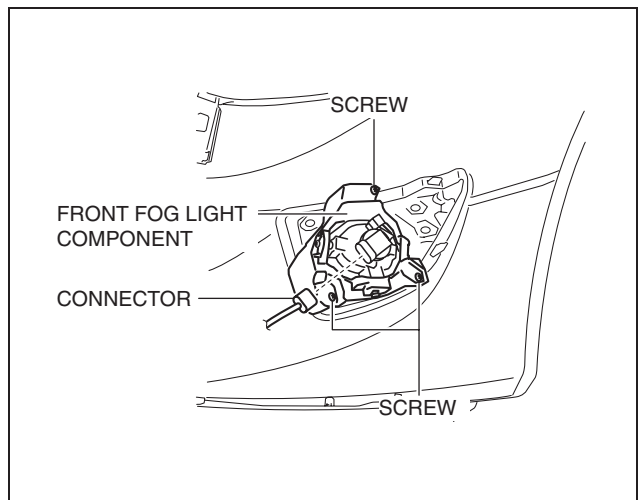
### AutoAlliance Thailand (AAT) Manufactured Vehicles Standard Type

1. Disconnect the negative battery cable.
2. Lift up the vehicle.
3. Remove the screws shown in the figure and bend back the mudguard in the direction of the arrow.



am2zzw0000250

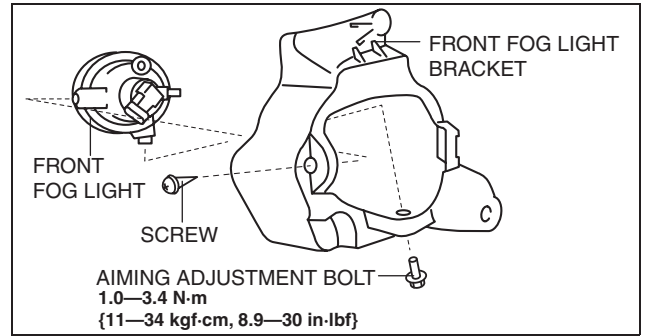
4. Disconnect the connector.
5. Remove the screws, then remove the front fog light component.



am2zzw0000446

## LIGHTING SYSTEMS

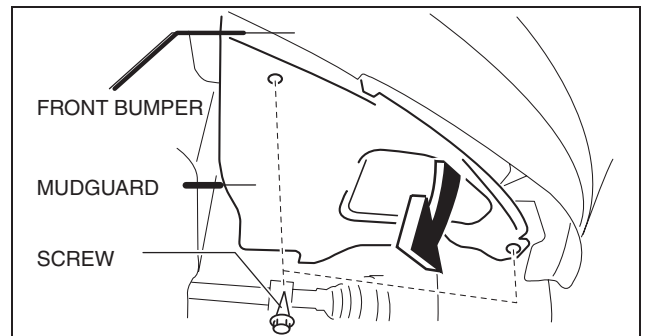
6. Remove the aiming adjustment bolt.
7. Remove the screw.
8. Remove the front fog light.
9. Install in the reverse order of removal.
10. Adjust the front fog light aiming. (See 09-18-20 FRONT FOG LIGHT AIMING.)



am2zzw0000443

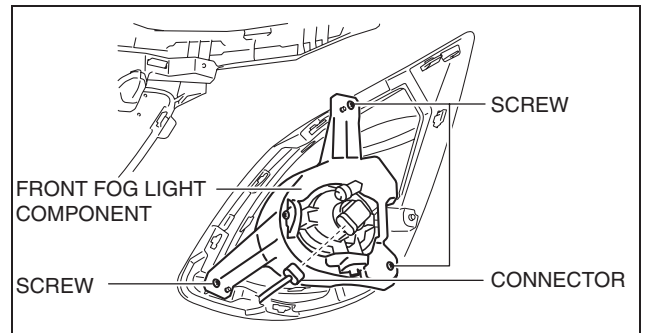
### Sport Type

1. Disconnect the negative battery cable.
2. Lift up the vehicle.
3. Remove the screws shown in the figure and bend back the mudguard in the direction of the arrow.



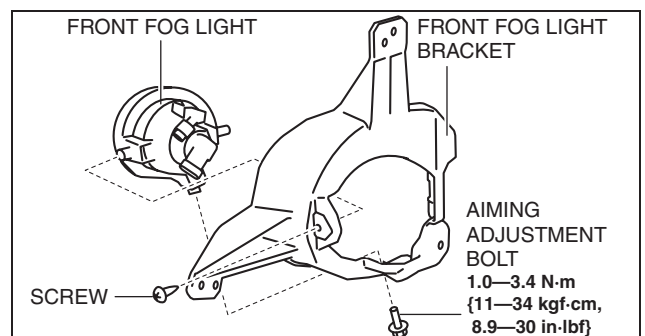
am2zzw0000250

4. Disconnect the connector.
5. Remove the screws, then remove the front fog light component.



am2zzw0000446

6. Remove the aiming adjustment bolt.
7. Remove the screw.
8. Remove the front fog light.
9. Install in the reverse order of removal.
10. Adjust the front fog light aiming. (See 09-18-20 FRONT FOG LIGHT AIMING.)



am2zzw0000446

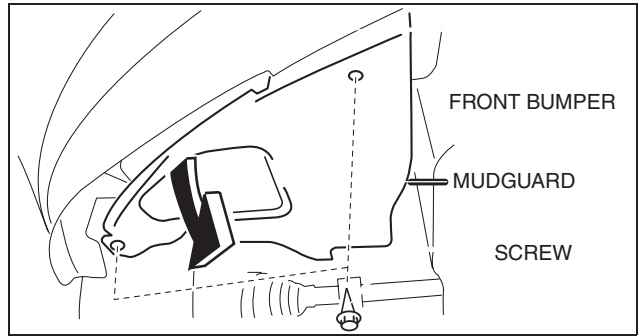
### FRONT FOG LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.

id091800802300

## LIGHTING SYSTEMS

- Remove the screws shown in the figure and bend back the mudguard in the direction of the arrow.



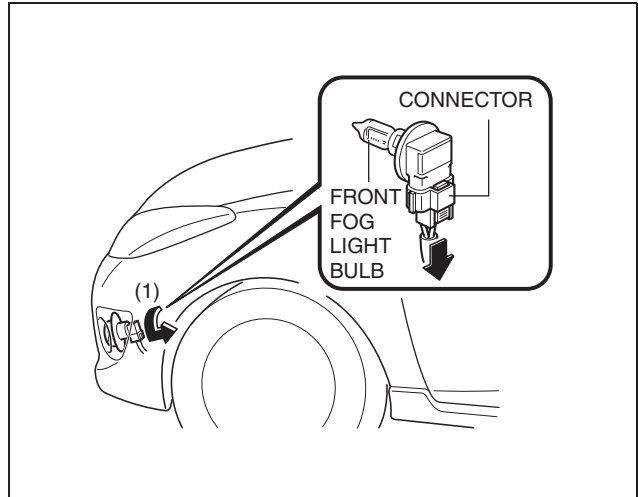
am2zzw0000382

- Disconnect the connector.
- Rotate the front fog light bulb in the direction of the arrow (1) and pull it out.

### Caution

- A bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, heat of higher temperature than normal will build, shortening the life of the bulb. When replacing the bulb, hold the metal flange, not the glass.

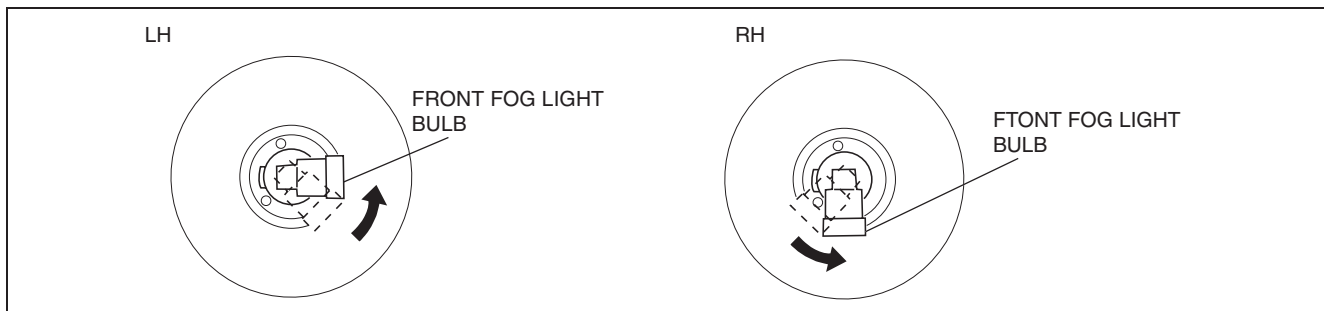
- Install in the reverse order of removal. (See 09-18-20 Front Fog Light Bulb Installation Note.)



am2zzw0000382

### Front Fog Light Bulb Installation Note

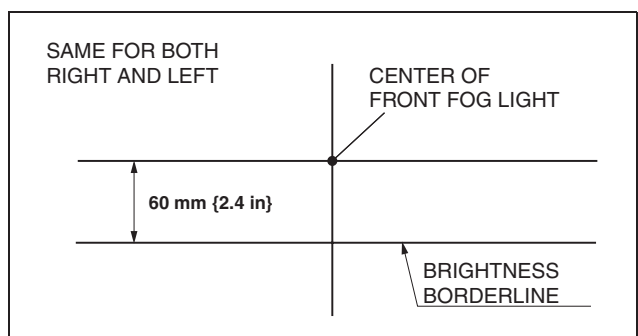
- Install the front fog light bulb by turning it in the direction of the arrow.



am2zzw0000217

### FRONT FOG LIGHT AIMING

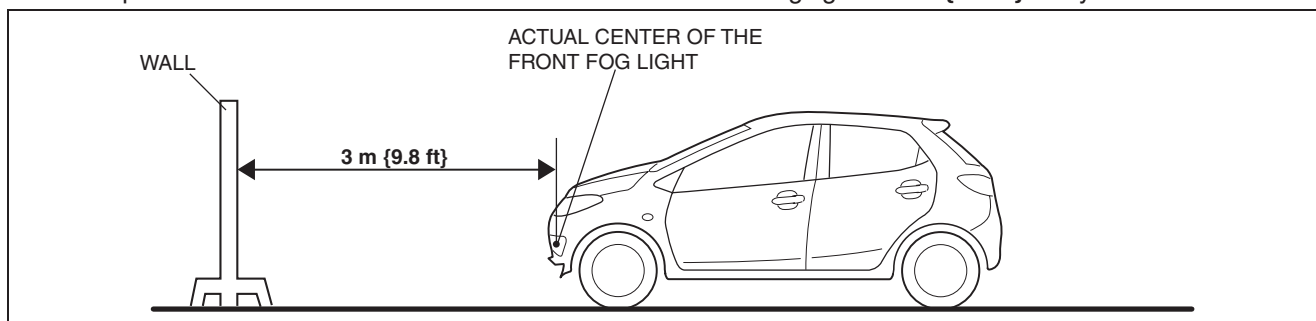
- Make a front fog light adjustment screen as shown in the figure using double-weight, white paper.
- Adjust the tire pressure to the specification.
- Position the unloaded vehicle on a flat, level surface.
- Seat one person in the driver's seat.



am2zzw0000444

## LIGHTING SYSTEMS

5. Line up the vehicle with the wall so that the center of the front fog light is **3 m {9.8 ft}** away from the wall.

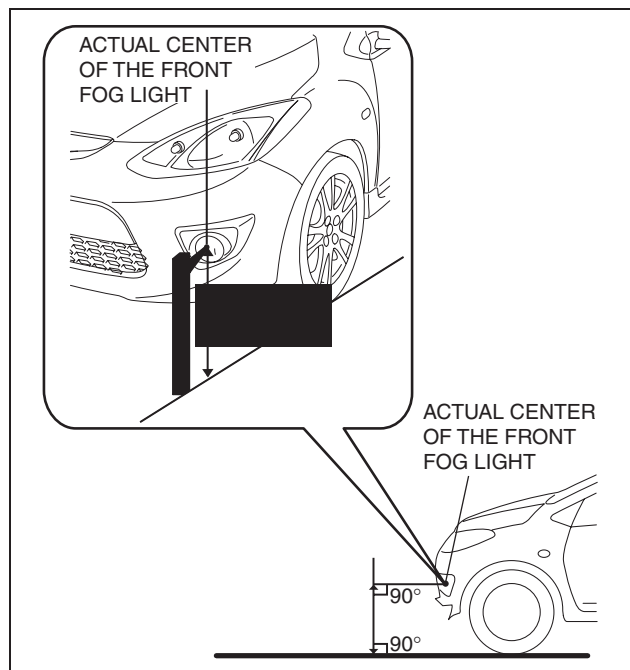


am2zzw0000444

6. Measure the height at the center of the front fog light.

**Note**

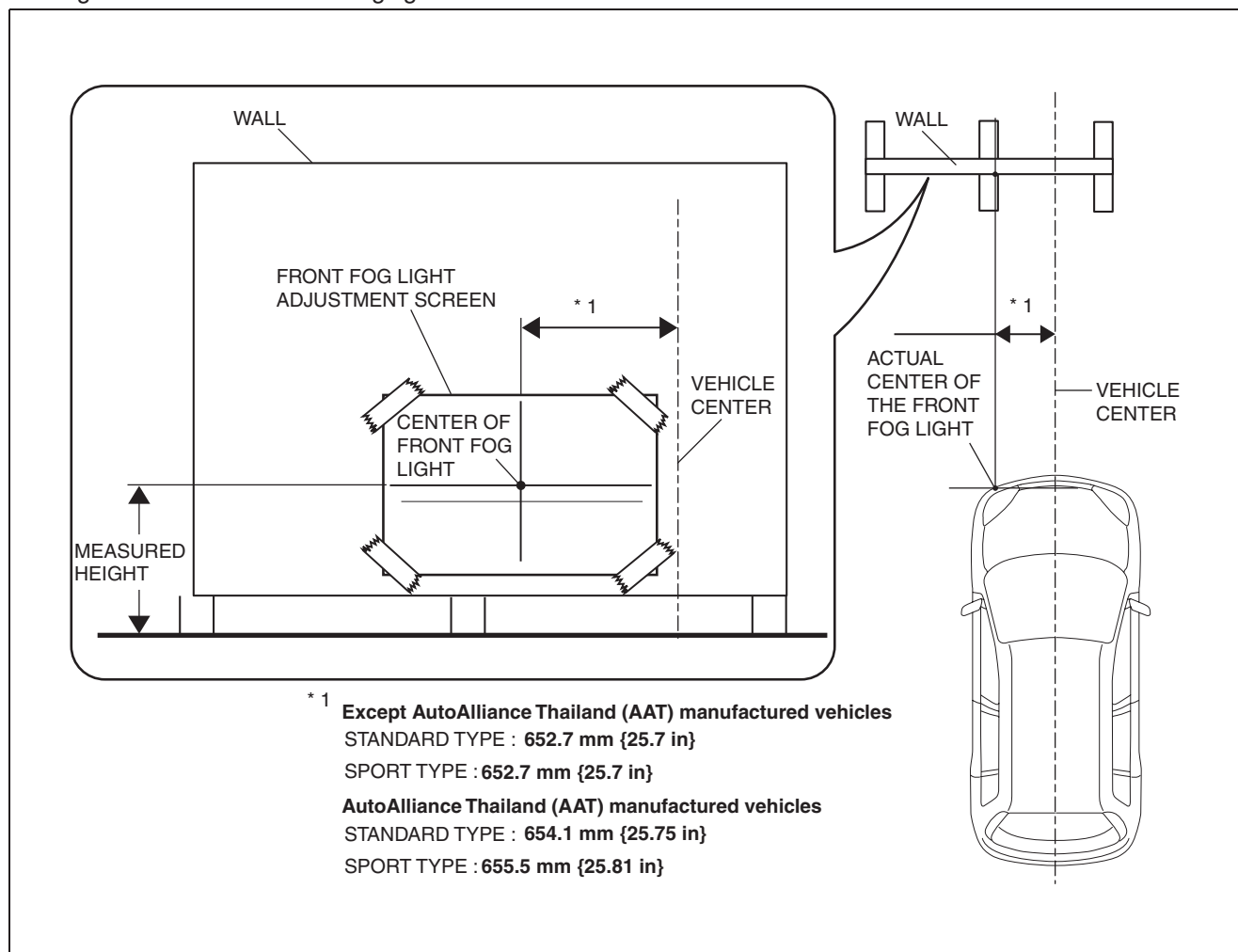
- Since the height of the vehicle varies depending on the vehicle situation, measure the height of the center of the front fog light using the actual vehicle.



am2zzw0000496

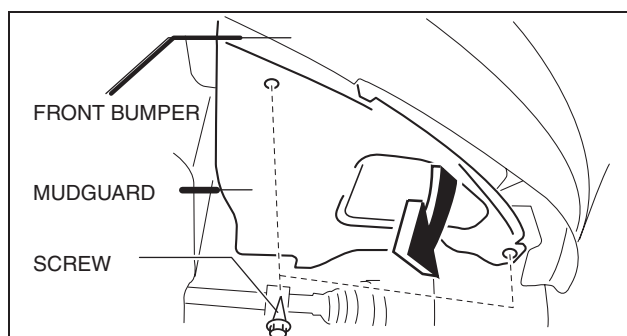
## LIGHTING SYSTEMS

7. Align the center of the front fog light with the center of the screen.



am2zzw0000444

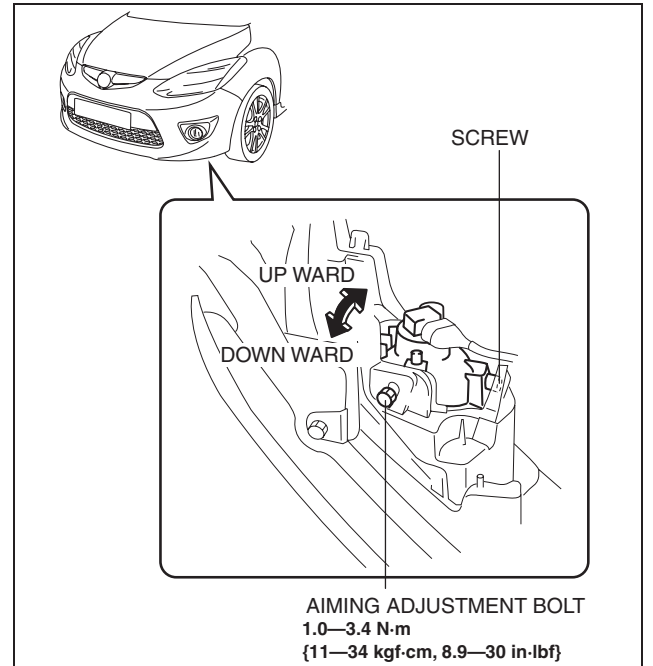
8. Block the light of the other front fog light using a partition.
9. Start the engine so that the battery remains charged.
10. Turn the front fog lights on.
11. Verify that brightness border line of the front fog light is at the position indicated on the adjustment screen.
  - If the brightness border line is not at the position indicated on the adjustment screen, perform the following adjustment.
12. Remove the screws shown in the figure and bend back the mudguard in the direction of the arrow.



am2zzw0000250

## LIGHTING SYSTEMS

- Loosen the aiming adjustment bolt, adjust the center of the front fog light to the position shown in the figure, and tighten the screws.



am2zzw0000444

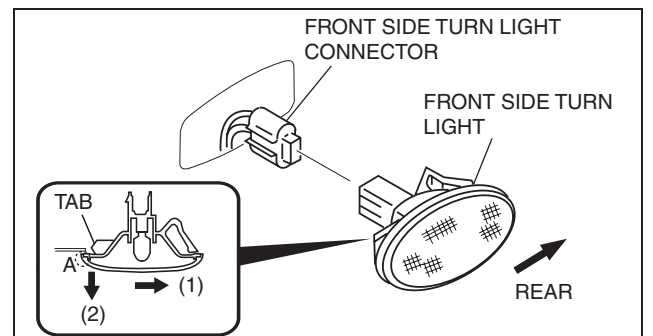
### FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION

id091800800900

- Disconnect the negative battery cable.
- Move the front side turn light in the direction of the arrow (1) (toward the vehicle rear) and detach the tab.
- Pull area A of the front side turn light in the direction of the arrow (2) and remove the front side turn light.
- Disconnect the front side turn light connector.
- Install in the reverse order of removal.

#### Caution

- Always assemble the front side turn light with the tab towards the vehicle rear.



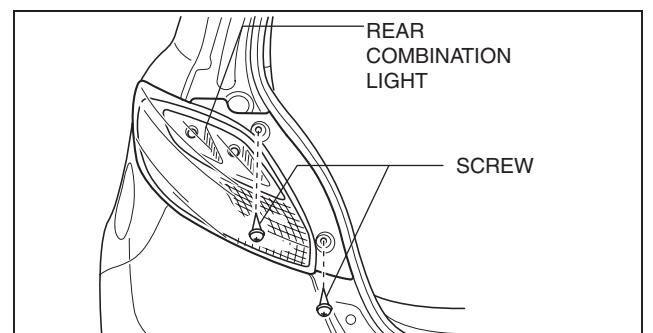
am2zzw0000336

### REAR COMBINATION LIGHT REMOVAL/INSTALLATION

id091800801000

#### 5HB/3HB

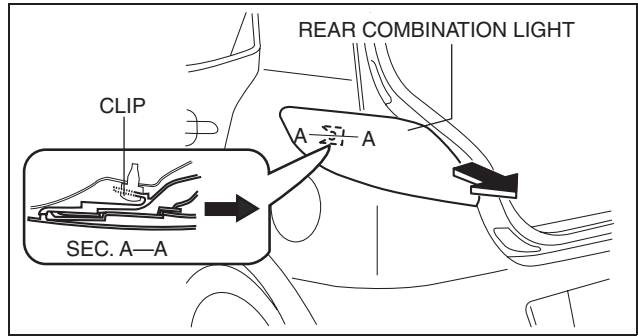
- Disconnect the negative battery cable.
- Remove the screws.



am2zzw0000218

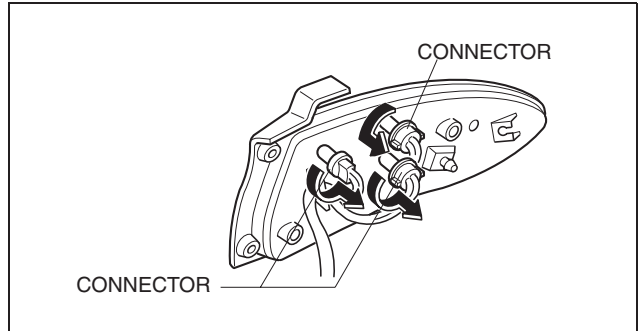
## LIGHTING SYSTEMS

- Slide the rear combination light to the vehicle rear, avoiding the clip.



am2zzw0000336

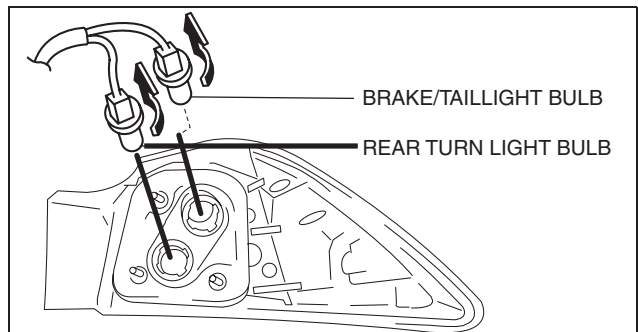
- Disconnect the connectors in the direction of the arrow shown in the figure and remove the rear combination light.
- Install in the reverse order of removal.



am2zzw0000219

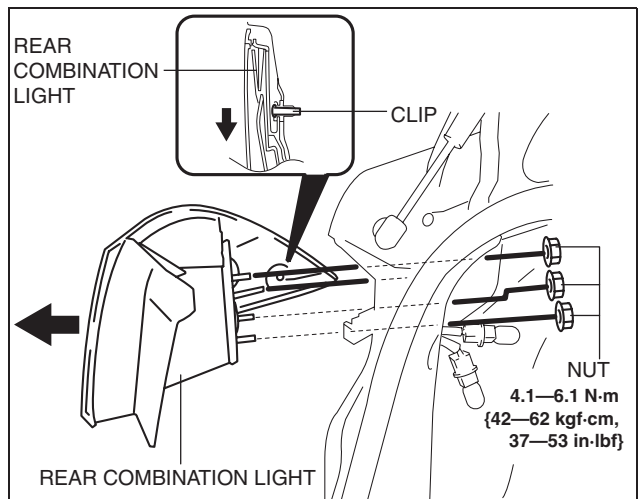
### 4SD

- Disconnect the negative battery cable.
- Remove the trunk end trim. (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
- Remove the fasteners and slightly bend back the trunk side trim. (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
- Disconnect the connector in the direction of the arrow shown in the figure and remove the rear combination light.



am2zzw0000496

- Remove the nuts and slide the rear combination light to the vehicle rear, avoiding the clip.
- Install in the reverse order of removal.



am2zzw0000497



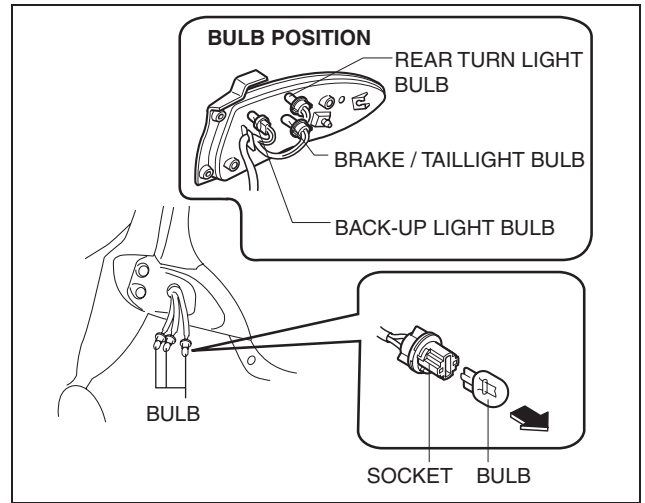
## LIGHTING SYSTEMS

### REAR COMBINATION LIGHT BULB REMOVAL/INSTALLATION

id091800805900

#### 5HB/3HB

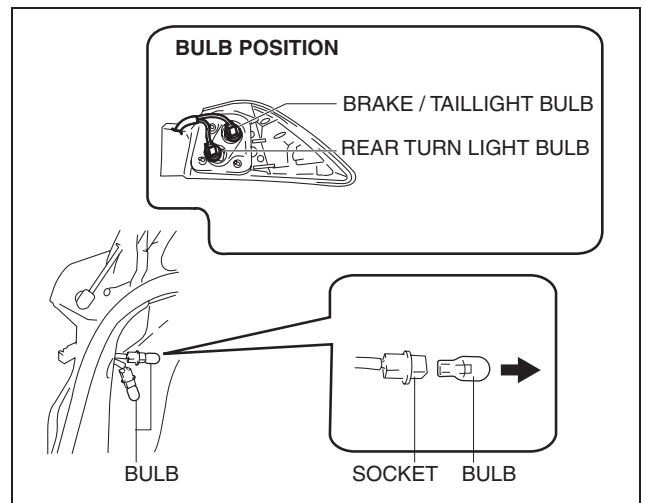
1. Disconnect the negative battery cable.
2. Remove the rear combination light. (See 09-18-23 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
3. Remove the rear combination light bulbs.
4. Install in the reverse order of removal.



am2zzw0000497

#### 4SD

1. Disconnect the negative battery cable.
2. Remove the service hole cover.
3. Remove the socket.
4. Remove the rear combination light bulbs.
5. Install in the reverse order of removal.



am2zzw0000497

### INBOARD LIGHT REMOVAL/INSTALLATION [4SD]

id0918008061a5

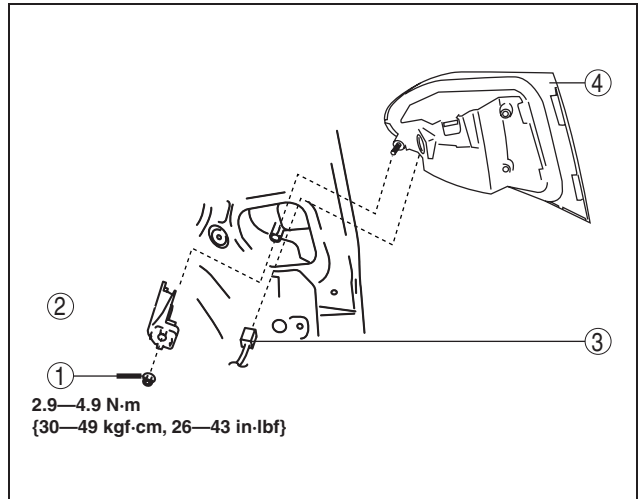
1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)

## LIGHTING SYSTEMS

3. Remove in the order indicated in the table.

|   |                                                                  |
|---|------------------------------------------------------------------|
| 1 | Nut                                                              |
| 2 | Bracket                                                          |
| 3 | Connector                                                        |
| 4 | Inboard light<br>(See 09-18-26 Inboard Light Installation Note.) |

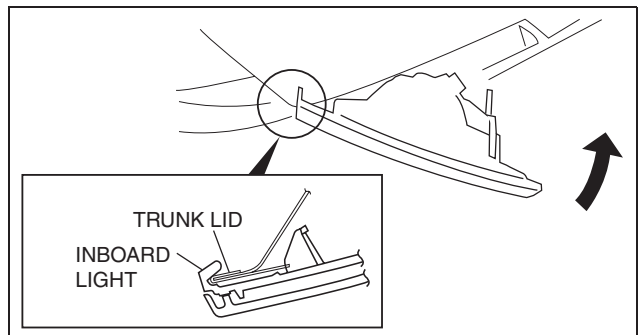
4. Install in the reverse order of removal.



am2zzw0000494

### Inboard Light Installation Note

1. Insert the inboard light into the trunk lid as shown in the figure, then pivot it inward and fix in place.



am2zzw0000482

### INBOARD LIGHT BULB REMOVAL/INSTALLATION [4SD]

id0918008060a5

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Remove in the order indicated in the table.

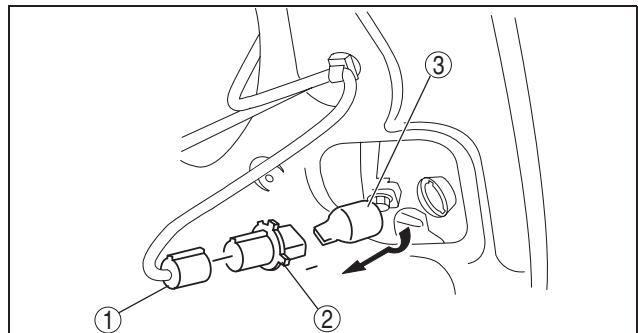
#### With rear fog light

|   |                                                                         |
|---|-------------------------------------------------------------------------|
| 1 | Connector                                                               |
| 2 | Socket                                                                  |
| 3 | Rear fog light bulb (driver-side) / back-up light bulb (passenger-side) |

#### Without rear fog light

|   |                    |
|---|--------------------|
| 1 | Connector          |
| 2 | Socket             |
| 3 | Back-up light bulb |

4. Install in the reverse order of removal.



am2ccw0000021

### REAR FOG LIGHT REMOVAL/INSTALLATION

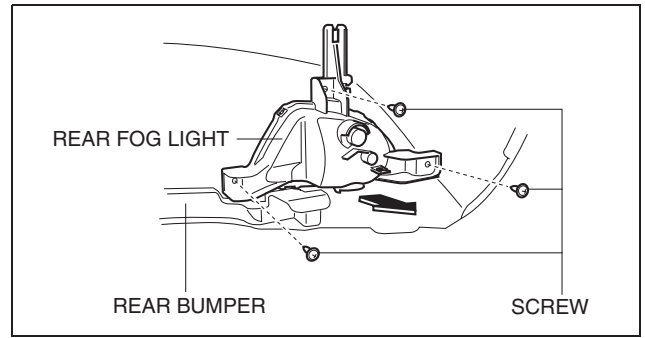
id091800805100

#### 5HB/3HB

1. Disconnect the negative battery cable.
2. Remove the rear fog light bulb. (See 09-18-27 REAR FOG LIGHT BULB REMOVAL/INSTALLATION.)
3. Remove the rear bumper. (See 09-10-23 REAR BUMPER REMOVAL/INSTALLATION.)
4. Remove the screws.

## LIGHTING SYSTEMS

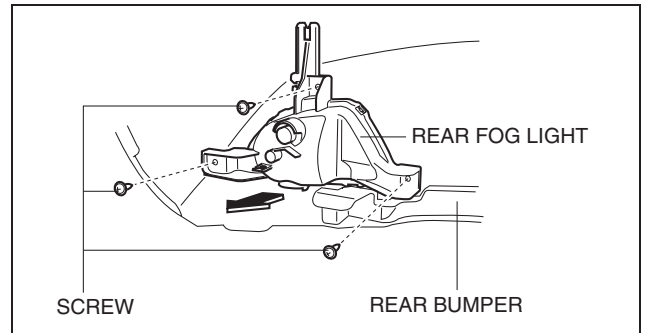
**L.H.D.**



am2zzw0000373

**R.H.D.**

5. Remove the rear fog light in the direction of the arrow shown in the figure.
6. Install in the reverse order of removal.



am2zzw0000373

**4SD**

**Note**

- Rear fog light is integrated with the inboard light (RH).

1. Refer to **09-18-25 INBOARD LIGHT REMOVAL/INSTALLATION [4SD]**.

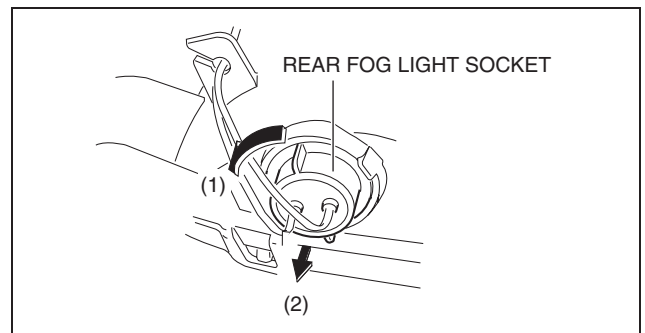
### REAR FOG LIGHT BULB REMOVAL/INSTALLATION

id091800851300

**5HB/3HB**

1. Disconnect the negative battery cable.
2. Rotate the rear fog light socket in the direction of the arrow (1) shown in the figure, then remove the rear fog light socket and rear fog light bulb in the direction of the arrow (2).

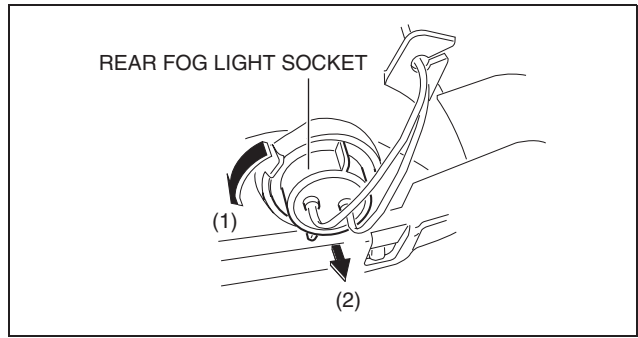
**L.H.D.**



am2zzw0000373

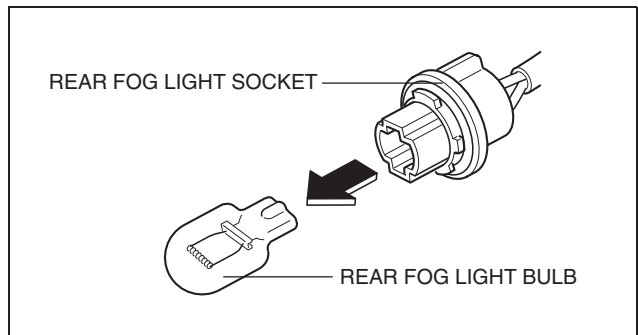
## LIGHTING SYSTEMS

R.H.D.



am2zzw0000337

3. Remove the rear fog light bulb from the rear fog light socket in the direction of the arrow shown in the figure.
4. Install in the reverse order of removal.



am2zzw0000029

4SD

### Note

- Rear fog light is integrated with the inboard light (RH).

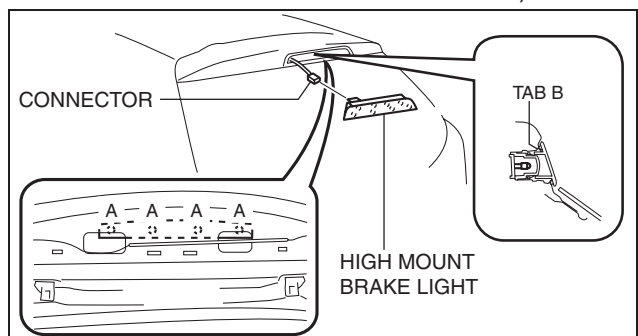
1. Refer to **09-18-26** INBOARD LIGHT BULB REMOVAL/INSTALLATION [4SD]

## HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION

id091800802000

5HB/3HB

1. Disconnect the negative battery cable.
2. Remove the liftgate upper trim. (See **09-17-78** LIFTGATE UPPER TRIM REMOVAL/INSTALLATION.)
3. Remove tabs A (4 locations).
4. Remove the high-mount brake light while removing tabs B (4 locations).
5. Disconnect the connector.
6. Install in the reverse order of removal.



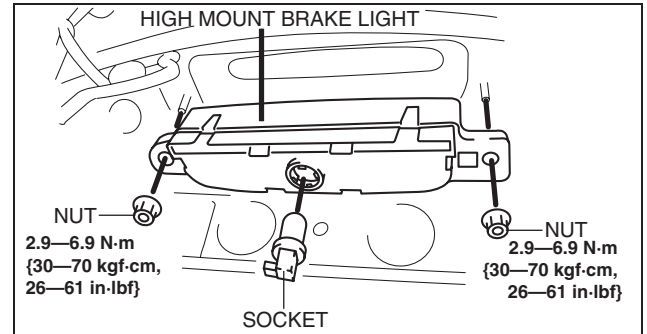
am2zzw0000228

4SD

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See **09-17-77** TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)

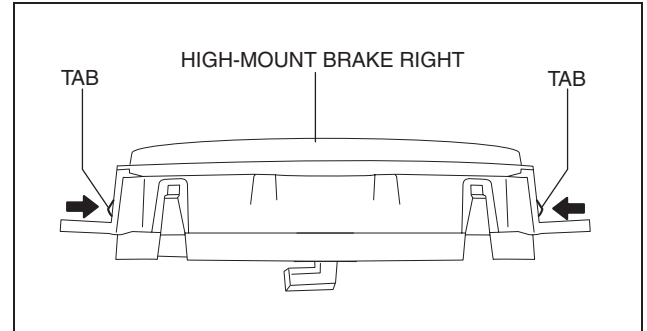
## LIGHTING SYSTEMS

3. Disconnect the socket.
4. Remove the nuts.



am2zzw0000483

5. Disengage the tabs by pressing both ends of the lens in the directions indicated by the arrows and remove the high-mount brake light.
6. Install in the reverse order of removal.



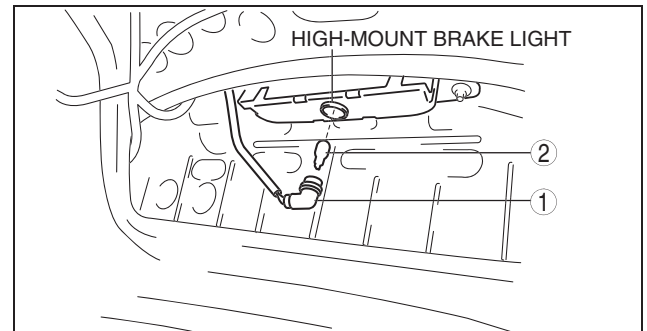
am2zzw0000491

### HIGH-MOUNT BRAKE LIGHT BULB REMOVAL/INSTALLATION [4SD]

id0918008664a5

1. Disconnect the negative battery cable.
2. Remove the trunk lid trim. (See 09-17-77 TRUNK LID TRIM REMOVAL/INSTALLATION [4SD].)
3. Remove in the order indicated in the table.

|   |        |
|---|--------|
| 1 | Socket |
| 2 | Bulb   |

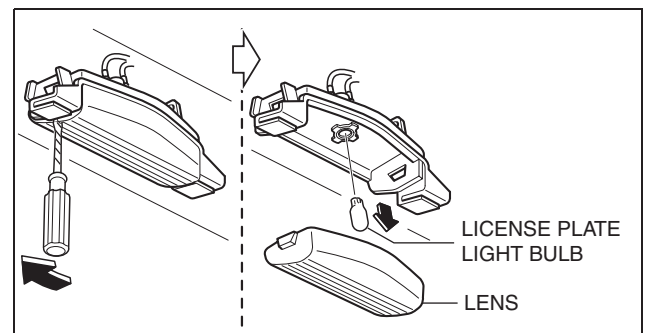


am2zzw0000491

### LICENSE PLATE LIGHT BULB REMOVAL/INSTALLATION

id091800857800

1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the service hole, push it in the direction of the arrow, and remove the lens.
3. Remove the license plate light bulb from the socket.
4. Install in the reverse order of removal.



am2zzw0000250

### LICENSE PLATE LIGHT REMOVAL/INSTALLATION

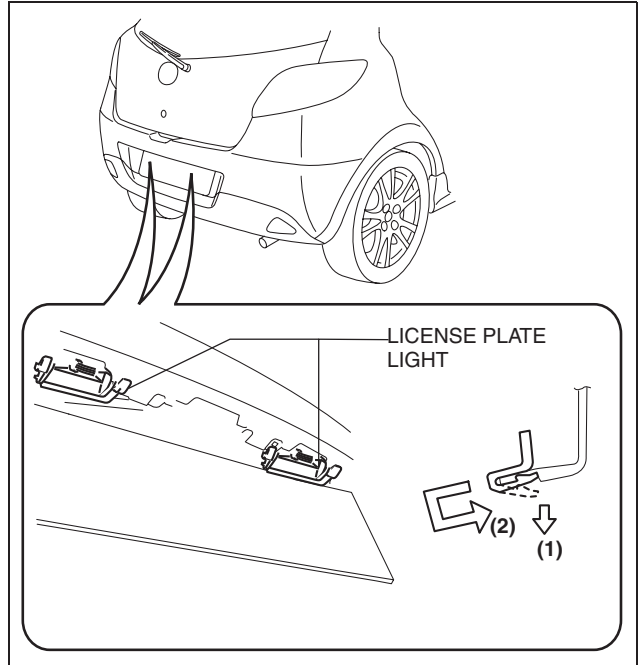
id091800801100

#### 5HB/3HB

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (3HB) (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Rear scuff plate (5HB) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)

## LIGHTING SYSTEMS

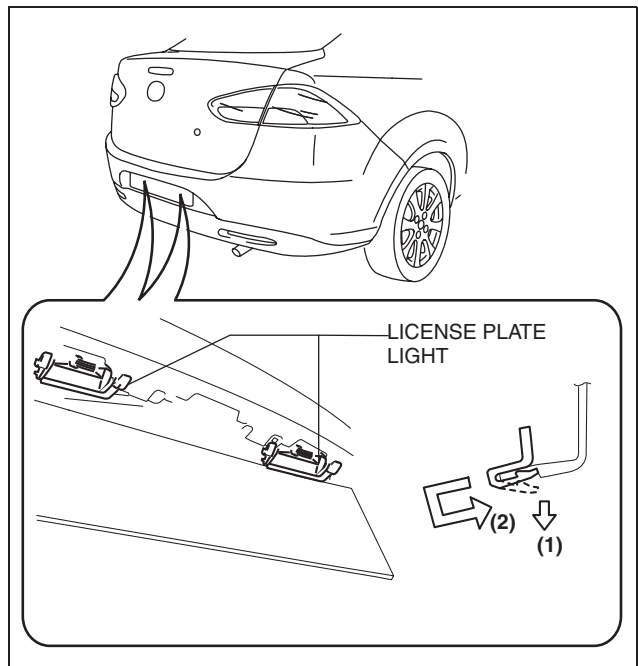
- (3) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (4) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (5) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (6) Trunk side trim (LH) (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.) (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
3. Disconnect the connector.
  4. Pull the tabs shown in the figure in the direction of the arrow (1) and remove them in the direction of the arrow (2).
  5. Remove the license plate light.
  6. Install in the reverse order of removal.



am2zzw0000249

### 4SD

1. Disconnect the negative battery cable.
2. Disconnect the connector.
3. Pull the tabs shown in the figure in the direction of the arrow (1) and remove them in the direction of the arrow (2).
4. Remove the license plate light.
5. Install in the reverse order of removal.



am2ccw0000021

### BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION

#### F35M-R

1. Disconnect the negative battery cable.

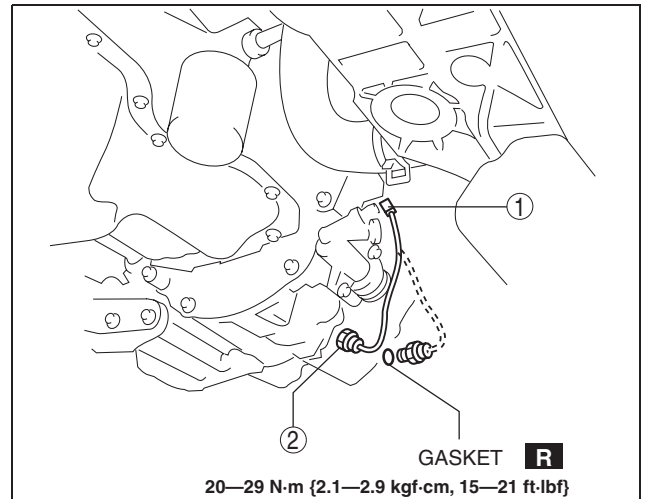
id091800800200

## LIGHTING SYSTEMS

2. Drain the transaxle oil.
3. Remove in the order indicated in the table.

|   |                      |
|---|----------------------|
| 1 | Connector            |
| 2 | Back-up light switch |

4. Install in the reverse order of removal.



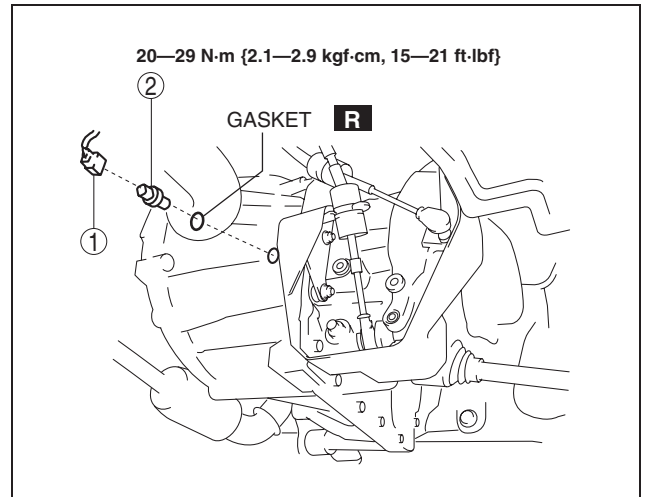
am2zzw0000337

### B65M-R

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.

|   |                      |
|---|----------------------|
| 1 | Connector            |
| 2 | Back-up light switch |

3. Install in the reverse order of removal.

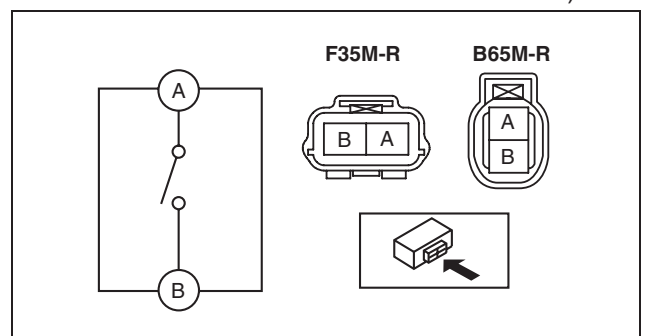


am2zzw0000337

### BACK-UP LIGHT SWITCH INSPECTION

id091800800300

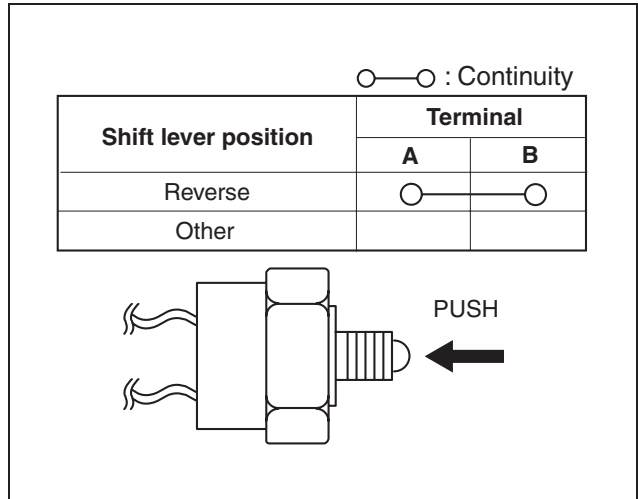
1. Disconnect the negative battery cable.
2. Drain the transmission oil (F35M-R).
3. Remove the back-up light switch. (See 09-18-30 BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION.)
4. Verify that the continuity between the back-up light switch terminals is as indicated in the table using a circuit tester.



am2zzw0000496

## LIGHTING SYSTEMS

- If not as indicated in the table, replace the back-up light switch.

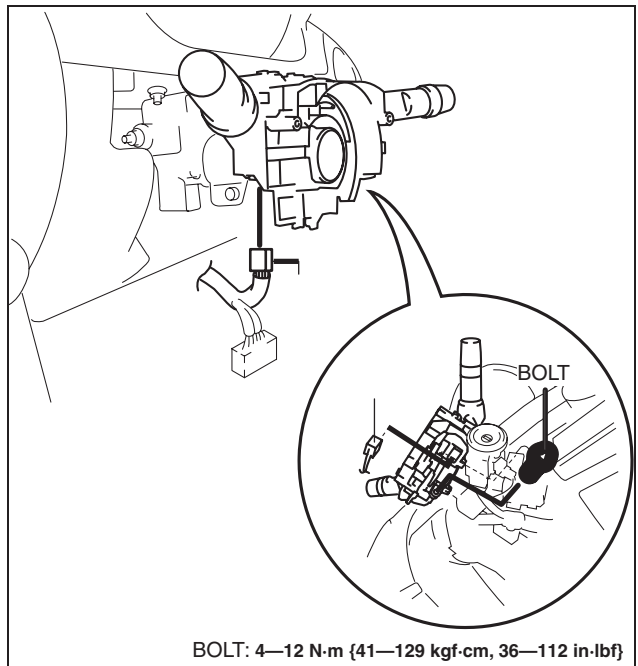


am2zzw0000240

### COMBINATION SWITCH REMOVAL/INSTALLATION

#### R.H.D.

1. Disconnect the negative battery cable and wait **1 min or more**.
2. Remove the following parts:
  - (1) Driver-side air bag module.
  - (2) Steering wheel (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (3) Column cover (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
  - (4) Clock spring.
3. Disconnect the connector.
4. Remove the bolt.

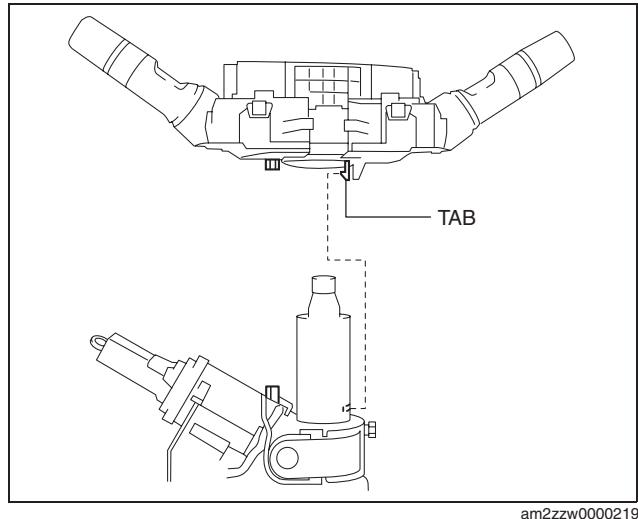


am2zzw0000351



## LIGHTING SYSTEMS

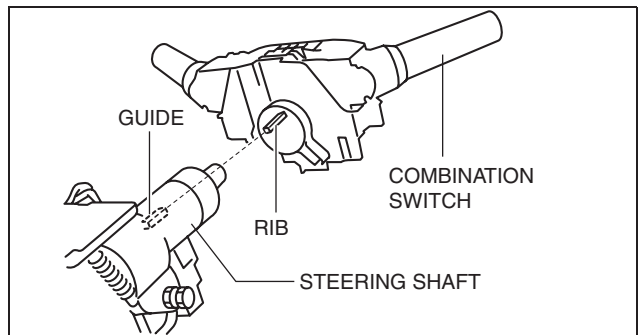
5. Detach the tab.
6. Remove the combination switch. (See 09-18-34 Combination Switch Installation Note.)
7. Install in the reverse order of removal.



am2zzw0000219

### Combination Switch Installation Note

1. Align the combination switch rib with the steering shaft guide and press the combination switch until it contacts.

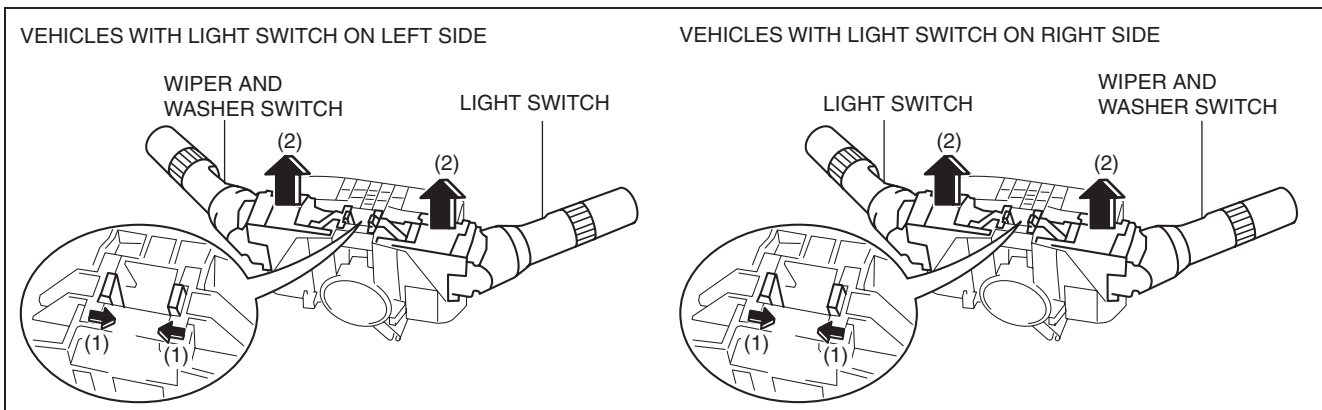


am2zzw0000219

### COMBINATION SWITCH DISASSEMBLY/ASSEMBLY

id091800802600

1. Disconnect the negative battery cable and wait **1 min or more**.
2. Remove the following parts:
  - (1) Driver-side air bag module.
  - (2) Steering wheel (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (3) Column cover (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
  - (4) Clock spring
3. Remove the combination switch. (See 09-18-32 COMBINATION SWITCH REMOVAL/INSTALLATION.)
4. Press the tabs in the direction of the arrow (1) shown in the figure, then remove the light switch, and the wiper and washer switch.



am2zzw0000336

5. Assemble in the reverse order of disassembly.

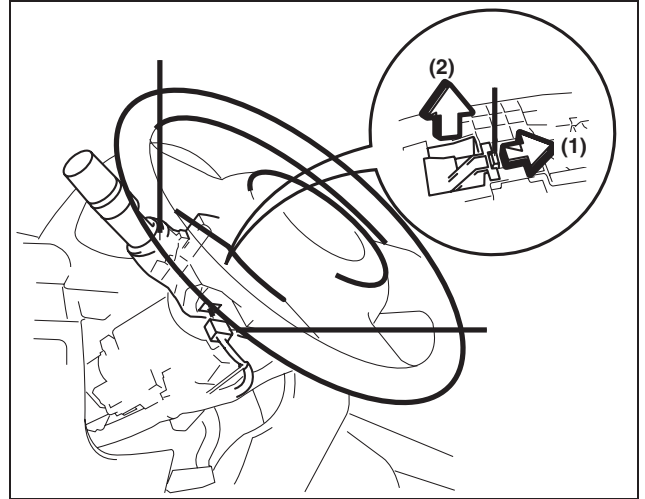
## LIGHTING SYSTEMS

### LIGHT SWITCH REMOVAL/INSTALLATION

id091800802800

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Disconnect the connector.

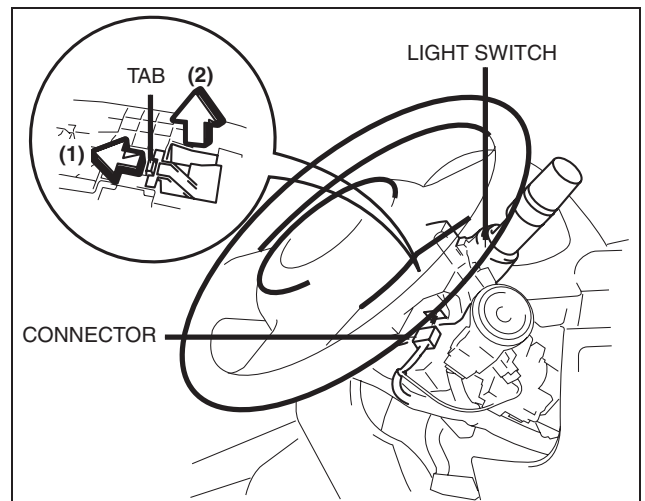
#### Vehicles with light switch on left side



am2zzw0000220

#### Vehicles with light switch on right side

4. Release the tab in the direction of the arrow (1) shown in the figure and remove the light switch in the direction of the arrow (2).
5. Install in the reverse order of removal.



am2zzw0000220

### LIGHT SWITCH INSPECTION

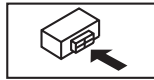
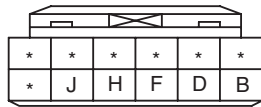
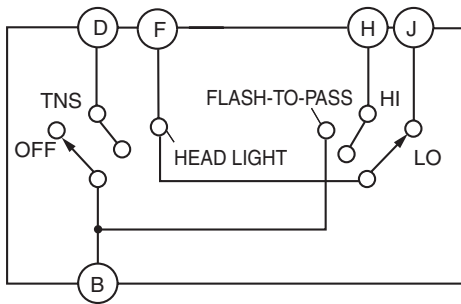
id091800802900

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the light switch. (See 09-18-35 LIGHT SWITCH REMOVAL/INSTALLATION.)
4. Verify that the continuity between the light switch terminals is as indicated in the table.
  - If not as indicated in the table, replace the light switch.

## LIGHTING SYSTEMS

### Vehicles Without Auto Light System Headlight switch

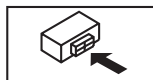
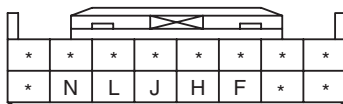
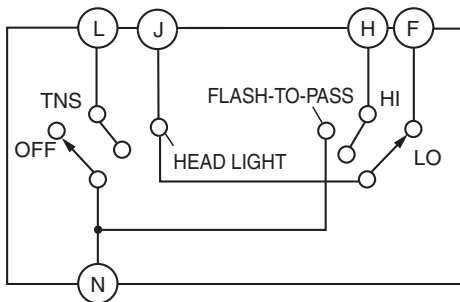
#### VEHICLES WITH LIGHT SWITCH ON LEFT SIDE



○—○ : Continuity

| Switch position |        |               | Terminal |     |     |   |     |
|-----------------|--------|---------------|----------|-----|-----|---|-----|
| Light           | Dimmer | Flash-to-pass | B        | D   | F   | H | J   |
| OFF             | -      | OFF           |          |     |     |   |     |
|                 |        | ON            | ○—○      |     | ○—○ |   |     |
| TNS             | -      | OFF           | ○—○      |     | ○—○ |   | ○—○ |
|                 |        | ON            | ○—○      | ○—○ | ○—○ |   |     |
| Head-light      | LO     | OFF           | ○—○      | ○—○ | ○—○ |   | ○—○ |
|                 | LO     | ON            | ○—○      | ○—○ | ○—○ |   | ○—○ |
|                 | HI     | -             | ○—○      | ○—○ | ○—○ |   |     |

#### VEHICLES WITH LIGHT SWITCH ON RIGHT SIDE



○—○ : Continuity

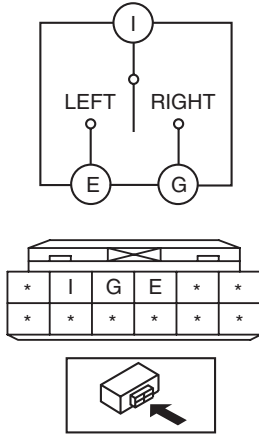
| Switch position |        |               | Terminal |     |     |     |     |
|-----------------|--------|---------------|----------|-----|-----|-----|-----|
| Light           | Dimmer | Flash-to-pass | F        | H   | J   | L   | N   |
| OFF             | -      | OFF           |          |     |     |     |     |
|                 |        | ON            |          | ○—○ | ○—○ |     | ○—○ |
| TNS             | -      | OFF           | ○—○      |     | ○—○ |     | ○—○ |
|                 |        | ON            |          | ○—○ | ○—○ | ○—○ |     |
| Head-light      | LO     | OFF           | ○—○      |     | ○—○ | ○—○ |     |
|                 | LO     | ON            |          | ○—○ | ○—○ | ○—○ |     |
|                 | HI     | -             |          | ○—○ | ○—○ | ○—○ |     |

am2zzw0000483

# LIGHTING SYSTEMS

## Turn switch

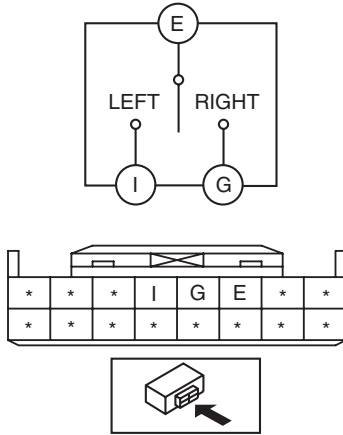
### VEHICLES WITH LIGHT SWITCH ON LEFT SIDE



○—○ : Continuity

| Switch position | Terminal |     |     |
|-----------------|----------|-----|-----|
|                 | E        | G   | I   |
| Left            | ○—○      |     | ○—○ |
| OFF             |          |     |     |
| Right           |          | ○—○ | ○—○ |

### VEHICLES WITH LIGHT SWITCH ON RIGHT SIDE

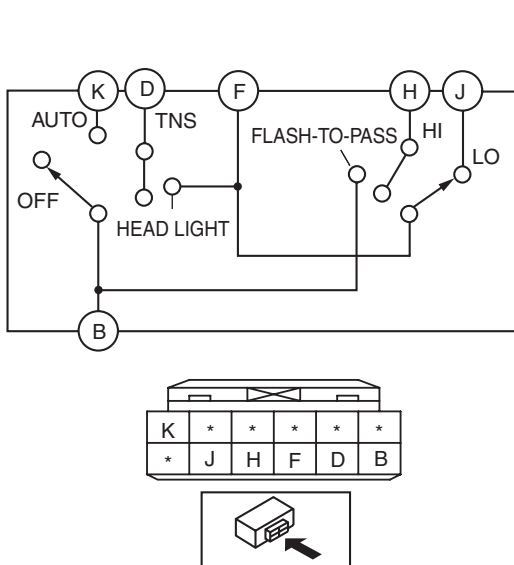


○—○ : Continuity

| Switch position | Terminal |     |     |
|-----------------|----------|-----|-----|
|                 | G        | I   | E   |
| Left            |          | ○—○ | ○—○ |
| OFF             |          |     |     |
| Right           | ○—○      |     | ○—○ |

am2zzw0000515

## Vehicles With Auto Light System Headlight switch



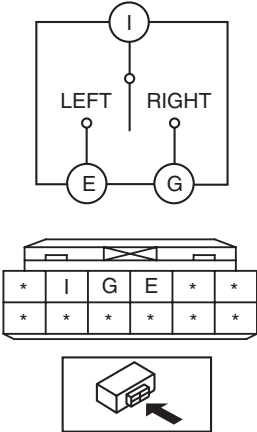
○—○ : Continuity

| Switch position |        |               | Terminal |     |     |   |     |     |
|-----------------|--------|---------------|----------|-----|-----|---|-----|-----|
| Light           | Dimmer | Flash-to-pass | B        | D   | F   | H | J   | K   |
| OFF             | -      | OFF           |          |     |     |   |     |     |
|                 |        | ON            | ○—○      |     | ○—○ |   |     |     |
| TNS             | -      | OFF           | ○—○      |     |     |   |     |     |
|                 |        | ON            | ○—○      | ○—○ | ○—○ |   |     |     |
| Head-light      | LO     | OFF           | ○—○      | ○—○ | ○—○ |   | ○—○ |     |
|                 |        | ON            | ○—○      | ○—○ | ○—○ |   |     |     |
|                 | HI     | -             | ○—○      | ○—○ | ○—○ |   |     |     |
| Auto            | LO     | OFF           | ○—○      |     |     |   |     | ○—○ |
|                 |        | ON            | ○—○      |     | ○—○ |   |     | ○—○ |
|                 | HI     | -             | ○—○      |     | ○—○ |   |     | ○—○ |

am2zzw0000380

# LIGHTING SYSTEMS

## Turn switch



○—○ : Continuity

| Switch position | Terminal |    |    |
|-----------------|----------|----|----|
|                 | E        | G  | I  |
| Left            | ○—       |    | ○— |
| OFF             |          |    |    |
| Right           |          | ○— | ○— |

am2zzw0000380

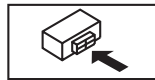
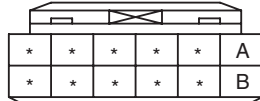
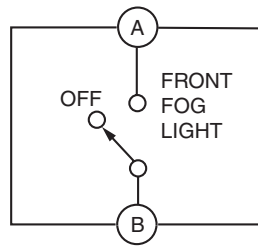
## FRONT FOG LIGHT SWITCH INSPECTION

id091800803200

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the light switch. (See 09-18-35 LIGHT SWITCH REMOVAL/INSTALLATION.)
4. Verify that the continuity between the front fog light switch terminals is as indicated in the table using a circuit tester.
  - If not as indicated in the table, replace the light switch.

## LIGHTING SYSTEMS

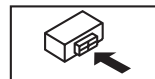
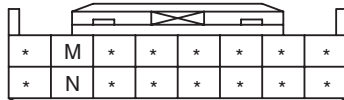
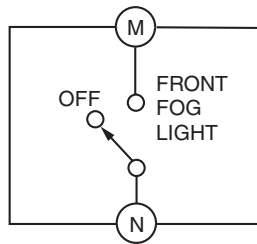
### VEHICLES WITH LIGHT SWITCH ON LEFT SIDE



○—○ : Continuity

| Switch position | Terminal |   |
|-----------------|----------|---|
|                 | A        | B |
| OFF             |          |   |
| FRONT FOG LIGHT | ○—○      |   |

### VEHICLES WITH LIGHT SWITCH ON RIGHT SIDE



○—○ : Continuity

| Switch position | Terminal |   |
|-----------------|----------|---|
|                 | M        | N |
| OFF             |          |   |
| FRONT FOG LIGHT | ○—○      |   |

am2zzw0000515

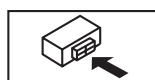
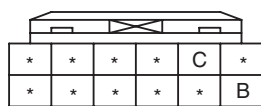
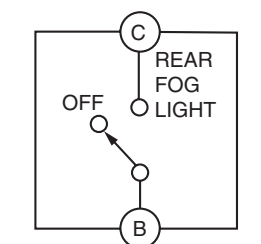
### REAR FOG LIGHT SWITCH INSPECTION

id091800475500

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the light switch. (See 09-18-35 LIGHT SWITCH REMOVAL/INSTALLATION.)
4. Verify that the continuity between the front fog light switch terminals is as indicated in the table using a tester.
  - If not as indicated in the table, replace the light switch.

## LIGHTING SYSTEMS

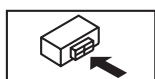
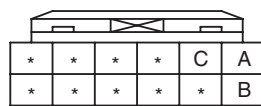
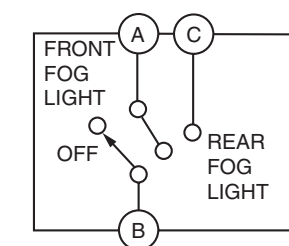
### WITHOUT FRONT FOG LIGHT



○—○ : Continuity

| Switch position | Terminal |   |
|-----------------|----------|---|
|                 | B        | C |
| OFF             |          |   |
| REAR FOG LIGHT  | ○—○      |   |

### WITH FRONT FOG LIGHT



○—○ : Continuity

| Switch position | Terminal |     |     |
|-----------------|----------|-----|-----|
|                 | A        | B   | C   |
| OFF             |          |     |     |
| FRONT FOG LIGHT | ○—○      |     |     |
| REAR FOG LIGHT  | ○—○      | ○—○ | ○—○ |

am2zzw0000515

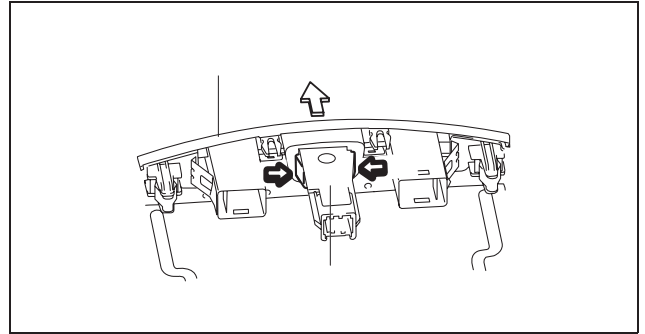
## HAZARD WARNING SWITCH REMOVAL/INSTALLATION

id091800803000

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (Vehicles with center panel unit) (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (5) Center panel unit (Vehicles with center panel unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (6) Center panel (Vehicles without center panel unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)

## LIGHTING SYSTEMS

3. Remove the hazard warning switch in the direction of the arrow (2) shown in the figure while pressing the hazard warning switch tabs in the direction of the arrow (1).
4. Install in the reverse order of removal.

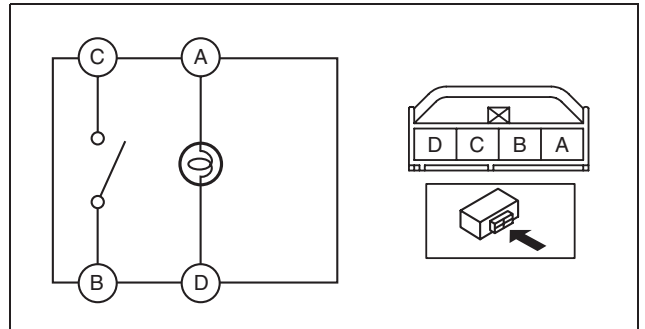


am2zzw0000249

### HAZARD WARNING SWITCH INSPECTION

id091800803100

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (Vehicles with center panel unit) (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (5) Center panel unit (Vehicles with center panel unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (6) Center panel (Vehicles without center panel unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (7) Hazard warning switch (See 09-18-40 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.)
3. Verify that the continuity between the hazard warning switch terminals is as indicated in the table.
  - If not as indicated in the table, replace the hazard warning switch.



am2zzw0000482

| <div style="display: flex; justify-content: space-around; align-items: center;"> <span>○—○: Continuity</span> <span>○—(X)—○: Bulb</span> </div> |          |   |     |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------|---|-----|---|
| Switch position                                                                                                                                 | Terminal |   |     |   |
|                                                                                                                                                 | A        | D | C   | B |
| ON                                                                                                                                              | ○—(X)—○  |   | ○—○ |   |
| OFF                                                                                                                                             | ○—(X)—○  |   |     |   |

am2zzw0000482

### HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION

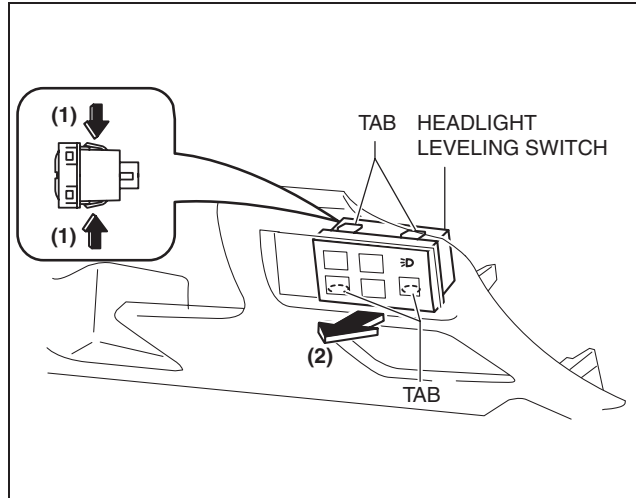
id091800803600

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (driver-side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Front side trim (driver-side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - (3) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (4) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (5) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)



## LIGHTING SYSTEMS

- (6) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
- (7) Lower panel (driver-side) (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
3. Press the tabs in the direction of the arrow (1) shown in the figure and remove the auto leveling switch in the direction of the arrow (2).
4. Install in the reverse order of removal.

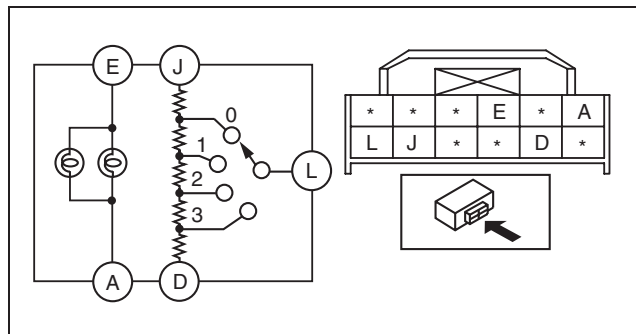


am2zzw0000254

### HEADLIGHT LEVELING SWITCH INSPECTION

id091800803700

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (driver-side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Front side trim (driver-side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - (3) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (4) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (5) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (6) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (7) Lower panel (driver-side) (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (8) Headlight leveling switch (See 09-18-41 HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION.)
3. Verify that the resistance and continuity between the headlight leveling switch terminals is as indicated in the table using a tester.
  - If not as indicated in the table, or if the resistance is not within the specification, replace the headlight leveling switch.



am2zzw0000348

## LIGHTING SYSTEMS

$\text{---}\text{---}\text{---}$  : Resistance     $\text{---}\text{---}\text{---}$  : Bulb

| Switch position | Terminal                                        |   |   |                                  |   |
|-----------------|-------------------------------------------------|---|---|----------------------------------|---|
|                 | H                                               | J | D | A                                | E |
| 0               | $\text{---}\text{---}\text{---}$<br>$R_1$ $R_2$ |   |   | $\text{---}\text{---}\text{---}$ |   |
| 1               | $\text{---}\text{---}\text{---}$<br>$R_3$ $R_4$ |   |   | $\text{---}\text{---}\text{---}$ |   |
| 2               | $\text{---}\text{---}\text{---}$<br>$R_5$ $R_6$ |   |   | $\text{---}\text{---}\text{---}$ |   |
| 3               | $\text{---}\text{---}\text{---}$<br>$R_7$ $R_8$ |   |   | $\text{---}\text{---}\text{---}$ |   |

$R_1$ : 910  $\Omega$      $R_2$ : 3785  $\Omega$      $R_3$ : 1716  $\Omega$      $R_4$ : 2979  $\Omega$   
 $R_5$ : 2276  $\Omega$      $R_6$ : 2419  $\Omega$      $R_7$ : 2895  $\Omega$      $R_8$ : 1800  $\Omega$

am2zzw0000228

### AUTO LIGHT ILLUMINATION LEVEL SETTING

id091800803300

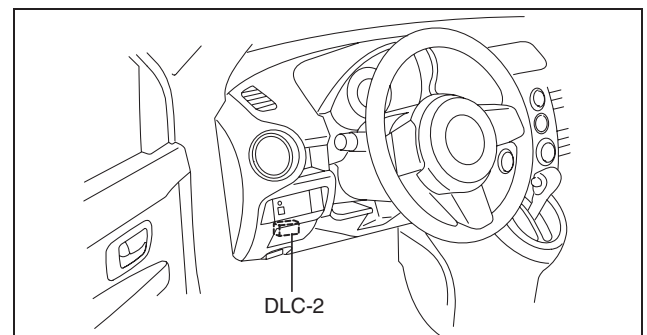
#### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the AUTO LIGHT ILLUMINATION LEVEL SETTING.

- Connect the M-MDS to the DLC-2.
- After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    - Select "Module Programming".
- Then, select items from the screen menu in the following order.
  - Select "Programmable Parameters".
  - Select "Exterior Lighting".
- Select the item name, and then select option.

#### Items

- Autolamp On Setting (Standard (Other) / Low (Other))



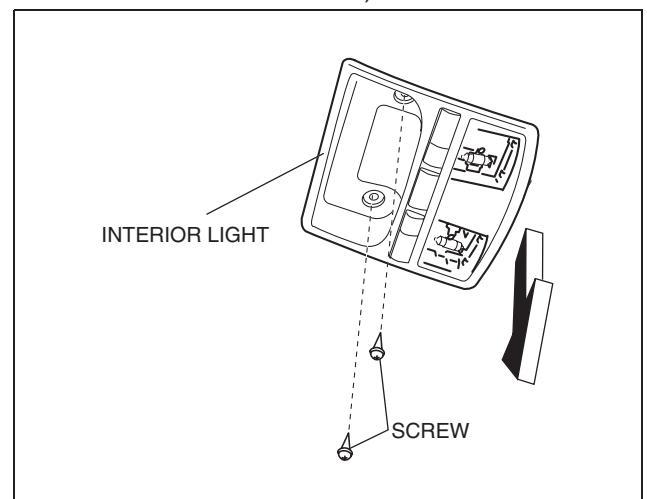
am2zzw0000251

### INTERIOR LIGHT REMOVAL/INSTALLATION

id091800801500

#### Vehicles With Intruder Sensor

- Disconnect the negative battery cable.
- Remove the intruder sensor. (See 09-14-135 INTRUDER SENSOR REMOVAL/INSTALLATION.)
- Remove the lens. (See 09-18-44 INTERIOR LIGHT BULB REMOVAL/INSTALLATION.)
- Remove the screw.
- Remove the interior light.
- Disconnect the interior light connector.
- Install in the reverse order of removal.

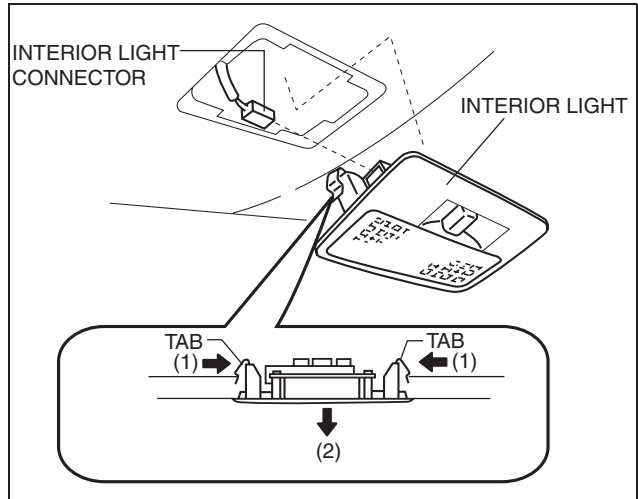


am2zzw0000224

## LIGHTING SYSTEMS

### Vehicles Without Intruder Sensor

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (3) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (4) Rain sensor cover (vehicles with rain sensor) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
3. Set the headliner out of the way.
4. Release the tabs in the direction of the arrow (1) shown in the figure and remove the interior light in the direction of the arrow (2).
5. Disconnect the interior light connector.
6. Install in the reverse order of removal.



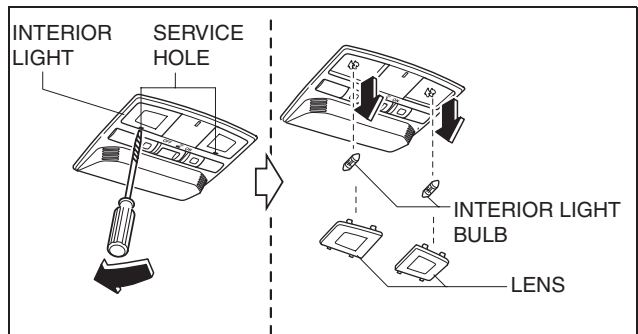
am2zzw0000213

### INTERIOR LIGHT BULB REMOVAL/INSTALLATION

id091800801400

#### Vehicles With Intruder Sensor

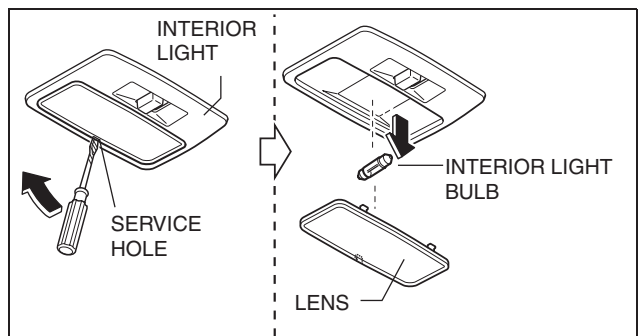
1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the service hole, push it in the direction indicated by the arrow, and remove the lens.
3. Remove the interior light bulbs.
4. Install in the reverse order of removal.



am2zzw0000225

#### Vehicles Without Intruder Sensor

1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the service hole, push it in the direction indicated by the arrow, and remove the lens.
3. Remove the interior light bulb.
4. Install in the reverse order of removal.



am2zzw0000250

### INTERIOR LIGHT INSPECTION

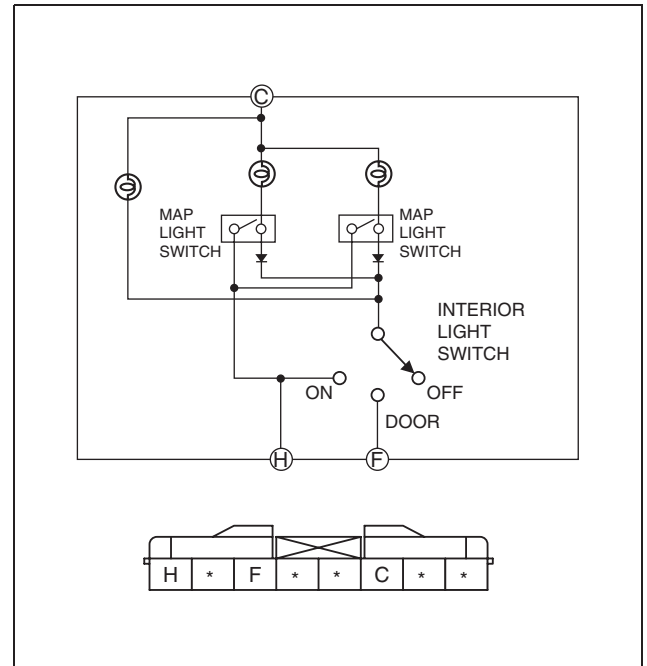
id091800801600

#### Vehicles With Intruder Sensor

1. Disconnect the negative battery cable.
2. Remove the intruder sensor. (See 09-14-135 INTRUDER SENSOR REMOVAL/INSTALLATION.)
3. Remove the lens. (See 09-18-44 INTERIOR LIGHT BULB REMOVAL/INSTALLATION.)

## LIGHTING SYSTEMS

4. Remove the interior light. (See 09-18-43 INTERIOR LIGHT REMOVAL/INSTALLATION.)
5. Verify that the continuity between the interior light terminals is as indicated in the table.



am2zzw0000496

- If not as indicated in the table, replace the interior light.

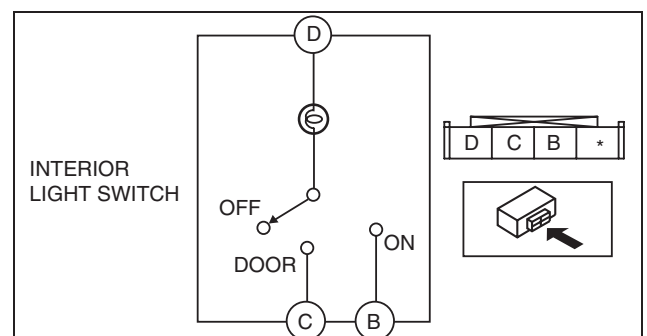
○ ○ ○ : Bulb

| Switch Position       |      | Terminal |   |   |
|-----------------------|------|----------|---|---|
|                       |      | H        | F | C |
| Map Light Switch      | OFF  |          |   |   |
|                       | ON   | ○        | ○ | ○ |
| Interior Light Switch | OFF  |          |   |   |
|                       | DOOR |          | ○ | ○ |
|                       | ON   | ○        | ○ | ○ |

am2zzw0000496

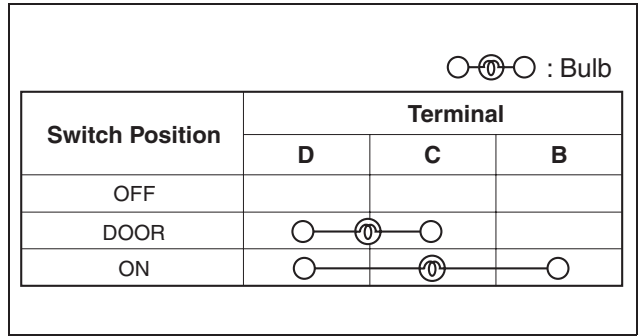
### Vehicles Without Intruder Sensor

1. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (3) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (4) Rain sensor cover (vehicles with rain sensor) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
2. Remove the interior light. (See 09-18-43 INTERIOR LIGHT REMOVAL/INSTALLATION.)
3. Set the headliner out of the way.
4. Verify that the continuity between the interior light terminals is as indicated in the table.
  - If not as indicated in the table, replace the interior light.



am2zzw0000496

## LIGHTING SYSTEMS

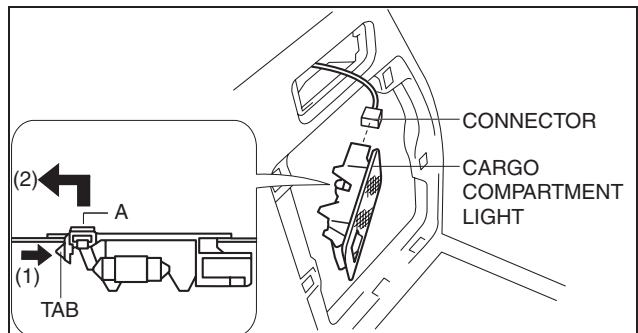


am2zzw0000496

### CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION

id091800801700

1. Disconnect the negative battery cable.
2. Insert hand through the service hole, release the tab in the direction of the arrow (1) shown in the figure, and pull area A in the direction of the arrow (2) to remove the cargo compartment light.
3. Disconnect the cargo compartment light connector.
4. Install in the reverse order of removal.

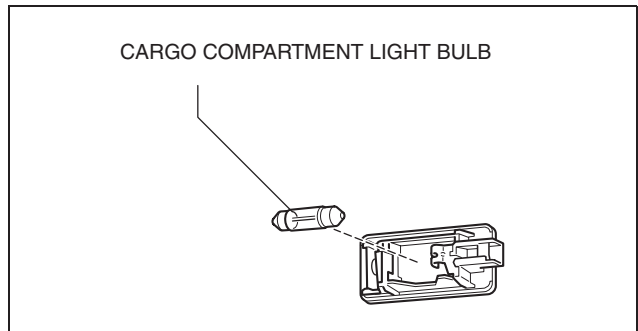


am2zzw0000227

### CARGO COMPARTMENT LIGHT BULB REMOVAL/INSTALLATION

id091800807800

1. Disconnect the negative battery cable.
2. Remove the cargo compartment light. (See 09-18-46 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
3. Remove the cargo compartment light bulb.
4. Install in the reverse order of removal.



am2zzw0000227

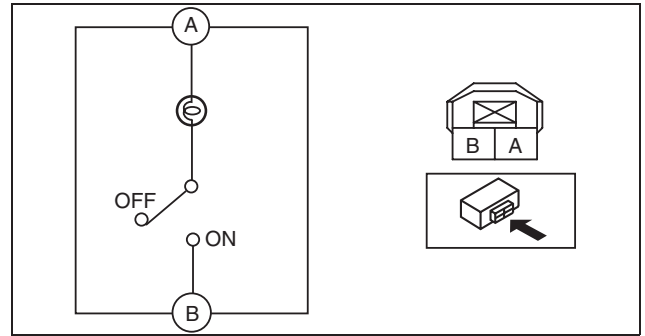
### CARGO COMPARTMENT LIGHT INSPECTION

id091800801800

1. Disconnect the negative battery cable.
2. Remove the cargo compartment light. (See 09-18-46 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)

## LIGHTING SYSTEMS

3. Verify that the continuity between the cargo compartment light terminals is as indicated in the table.
  - If not as indicated in the table, replace the cargo compartment light.



am2zzw0000482

○—○—○ : Bulb

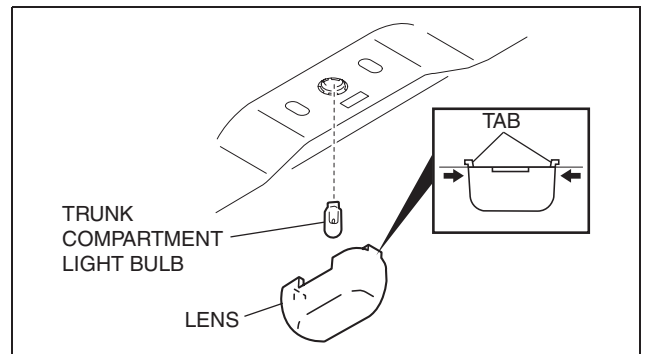
| Switch position | Terminal |       |
|-----------------|----------|-------|
|                 | A        | B     |
| ON              | ○—○—○    | ○—○—○ |
| OFF             | ○—○—○    | ○—○—○ |

am2zzw0000482

### TRUNK COMPARTMENT LIGHT REMOVAL/INSTALLATION [4SD]

id0918008507a5

1. Disconnect the negative battery cable.
2. Disengage the tabs by pressing both ends of the lens in the directions indicated by the arrows and remove the lens.
3. Install in the reverse order of removal.



am2zzw0000483

## WIPER/WASHER SYSTEM

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### 09-19 WIPER/WASHER SYSTEM

|                                          |          |
|------------------------------------------|----------|
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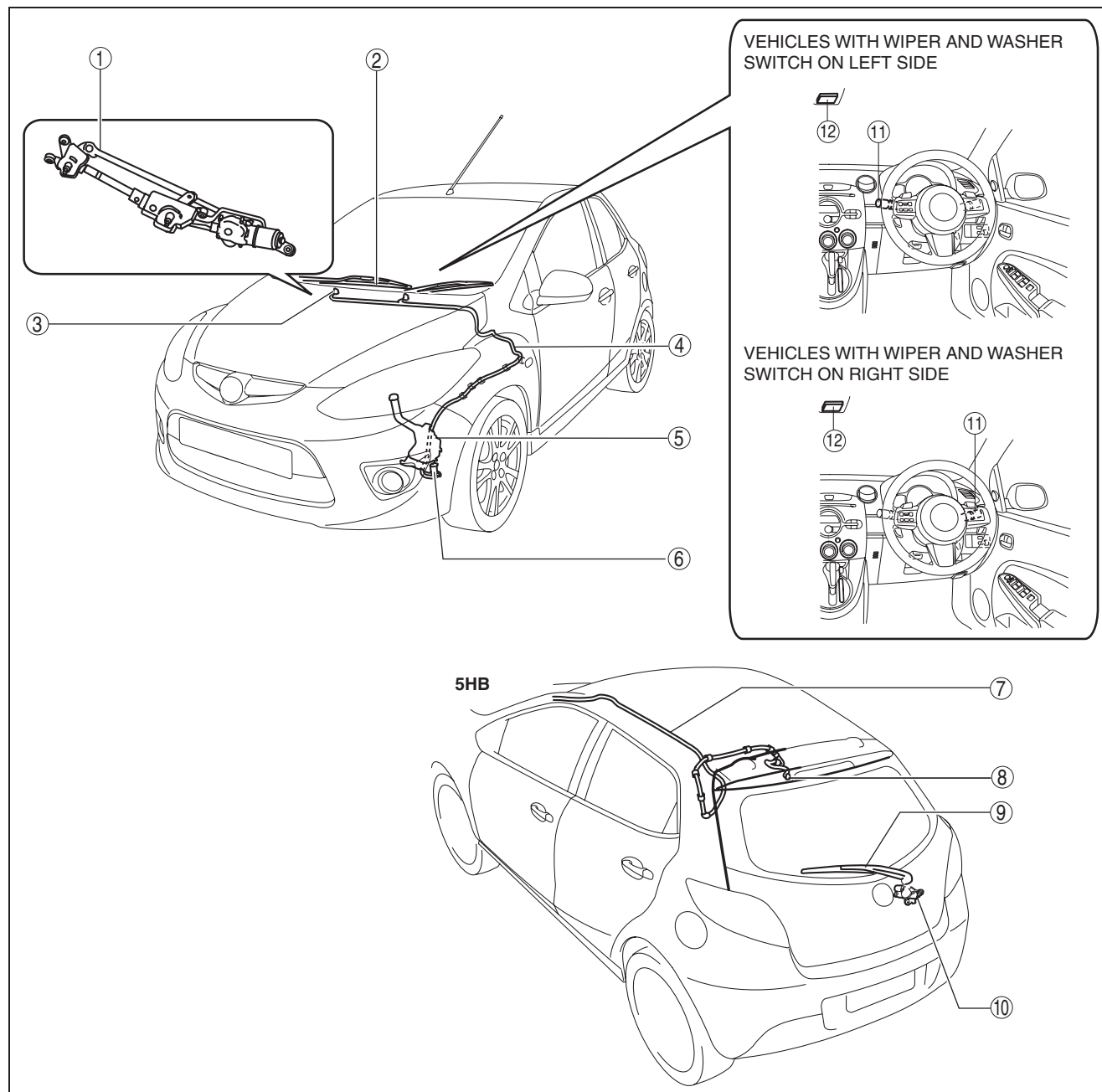
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## WIPER/WASHER SYSTEM

### WIPER/WASHER SYSTEM LOCATION INDEX

R.H.D.

id091900910000



am2zzw0000495

|   |                                                                                                                                                                                                          |
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| 2 | Windshield wiper arm and blade<br>(See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)<br>(See 09-19-8 WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT.)                                         |
| 3 | Windshield washer nozzle<br>(See 09-19-15 WINDSHIELD WASHER NOZZLE REMOVAL/INSTALLATION.)<br>(See 09-19-16 WINDSHIELD WASHER NOZZLE ADJUSTMENT.)                                                         |

|   |                                                                                                                                           |
|---|-------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Windshield washer hose<br>(See 09-19-16 WINDSHIELD WASHER HOSE REMOVAL/INSTALLATION.)                                                     |
| 5 | Washer tank<br>(See 09-19-13 WASHER TANK REMOVAL/INSTALLATION.)                                                                           |
| 6 | Washer motor<br>(See 09-19-9 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION.)<br>(See 09-19-11 WINDSHIELD WIPER MOTOR DISASSEMBLY/ASSEMBLY.) |
| 7 | Rear washer hose<br>(See 09-19-20 REAR WASHER HOSE REMOVAL/INSTALLATION.)                                                                 |



## WIPER/WASHER SYSTEM

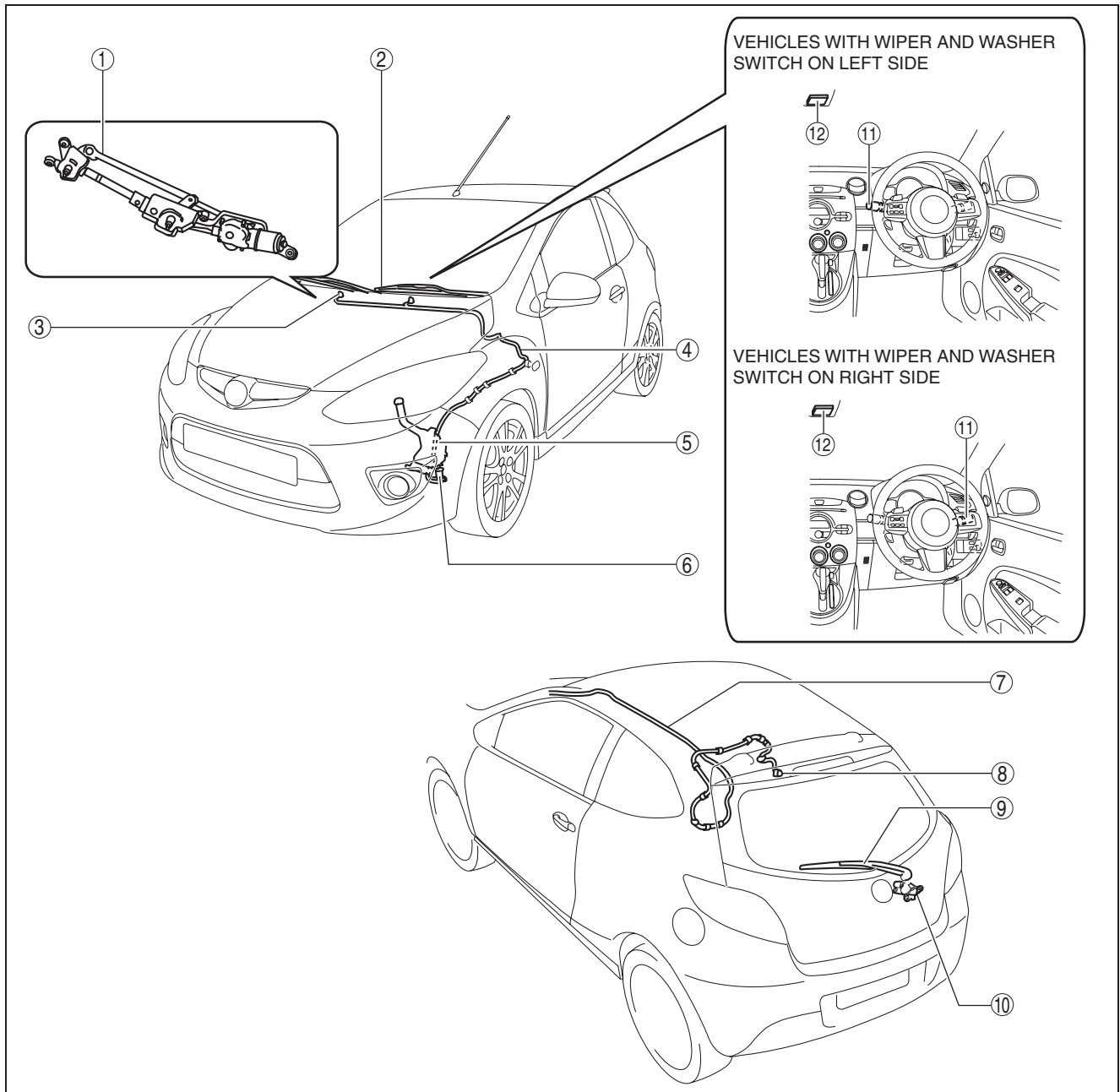
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|    |                                                                                                                                                          |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | Rear washer nozzle<br>(See 09-19-20 REAR WASHER NOZZLE REMOVAL/INSTALLATION.)<br>(See 09-19-20 REAR WASHER NOZZLE ADJUSTMENT.)                           |
| 9  | Rear wiper arm and blade<br>(See 09-19-17 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)<br>(See 09-19-18 REAR WIPER ARM AND BLADE ADJUSTMENT.)         |
| 10 | Rear wiper motor<br>(See 09-19-18 REAR WIPER MOTOR REMOVAL/INSTALLATION.)<br>(See 09-19-19 REAR WIPER MOTOR INSPECTION.)                                 |
| 11 | Wiper and washer switch<br>(See 09-19-24 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)<br>(See 09-19-25 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) |
| 12 | Rain sensor<br>(See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.) (See 09-19-31 RAIN SENSOR INITIAL SETTING.)                                              |

## WIPER/WASHER SYSTEM

### WIPER/WASHER SYSTEM LOCATION INDEX [3HB] R.H.D.

id0919009100z3



am2zzw0000495

|   |                                                                                                                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Windshield wiper motor<br>(See 09-19-9 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION.)<br>(See 09-19-11 WINDSHIELD WIPER MOTOR DISASSEMBLY/ASSEMBLY.)<br>(See 09-19-12 WINDSHIELD WIPER MOTOR INSPECTION.) |
| 2 | Windshield wiper arm and blade<br>(See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)<br>(See 09-19-8 WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT.)                                         |
| 3 | Windshield washer nozzle<br>(See 09-19-15 WINDSHIELD WASHER NOZZLE REMOVAL/INSTALLATION.)<br>(See 09-19-16 WINDSHIELD WASHER NOZZLE ADJUSTMENT.)                                                         |

|   |                                                                                                                                           |
|---|-------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Windshield washer hose<br>(See 09-19-16 WINDSHIELD WASHER HOSE REMOVAL/INSTALLATION.)                                                     |
| 5 | Washer tank<br>(See 09-19-13 WASHER TANK REMOVAL/INSTALLATION.)                                                                           |
| 6 | Washer motor<br>(See 09-19-9 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION.)<br>(See 09-19-11 WINDSHIELD WIPER MOTOR DISASSEMBLY/ASSEMBLY.) |
| 7 | Rear washer hose<br>(See 09-19-22 REAR WASHER HOSE REMOVAL/INSTALLATION [3HB].)                                                           |

## WIPER/WASHER SYSTEM

|    |                                                                                                                                                          |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | Rear washer nozzle<br>(See 09-19-20 REAR WASHER NOZZLE REMOVAL/INSTALLATION.)<br>(See 09-19-20 REAR WASHER NOZZLE ADJUSTMENT.)                           |
| 9  | Rear wiper arm and blade<br>(See 09-19-17 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)<br>(See 09-19-18 REAR WIPER ARM AND BLADE ADJUSTMENT.)         |
| 10 | Rear wiper motor<br>(See 09-19-18 REAR WIPER MOTOR REMOVAL/INSTALLATION.)<br>(See 09-19-19 REAR WIPER MOTOR INSPECTION.)                                 |
| 11 | Wiper and washer switch<br>(See 09-19-24 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)<br>(See 09-19-25 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) |
| 12 | Rain sensor<br>(See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.) (See 09-19-31 RAIN SENSOR INITIAL SETTING.)                                              |

### WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION

id091900474600

#### Warning

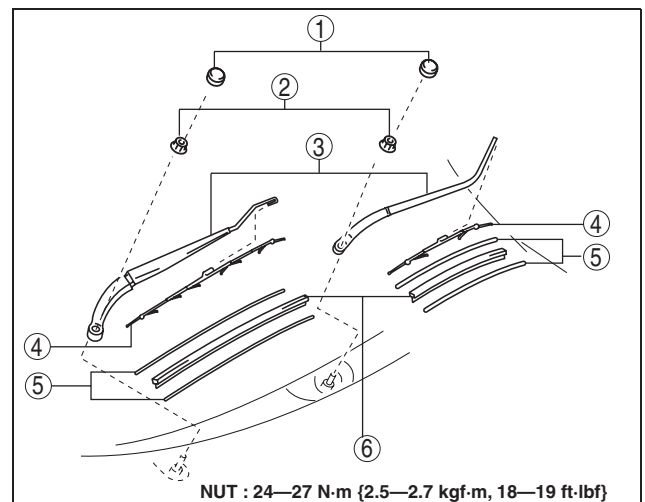
- When the ignition switch is turned to the ON position, and the wiper and washer switch is in the AUTO position, the windshield wipers could operate accidentally under the following conditions. Always turn the ignition switch, and the wiper and washer switch off before handling the windshield wipers; otherwise a pinched hand or fingers could result in injury or a wiper system malfunction:
  - The windshield in the rain sensor installation area is touched.
  - The windshield is subjected to an impact.
  - The rain sensor is subjected to an impact from inside the vehicle.
  - Water is poured on the windshield.

1. Remove in the order indicated in the table.

#### R.H.D.

|   |                                                                                |
|---|--------------------------------------------------------------------------------|
| 1 | Cap                                                                            |
| 2 | Nut                                                                            |
| 3 | Windshield wiper arm<br>(See: 09-19-8 Windshield Wiper Arm Installation Note.) |
| 4 | Windshield wiper blade                                                         |
| 5 | Backing plate                                                                  |
| 6 | Rubber brush                                                                   |

2. Install in the reverse order of removal.
3. Adjust the windshield wiper arm and blade. (See 09-19-8 WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT.)

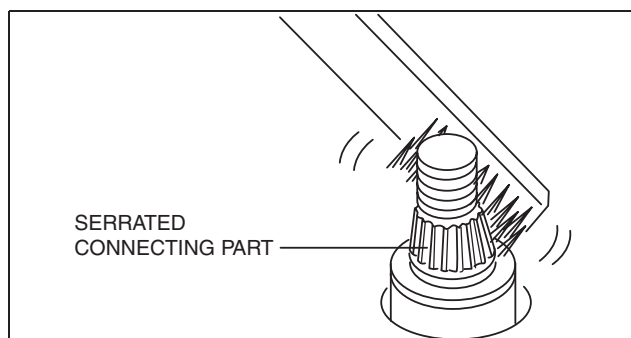


am2zzw0000506

## WIPER/WASHER SYSTEM

### Windshield Wiper Arm Installation Note

1. Clean the serrated connecting part with a wire brush before installing the windshield wiper arm.



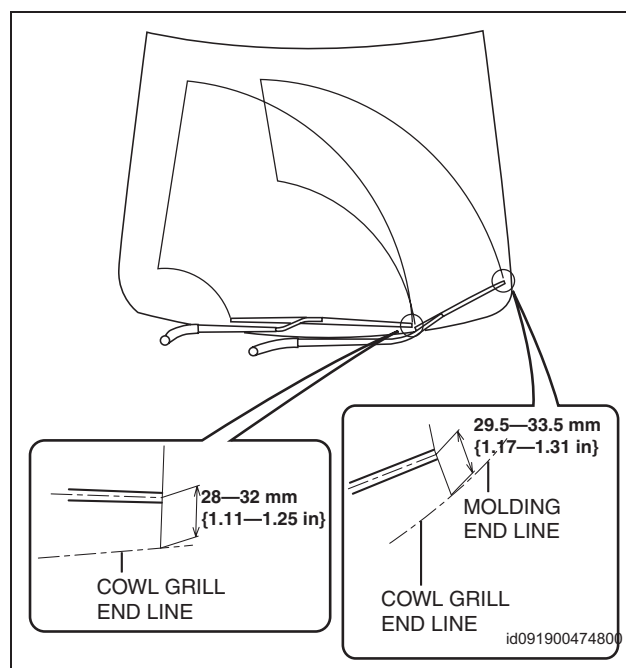
am2zzw0000212

### WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT

1. Turn off the windshield wiper switch while operating the windshield wiper motor to stop the windshield wiper at the auto-stop position.
2. Slide the serrated connecting part and position the windshield wiper arm and blade as shown in the figure.

id091900474700

R.H.D.



id091900474800

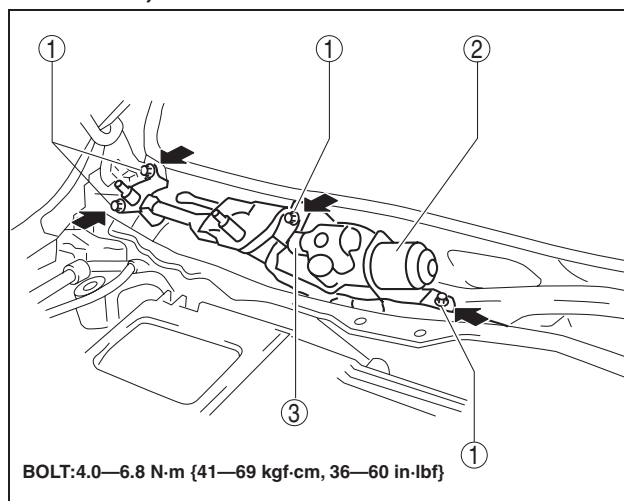
am2zzw0000213

### WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the windshield wiper arm. (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
3. Remove the cowl grille. (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

am2zzw0000432

R.H.D. (Except AutoAlliance Thailand (AAT) manufactured vehicles)



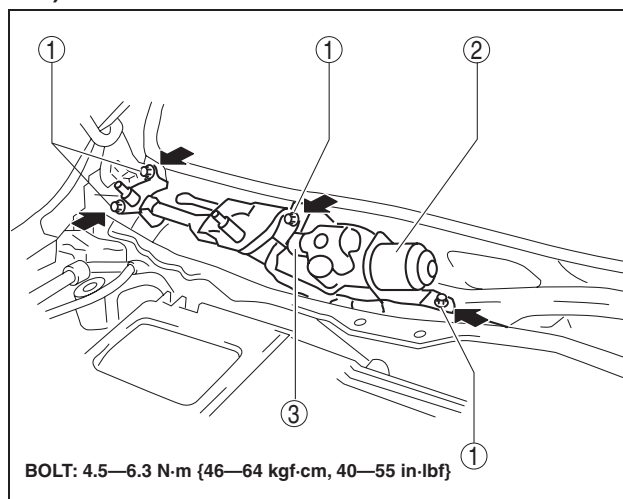
am2zzw0000216

## WIPER/WASHER SYSTEM

### R.H.D. (AutoAlliance Thailand (AAT) manufactured vehicles)

|   |                        |
|---|------------------------|
| 1 | Bolt                   |
| 2 | Windshield wiper motor |
| 3 | Connector              |

5. Install in the reverse order of removal.
6. Adjust the windshield wiper arm and blade. (See 09-19-8 WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT.)

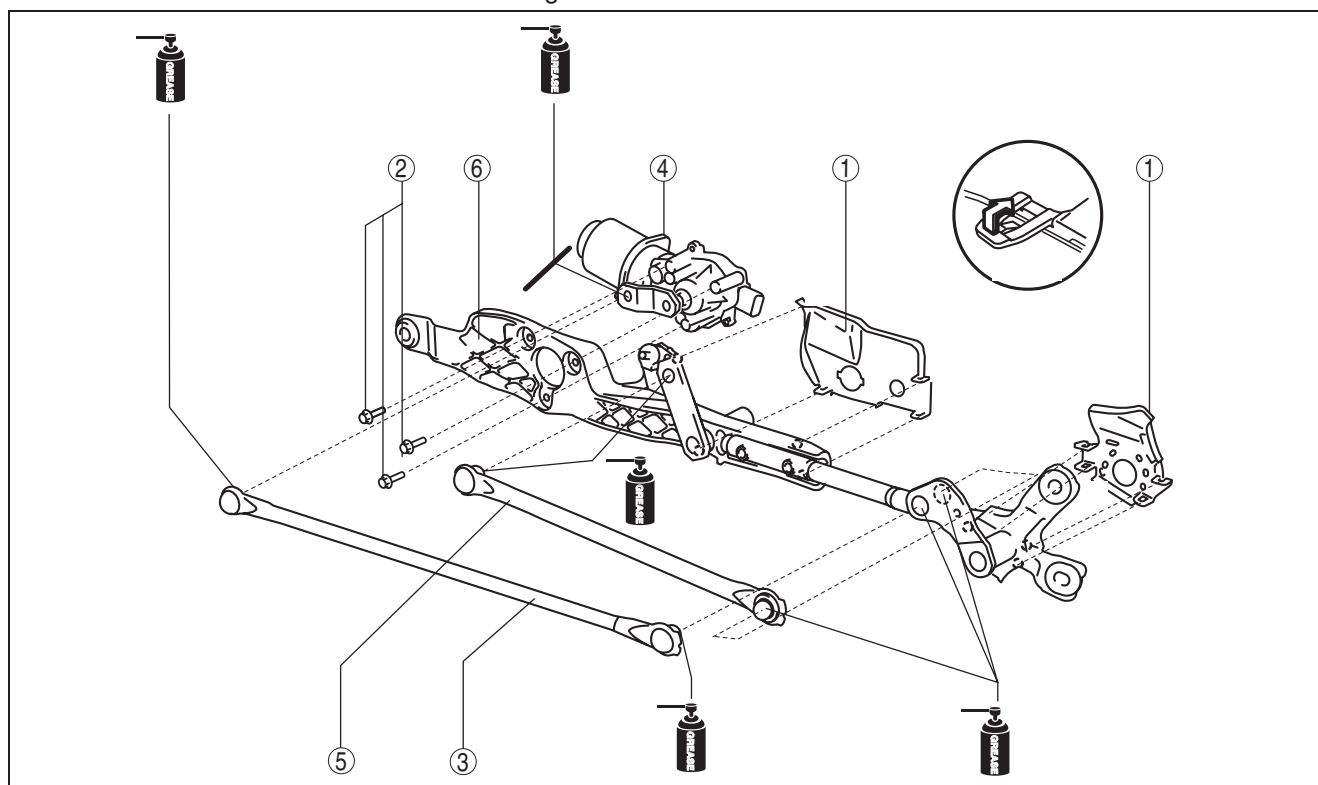


am2zzw0000216

### WINDSHIELD WIPER MOTOR DISASSEMBLY/ASSEMBLY

id091900474900

1. Disassemble in the order indicated in the figure.



adejjw00003084

|   |                                                          |
|---|----------------------------------------------------------|
| 1 | Cover                                                    |
| 2 | Bolt                                                     |
| 3 | Wiper link No.1 (See 09-19-11 Ball Joint Assembly Note.) |

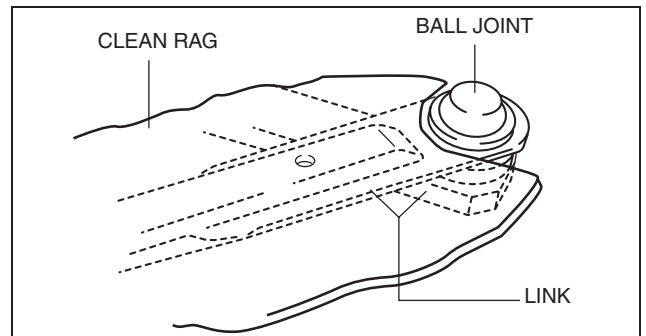
|   |                                                                             |
|---|-----------------------------------------------------------------------------|
| 4 | Windshield wiper motor (See 09-19-11 Windshield Wiper Motor Assembly Note.) |
| 5 | Wiper link No.2 (See 09-19-11 Ball Joint Assembly Note.)                    |
| 6 | Main link (See 09-19-11 Ball Joint Assembly Note.)                          |

## WIPER/WASHER SYSTEM

2. Assemble in the reverse order of disassembly.

### Ball Joint Assembly Note

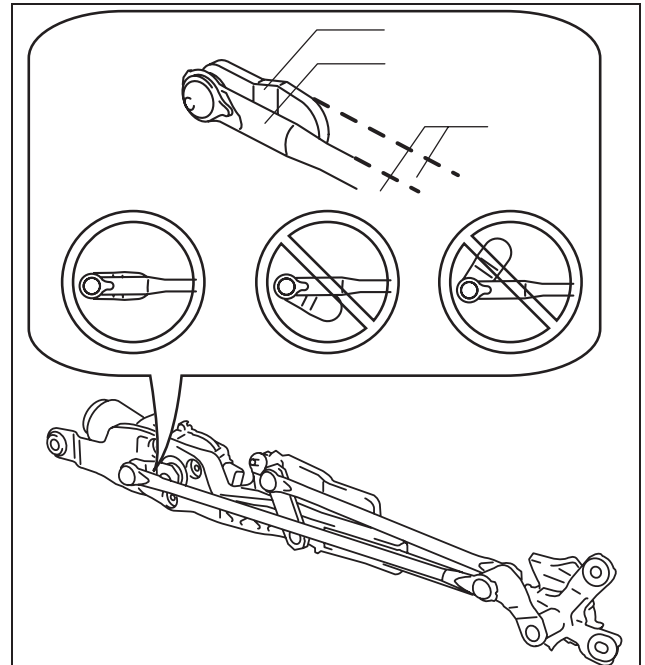
1. Use a clean cloth to protect the link and squeeze using pliers.



am2zzw0000218

### Windshield Wiper Motor Assembly Note

1. Connect the windshield wiper motor to the vehicle wiring harness connector, operate the windshield wipers, and then stop them at the auto-stop position.
2. Adjust the motor crank and wiper link No.1 so that they are parallel as shown in the figure.



am2zzw0000218

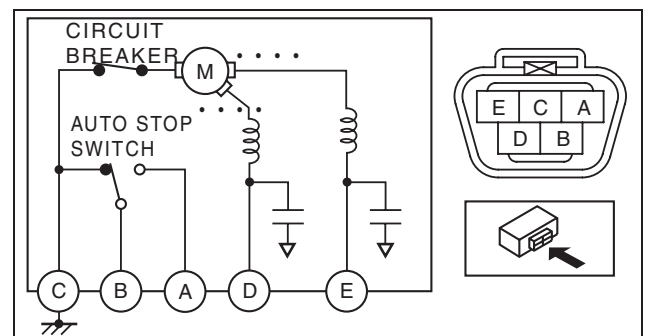
## WINDSHIELD WIPER MOTOR INSPECTION

id091900475000

### R.H.D.

1. Disconnect windshield wiper motor connector.
2. After connecting the windshield wiper motor terminal D or E to the positive battery terminal, and terminal C to the negative battery terminal, verify that the windshield wipers operate as shown in the table.
  - If not as indicated in the table, replace the windshield wiper motor.

| Terminal applied to battery |                          | Operation condition |
|-----------------------------|--------------------------|---------------------|
| Battery negative voltage    | Battery positive voltage |                     |
| C                           | D                        | HI                  |
|                             | E                        | LO                  |



adejjw00003085

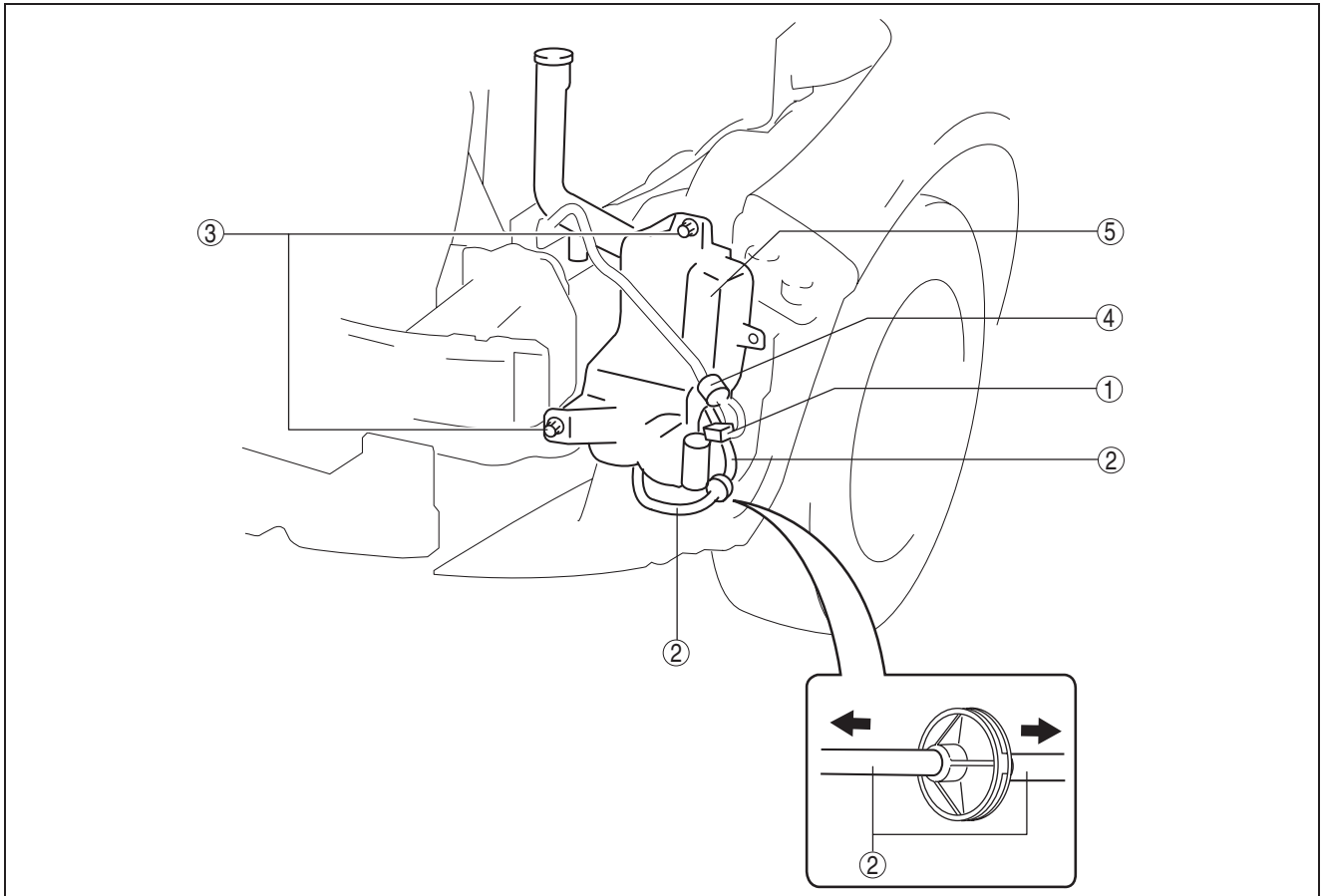
## WIPER/WASHER SYSTEM

3. Disconnect the positive battery from terminal E while the wipers are operating, then verify that the wipers do not stop at the auto-stop position.
4. Connect windshield wiper motor terminals E and A, and apply battery positive voltage to terminal B.
5. Verify that the windshield wipers operate at low speed again and they are at the auto-stop position.
  - If there is any malfunction, replace the windshield wiper motor.

### WASHER TANK REMOVAL/INSTALLATION

id091900476100

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove the front combination light on the left side. (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.



adejjw00004723

|   |             |
|---|-------------|
| 1 | Connector   |
| 2 | Washer hose |
| 3 | Bolt        |

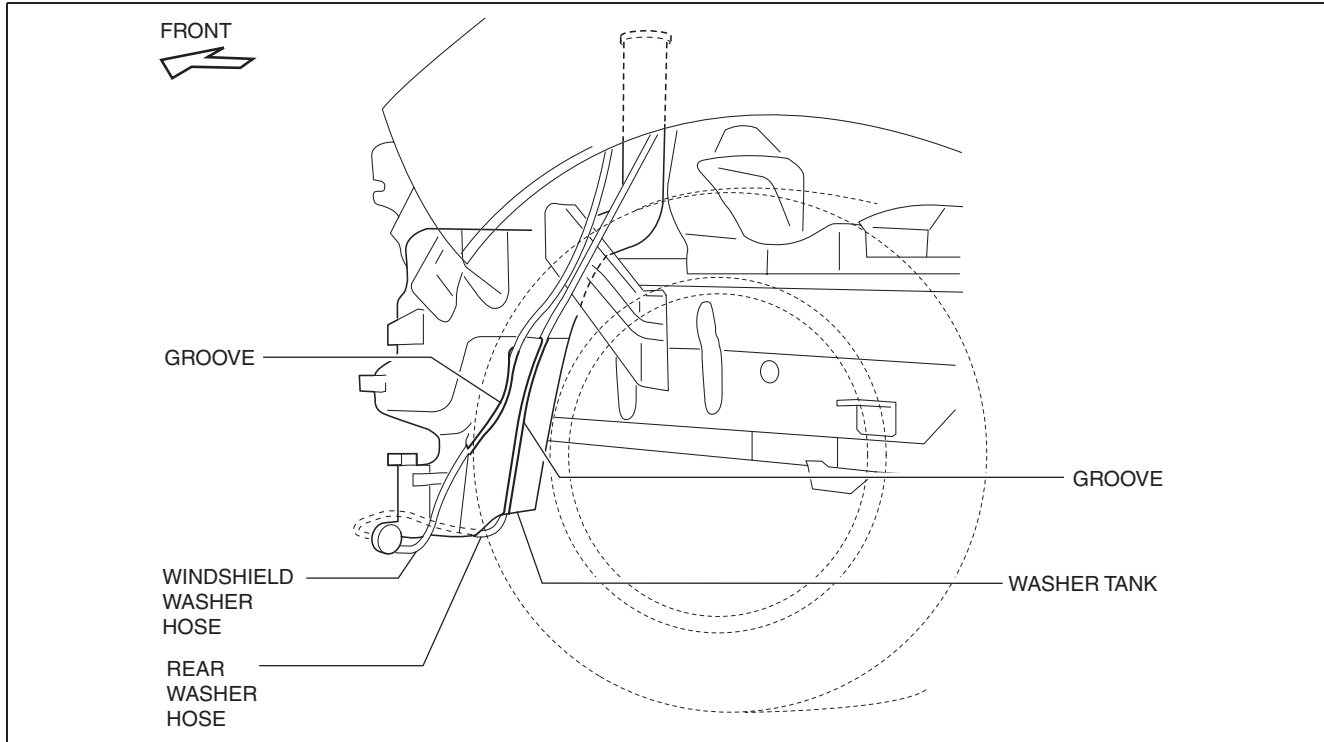
|   |                                                              |
|---|--------------------------------------------------------------|
| 4 | Clip                                                         |
| 5 | Washer tank<br>(See 09-19-14 Washer Hose Installation Note.) |

5. Install in the reverse order of removal.

## WIPER/WASHER SYSTEM

### Washer Hose Installation Note

1. Install the washer hoses by inserting them in the washer tank grooves as shown in the figure.



am2zzw0000226

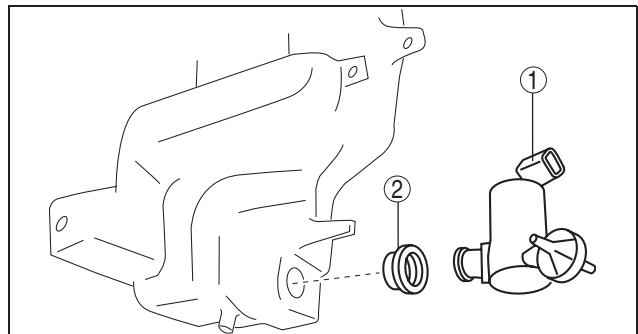
### WASHER MOTOR REMOVAL/INSTALLATION

id091900477100

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove the front combination light on the left side. (See 09-18-5 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
4. Remove the washer tank. (See 09-19-13 WASHER TANK REMOVAL/INSTALLATION.)
5. Remove in the order indicated in the table.

|   |              |
|---|--------------|
| 1 | Washer motor |
| 2 | Grommet      |

6. Install in the reverse order of removal.



adejjw00002618

### WASHER MOTOR INSPECTION

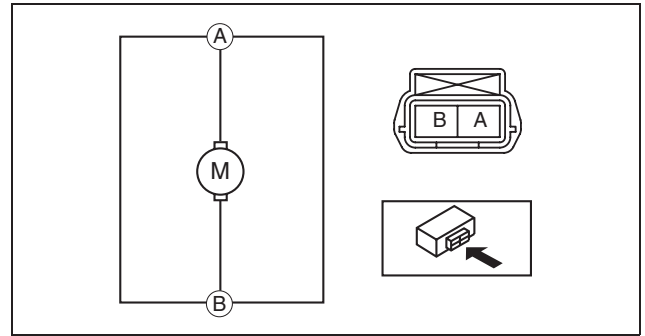
id091900477200

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09-10-8 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove the washer tank. (See 09-19-13 WASHER TANK REMOVAL/INSTALLATION.)
4. Remove the washer motor. (See 09-19-14 WASHER MOTOR REMOVAL/INSTALLATION.)
5. Disconnect the negative battery cable.



## WIPER/WASHER SYSTEM

6. After connecting washer motor terminal A to the positive battery terminal, and terminal B to the negative battery terminal, verify that washer fluid flows to the windshield washer hose.
  - If there is any malfunction, replace the washer motor.
7. After connecting washer motor terminal B to the positive battery terminal, and terminal A to the negative battery terminal, verify that washer fluid flows to the rear washer hose.
  - If there is any malfunction, replace the washer motor.

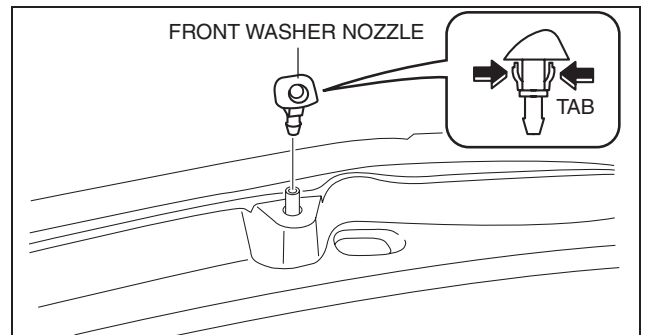


adejiw00002688

### WINDSHIELD WASHER NOZZLE REMOVAL/INSTALLATION

id091900476300

1. Remove the windshield wiper arm. (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
2. Remove the cowl grille. (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
3. Remove the windshield washer hose from the windshield washer nozzle.
4. Press the windshield washer nozzle tab in the direction of the arrow shown in the figure to detach it.
5. Pull out the windshield washer nozzle from the cowl grille and remove.
6. Install in the reverse order of removal.



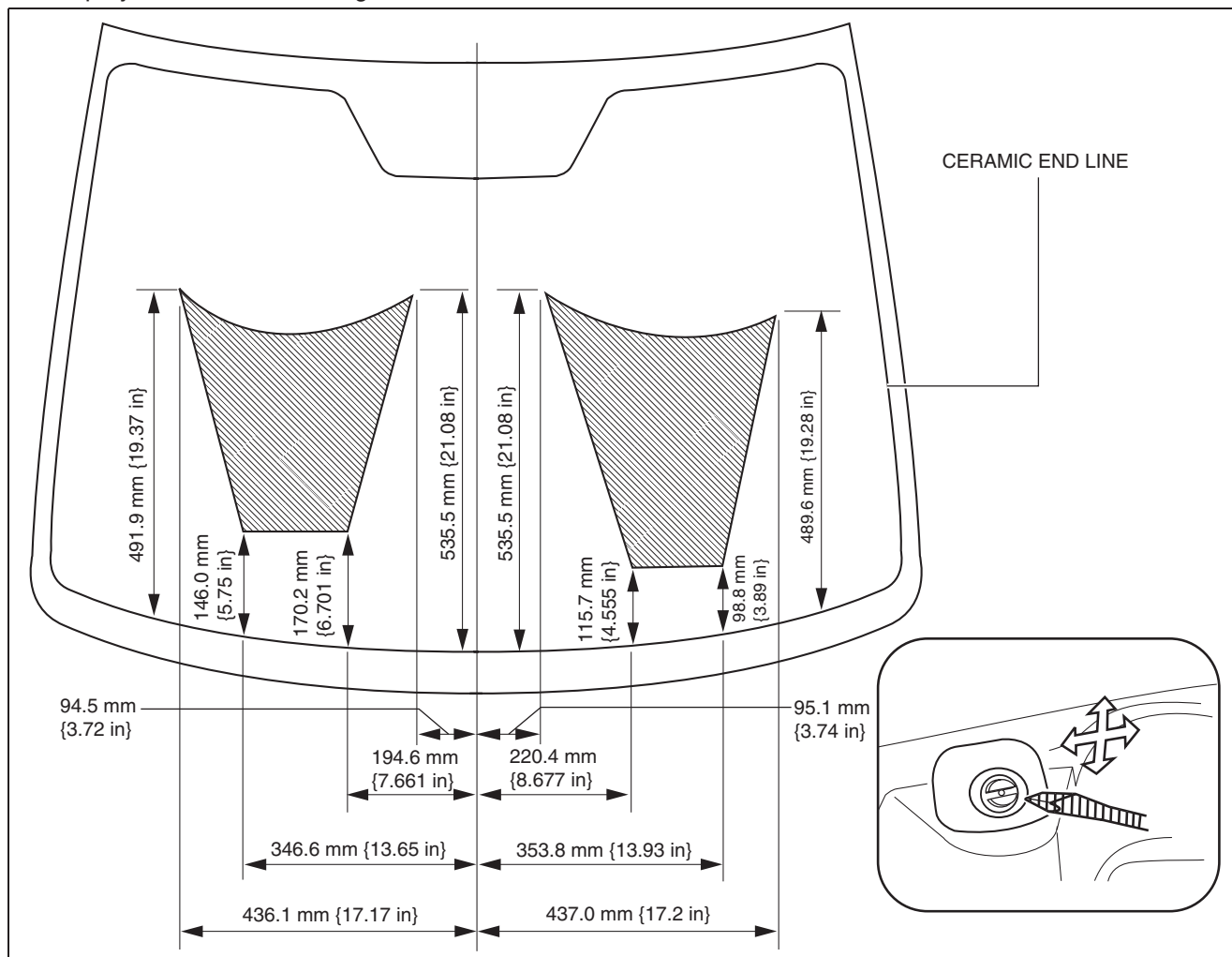
am2zzw0000220

## WIPER/WASHER SYSTEM

### WINDSHIELD WASHER NOZZLE ADJUSTMENT

id091900476400

1. Insert a tape-wrapped flathead screwdriver into the windshield washer nozzle and adjust the area washer fluid is sprayed as shown in the figure.

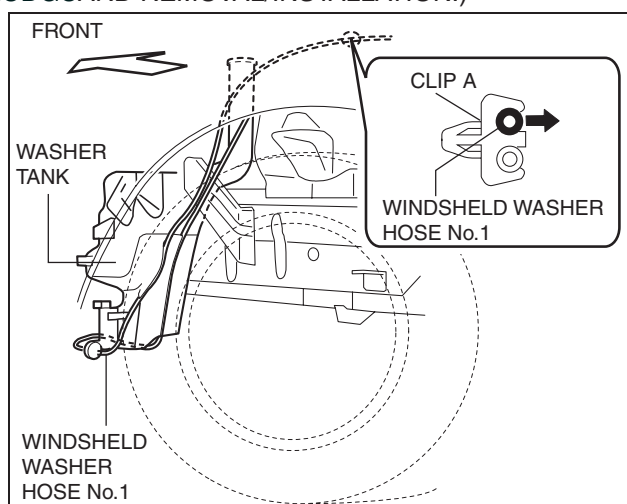


am2zzw0000225

### WINDSHIELD WASHER HOSE REMOVAL/INSTALLATION

id091900476500

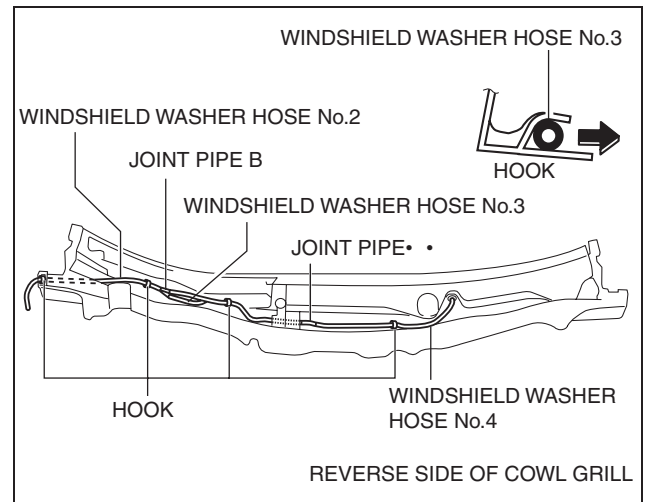
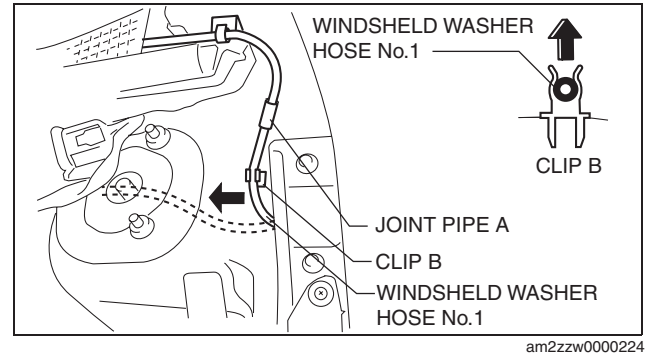
1. Remove the mudguard on the left side. (See 09-16-8 MUDGUARD REMOVAL/INSTALLATION.)
2. Remove windshield washer hose No.1 from the washer tank.
3. Detach clip A.



am2zzw0000224

## WIPER/WASHER SYSTEM

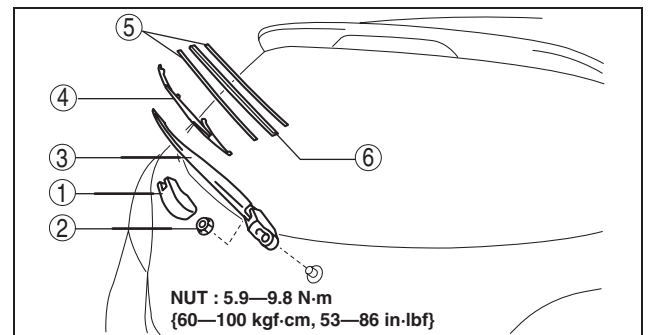
- Remove windshield washer hose No.1 from clip B and joint pipe A in the direction of the arrow shown in the figure.
- Remove the windshield washer base No.1 from joint pipe A.
- Remove windshield washer hose No.1 from joint pipe A.
- Remove the cowl grille. (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
- Remove the windshield wiper arm. (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
- Remove the windshield washer nozzle. (See 09-19-15 WINDSHIELD WASHER NOZZLE REMOVAL/INSTALLATION.)
- Remove the windshield washer hose from the hook.
- Remove windshield washer hoses No.2, No.3 and No.4 from joint pipes B and C.
- Install in the reverse order of removal.



### REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION

- Remove in the order indicated in the table.

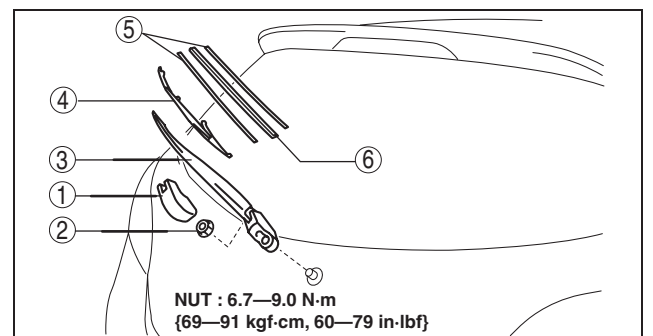
**Except AutoAlliance Thailand (AAT) manufactured vehicles**



**AutoAlliance Thailand (AAT) manufactured vehicles**

|   |                                                                    |
|---|--------------------------------------------------------------------|
| 1 | Cap                                                                |
| 2 | Nut                                                                |
| 3 | Rear wiper arm<br>(See 09-19-18 Rear Wiper Arm Installation Note.) |
| 4 | Rear wiper blade                                                   |
| 5 | Backing plate                                                      |
| 6 | Rubber brush                                                       |

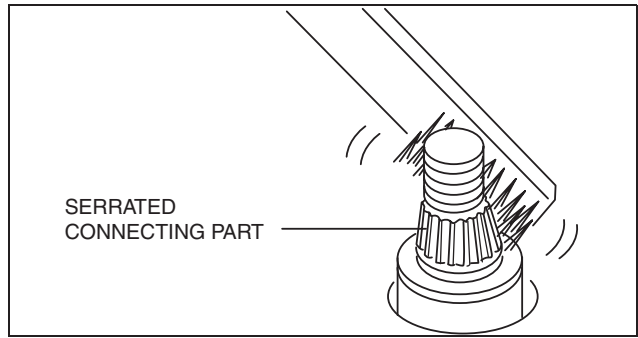
- Install in the reverse order of removal.
- Adjust the rear wiper arm and blade. (See 09-19-17 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)



## WIPER/WASHER SYSTEM

### Rear Wiper Arm Installation Note

1. Clean the serrated connecting part with a wire brush before installing the rear wiper arm.

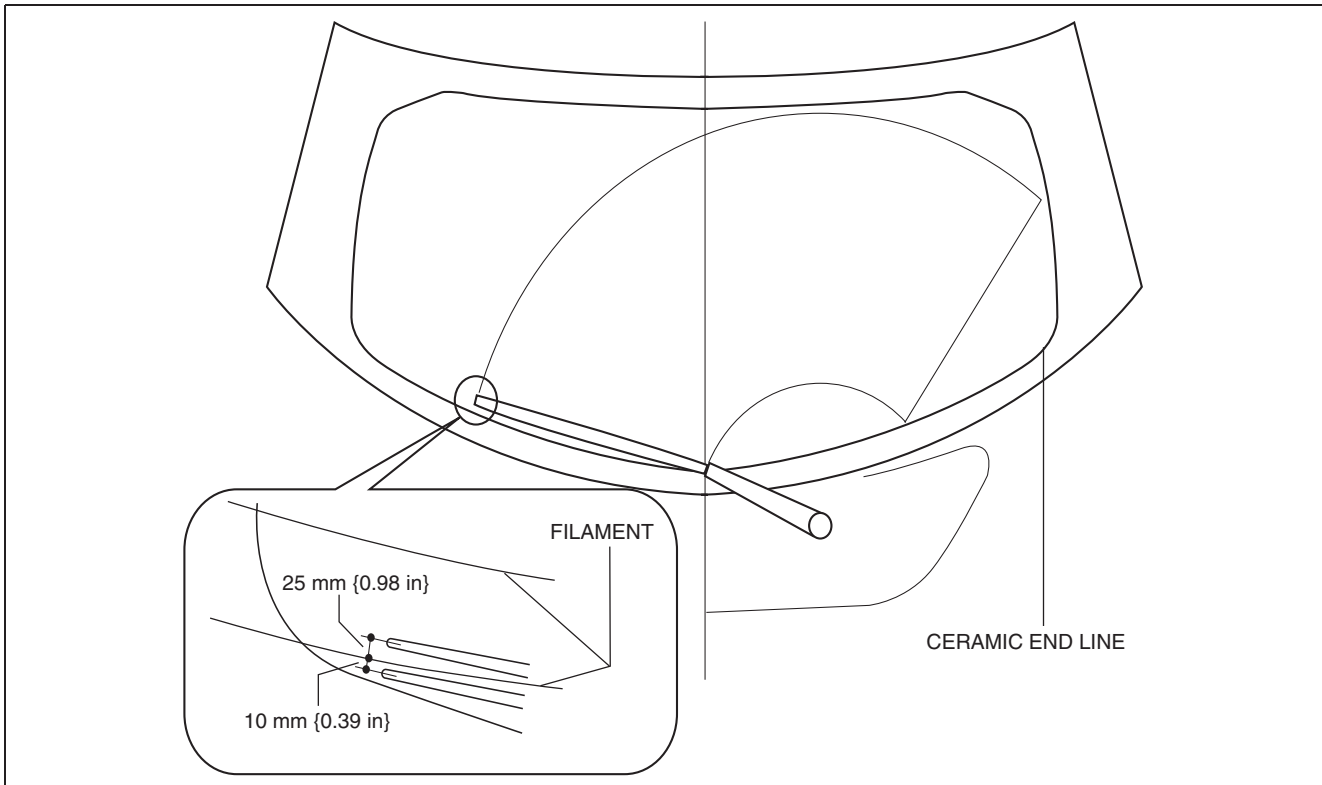


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### REAR WIPER ARM AND BLADE ADJUSTMENT

id091900910200

1. Turn off the rear wiper switch while operating the rear wiper motor to stop the rear wiper at the auto-stop position.
2. Slide the serrated connecting part and position the rear wiper arm and blade as shown in the figure.



am2zzw0000225

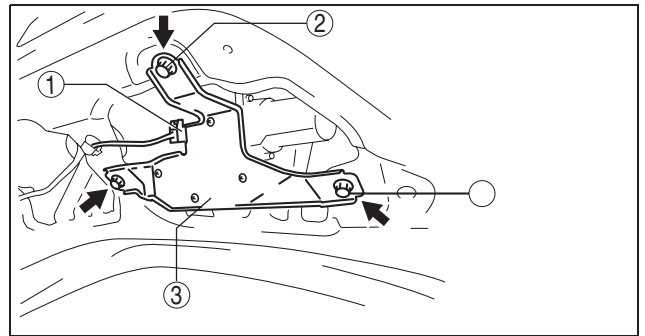
### REAR WIPER MOTOR REMOVAL/INSTALLATION

id091900475500

1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
3. Remove the rear wiper arm. (See 09-19-17 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

## WIPER/WASHER SYSTEM

Except AutoAlliance Thailand (AAT) manufactured vehicles

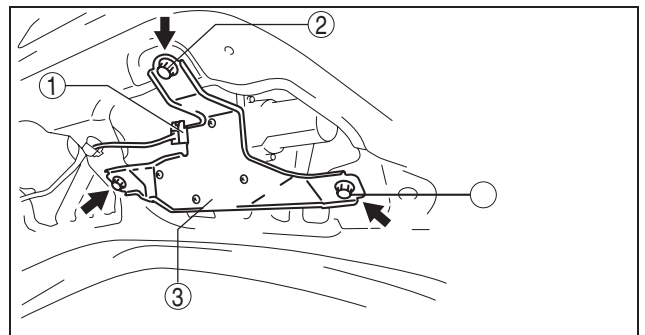


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AutoAlliance Thailand (AAT) manufactured vehicles

|   |                  |
|---|------------------|
| 1 | Connector        |
| 2 | Bolt             |
| 3 | Rear wiper motor |

5. Install in the reverse order of removal.
6. Adjust the rear wiper arm and blade. (See 09-19-18 REAR WIPER ARM AND BLADE ADJUSTMENT.)

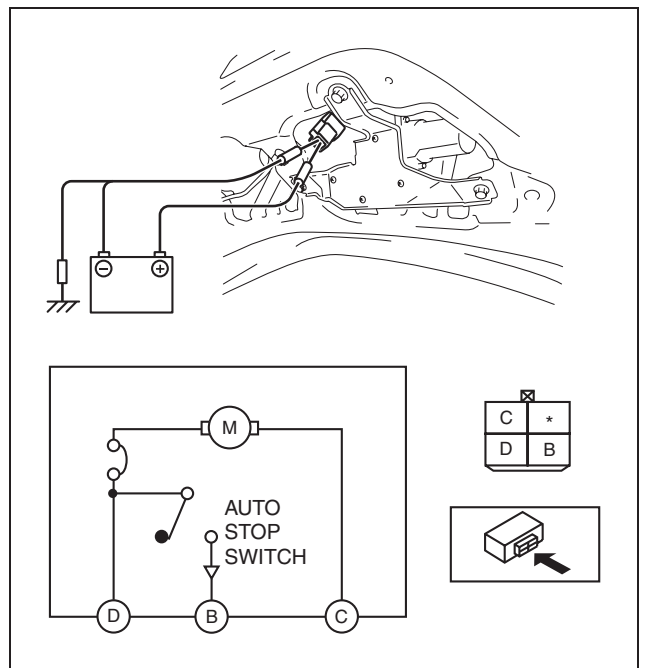


am2zzw0000433

### REAR WIPER MOTOR INSPECTION

id091900475600

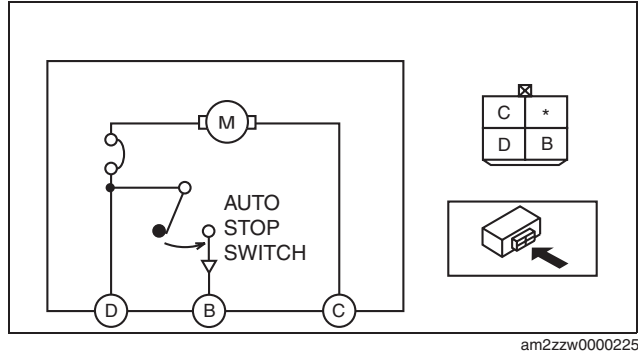
1. Disconnect the negative battery cable.
2. Remove the liftgate lower trim. (See 09-17-79 LIFTGATE LOWER TRIM REMOVAL/INSTALLATION.)
3. Remove the rear wiper motor connector.
4. Apply battery positive voltage to rear wiper motor connector terminal C, and connect terminals B and D to the ground.
5. Verify that the rear wiper motor operates smoothly.



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## WIPER/WASHER SYSTEM

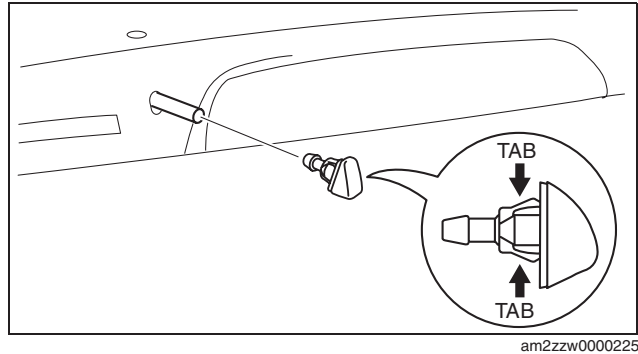
6. Disconnect the ground connecting rear wiper motor connector terminal D and the negative battery terminal while the rear wipers are operating, then verify that the rear wipers stop at the auto-stop position.
  - If there is any malfunction, replace the rear wiper motor.



### REAR WASHER NOZZLE REMOVAL/INSTALLATION

id091900476700

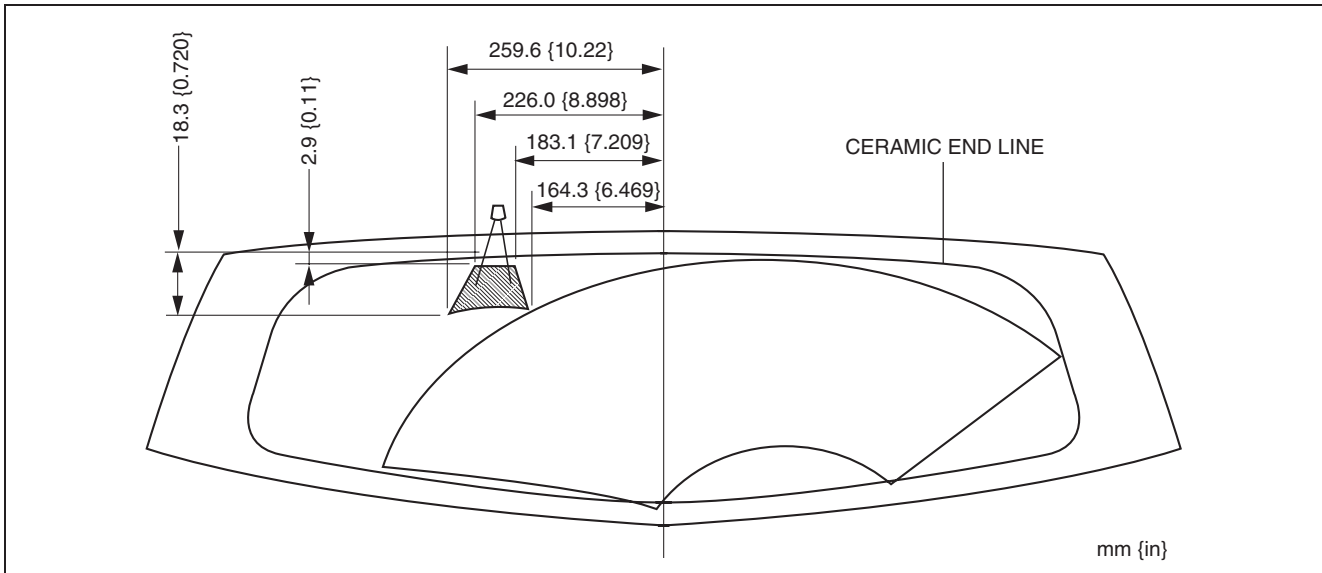
1. Remove the liftgate upper trim. (See 09-17-78 LIFTGATE UPPER TRIM REMOVAL/INSTALLATION.)
2. Release the tabs in the direction of the arrow shown in the figure and remove the rear washer nozzle.
3. Install in the reverse order of removal.
4. Adjust the spray area of the rear washer nozzle. (See 09-19-20 REAR WASHER NOZZLE ADJUSTMENT.)



### REAR WASHER NOZZLE ADJUSTMENT

id091900476800

1. Insert a needle or similar thin tool into the rear washer nozzle and adjust the area where washer fluid is sprayed as shown in the figure.



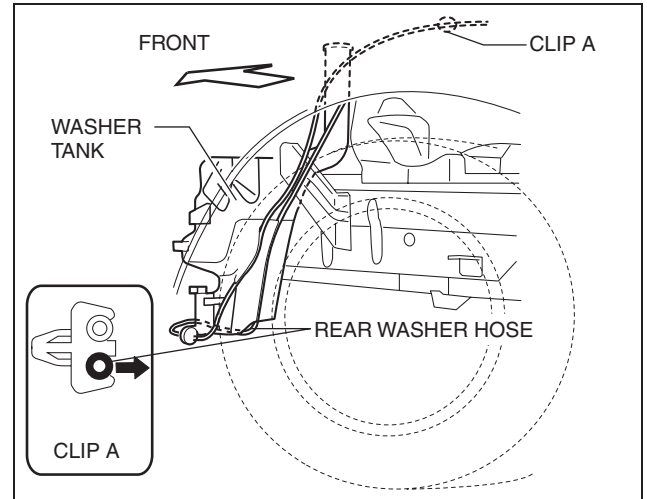
### REAR WASHER HOSE REMOVAL/INSTALLATION

id091900475700

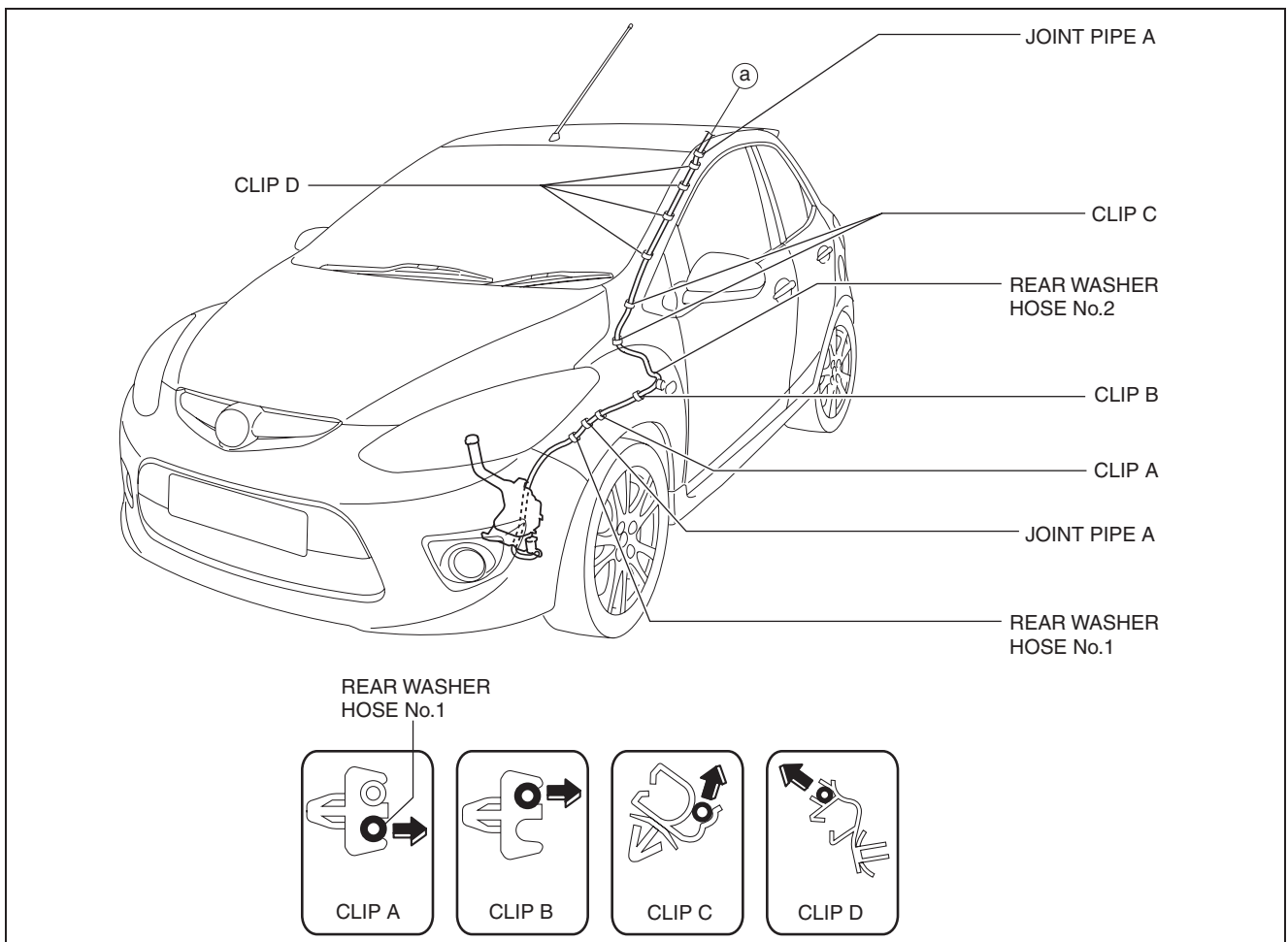
1. Disconnect the negative battery cable.
2. Remove the mudguard on the left side. (See 09-16-8 MUDGUARD REMOVAL/INSTALLATION.)

## WIPER/WASHER SYSTEM

3. Disconnect the rear washer hose from the washer tank.
4. Remove rear washer hose No.1 from clip A.



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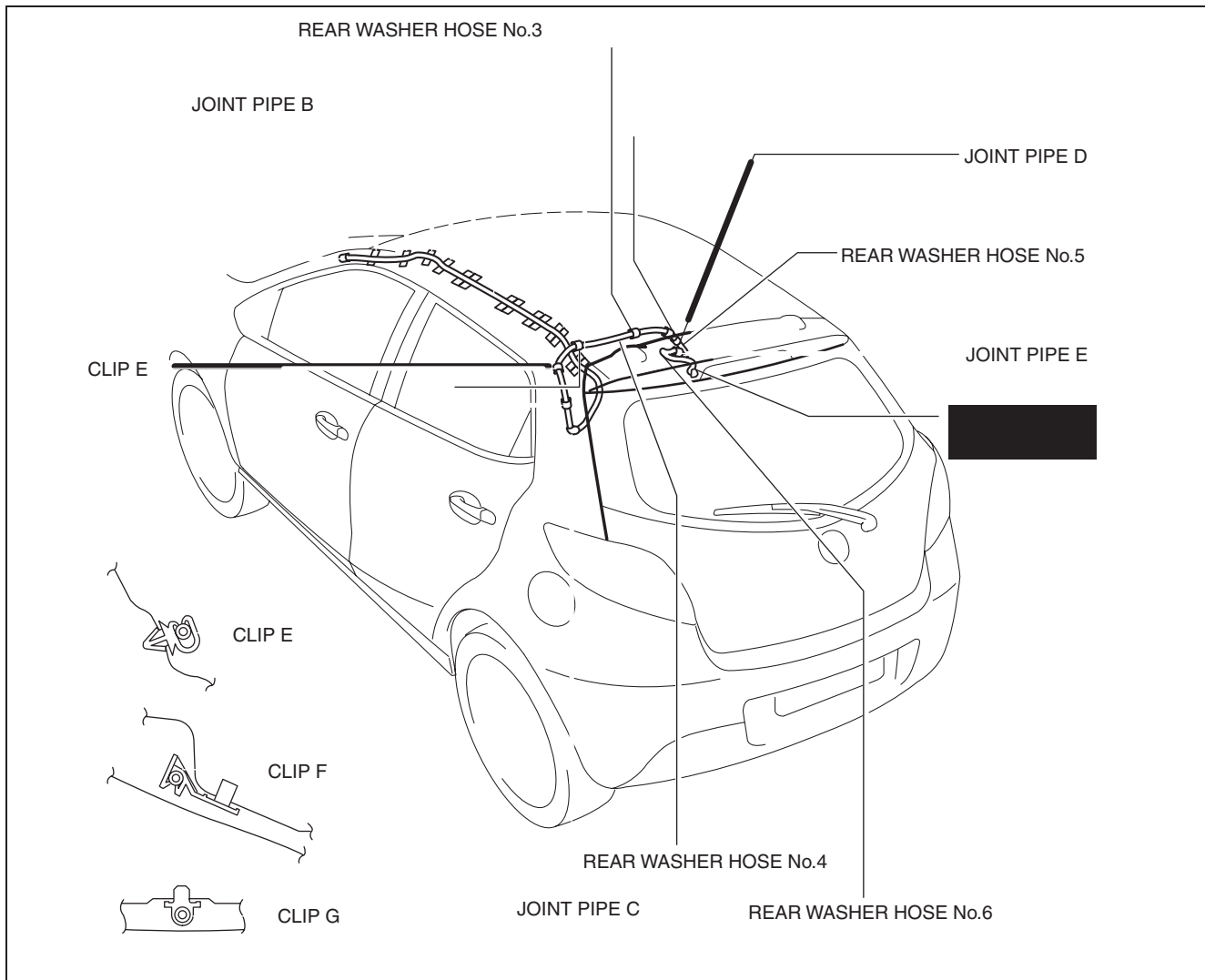


am2zzw0000226

5. Remove the A-pillar trim on the left side. (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
6. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
7. Remove the grove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
8. Remove rear washer hose No.2 from clips B, C, and D.
9. Remove rear washer hose No.2 and joint pipe B.
10. Remove the following parts:
  - (1) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (2) Rear scuff plate (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (3) B-pillar lower trim (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)

## WIPER/WASHER SYSTEM

- (4) Front seat belt upper anchor installation bolt
- (5) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
- (6) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
- (7) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
- (8) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
- (9) Trunk side trim (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
- (10) C-pillar trim (See 09-17-46 C-PILLAR TRIM REMOVAL/INSTALLATION.)
- (11) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
- (12) Rain sensor cover (vehicles with rain sensor) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
- (13) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
11. Remove joint pipe C.
12. Remove the headliner. (See 09-17-81 HEADLINER REMOVAL/INSTALLATION.)
13. Peel off the tape and remove rear washer hose No.3.



am2zzw0000226

14. Remove rear washer hose No.4 from clips E, F, and G.
15. Remove rear washer hose No.4 from joint pipe D.
16. Remove rear washer hose no.5 from joint pipe E.
17. Remove the rear washer nozzle. (See 09-19-20 REAR WASHER NOZZLE REMOVAL/INSTALLATION.)
18. Remove rear washer hose No.6.
19. Install in the reverse order of removal.

### REAR WASHER HOSE REMOVAL/INSTALLATION [3HB]

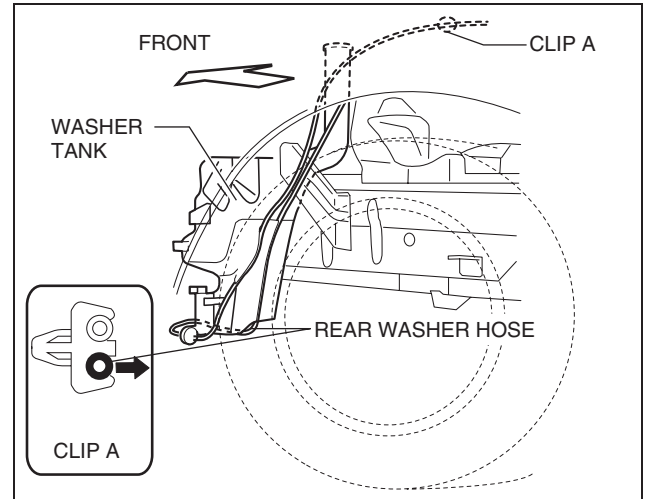
id0919004757z3

1. Disconnect the negative battery cable.
2. Remove the mudguard on the left side. (See 09-16-8 MUDGUARD REMOVAL/INSTALLATION.)

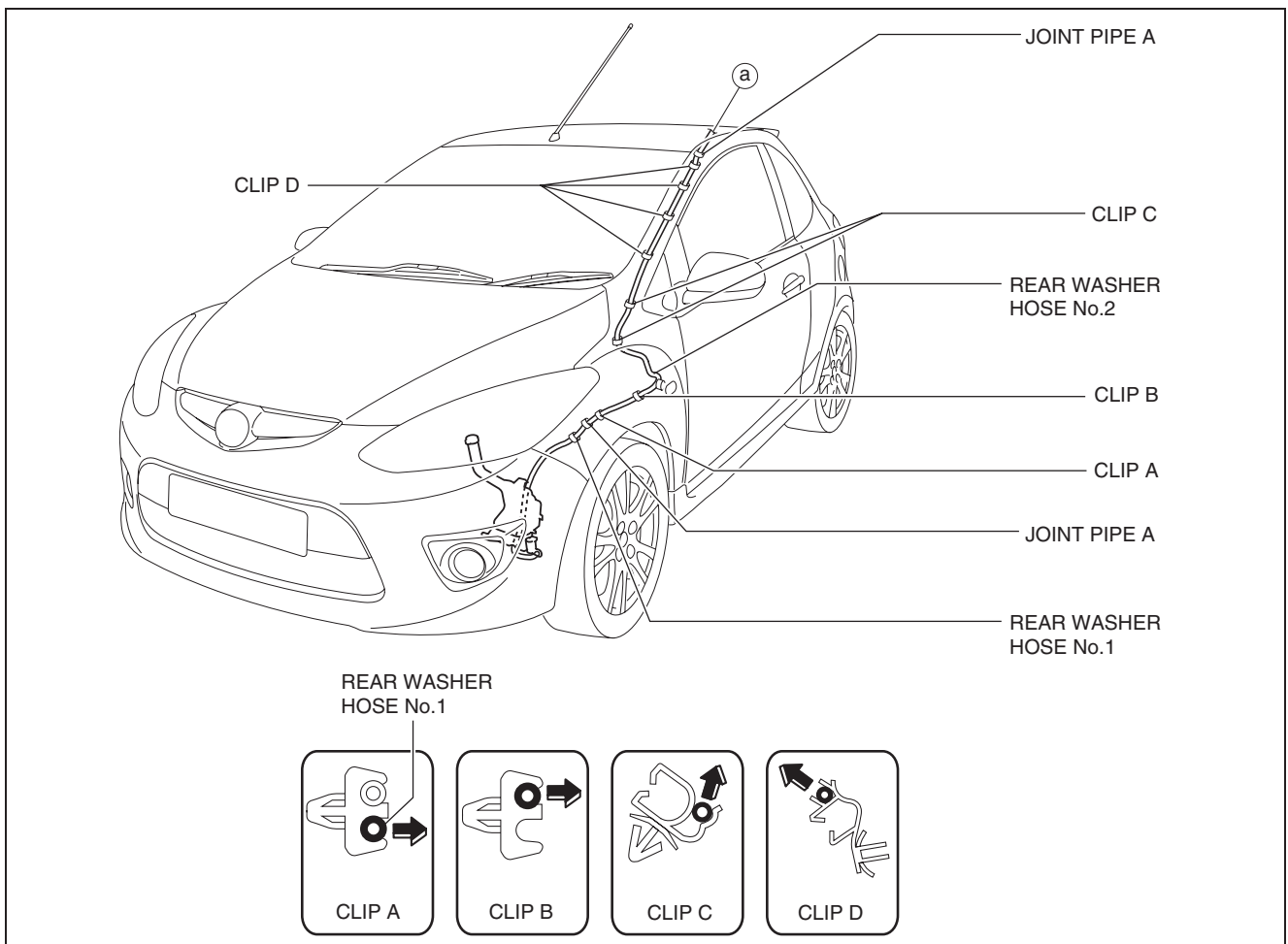


## WIPER/WASHER SYSTEM

3. Disconnect the rear washer hose from the washer tank.
4. Remove rear washer hose No.1 from clip A.



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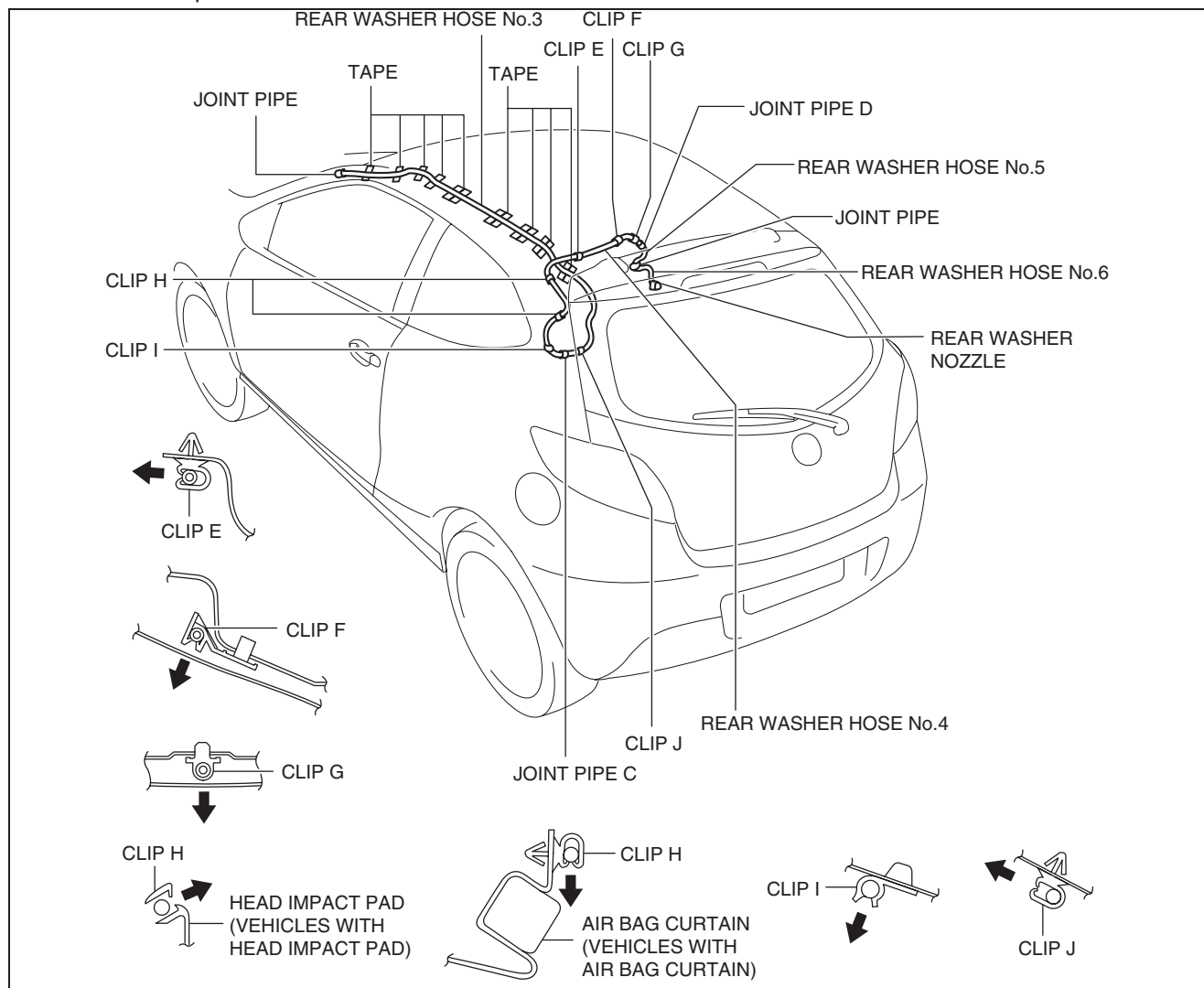


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5. Remove the A-pillar trim on the left side. (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
6. Remove the glove compartment. (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
7. Remove the glove compartment cover. (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
8. Remove rear washer hose No.2 from clips B, C, and D.
9. Remove rear washer hose No.2 and joint pipe B.
10. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Front seat belt upper anchor installation bolt
  - (3) B-pillar upper trim (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)

## WIPER/WASHER SYSTEM

- (4) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
- (5) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
- (6) Trunk side trim (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
- (7) C-pillar trim (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
- (8) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
- (9) Rain sensor cover (vehicles with rain sensor) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
- (10) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
- (11) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
11. Remove joint pipe C.
12. Remove the headliner. (See 09-17-81 HEADLINER REMOVAL/INSTALLATION.)
13. Peel off the tape and remove rear washer hose No.3.



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14. Remove rear washer hose No.4 from clips E, F, G, H, I, and J.
15. Remove rear washer hose No.4 from joint pipe D.
16. Remove rear washer hose no.5 from joint pipe E.
17. Remove the rear washer nozzle. (See 09-19-20 REAR WASHER NOZZLE REMOVAL/INSTALLATION.)
18. Remove rear washer hose No.6.
19. Install in the reverse order of removal.

### WIPER AND WASHER SWITCH REMOVAL/INSTALLATION

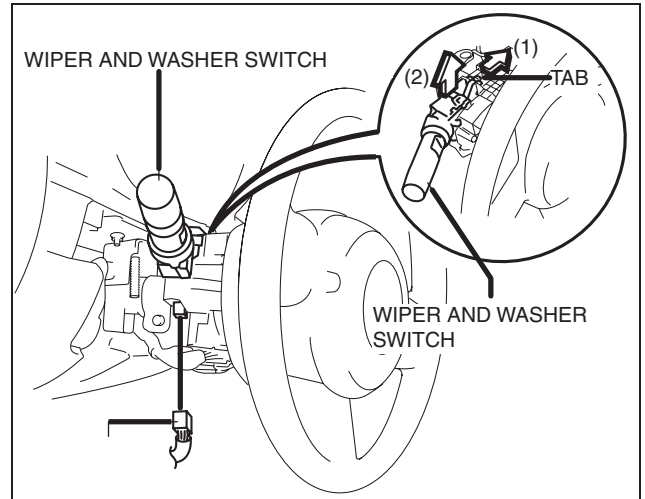
id091900910300

#### Vehicles With Wiper and Washer Switch on Left Side

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)

## WIPER/WASHER SYSTEM

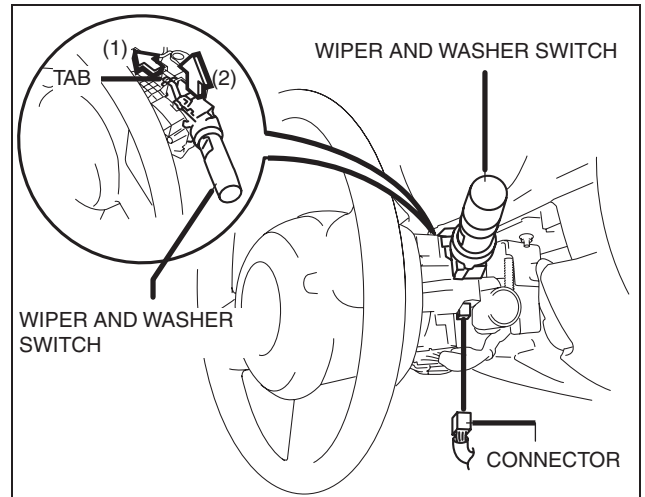
3. Disconnect the connector.
4. Release the tab in the direction of the arrow (1) shown in the figure, pull up the wiper and washer switch in the direction of the arrow (2), and remove it.
5. Install in the reverse order of removal.



adejjw00002490

### Vehicles With Wiper and Washer Switch on Right Side

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Disconnect the connector.
4. Release the tab in the direction of the arrow (1) shown in the figure, pull up the wiper and washer switch in the direction of the arrow (2), and remove it.
5. Install in the reverse order of removal.



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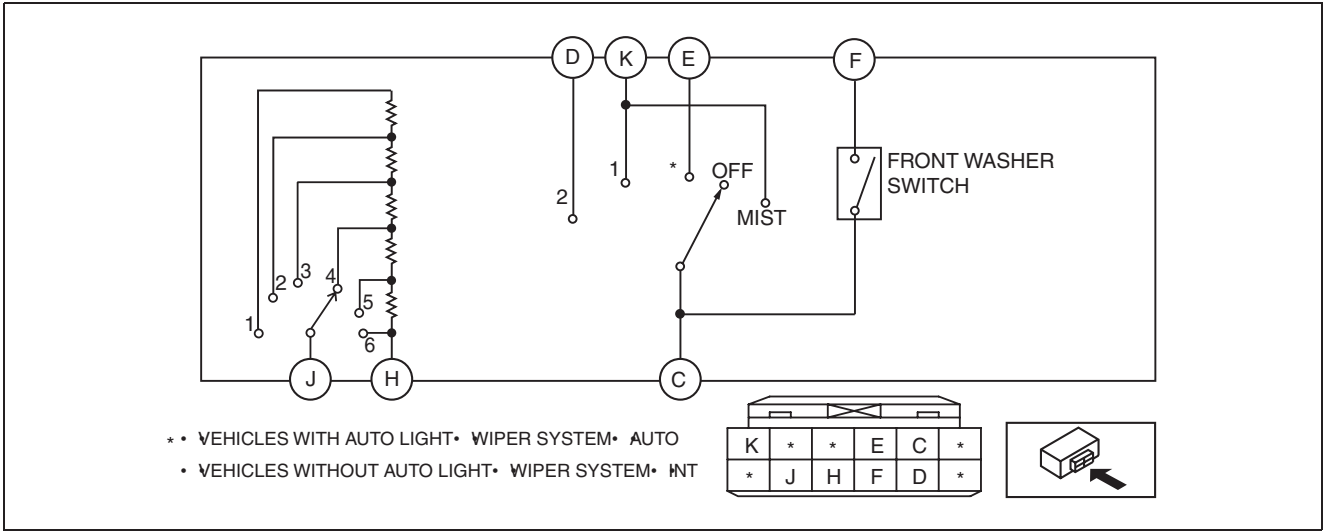
### WINDSHIELD WIPER AND WASHER SWITCH INSPECTION

id091900910400

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the wiper and washer switch. (See 09-19-24 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
4. Verify that the resistance and continuity between the windshield wiper and washer switch terminals as indicated in the table.
  - If the continuity is not as indicated in the table, or if the resistance is not within the specification, replace the windshield wiper and washer switch.

# WIPER/WASHER SYSTEM

## Vehicles With Wiper and Washer Switch on Left Side



am2zzw0000226

○—○: CONTINUITY

| SWITCH POSITION          |          | TERMINAL |   |   |   |   |
|--------------------------|----------|----------|---|---|---|---|
|                          |          | C        | D | E | F | K |
| WINDSHIELD WIPER SWITCH  | OFF      |          |   |   |   |   |
|                          | MIST     | ○        | — |   |   | ○ |
|                          | AUTO/INT | ○        | — | ○ |   |   |
|                          | 1        | ○        | — |   |   | ○ |
|                          | 2        | ○        | ○ |   |   |   |
| WINDSHIELD WASHER SWITCH | ON       | ○        | — |   | ○ |   |

am2zzw0000226

○—W—○: RESISTANCE

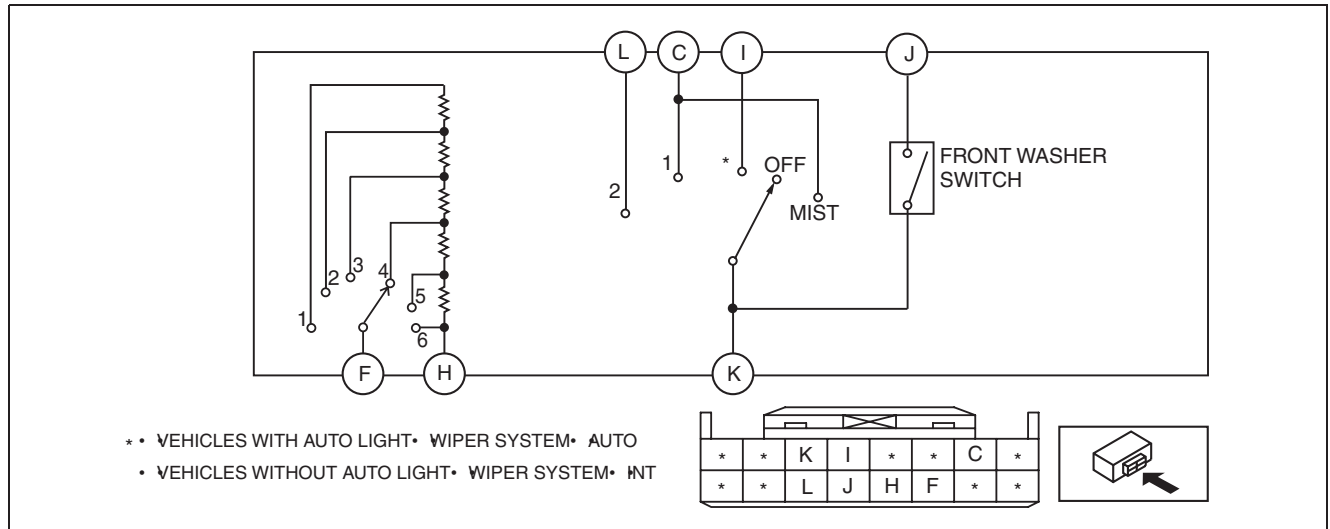
| SWITCH POSITION | TERMINAL |                  |
|-----------------|----------|------------------|
|                 | J        | H                |
| 1               | ○        | ○ R <sub>1</sub> |
| 2               | ○        | ○ R <sub>2</sub> |
| 3               | ○        | ○ R <sub>3</sub> |
| 4               | ○        | ○ R <sub>4</sub> |
| 5               | ○        | ○ R <sub>5</sub> |
| 6               | ○        | ○                |

R<sub>1</sub>: 4010 • •      R<sub>4</sub>: 300 • •  
R<sub>2</sub>: 1310 • •      R<sub>5</sub>: 120 • •  
R<sub>3</sub>: 630 • •

am2zzw0000226

## WIPER/WASHER SYSTEM

### Vehicles With Wiper and Washer Switch on Right Side



am2zzw0000038

○—○ : CONTINUITY

| SWITCH POSITION          |          | TERMINAL |   |   |   |   |
|--------------------------|----------|----------|---|---|---|---|
|                          |          | C        | I | J | K | L |
| WINDSHIELD WIPER SWITCH  | OFF      |          |   |   |   |   |
|                          | MIST     | ○        | — | ○ |   |   |
|                          | AUTO/INT |          | ○ | — | ○ |   |
|                          | 1        | ○        | — | ○ |   |   |
|                          | 2        |          |   |   | ○ | ○ |
| WINDSHIELD WASHER SWITCH | ON       |          |   | ○ | ○ |   |

am2zzw0000038

○—○ : RESISTANCE

| SWITCH POSITION | TERMINAL |                  |
|-----------------|----------|------------------|
|                 | F        | H                |
| 1               | ○        | ○ R <sub>1</sub> |
| 2               | ○        | ○ R <sub>2</sub> |
| 3               | ○        | ○ R <sub>3</sub> |
| 4               | ○        | ○ R <sub>4</sub> |
| 5               | ○        | ○ R <sub>5</sub> |
| 6               | ○        | ○                |

R<sub>1</sub>: 4010 • • R<sub>4</sub>: 300 • •  
R<sub>2</sub>: 1310 • • R<sub>5</sub>: 120 • •  
R<sub>3</sub>: 630 • •

am2zzw0000038

### REAR WIPER AND WASHER SWITCH INSPECTION

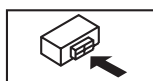
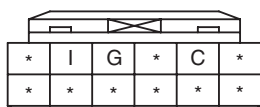
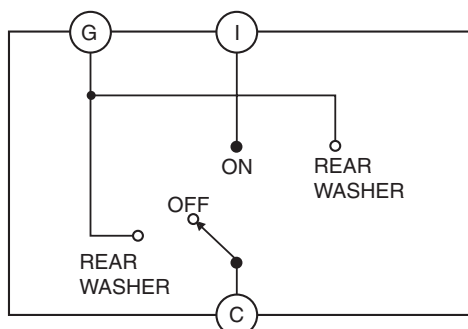
id091900910500

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the wiper and washer switch. (See 09-19-24 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
4. Verify that the continuity between the rear wiper and washer switch terminals is as indicated in the table.

## WIPER/WASHER SYSTEM

- If not as indicated in the table, replace the wiper and washer switch.

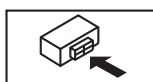
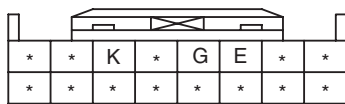
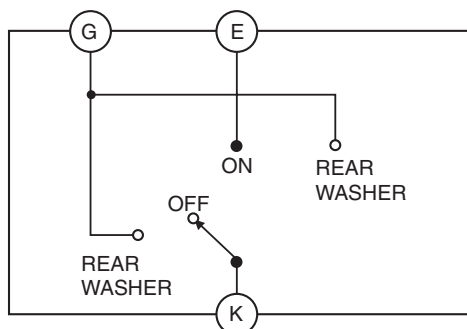
### VEHICLES WITH WIPER AND WASHER SWITCH ON LEFT SIDE



○—○ : CONTINUITY

| SWITCH POSITION              |     | TERMINAL |     |   |
|------------------------------|-----|----------|-----|---|
|                              |     | C        | G   | I |
| REAR WIPER SWITCH            | OFF |          |     |   |
|                              | ON  | ○—○      |     |   |
| REAR WIPER AND WASHER SWITCH | ON  | ○—○      | ○—○ |   |

### VEHICLES WITH WIPER AND WASHER SWITCH ON RIGHT SIDE



○—○ : CONTINUITY

| SWITCH POSITION              |     | TERMINAL |     |   |
|------------------------------|-----|----------|-----|---|
|                              |     | E        | G   | K |
| REAR WIPER SWITCH            | OFF |          |     |   |
|                              | ON  | ○—○      |     |   |
| REAR WIPER AND WASHER SWITCH | ON  |          | ○—○ |   |

am2zzw0000431

## RAIN SENSOR REMOVAL/INSTALLATION

id091900474200

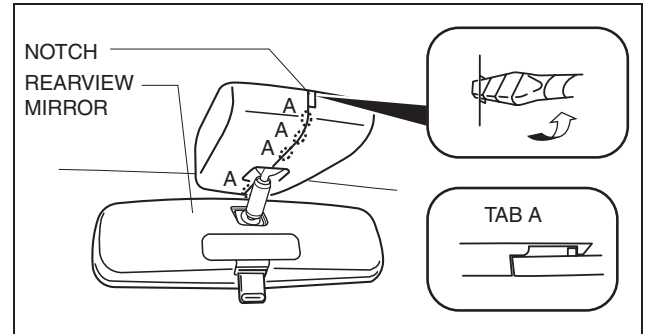
### Caution

- The reflection rate at the moment the ignition switch is first turned to the ON position after replacing the rain sensor with a new one is stored as the condition indicating no precipitation on the windshield. Therefore, remove water and dirt from the windshield before turning on the ignition switch.
- Perform the rain sensor initialization in the following cases: (See 09-19-31 RAIN SENSOR INITIAL SETTING.)
  - The windshield is replaced and the rain sensor is reused
  - The auto wiper system operates incorrectly

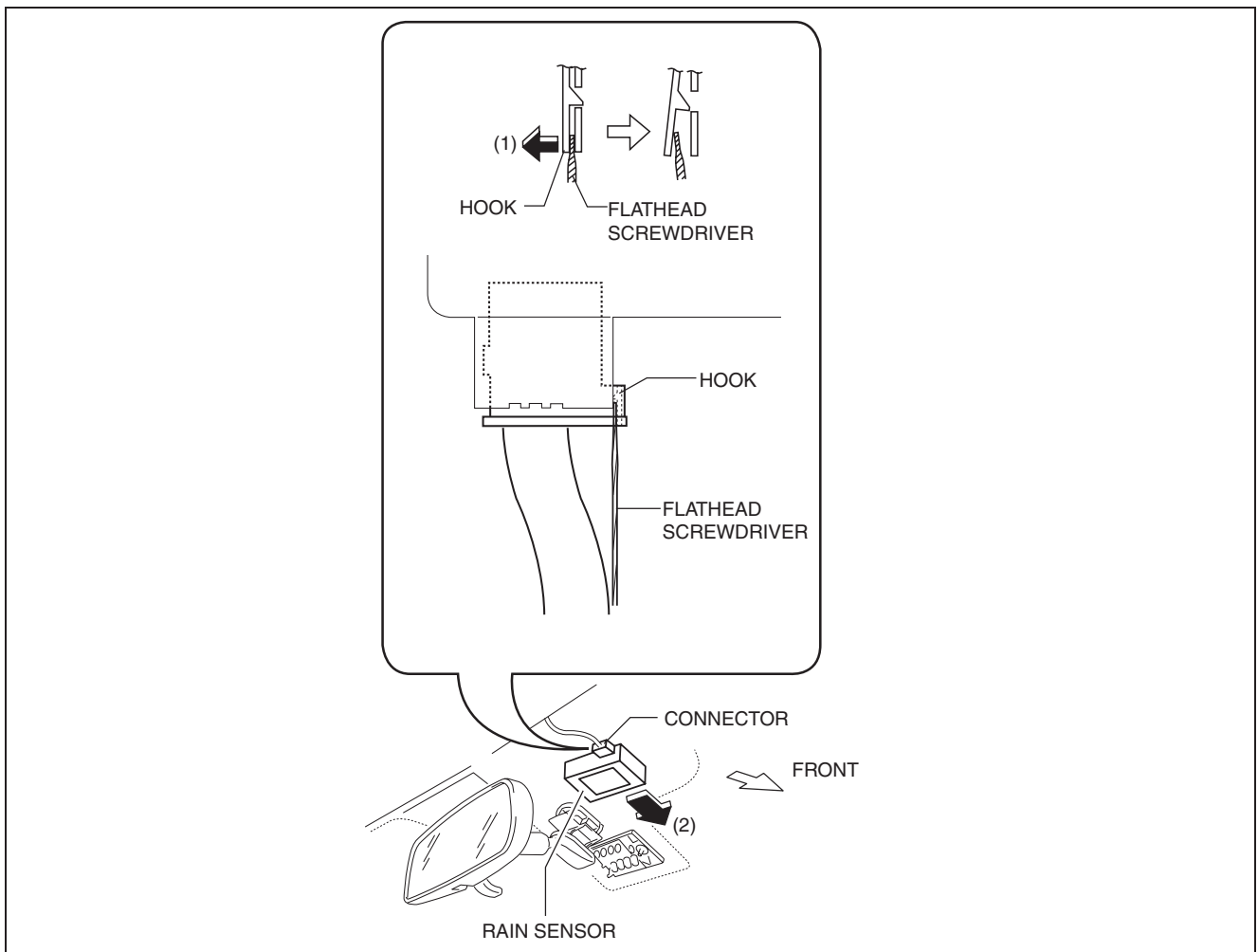
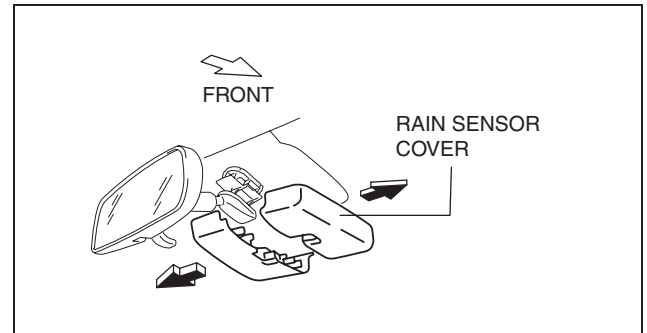
1. Disconnect the negative battery cable.

## WIPER/WASHER SYSTEM

2. Insert a tape-wrapped flathead screwdriver into the notch on the rain sensor cover, turn it in the direction of the arrow shown in the figure, and detach the tab A.



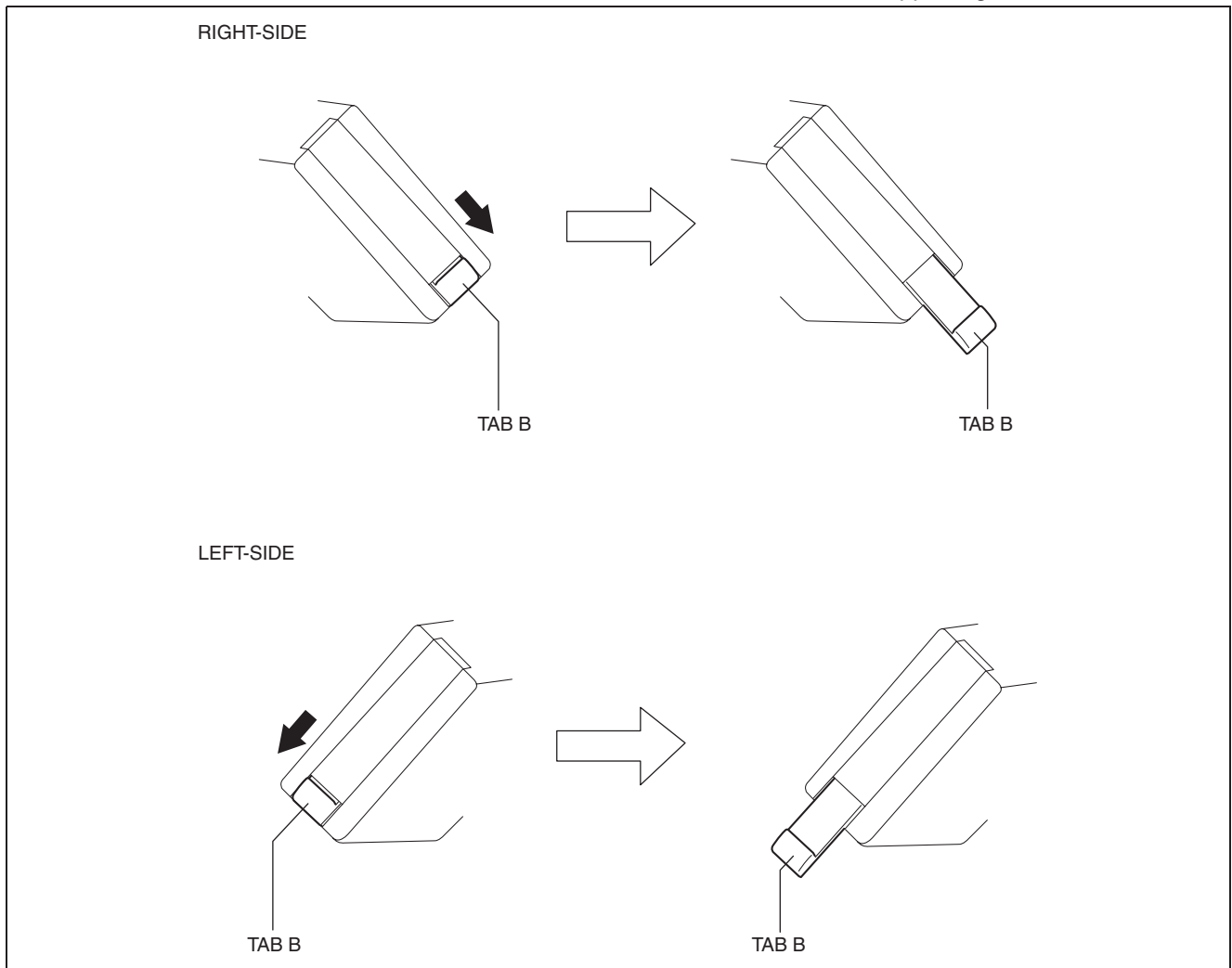
3. Remove the rain sensor cover in the direction shown in the figure.
4. Disconnect the rain sensor connector.



am2zzw0000363

## WIPER/WASHER SYSTEM

5. Slide the tab B in the direction of the arrow and remove the rain sensor while supporting it with the hand.

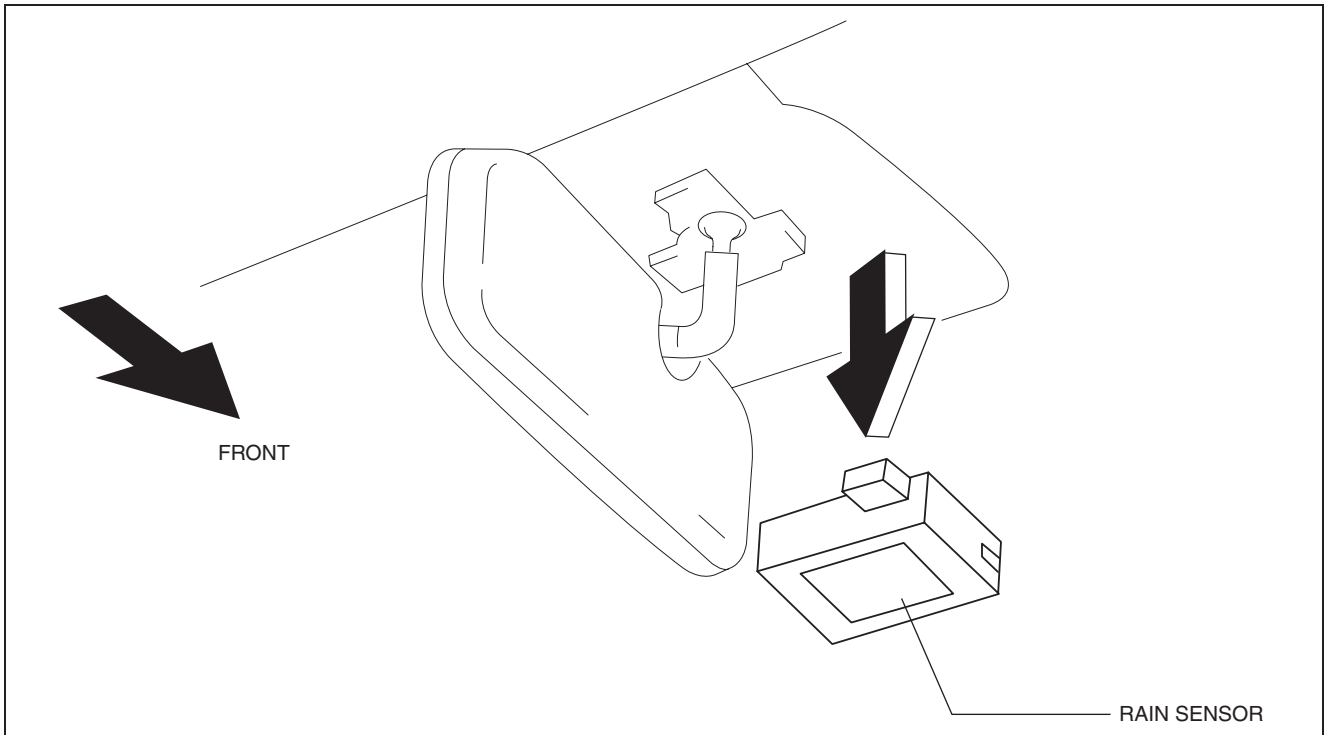


am2zzw0000262



## WIPER/WASHER SYSTEM

6. Remove the rain sensor in the direction of the arrow shown in the figure.



am2zzw0000262

7. Install in the reverse order of removal.

### RAIN SENSOR INITIAL SETTING

id091900474300

#### Caution

- Rain sensor initialization is performed when it is newly replaced and when its previously programmed setting is modified due to the reflection rate change caused by the replacement of the windshield.

#### Rain Sensor Initialization

- The reflection rate at the moment the ignition switch is first turned to the ON position after replacing the rain sensor with a new one is stored as the condition indicating no precipitation on the windshield. Therefore, remove water and dirt from the windshield before turning on the ignition switch.

#### Rain Sensor Re-initialization

1. Remove water and dirt from the windshield surface.
2. Turn the ignition switch off.
3. Move the windshield wiper switch to the AUTO position.
4. Perform the windshield wiper switch operation (AUTO→OFF→AUTO) five times within 10 s after turning the ignition switch to the ON position. The windshield wiper will operate once at low speed when the reinitialization setting is performed correctly.

#### Caution

- If the operation is too fast, the windshield wiper switch position cannot be detected and the initialization may not be performed. Operate the windshield wiper switch one cycle every 1 s.

## 09-20 ENTERTAINMENT

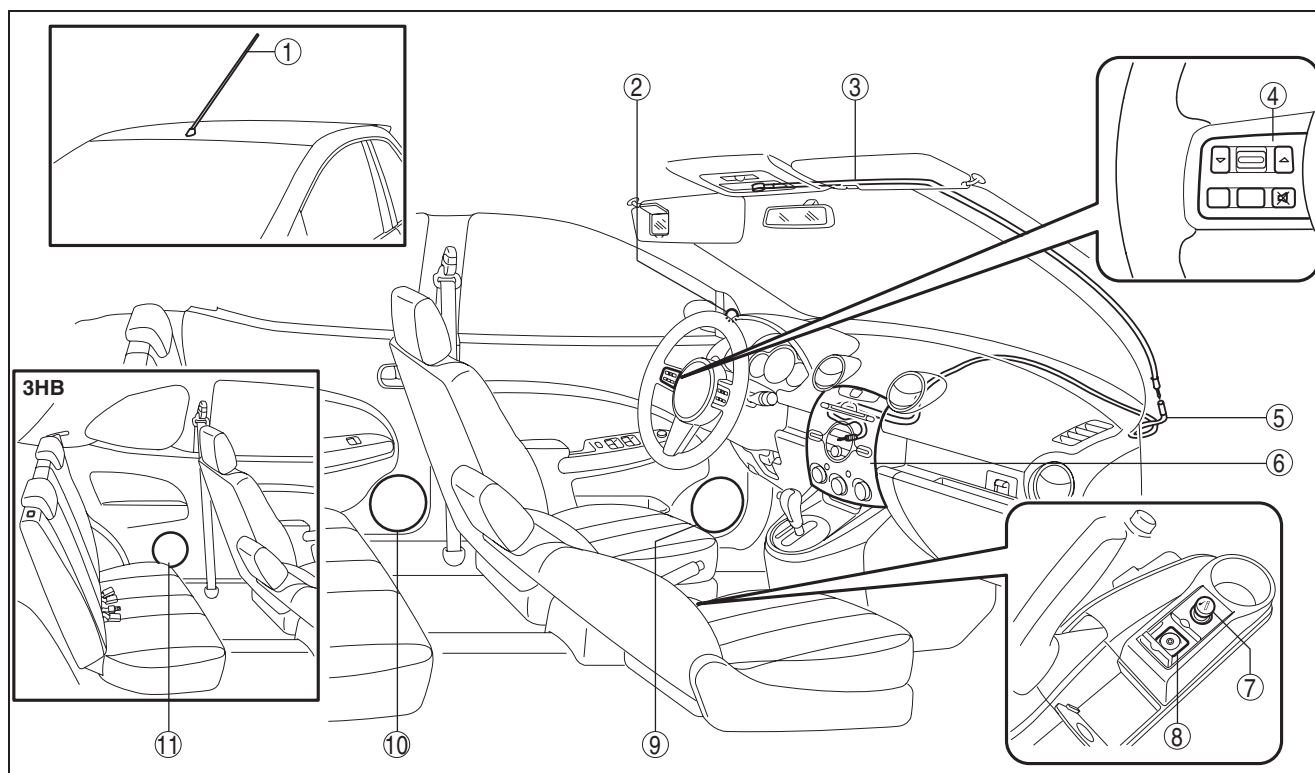
|                                      |          |                                         |          |
|--------------------------------------|----------|-----------------------------------------|----------|
| <b>ENTERTAINMENT</b>                 |          | <b>ANTENNA FEEDER NO.1</b>              |          |
| LOCATION INDEX.....                  | 09-20-2  | REMOVAL/INSTALLATION .....              | 09-20-17 |
| <b>CENTER PANEL UNIT</b>             |          | <b>ANTENNA FEEDER NO.1</b>              |          |
| REMOVAL/INSTALLATION.....            | 09-20-3  | INSPECTION .....                        | 09-20-19 |
| Center Panel Unit Removal Note.....  | 09-20-4  | <b>ANTENNA FEEDER NO.2</b>              |          |
| <b>CENTER PANEL UNIT</b>             |          | REMOVAL/INSTALLATION .....              |          |
| DISASSEMBLY/ASSEMBLY.....            | 09-20-4  | Antenna Feeder No.2 (Type B)            |          |
| Hazard Warning Switch Panel          |          | Installation Note .....                 |          |
| Removal Note .....                   | 09-20-5  | <b>ANTENNA FEEDER NO.2</b>              |          |
| <b>FRONT DOOR SPEAKER</b>            |          | INSPECTION .....                        |          |
| REMOVAL/INSTALLATION.....            | 09-20-6  | <b>AUDIO CONTROL SWITCH</b>             |          |
| Front Door Speaker Removal Note ...  | 09-20-7  | REMOVAL/INSTALLATION .....              |          |
| <b>FRONT DOOR SPEAKER</b>            |          | Cover Removal Note .....                |          |
| INSPECTION.....                      | 09-20-7  | Cover Installation Note .....           |          |
| <b>REAR DOOR SPEAKER</b>             |          | <b>AUDIO CONTROL SWITCH</b>             |          |
| REMOVAL/INSTALLATION.....            | 09-20-8  | INSPECTION .....                        |          |
| Rear Door Speaker Removal Note ...   | 09-20-9  | <b>ACCESSORY SOCKET</b>                 |          |
| <b>REAR DOOR SPEAKER</b>             |          | REMOVAL/INSTALLATION .....              |          |
| INSPECTION.....                      | 09-20-9  | Accessory Socket Removal Note .....     |          |
| <b>REAR SPEAKER</b>                  |          | Cap Removal Note .....                  |          |
| REMOVAL/INSTALLATION [3HB] ....      | 09-20-10 | <b>ACCESSORY SOCKET</b>                 |          |
| Rear Speaker Removal Note .....      | 09-20-11 | INSPECTION .....                        |          |
| <b>REAR SPEAKER INSPECTION</b>       |          | <b>AUXILIARY JACK</b>                   |          |
| [3HB].....                           | 09-20-11 | REMOVAL/INSTALLATION .....              |          |
| <b>TWEETER</b>                       |          | <b>AUXILIARY JACK INSPECTION .....</b>  |          |
| REMOVAL/INSTALLATION.....            | 09-20-12 | Except Auto Alliance Thailand (AAT)     |          |
| <b>TWEETER INSPECTION.....</b>       |          | Manufactured Vehicles .....             |          |
| <b>CENTER ROOF ANTENNA</b>           |          | Auto Alliance Thailand (AAT)            |          |
| REMOVAL/INSTALLATION.....            | 09-20-13 | Manufactured Vehicles .....             |          |
| Center Roof Antenna (Type B)         |          | <b>CIGARETTE LIGHTER</b>                |          |
| Installation Note .....              | 09-20-15 | REMOVAL/INSTALLATION .....              |          |
| <b>CENTER ROOF ANTENNA</b>           |          | Socket Removal Note .....               |          |
| INSPECTION.....                      | 09-20-15 | Ring Removal Note .....                 |          |
| <b>ANTENNA FEEDER LOCATION .....</b> |          | <b>CIGARETTE LIGHTER INSPECTION ...</b> |          |
|                                      | 09-20-16 |                                         |          |

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# ENTERTAINMENT

## ENTERTAINMENT LOCATION INDEX

id092000800100



am2zzw0000328

|   |                                                                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Center roof antenna<br>(See 09-20-13 CENTER ROOF ANTENNA REMOVAL/INSTALLATION.)<br>(See 09-20-15 CENTER ROOF ANTENNA INSPECTION.)                                            |
| 2 | Tweeter<br>(See 09-20-12 TWEETER REMOVAL/INSTALLATION.)<br>(See 09-20-12 TWEETER INSPECTION.)                                                                                |
| 3 | Antenna feeder No.2<br>(See 09-20-16 ANTENNA FEEDER LOCATION.)<br>(See 09-20-20 ANTENNA FEEDER NO.2 REMOVAL/INSTALLATION.)<br>(See 09-20-21 ANTENNA FEEDER NO.2 INSPECTION.) |
| 4 | Audio control switch<br>(See 09-20-23 AUDIO CONTROL SWITCH REMOVAL/INSTALLATION.)<br>(See 09-20-24 AUDIO CONTROL SWITCH INSPECTION.)                                         |
| 5 | Antenna feeder No.1<br>(See 09-20-16 ANTENNA FEEDER LOCATION.)<br>(See 09-20-17 ANTENNA FEEDER NO.1 REMOVAL/INSTALLATION.)<br>(See 09-20-19 ANTENNA FEEDER NO.1 INSPECTION.) |
| 6 | Center panel unit<br>(See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)<br>(See 09-20-4 CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY.)                                          |

|    |                                                                                                                                |
|----|--------------------------------------------------------------------------------------------------------------------------------|
| 7  | Accessory socket<br>(See 09-20-25 ACCESSORY SOCKET REMOVAL/INSTALLATION.)<br>(See 09-20-27 ACCESSORY SOCKET INSPECTION.)       |
|    | Cigarette lighter<br>(See 09-20-29 CIGARETTE LIGHTER REMOVAL/INSTALLATION.)<br>(See 09-20-30 CIGARETTE LIGHTER INSPECTION.)    |
| 8  | Auxiliary jack<br>(See 09-20-27 AUXILIARY JACK REMOVAL/INSTALLATION.)<br>(See 09-20-27 AUXILIARY JACK INSPECTION.)             |
| 9  | Front door speaker<br>(See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)<br>(See 09-20-7 FRONT DOOR SPEAKER INSPECTION.)   |
| 10 | Rear door speaker<br>(See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)<br>(See 09-20-9 REAR DOOR SPEAKER INSPECTION.)      |
| 11 | Rear speaker (3HB)<br>(See 09-20-10 REAR SPEAKER REMOVAL/INSTALLATION [3HB].)<br>(See 09-20-11 REAR SPEAKER INSPECTION [3HB].) |

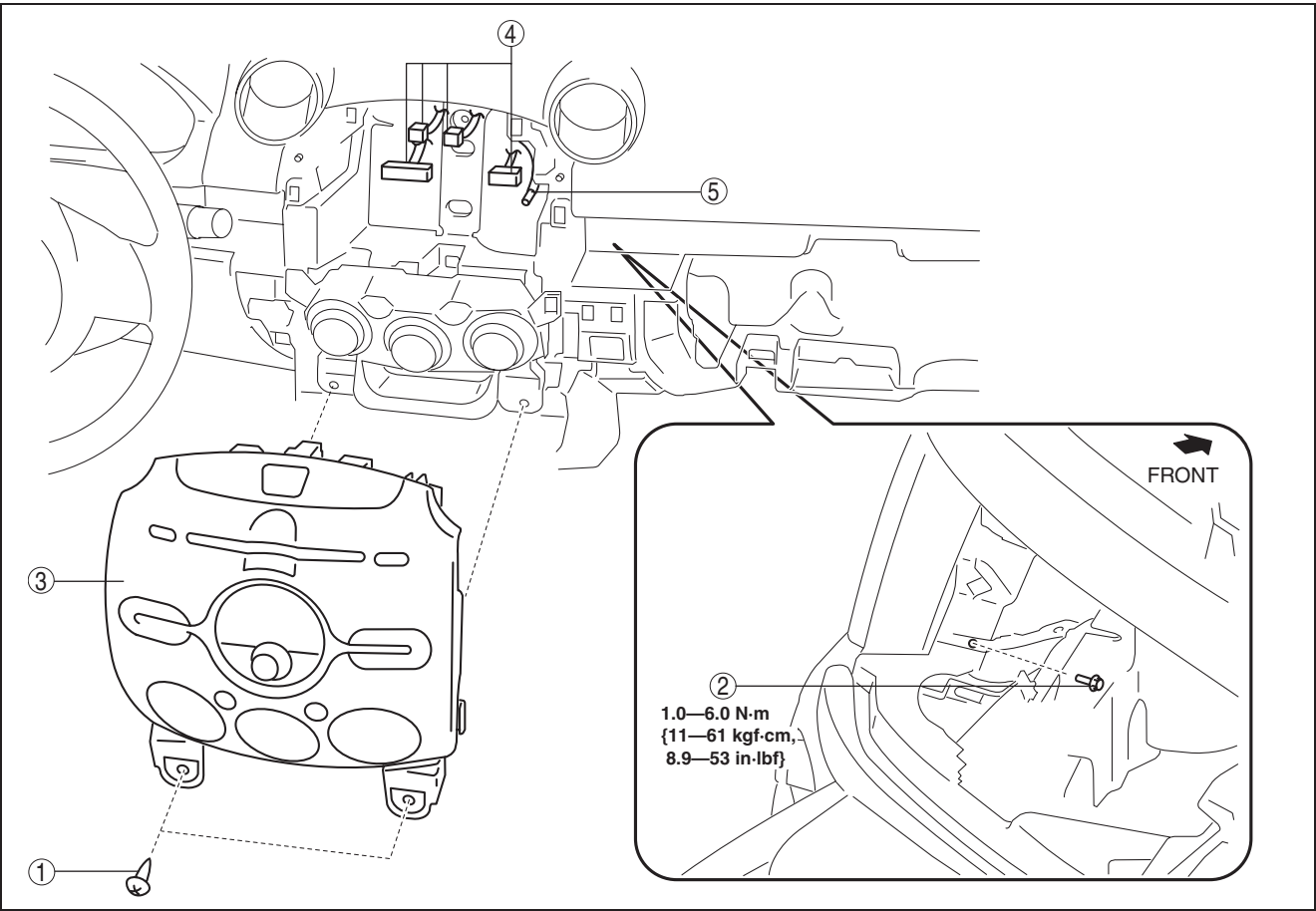
CENTER PANEL UNIT REMOVAL/INSTALLATION

id092000800600

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.
4. Install in the reverse order of removal.

Caution

- If the wiring harness or the antenna feeder is caught between the center panel unit and dashboard, it could cause a malfunction. When installing the center panel unit, make sure that the wiring harness and antenna feeders are not caught between the center panel unit and dashboard.



am2zzw0000030

|   |                                                                    |
|---|--------------------------------------------------------------------|
| 1 | Screw                                                              |
| 2 | Bolt                                                               |
| 3 | Center panel unit<br>(See 09-20-4 Center Panel Unit Removal Note.) |

|   |                     |
|---|---------------------|
| 4 | Connector           |
| 5 | Antenna feeder plug |

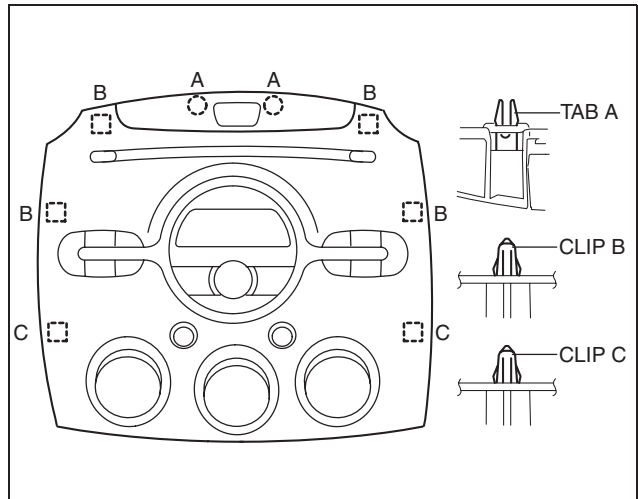
## ENTERTAINMENT

### Center Panel Unit Removal Note

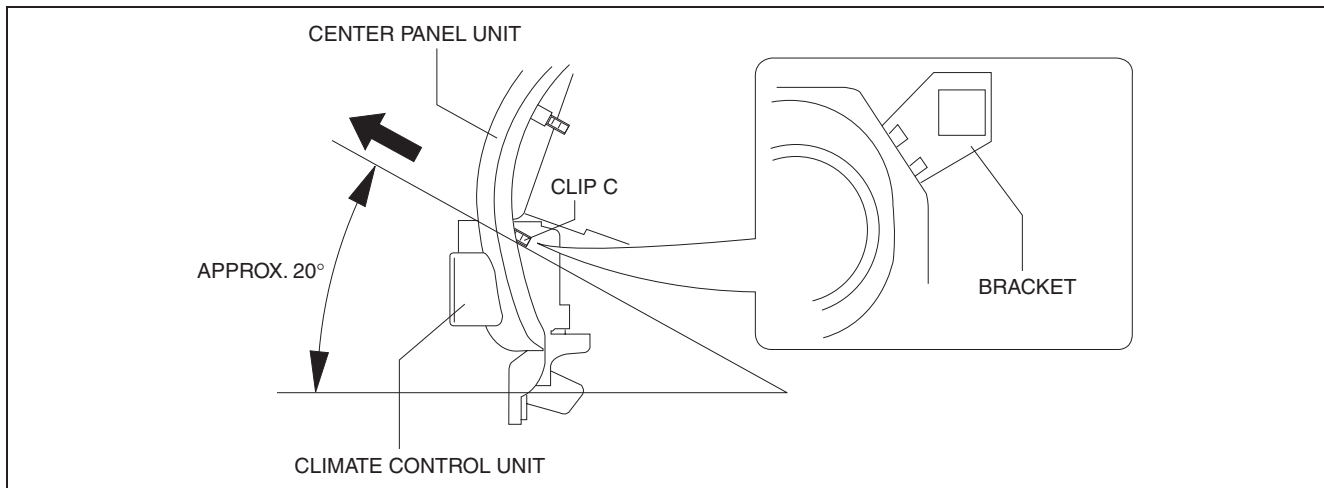
1. Remove the center panel unit tabs A and clips B, C from the dashboard.

#### Caution

- When the center panel unit is removed, clips C could interfere with the climate control unit bracket and cause damage. Pull the center panel unit in the direction of the arrow shown in the figure (upward at a approx. 20 °angle) when removing it.



am2zzw0000277



am2zzw0000318

### CENTER PANEL UNIT DISASSEMBLY/ASSEMBLY

id092000800700

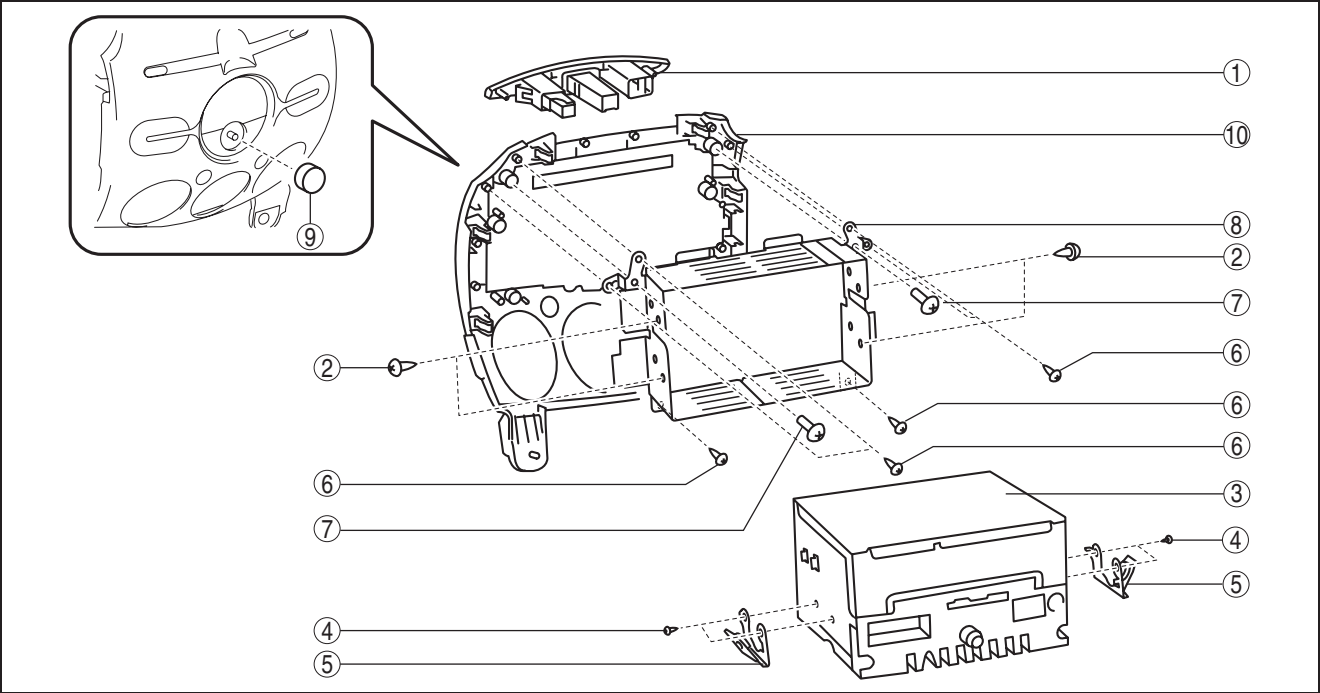
#### Note

- When disassembling the center panel unit, it could get scratched if it is placed directly on the ground. When disassembling the center panel unit, spread a soft cloth underneath to perform the work.

1. Disassemble in the order indicated in the figure.

# ENTERTAINMENT

2. Assemble in the reverse order of disassembly.



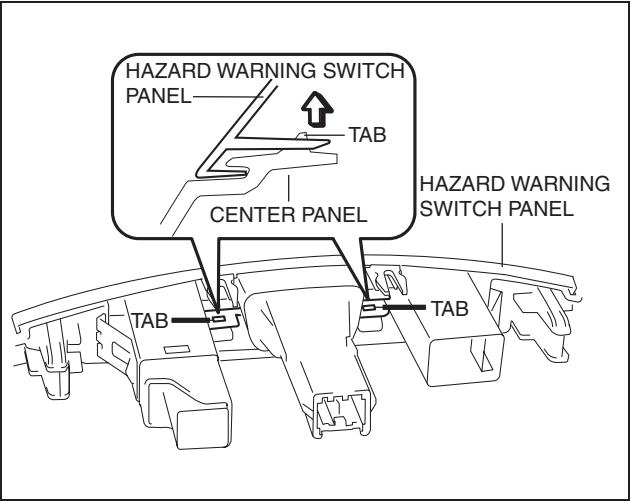
am2zzw0000331

|   |                                                                                        |
|---|----------------------------------------------------------------------------------------|
| 1 | Hazard warning switch panel<br>(See 09-20-5 Hazard Warning Switch Panel Removal Note.) |
| 2 | Screw                                                                                  |
| 3 | Audio unit                                                                             |
| 4 | Screw                                                                                  |
| 5 | Bracket A                                                                              |

|    |              |
|----|--------------|
| 6  | Screw        |
| 7  | Screw        |
| 8  | Bracket B    |
| 9  | Knob         |
| 10 | Center panel |

## Hazard Warning Switch Panel Removal Note

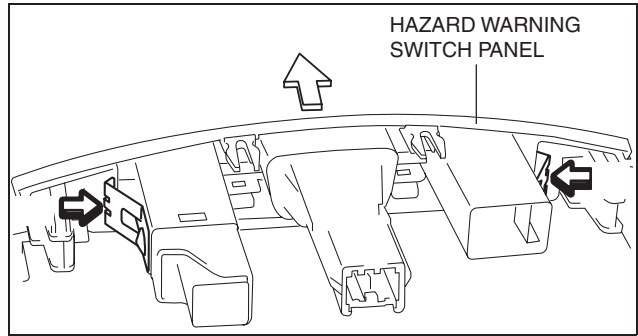
1. Press the hazard warning switch panel upward in the direction of the arrow shown in the figure using a tape-wrapped fastener remover while avoiding the center panel tabs.



am2zzw0000039

## ENTERTAINMENT

2. Remove the hazard warning switch panel in the direction of the arrow (2) shown in the figure while pressing the hazard warning switch panel clips indicated by the arrow (1).



am2zzw0000039

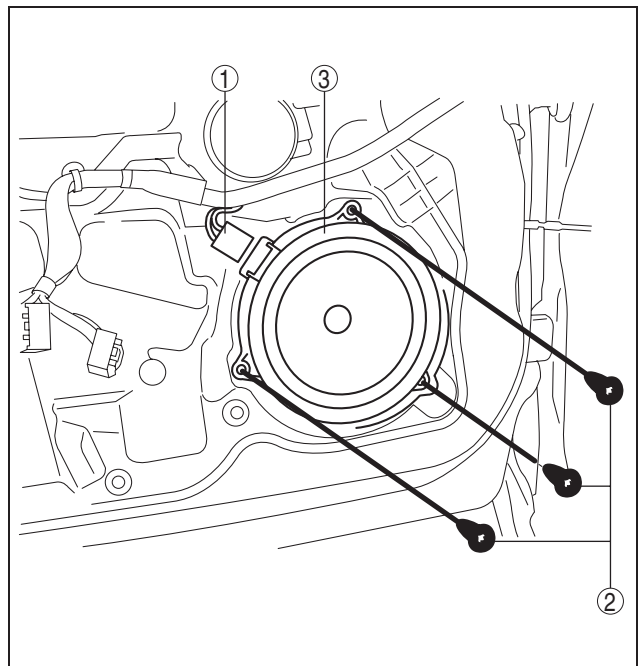
### FRONT DOOR SPEAKER REMOVAL/INSTALLATION

id092000802200

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

|   |                                                                      |
|---|----------------------------------------------------------------------|
| 1 | Connector                                                            |
| 2 | Screw                                                                |
| 3 | Front door speaker<br>(See 09-20-7 Front Door Speaker Removal Note.) |

5. Install in the reverse order of removal.

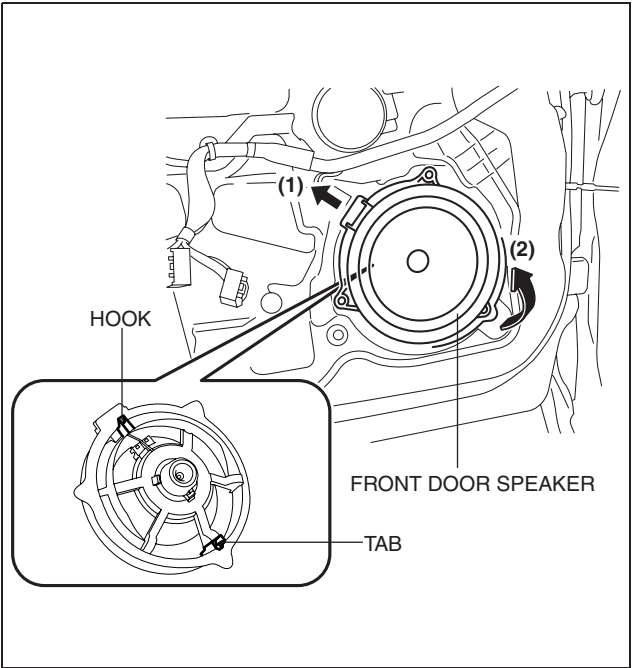


am2zzw0000029

# ENTERTAINMENT

## Front Door Speaker Removal Note

1. Remove the front door speaker in the direction of the arrow shown in the figure.

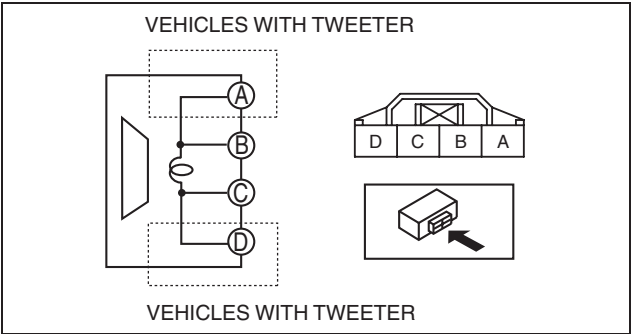


am2zzw0000035

## FRONT DOOR SPEAKER INSPECTION

id092000802300

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the front door trim. (See 09-17-58 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the front door speaker. (See 09-20-6 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
5. Verify the resistance between the front door speaker terminals.



am2zzw0000035

- If not within the specification, replace the front door speaker.

**Resistance**  
**3.4—4.6 ohms**

6. Have a 1.5 V battery ready.

| Resistance          |          |   |   |     |
|---------------------|----------|---|---|-----|
| Test condition      | Terminal |   |   |     |
|                     | A        | B | C | D   |
| Under any condition | ○        | ○ | ○ | ○ * |

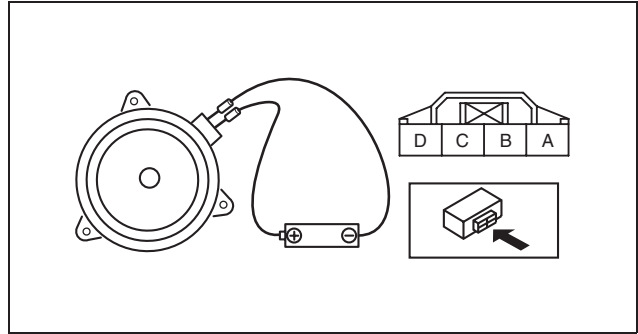
\*: VEHICLES WITH TWEETER

am2zzw0000035



## ENTERTAINMENT

7. Connect the battery positive (+) pole to front door speaker terminal C, and the negative (-) pole to terminal B.
8. Verify that sound is output from the front door speaker.
  - If sound is not output, replace the front door speaker.



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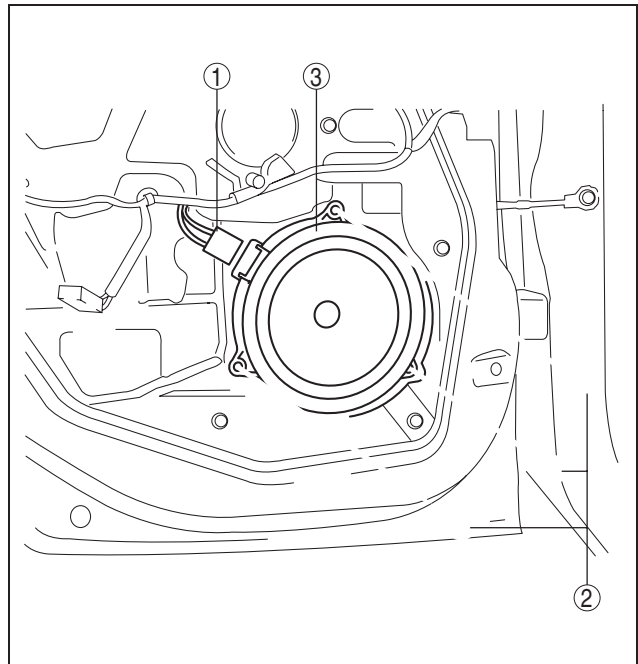
### REAR DOOR SPEAKER REMOVAL/INSTALLATION

id092000805000

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

|   |                                                                    |
|---|--------------------------------------------------------------------|
| 1 | Connector                                                          |
| 2 | Screw                                                              |
| 3 | Rear door speaker<br>(See 09-20-9 Rear Door Speaker Removal Note.) |

5. Install in the reverse order of removal.

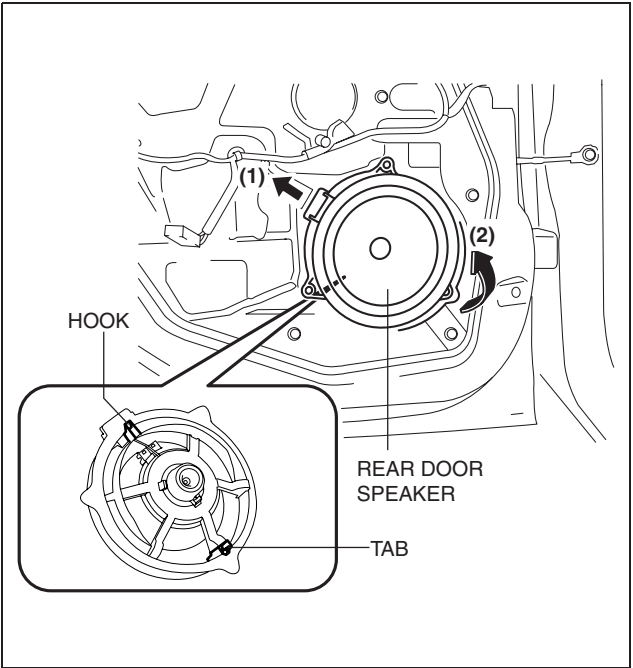


am2zzw0000029

# ENTERTAINMENT

## Rear Door Speaker Removal Note

1. Remove the rear door speaker in the direction of the arrow shown in the figure.

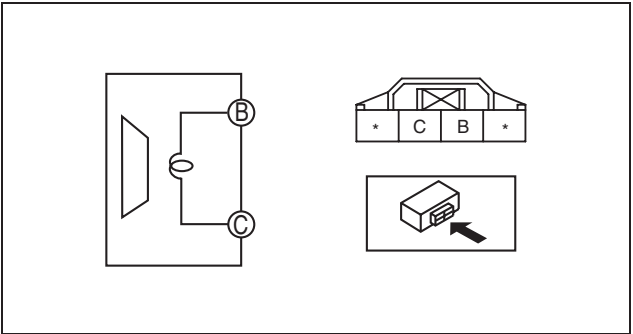


am2zzw0000035

## REAR DOOR SPEAKER INSPECTION

id092000804900

1. Disconnect the negative battery cable.
2. Remove the sail inner garnish. (See 09-17-53 SAIL INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear door trim. (See 09-17-65 REAR DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the rear door speaker. (See 09-20-8 REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
5. Verify the resistance between the rear door speaker terminals.



adejiw00001161

- If not within the specification, replace the rear door speaker.

**Resistance**  
**3.4—4.6 ohms**

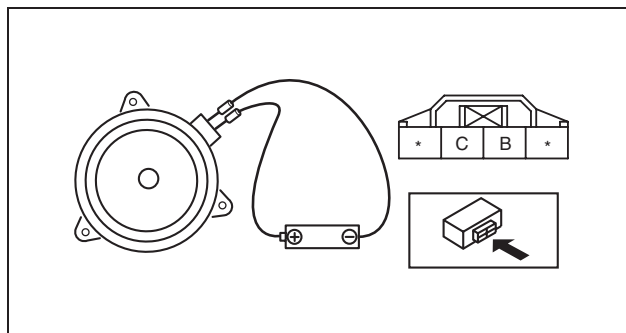
6. Have a 1.5 V battery ready.

| Resistance          |          |
|---------------------|----------|
| Test condition      | Taeminal |
|                     | B C      |
| Under any condition |          |

am2zzw0000497

## ENTERTAINMENT

7. Connect the battery positive (+) pole to rear door speaker terminal C, and the negative (-) pole to terminal B.
8. Verify that sound is output from the rear door speaker.
  - If sound is not output, replace the rear door speaker.



adejjw00004090

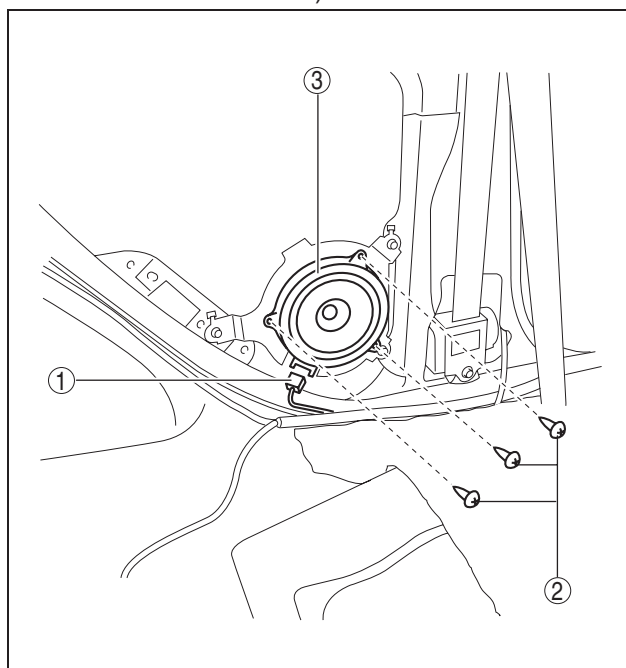
### REAR SPEAKER REMOVAL/INSTALLATION [3HB]

id0920008024z3

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (3) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (5) Trunk side trim (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

|   |                                                           |
|---|-----------------------------------------------------------|
| 1 | Connector                                                 |
| 2 | Screw                                                     |
| 3 | Rear speaker<br>(See 09-20-11 Rear Speaker Removal Note.) |

4. Install in the reverse order of removal.

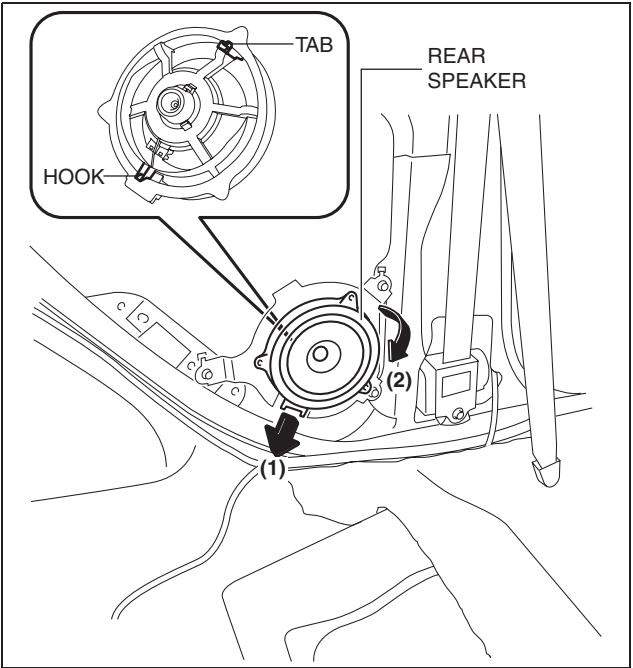


am2zzw0000328

# ENTERTAINMENT

## Rear Speaker Removal Note

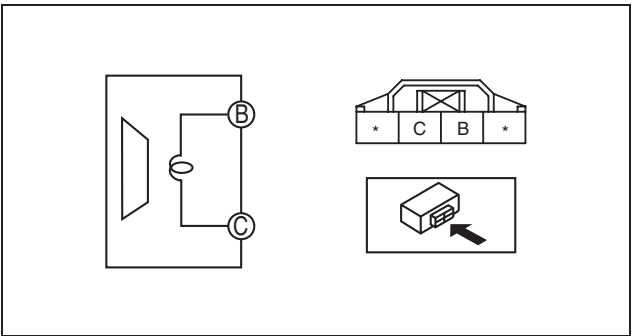
1. Remove the rear speaker in the direction of the arrow shown in the figure.



## REAR SPEAKER INSPECTION [3HB]

id0920008025z3

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Front scuff plate (See 09-17-57 FRONT SCUFF PLATE REMOVAL/INSTALLATION [3HB].)
  - (2) Rear seat cushion (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (3) Rear seat back (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (4) Trunk end trim (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (5) Trunk side trim (See 09-17-70 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
  - (6) Rear speaker (See 09-20-10 REAR SPEAKER REMOVAL/INSTALLATION [3HB].)
3. Verify the resistance between the rear speaker terminals.



- If not within the specification, replace the rear speaker.

**Resistance**  
**3.4—4.6 ohms**

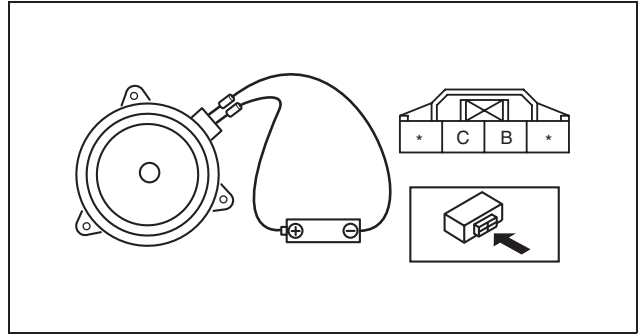
4. Have a 1.5 V battery ready.

| Taeminal            |  |
|---------------------|--|
| Test condition      |  |
| Under any condition |  |

am2zzw0000468

## ENTERTAINMENT

5. Connect the battery positive (+) pole to rear speaker terminal C, and the negative (-) pole to terminal B.
6. Verify that sound is output from the rear speaker.
  - If sound is not output, replace the rear speaker.

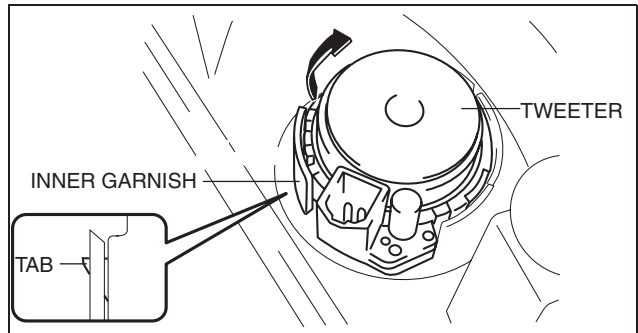


adejjw00004090

id092000808000

### TWEETER REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the tweeter in the direction of the arrow shown in the figure.
4. Install in the reverse order of removal.

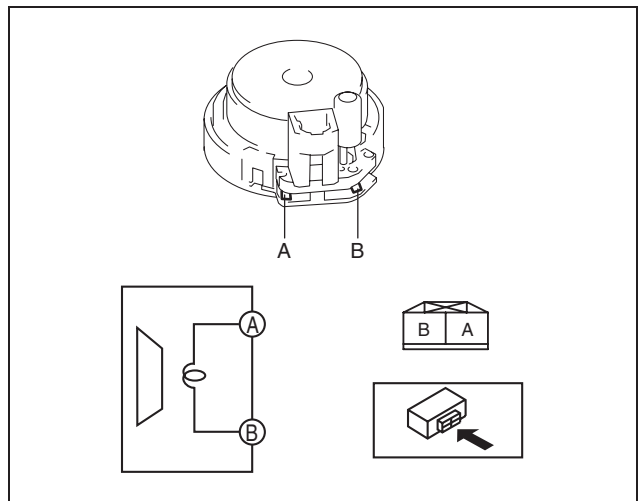


am2zzw0000030

id092000808100

### TWEETER INSPECTION

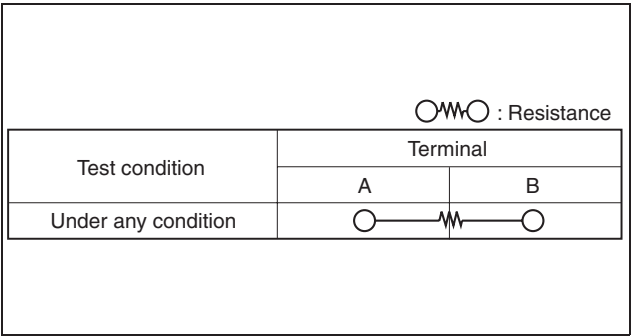
1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09-17-34 INNER GARNISH REMOVAL/INSTALLATION.)
3. Remove the tweeter. (See 09-20-12 TWEETER REMOVAL/INSTALLATION.)
4. Verify the resistance between tweeter terminals.
  - If not within the specification, replace the tweeter.



adejjw00000750

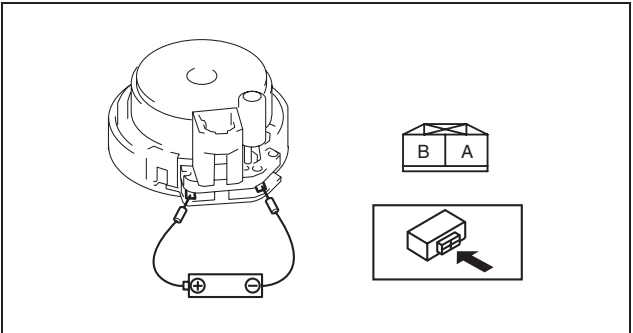
**Resistance**  
**3.4—4.6 ohms**

5. Have a 1.5 V battery ready.



am2zzw0000030

6. Connect the battery positive (+) pole to tweeter terminal B, and the negative (-) pole to terminal A.
7. Verify that sound is output from the tweeter.
- If sound is not output, replace the tweeter.



adejiw00004091

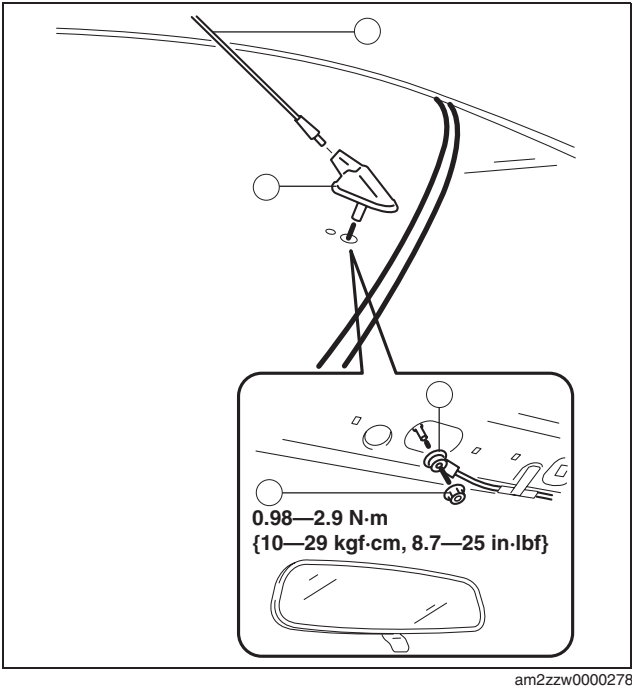
**CENTER ROOF ANTENNA REMOVAL/INSTALLATION**

id092000801600

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (3) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (4) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (5) Rear scuff plate (5HB,4SD) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (6) B-pillar lower trim (5HB,4SD) (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (3HB) (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Rear seat back (3HB) (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (9) Trunk end trim (3HB) (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (10)Trunk side trim (3HB) (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (11)C-pillar trim (3HB) (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (12)Front seat belt adjuster anchor cover.
  - (13)Front seat belt upper anchor installation bolt
  - (14)B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.) (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (15)Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
3. Disconnect the rain sensor connector. (vehicles with auto light/wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
4. Partially peel back the seaming welt.
5. Partially peel back the headliner.
6. Remove in the order indicated in the table.

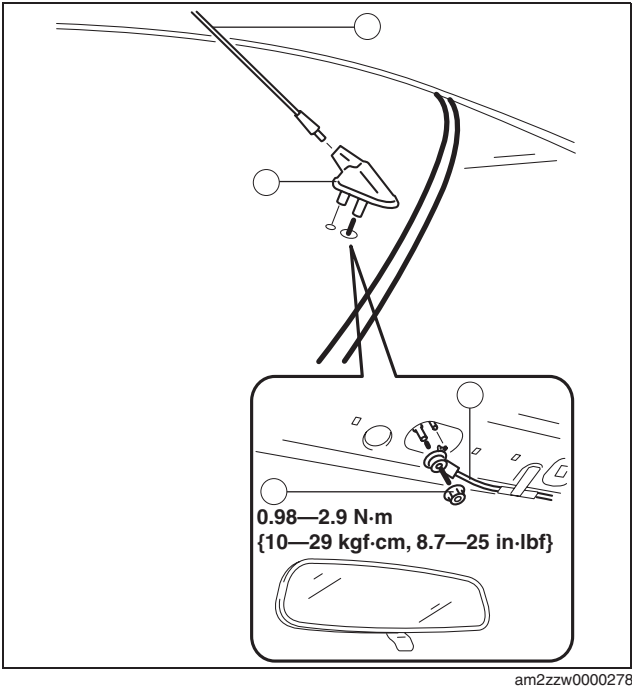
# ENTERTAINMENT

## TYPE A



|   |                     |
|---|---------------------|
| 1 | Nut                 |
| 2 | Antenna feeder No.2 |
| 3 | Antenna rod         |
| 4 | Center roof antenna |

## TYPE B



|   |                                                                                          |
|---|------------------------------------------------------------------------------------------|
| 1 | Nut                                                                                      |
| 2 | Antenna feeder No.2                                                                      |
| 3 | Antenna rod                                                                              |
| 4 | Center roof antenna<br>(See 09-20-15 Center Roof Antenna (Type B)<br>Installation Note.) |

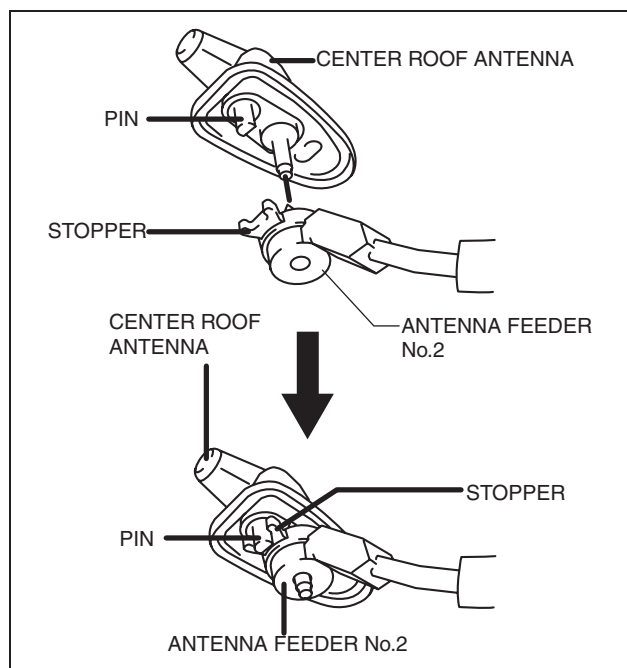
7. Install in the reverse order of removal.

## ENTERTAINMENT

8. After installation, verify that the rubber of the center roof antenna is installed to the roof panel with no space between the two.

### Center Roof Antenna (Type B) Installation Note

1. Install the antenna feeder No.2 stopper to the pin of the center roof antenna.



am2zzw0000373

### CENTER ROOF ANTENNA INSPECTION

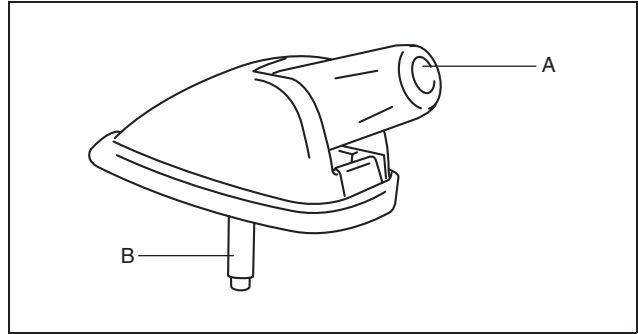
id092000801700

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (3) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (4) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (5) Rear scuff plate (5HB,4SD) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (6) B-pillar lower trim (5HB,4SD) (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (3HB) (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Rear seat back (3HB) (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (9) Trunk end trim (3HB) (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (10) Trunk side trim (3HB) (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (11) C-pillar trim (3HB) (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (12) Front seat belt adjuster anchor cover.
  - (13) Front seat belt upper anchor installation bolt.
  - (14) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.) (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (15) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  - (16) Center roof antenna (See 09-20-13 CENTER ROOF ANTENNA REMOVAL/INSTALLATION.)



## ENTERTAINMENT

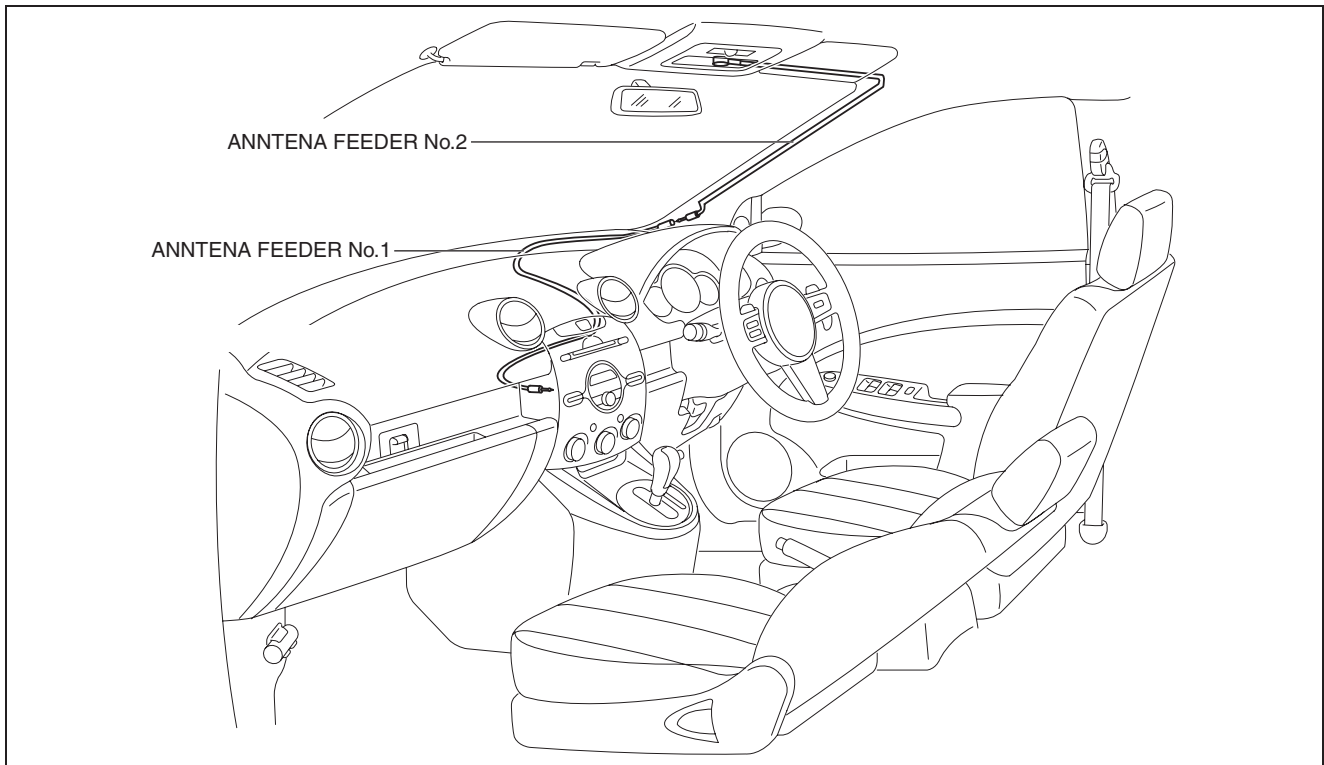
3. Inspect for continuity between center roof antenna sections A and B.
- If there is no continuity, replace the center roof antenna.



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### ANTENNA FEEDER LOCATION

R.H.D.



am2zzw0000059

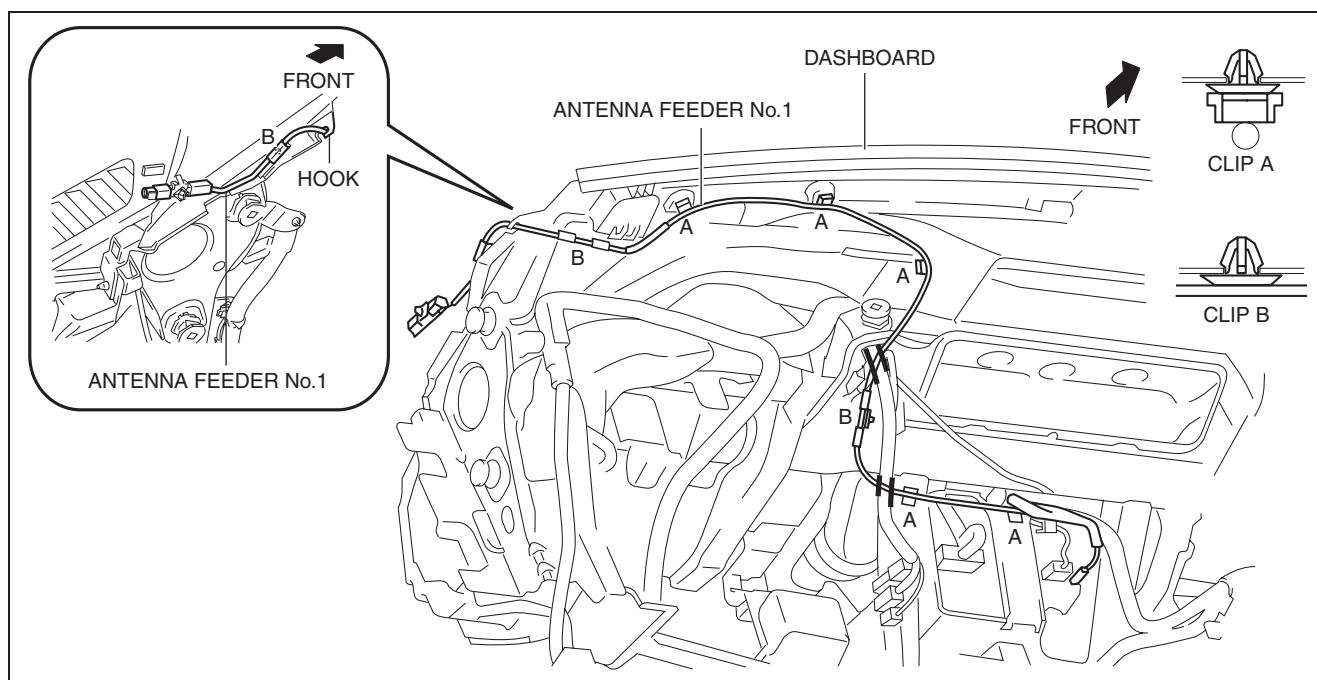
### ANTENNA FEEDER NO.1 REMOVAL/INSTALLATION

id092000812200

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (2) Glove compartment cover (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
  - (3) Dashboard under cover (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)
  - (4) Heat duct (passenger side).
  - (5) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (6) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (7) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (8) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (9) Front side trim (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
  - (10) Bonnet release lever (See 09-14-28 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
  - (11) Driver-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (12) Driver-side air bag module.
  - (13) Steering wheel (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (14) Column cover (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
  - (15) Meter hood (See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)
  - (16) Instrument cluster (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
  - (17) Combination switch (See 09-18-32 COMBINATION SWITCH REMOVAL/INSTALLATION.)
  - (18) Center panel unit (vehicles with audio unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (19) Center panel (vehicles without audio unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (20) Climate control unit (See 07-40A-32 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07-40B-24 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)
  - (21) Shift lever (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (22) Selector lever (ATX/CVT)
  - (23) Interlock cable (ATX/CVT).
  - (24) Passenger-side lower panel (See 09-17-29 LOWER PANEL REMOVAL/INSTALLATION.)
  - (25) Side panel (See 09-17-34 SIDE PANEL REMOVAL/INSTALLATION.)
  - (26) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (27) Windshield wiper arm and blade (See 09-19-7 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
  - (28) Cowl grille (See 09-16-5 COWL GRILLE REMOVAL/INSTALLATION.)
  - (29) Sail garnish (See 09-16-7 SAIL GARNISH REMOVAL/INSTALLATION.)
  - (30) Windshield wiper motor (L.H.D.)
  - (31) Steering shaft cover (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (32) Steering shaft (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
  - (33) Dashboard (See 09-17-14 DASHBOARD REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-17-18 DASHBOARD REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-17-10 DASHBOARD REMOVAL/INSTALLATION [3HB].)
3. Remove clips A and B.
4. Remove the antenna feeder No.1 from the dashboard hook.
5. Remove antenna feeder No.1.
6. Install in the reverse order of removal.

## ENTERTAINMENT

R.H.D.

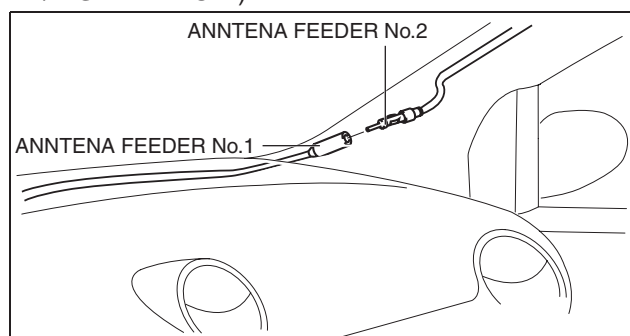


am2zzw0000250

### ANTENNA FEEDER NO.1 INSPECTION

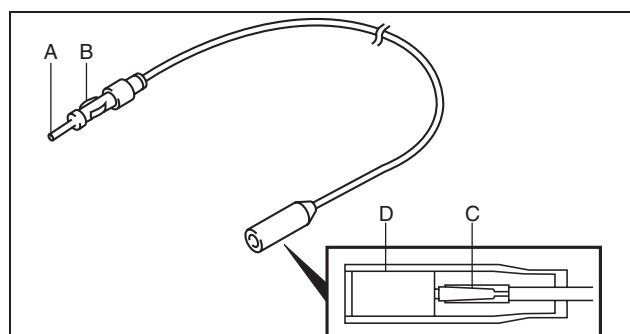
id092000812400

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (See 09-17-26 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
  - (5) Center panel unit (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (6) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
3. Disconnect antenna feeder No.2.



am2zzw0000159

4. Verify that the continuity between antenna feeder No.1 terminals is as indicated in the table.
  - If not as indicated in the table, replace antenna feeder No.1.



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## ENTERTAINMENT

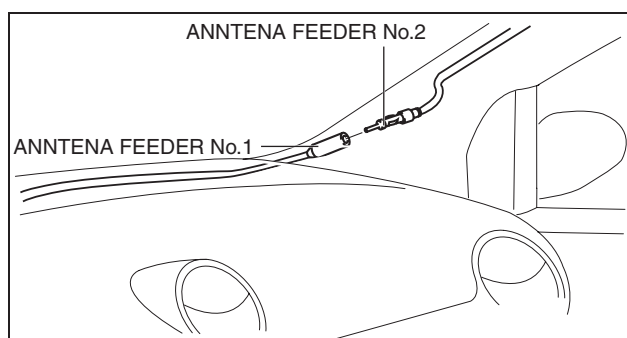
| ○—○ : Continuity    |          |    |    |    |
|---------------------|----------|----|----|----|
| Test condition      | Terminal |    |    |    |
|                     | A        | B  | C  | D  |
| Under any condition | ○—       | —○ | ○— | —○ |

am2zzw000031

### ANTENNA FEEDER NO.2 REMOVAL/INSTALLATION

id092000812300

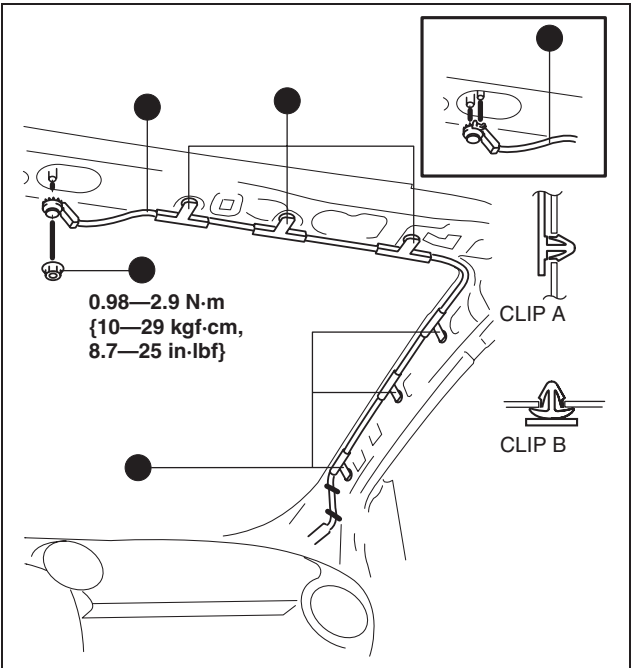
1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)
  - (2) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (3) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (4) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (5) Rear scuff plate (5HB,4SD) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (6) B-pillar lower trim (5HB,4SD) (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (3HB) (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Rear seat back (3HB) (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (9) Trunk end trim (3HB) (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (10) Trunk side trim (3HB) (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (11) C-pillar trim (3HB) (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (12) Front seat belt adjuster anchor cover.
  - (13) Front seat belt upper anchor installation bolt.
  - (14) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.) (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (15) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
3. Disconnect the rain sensor connector. (vehicles with auto light/wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
4. Partially peel back the seaming welt.
5. Partially peel back the headliner.
6. Disconnect antenna feeder No.1.



am2zzw0000159

## ENTERTAINMENT

7. Remove in the order indicated in the table.



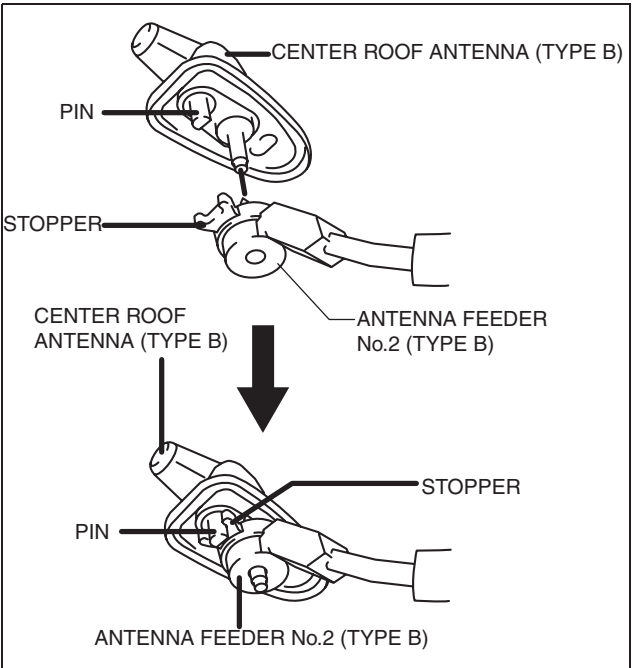
am2zzw0000278

|   |                                                                                                   |
|---|---------------------------------------------------------------------------------------------------|
| 1 | Clip A                                                                                            |
| 2 | Clip B                                                                                            |
| 3 | Nut                                                                                               |
| 4 | Antenna feeder No.2 (Type A)                                                                      |
| 5 | Antenna feeder No.2 (Type B)<br>(See 09-20-21 Antenna Feeder No.2 (Type B)<br>Installation Note.) |

8. Install in the reverse order of removal.

### Antenna Feeder No.2 (Type B) Installation Note

1. Install the antenna feeder No.2 (Type B) stopper to the pin of the center roof antenna (Type B).



am2zzw0000277

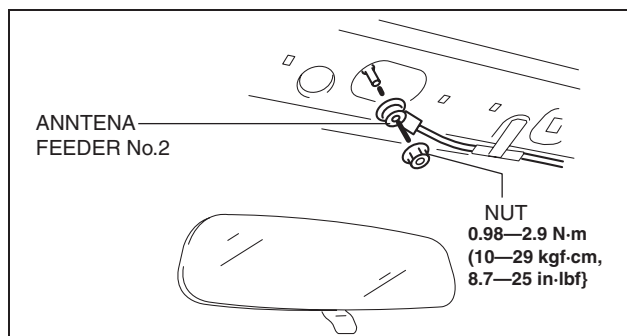
### ANTENNA FEEDER NO.2 INSPECTION

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) A-pillar trim (See 09-17-42 A-PILLAR TRIM REMOVAL/INSTALLATION.)

id092000812500

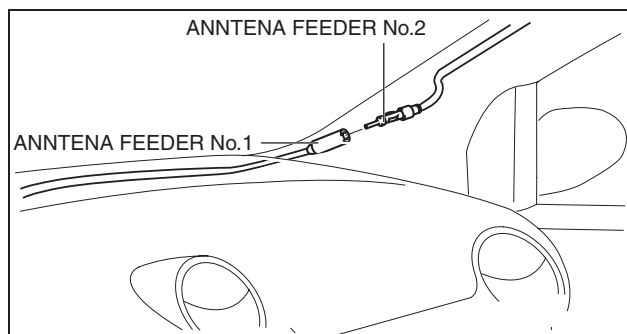
## ENTERTAINMENT

- (2) Sunvisor (See 09-17-80 SUNVISOR REMOVAL/INSTALLATION.)
  - (3) Assist handle (See 09-17-80 ASSIST HANDLE REMOVAL/INSTALLATION.)
  - (4) Front scuff plate (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
  - (5) Rear scuff plate (5HB,4SD) (See 09-17-58 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
  - (6) B-pillar lower trim (5HB,4SD) (See 09-17-46 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
  - (7) Rear seat cushion (3HB) (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
  - (8) Rear seat back (3HB) (See 09-13-26 REAR SEAT BACK REMOVAL/INSTALLATION [AutoAlliance (AAT) Thailand manufactured vehicles].) (See 09-13-27 REAR SEAT BACK REMOVAL/INSTALLATION [Except AutoAlliance (AAT) Thailand manufactured vehicles].)
  - (9) Trunk end trim (3HB) (See 09-17-75 TRUNK END TRIM REMOVAL/INSTALLATION.)
  - (10) Trunk side trim (3HB) (See 09-17-73 TRUNK SIDE TRIM REMOVAL/INSTALLATION [3HB].)
  - (11) C-pillar trim (3HB) (See 09-17-52 C-PILLAR TRIM REMOVAL/INSTALLATION [3HB].)
  - (12) Front seat belt adjuster anchor cover.
  - (13) Front seat belt upper anchor installation bolt.
  - (14) B-pillar upper trim (See 09-17-44 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.) (See 09-17-45 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION [3HB].)
  - (15) Rain sensor cover (Vehicles with auto light / wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
3. Disconnect the rain sensor connector. (vehicles with auto light/wiper system) (See 09-19-28 RAIN SENSOR REMOVAL/INSTALLATION.)
  4. Partially peel back the seaming welt.
  5. Partially peel back the headliner.
  6. Remove the nut.



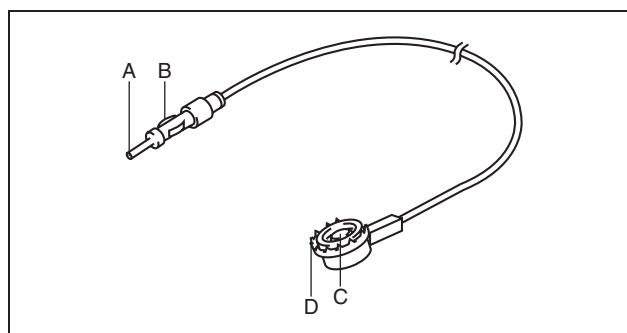
am2zzw0000159

7. Disconnect antenna feeder No.1.



am2zzw0000159

8. Verify that the continuity between antenna feeder No.2 terminals is as indicated in the table.
  - If not as indicated in the table, replace antenna feeder No.2.



adejjw00000960

○—○ : Continuity

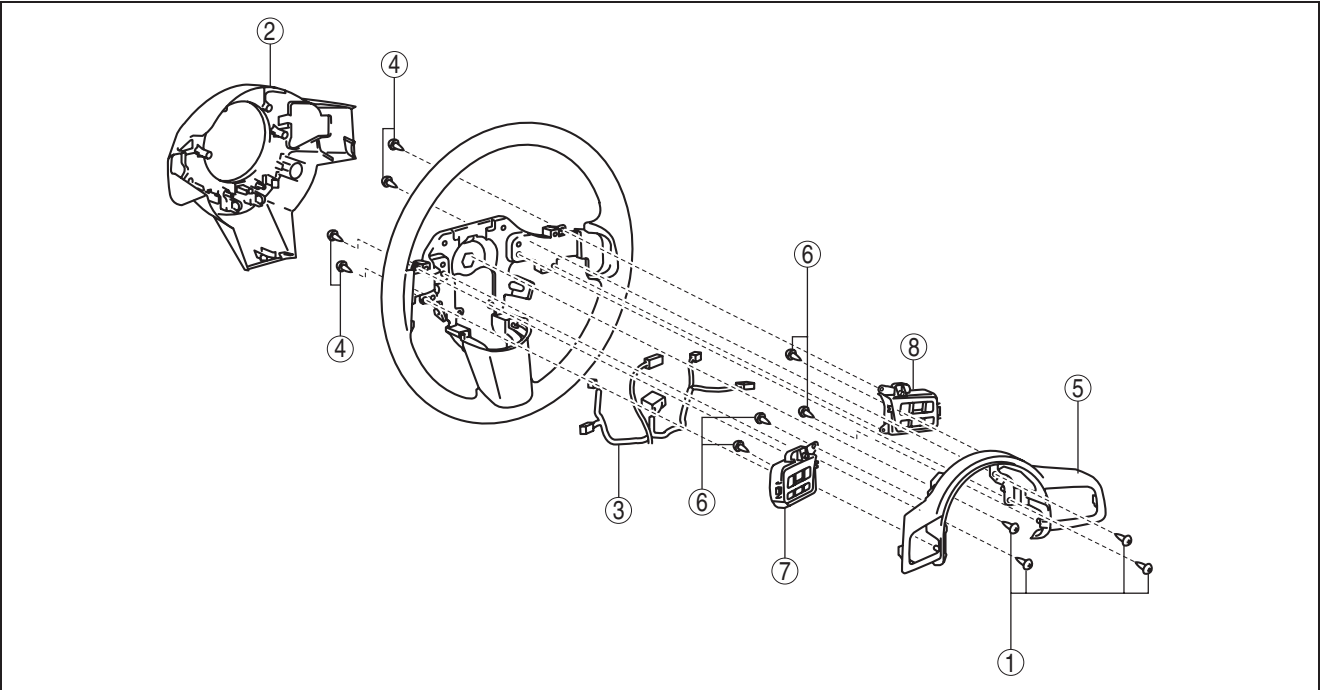
| Test condition      | Terminal |     |     |     |
|---------------------|----------|-----|-----|-----|
|                     | A        | B   | C   | D   |
| Under any condition | ○—○      |     | ○—○ |     |
|                     |          | ○—○ |     | ○—○ |

am2zzw0000031

AUDIO CONTROL SWITCH REMOVAL/INSTALLATION

id092000800200

1. Disconnect the negative battery cable and wait for **1 min or more**.
2. Remove the driver-side air bag module.
3. Remove the steering wheel. (See 06-13-10 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION [R.H.D.].)
4. Remove in the order indicated in the table.
5. Install in the reverse order of removal.



am2zzw0000024

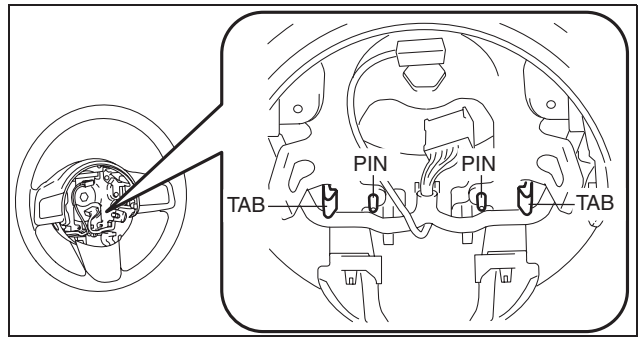
|   |                                                                                        |
|---|----------------------------------------------------------------------------------------|
| 1 | Screw                                                                                  |
| 2 | Cover<br>(See 09-20-24 Cover Removal Note.)<br>(See 09-20-24 Cover Installation Note.) |
| 3 | Wiring harness                                                                         |
| 4 | Screw                                                                                  |

|   |                                                             |
|---|-------------------------------------------------------------|
| 5 | Panel                                                       |
| 6 | Screw                                                       |
| 7 | Audio control switch                                        |
| 8 | Cruise control switch (vehicles with cruise control system) |

## ENTERTAINMENT

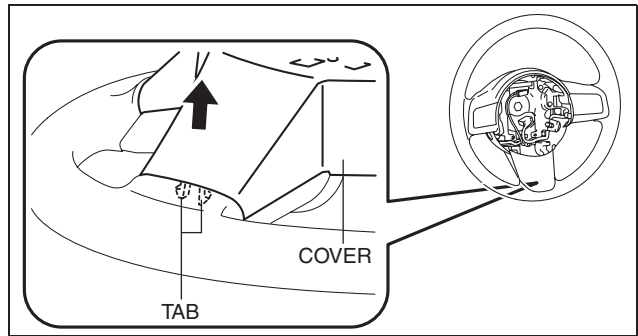
### Cover Removal Note

1. Remove the cover tabs and pins from the steering wheel.



am2zzw0000024

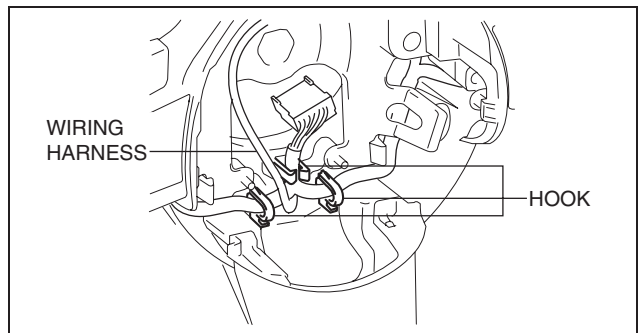
2. Remove the cover in the direction of the arrow shown in the figure.



am2zzw0000024

### Cover Installation Note

1. Secure the audio control switch wiring harness to the cover hooks.



am2zzw0000024

### AUDIO CONTROL SWITCH INSPECTION

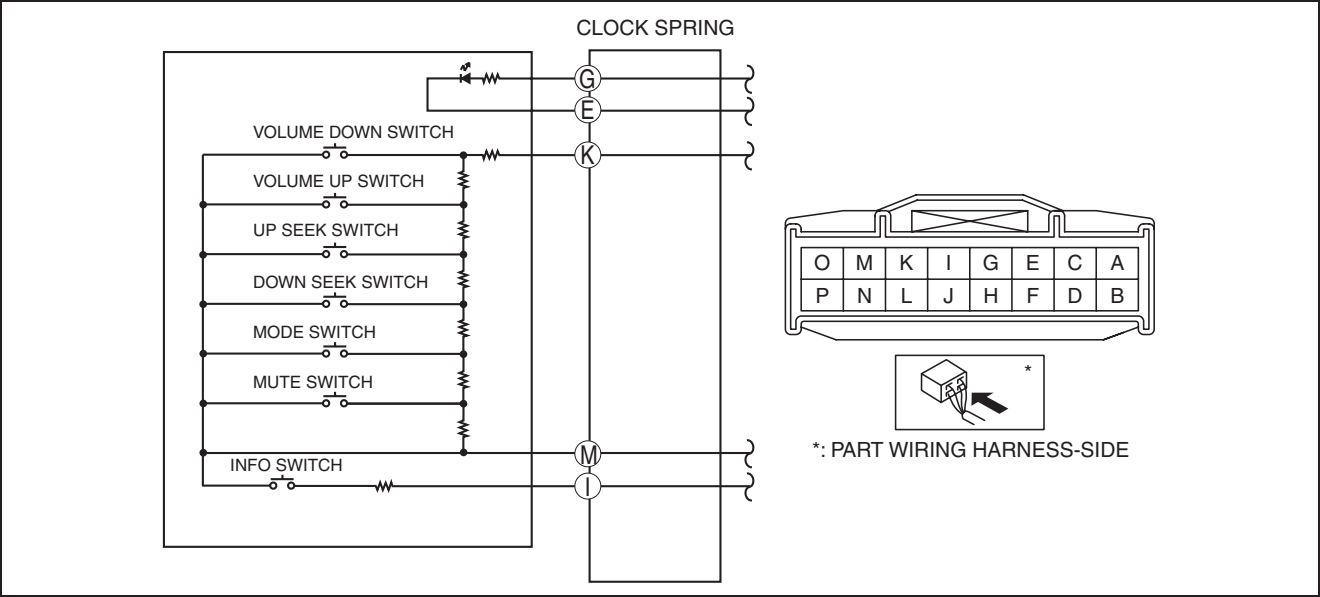
id092000800300

1. Disconnect the negative battery cable and wait for **1 min or more**.
2. Remove the driver-side air bag module.
3. Disconnect the clock spring connector.



# ENTERTAINMENT

4. Inspect for resistance and continuity between clock spring connector terminals M—K/I using a tester.



am2zzw0000497

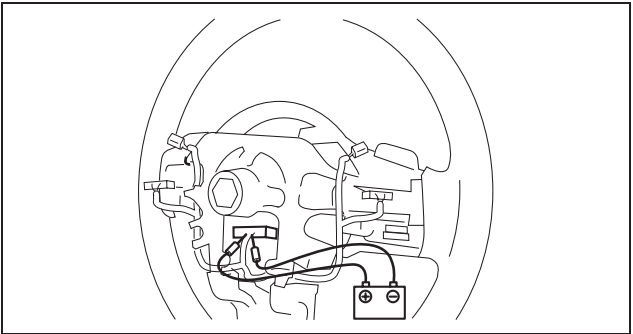
- If not within the specification, replace the audio control switch.

Ω : Resistance

| Switch Position       | Terminal |   |   | Resistance (ohm) |
|-----------------------|----------|---|---|------------------|
|                       | M        | K | I |                  |
| Volume Down Switch ON | ○—Ω—○    |   |   | 50.9—56.3        |
| Volume Up Switch ON   | ○—Ω—○    |   |   | 139—155          |
| Up Seek Switch ON     | ○—Ω—○    |   |   | 285—316          |
| Down Seek Switch ON   | ○—Ω—○    |   |   | 533—590          |
| Mode Switch ON        | ○—Ω—○    |   |   | 984—1,089        |
| Mute Switch ON        | ○—Ω—○    |   |   | 1,934—2,139      |
| Info Switch ON        | ○—Ω—○    |   | ○ | 50.9—56.3        |
| OFF                   | ○—Ω—○    |   |   | 4,794—5,300      |

am2zzw0000445

5. Apply battery positive voltage to audio control switch terminal G, and connect terminal E to ground.
6. Verify that the LED illuminates.
  - If the LED does not illuminate, replace the audio control switch.



am2zzw0000445

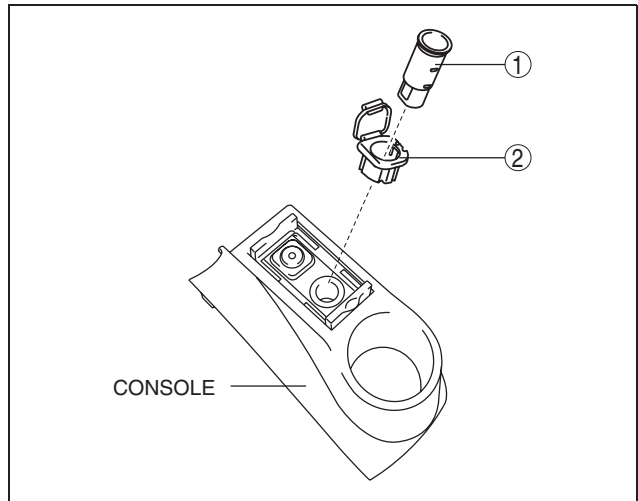
## ACCESSORY SOCKET REMOVAL/INSTALLATION

id092000800400

1. Disconnect the negative battery cable.
2. Remove the console. (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

## ENTERTAINMENT

### Type A

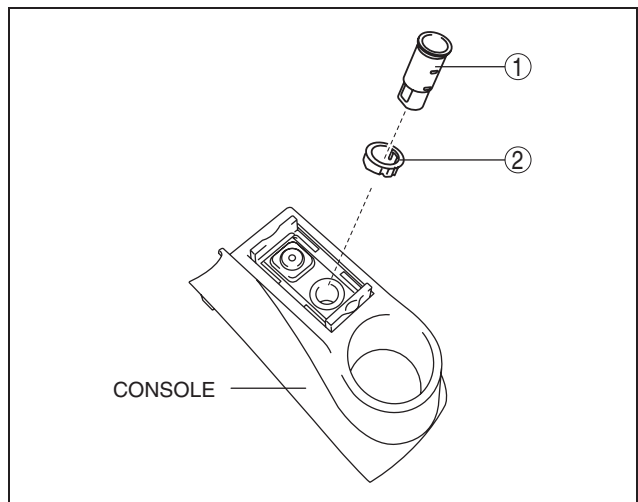


am2zzw0000432

### Type B

|   |                                                                   |
|---|-------------------------------------------------------------------|
| 1 | Accessory socket<br>(See 09-20-26 Accessory Socket Removal Note.) |
| 2 | Cap<br>(See 09-20-27 Cap Removal Note.)                           |

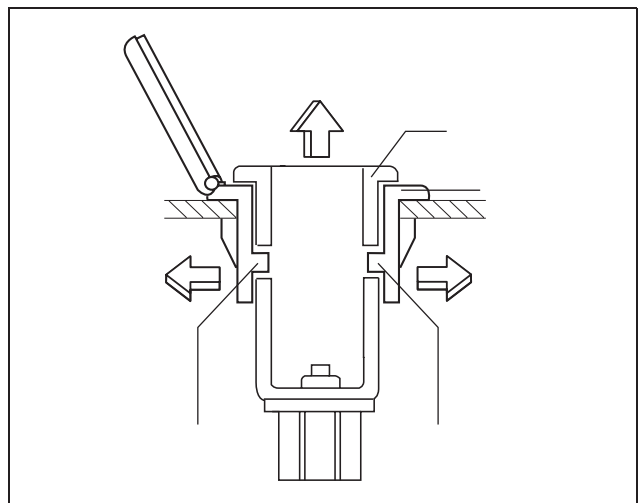
4. Install in the reverse order of removal.



am2zzw0000433

### Accessory Socket Removal Note

1. Remove the socket in the direction of the arrow (2) shown in the figure while opening the caps in the direction of the arrow (1) using a tape-wrapped fastener remover.

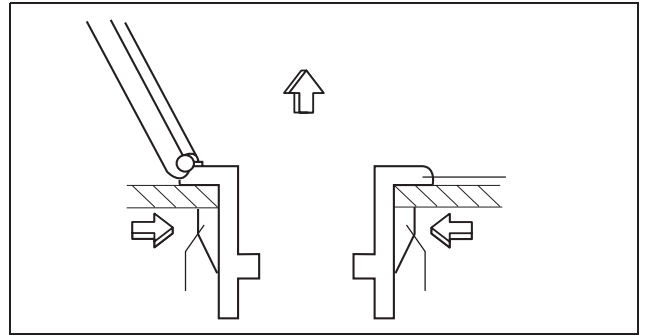


am6zzw0000136

## ENTERTAINMENT

### Cap Removal Note

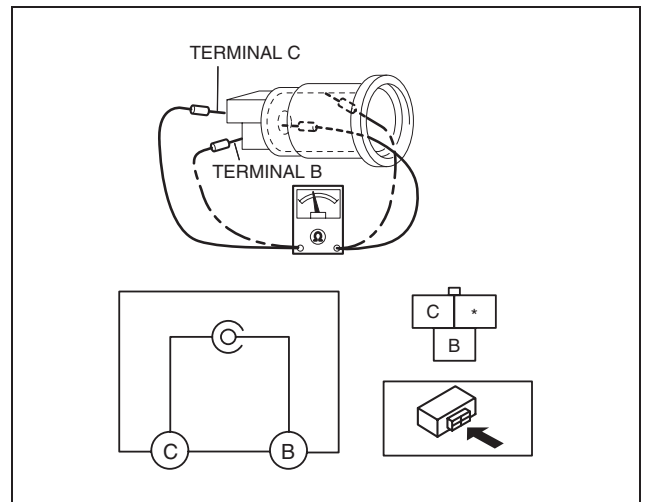
1. Remove the cap in the direction of the arrow (2) shown in the figure while pressing the cap tabs in the direction of the arrow (1).



am6zzw0000136

### ACCESSORY SOCKET INSPECTION

1. Connect a tester as shown in the figure and verify that there is continuity.
  - If the continuity cannot be verified, replace the accessory socket.

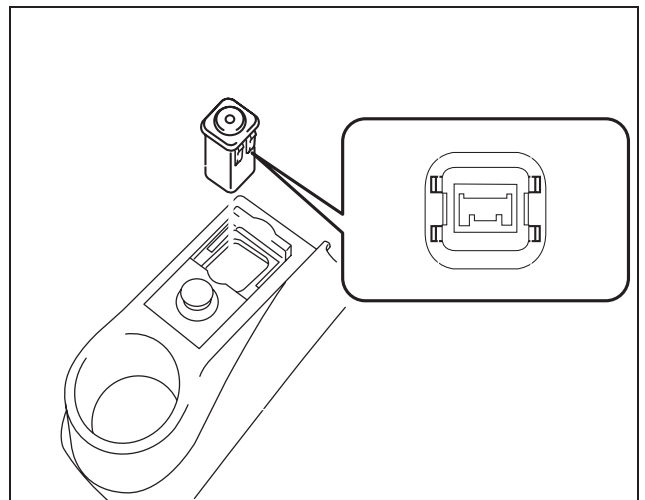


id092000800500

B6U0920W005

### AUXILIARY JACK REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the console. (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
3. Remove the auxiliary jack in the direction of the arrow (2) shown in the figure while pressing the auxiliary jack tabs in the direction of the arrow (1).
4. Install in the reverse order of removal.



id092000809900

am2zzw0000022

### AUXILIARY JACK INSPECTION

#### Except Auto Alliance Thailand (AAT) Manufactured Vehicles

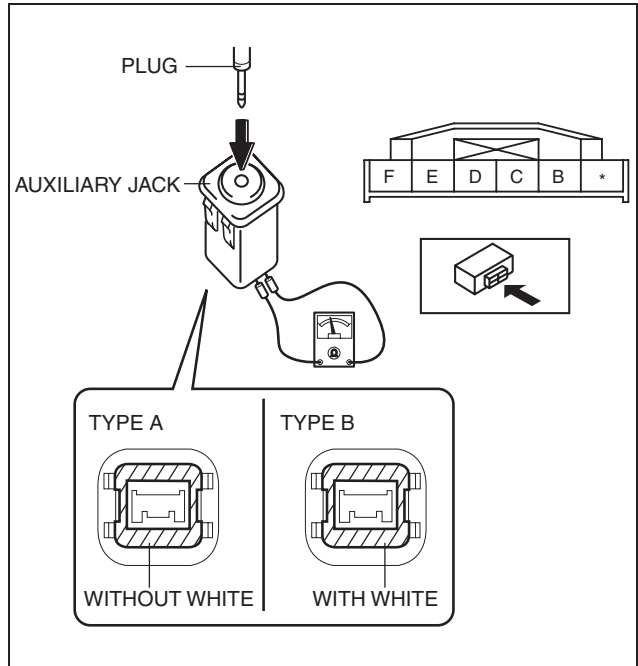
1. Disconnect the negative battery cable.
2. Remove the console. (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
3. Remove the auxiliary jack. (See 09-20-27 AUXILIARY JACK REMOVAL/INSTALLATION.)

id092000812600

## ENTERTAINMENT

4. Connect a commercially-available nonresistant plug to the auxiliary jack.
5. Verify that the continuity between the auxiliary jack terminals is as indicated in the table.

### Type A



am2zzw0000492

| Test condition        | Terminal |     |   |   |
|-----------------------|----------|-----|---|---|
|                       | C        | D   | E | F |
| Plug is connected     |          | ○—○ |   | ○ |
| Plug is not connected |          |     |   |   |

am2zzw0000202

### Type B

- If not as indicated in the table, replace the auxiliary jack.

| Test condition        | Terminal |     |   |   |   |   |
|-----------------------|----------|-----|---|---|---|---|
|                       | A        | B   | C | D | E | F |
| Plug is connected     |          | ○—○ |   |   |   | ○ |
| Plug is not connected |          |     |   |   |   |   |

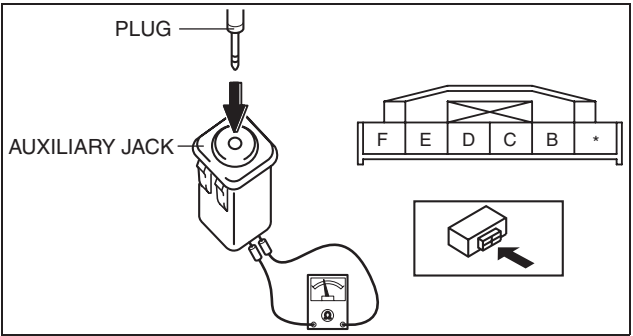
acxuww00003306

### Auto Alliance Thailand (AAT) Manufactured Vehicles

1. Disconnect the negative battery cable.
2. Remove the console. (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
3. Remove the auxiliary jack. (See 09-20-27 AUXILIARY JACK REMOVAL/INSTALLATION.)

# ENTERTAINMENT

4. Connect a commercially-available nonresistant plug to the auxiliary jack.



am2zzw0000432

5. Verify that the continuity between the auxiliary jack terminals is as indicated in the table.
- If not as indicated in the table, replace the auxiliary jack.

○—○: Continuity

| Test condition        | Terminal |     |   |   |   |     |
|-----------------------|----------|-----|---|---|---|-----|
|                       | A        | B   | C | D | E | F   |
| Plug is connected     |          | ○—○ |   |   |   | ○—○ |
| Plug is not connected |          |     |   |   |   |     |

acxuuv00003306

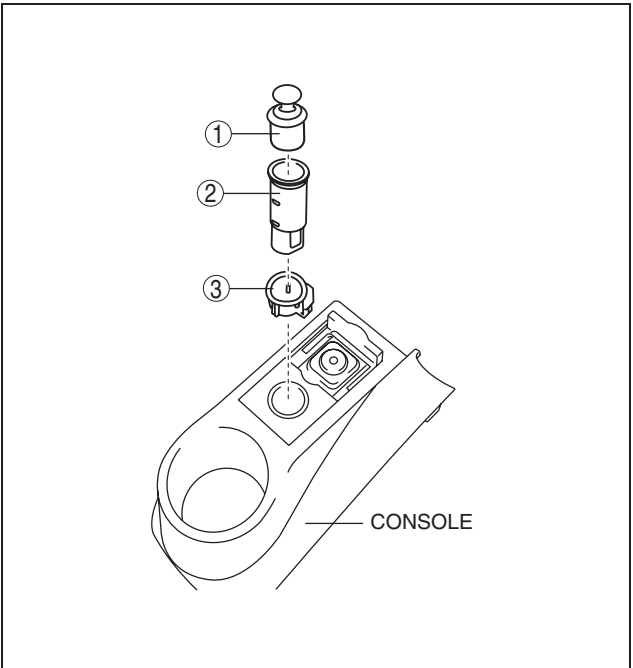
## CIGARETTE LIGHTER REMOVAL/INSTALLATION

id092000803100

1. Disconnect the negative battery cable.
2. Remove the console. (See 09-17-41 REAR CONSOLE REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

|   |                                               |
|---|-----------------------------------------------|
| 1 | Cigarette lighter plug                        |
| 2 | Socket<br>(See 09-20-30 Socket Removal Note.) |
| 3 | Ring<br>(See 09-20-30 Ring Removal Note.)     |

4. Install in the reverse order of removal.

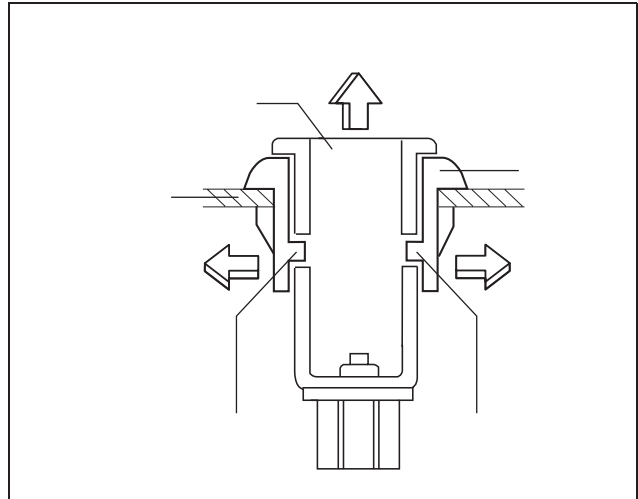


am2zzw0000022

## ENTERTAINMENT

### Socket Removal Note

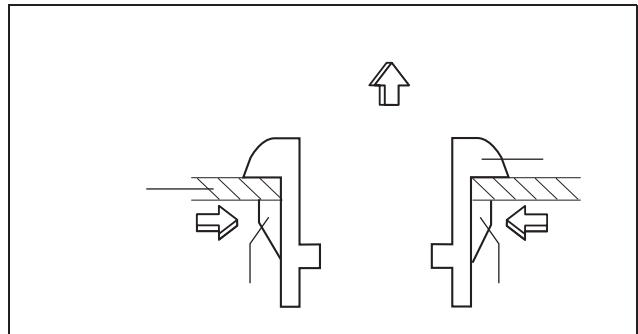
1. Remove the socket in the direction of the arrow (2) shown in the figure while opening the caps in the direction of the arrow (1) using a tape-wrapped fastener remover.



am2zzw0000023

### Ring Removal Note

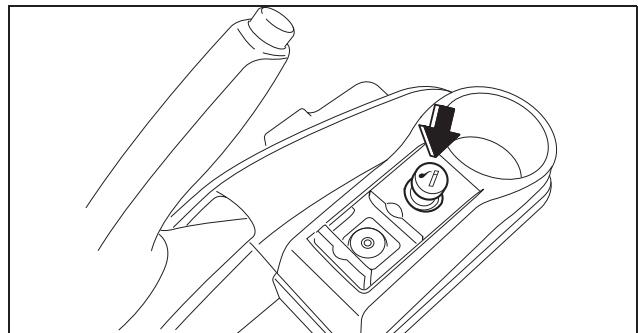
1. Remove the ring in the direction of the arrow (2) shown in the figure while pressing the ring tabs in the direction of the arrow (1).



am2zzw0000023

### CIGARETTE LIGHTER INSPECTION

1. Turn the ignition switch to the ACC position.
2. Press the cigarette lighter into the socket and verify that it returns to its original position in **10—20 s.**
  - If the cigarette lighter does not operate normally, replace the cigarette lighter and the socket.



am2zzw0000023

## POWER SYSTEMS

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### 09-21 POWER SYSTEMS

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#### IGNITION SWITCH

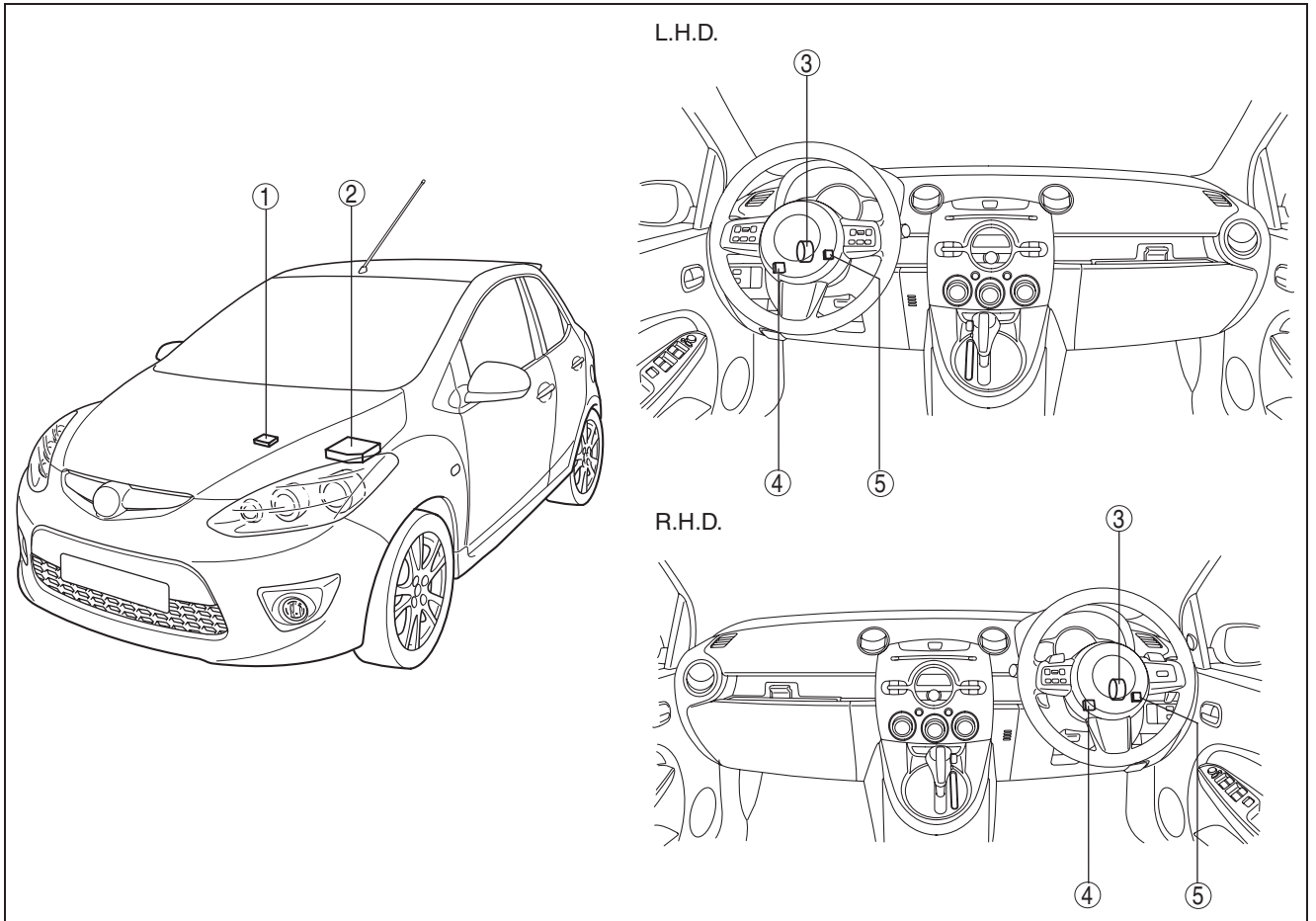
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|-----------------------------------------|----------|
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| manufactured vehicles) .....            | 09-21-13 |

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## POWER SYSTEMS

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id092100800700



am2zzw0000404

|   |                                                                                                                         |
|---|-------------------------------------------------------------------------------------------------------------------------|
| 1 | Main fuse<br>(See 09-21-3 MAIN FUSE REMOVAL/<br>INSTALLATION.)                                                          |
| 2 | Relay and fuse block<br>(See 09-21-8 RELAY LOCATION.)<br>(See 09-21-10 RELAY INSPECTION.)                               |
| 3 | Ignition switch<br>(See 09-21-6 IGNITION SWITCH REMOVAL/<br>INSTALLATION.)<br>(See 09-21-7 IGNITION SWITCH INSPECTION.) |

|   |                                                                                                                                                                                                                                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Steering lock unit (with advanced keyless and start system)<br>(See 09-21-6 STEERING LOCK UNIT<br>INSPECTION [WITH ADVANCED KEYLESS AND<br>START SYSTEM].)                                                                                                                      |
| 5 | Key reminder switch (without advanced keyless and start system)<br>(See 09-21-5 KEY REMINDER SWITCH<br>REMOVAL/INSTALLATION [WITHOUT ADVANCED<br>KEYLESS AND START SYSTEM].)<br>(See 09-21-5 KEY REMINDER SWITCH<br>INSPECTION [WITHOUT ADVANCED KEYLESS<br>AND START SYSTEM].) |



## POWER SYSTEMS

### FUSE SERVICE CAUTIONS

id092100801500

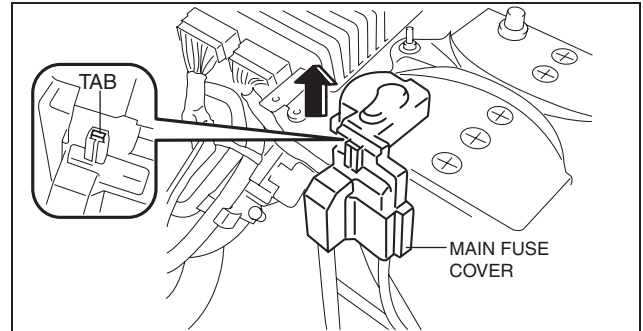
#### Caution

- If a fuse is burnt out, inspect the cause and repair the malfunctioning part, then replace the fuse with the specified value. If the fuse is replaced before doing this, it could burn again.

### MAIN FUSE REMOVAL/INSTALLATION

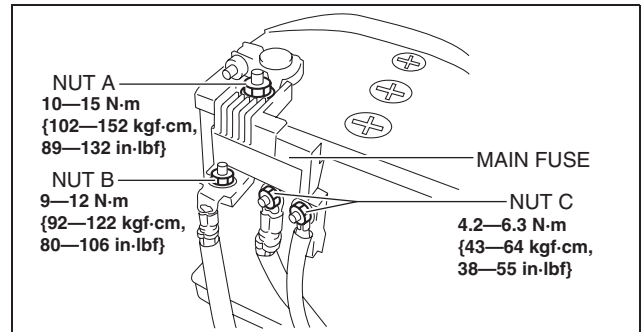
id092100801500

1. Disconnect the negative battery cable.
2. Remove the main fuse cover in the direction of the arrow while pressing the tab indicated in the figure.



am2zzw0000199

3. Remove nuts A, B, and C shown in the figure.
4. Remove the main fuse.
5. Install in the reverse order of removal.



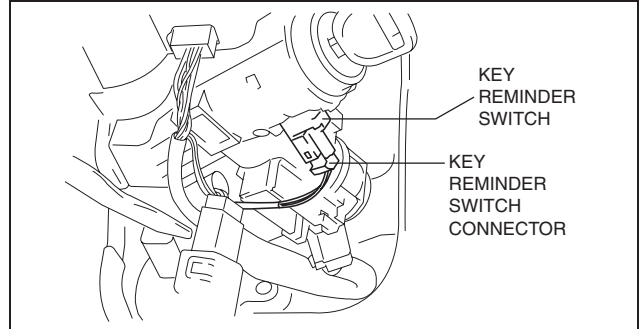
am2zzw0000199

## POWER SYSTEMS

### KEY REMINDER SWITCH REMOVAL/INSTALLATION [WITHOUT ADVANCED KEYLESS AND START SYSTEM]

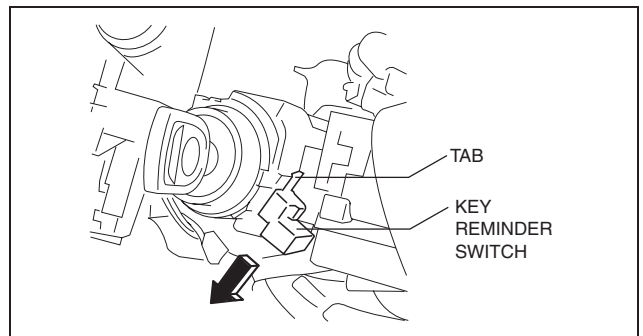
id092100491900

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the coil antenna. (See 09-14-133 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)
4. Insert the key into the key cylinder and turn the ignition switch to the ACC position.
5. Disconnect the key reminder switch connector.



am2zzw0000199

6. Detach the key reminder switch tab.
7. Install the key reminder switch in the direction of the arrow.
8. Install in the reverse order of removal.

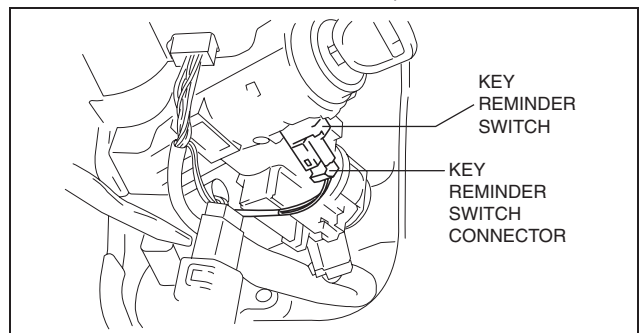


am2zzw0000193

### KEY REMINDER SWITCH INSPECTION [WITHOUT ADVANCED KEYLESS AND START SYSTEM]

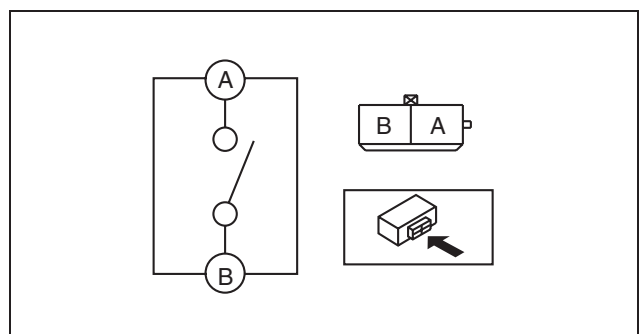
id092100492000

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
3. Disconnect the key reminder switch connector.



am2zzw0000193

4. Verify that the continuity between the key reminder switch terminals is as indicated in the table.



adejiw00000710

## POWER SYSTEMS

- If not as indicated in the table, replace the key reminder switch.

| ○—○ : CONTINUITY |          |     |
|------------------|----------|-----|
| KEY POSITION     | TERMINAL |     |
|                  | A        | B   |
| KEY INSERTED     | ○—○      | ○—○ |
| KEY REMOVED      |          |     |

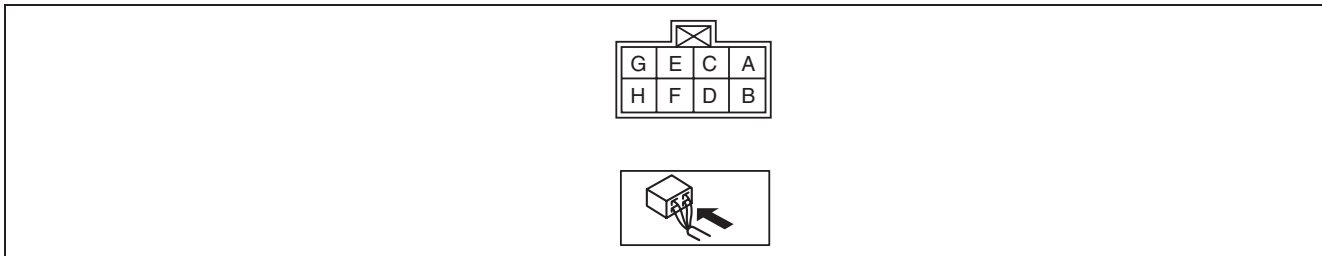
am2zzw0000194

### STEERING LOCK UNIT INSPECTION [WITH ADVANCED KEYLESS AND START SYSTEM]

id092100491800

1. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
2. Measure each terminal voltage under the measurement condition.
  - If the voltage is not as specified in the terminal voltage table, inspect the parts under "Inspection item(s)".
    - If the system does not work normally even though the inspection items are normal, replace the steering lock unit.

#### Terminal Voltage Table (Reference)



adejjw00000721

| Terminal | Signal name                | Connected to           | Measurement condition                                                                                      | Voltage (V) | Inspection item(s)                                                                                           |
|----------|----------------------------|------------------------|------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|
| A        | Push switch signal         | Keyless control module | Start knob is pressed                                                                                      | B+          | <ul style="list-style-type: none"> <li>• Keyless control module</li> <li>• Related wiring harness</li> </ul> |
|          |                            |                        | Start knob is not pressed                                                                                  | 1.0 or less |                                                                                                              |
| B        | Power supply               | Fuse                   | Under any condition                                                                                        | B+          | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Related wiring harness</li> </ul>                   |
| C        | Key reminder switch signal | Keyless control module | Key is inserted                                                                                            | B+          | <ul style="list-style-type: none"> <li>• Keyless control module</li> <li>• Related wiring harness</li> </ul> |
|          |                            |                        | Key is not inserted                                                                                        | 1.0 or less |                                                                                                              |
| D        | —                          | —                      | —                                                                                                          | —           | —                                                                                                            |
| E        | Power supply               | Fuse                   | Under any condition                                                                                        | B+          | <ul style="list-style-type: none"> <li>• Fuse</li> <li>• Related wiring harness</li> </ul>                   |
| F        | —                          | —                      | —                                                                                                          | —           | —                                                                                                            |
| G        | Serial communication       | Keyless control module | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |             |                                                                                                              |
| H        | Ground                     | Body ground            | Under any condition                                                                                        | 1.0 or less | <ul style="list-style-type: none"> <li>• Related wiring harness</li> </ul>                                   |

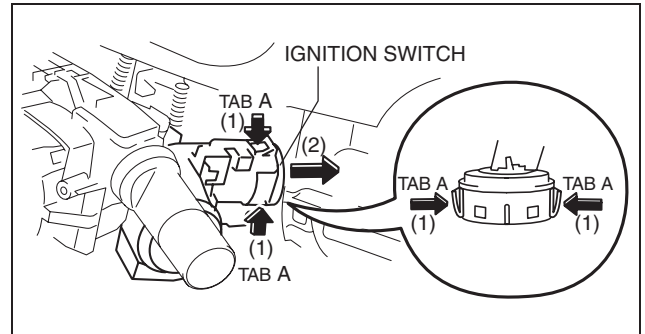
### IGNITION SWITCH REMOVAL/INSTALLATION

id092100800200

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)

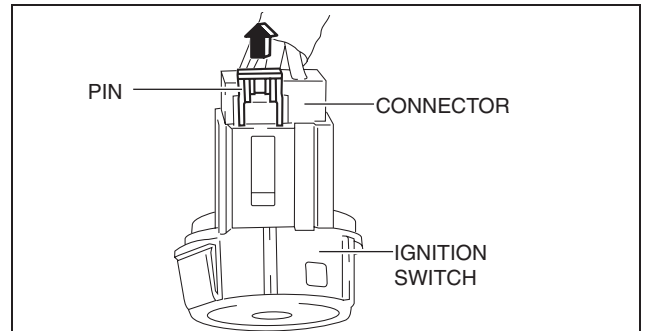
## POWER SYSTEMS

- Press tabs A in the direction of the arrow (1) shown in the figure and pull the ignition switch in the direction of the arrow (2).



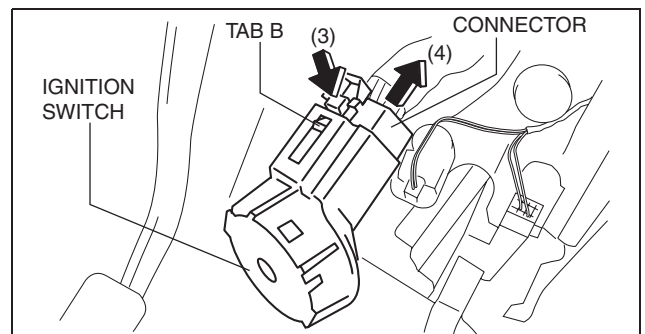
am2zzw0000199

- Pull the pin in the direction of the arrow shown in the figure and release the lock.



am2zzw0000200

- Pull the connector in the direction of the arrow (4) shown in the figure and remove it while pressing tab B in the direction of the arrow (3).
- Install in the reverse order of removal.

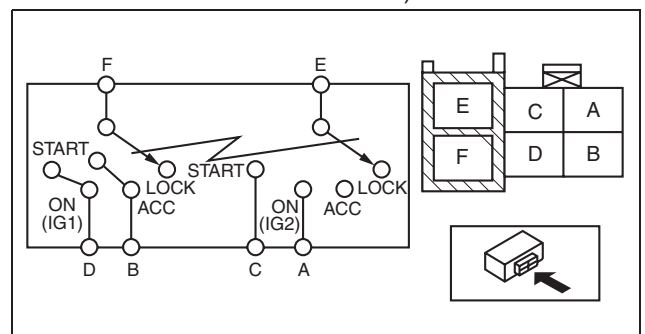


am2zzw0000200

### IGNITION SWITCH INSPECTION

id092100800100

- Disconnect the negative battery cable.
- Remove the column cover. (See 09-17-25 COLUMN COVER REMOVAL/INSTALLATION.)
- Remove the ignition switch. (See 09-21-6 IGNITION SWITCH REMOVAL/INSTALLATION.)
- Verify that the continuity between the ignition switch terminals is as indicated in the table.
  - If not as indicated in the table, replace the ignition switch.



adejiw00003501

POWER SYSTEMS

○—○: CONTINUITY

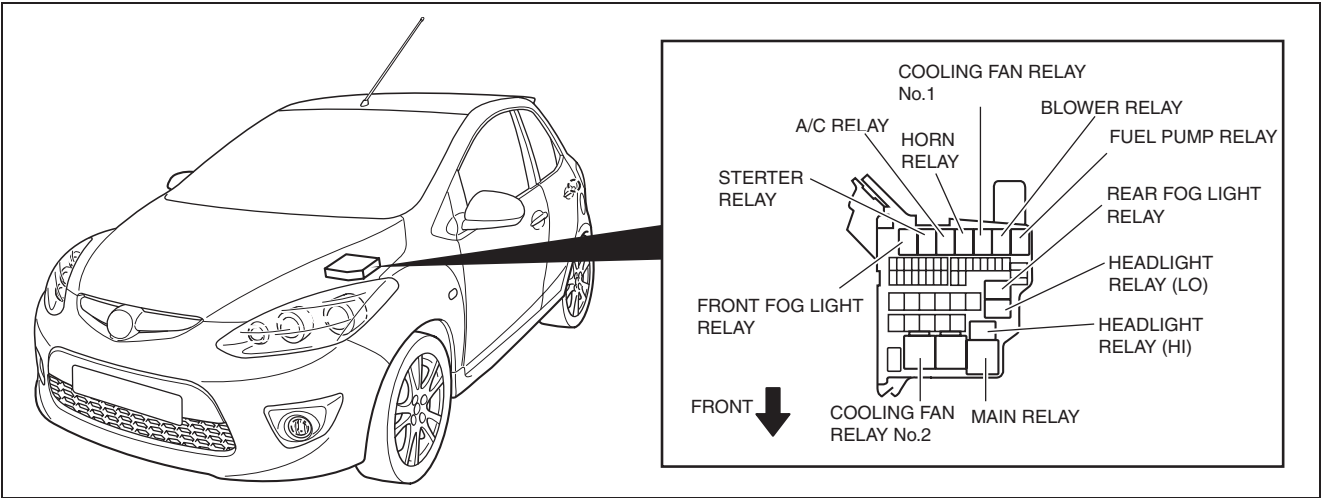
| IGNITION KEY POSITION | TERMINAL |   |   |   |   |   |
|-----------------------|----------|---|---|---|---|---|
|                       | F        | E | D | C | B | A |
| LOCK                  |          |   |   |   |   |   |
| ACC                   | ○        | — | — | — | ○ |   |
| ON                    | ○        | ○ | ○ | — | ○ | ○ |
| START                 | ○        | ○ | ○ | ○ |   |   |

am2zzw0000200

RELAY LOCATION

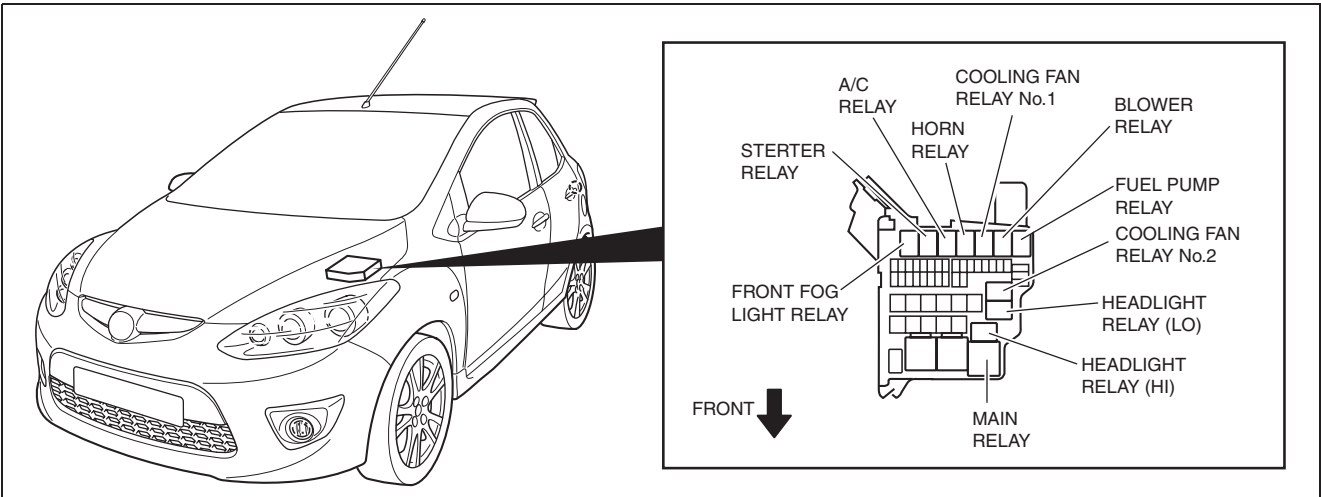
id092100800600

Except AutoAlliance Thailand (AAT) manufactured vehicles  
Except Hong Kong specs.



am2zzw0000200

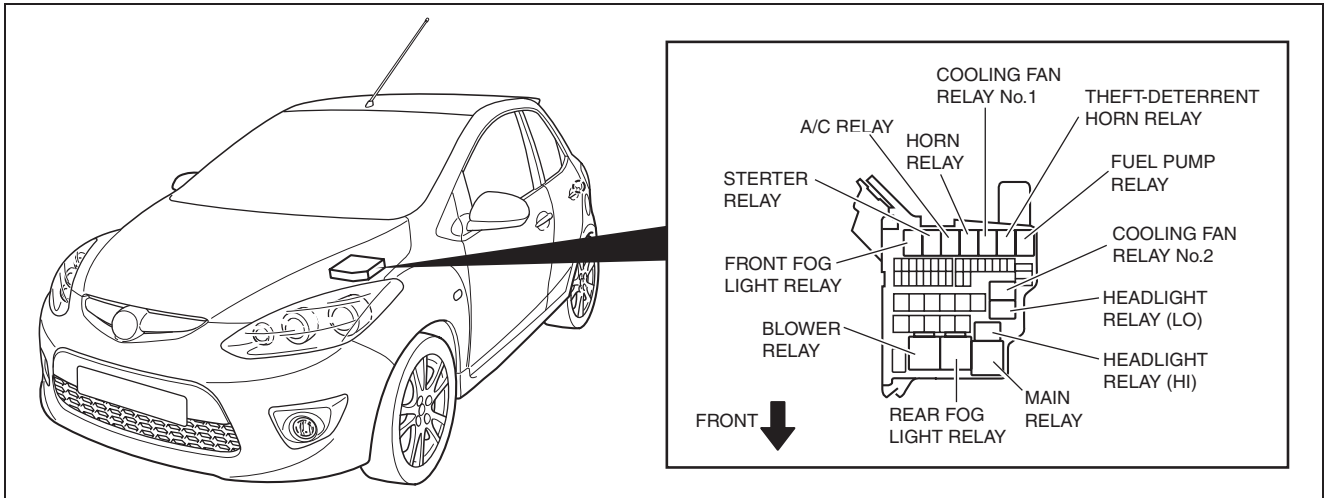
Hong Kong specs.



am2zzw0000432

## POWER SYSTEMS

### AutoAlliance Thailand (AAT) manufactured vehicles



am2zzw0000432

### RELAY INSPECTION

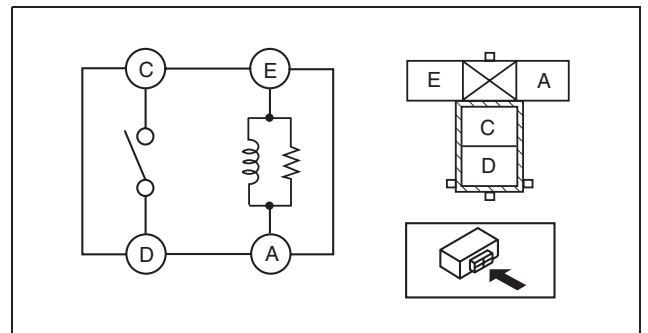
id092100800300

#### Relay Type (Except AutoAlliance Thailand (AAT) manufactured vehicles) Except Hong Kong specs.

| Connector type |        | Part name                                                                                                                                                                                                                                                                                               |
|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4-pin          | Type A | <ul style="list-style-type: none"> <li>• Front fog light relay</li> <li>• Rear fog light relay</li> <li>• Starter relay</li> <li>• A/C relay</li> <li>• Horn relay</li> <li>• Cooling fan relay No.1</li> <li>• Headlight relay (LO)</li> <li>• Headlight relay (HI)</li> <li>• Blower relay</li> </ul> |
|                | Type B | Cooling fan relay No.2                                                                                                                                                                                                                                                                                  |
|                | Type C | Main relay                                                                                                                                                                                                                                                                                              |
|                | Type D | Fuel pump relay                                                                                                                                                                                                                                                                                         |

#### Type A

1. Verify that the continuity is as indicated in the table.
  - If not as indicated in the table, replace the relay.



am2zzw0000262

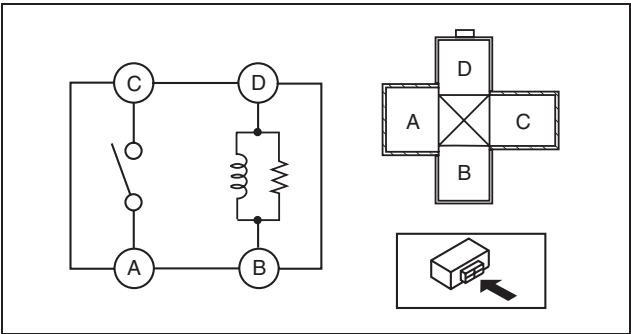
| ○—○ : CONTINUITY |          |        |   |   |
|------------------|----------|--------|---|---|
| STEP             | TERMINAL |        |   |   |
|                  | E        | A      | C | D |
| 1                | ○        | ○      |   |   |
| 2                | B+       | GROUND | ○ | ○ |

am2zzw0000195

# POWER SYSTEMS

## Type B

1. Verify that the continuity is as indicated in the table.
- If not as indicated in the table, replace the relay.



adejjw00003060

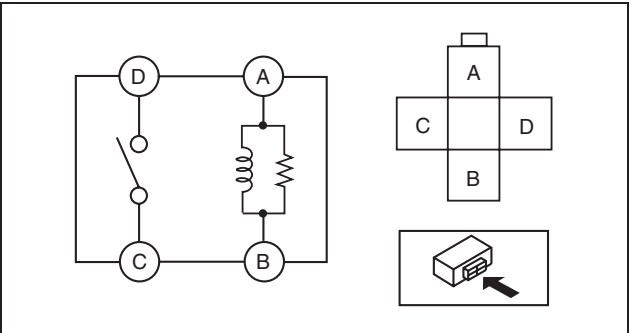
○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | D        | B      | A   | C |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

am2zzw0000195

## Type C

1. Verify that the continuity is as indicated in the table.
- If not as indicated in the table, replace the relay.



am2zzw0000432

○—○ : CONTINUITY

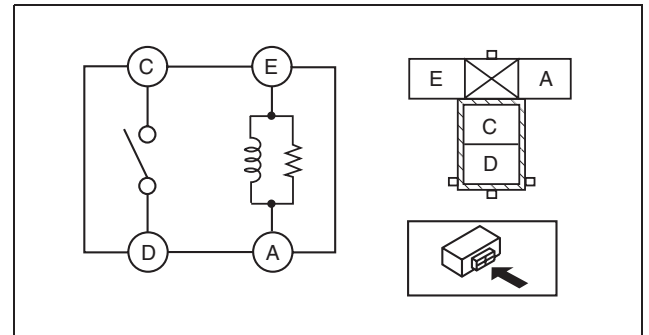
| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | A        | B      | C   | D |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

am2zzw0000195

## POWER SYSTEMS

### Type D

- Verify that the continuity is as indicated in the table.
  - If not as indicated in the table, replace the relay.



am2zzw0000262

○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | E        | A      | C   | D |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

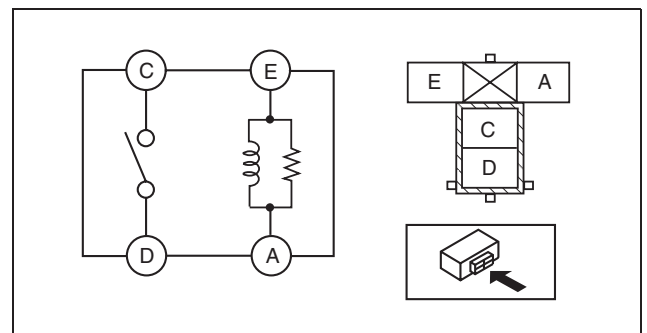
am2zzw0000195

### Relay Type (Except AutoAlliance Thailand (AAT) manufactured vehicles) Hong Kong specs.

| Connector type |        | Part name                                                                                                                                                                                                                                                                                                        |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4-pin          | Type A | <ul style="list-style-type: none"> <li>Front fog light relay</li> <li>Cooling fan relay No.1</li> <li>Cooling fan relay No.2</li> <li>Starter relay</li> <li>A/C relay</li> <li>Horn relay</li> <li>Headlight relay (LO)</li> <li>Headlight relay (HI)</li> <li>Blower relay</li> <li>Fuel pump relay</li> </ul> |
|                | Type B | Main relay                                                                                                                                                                                                                                                                                                       |

### Type A

- Verify that the continuity is as indicated in the table.
  - If not as indicated in the table, replace the relay.



am2zzw0000262

○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | E        | A      | C   | D |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

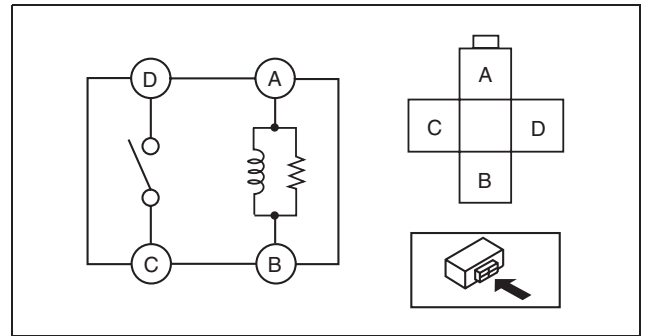
am2zzw0000195



## POWER SYSTEMS

### Type B

1. Verify that the continuity is as indicated in the table.
  - If not as indicated in the table, replace the relay.



am2zzw0000432

○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | A        | B      | C   | D |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

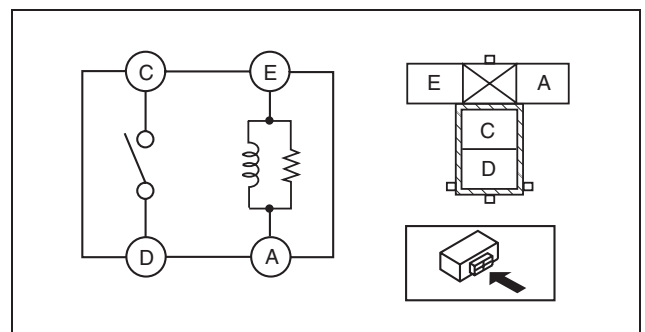
am2zzw0000195

### Relay Type (AutoAlliance Thailand (AAT) manufactured vehicles)

| Connector type |        | Part name                                                                                                                                                                                                                                                                                                                                          |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4-pin          | Type A | <ul style="list-style-type: none"> <li>• Front fog light relay</li> <li>• Starter relay</li> <li>• A/C relay</li> <li>• Horn relay</li> <li>• Cooling fan relay No.1</li> <li>• Cooling fan relay No.2</li> <li>• Headlight relay (LO)</li> <li>• Headlight relay (HI)</li> <li>• Theft-deterrent horn relay</li> <li>• Fuel pump relay</li> </ul> |
|                | Type B | <ul style="list-style-type: none"> <li>• Blower relay</li> <li>• Rear fog light relay</li> </ul>                                                                                                                                                                                                                                                   |
|                | Type C | Main relay                                                                                                                                                                                                                                                                                                                                         |

### Type A

1. Verify that the continuity is as indicated in the table.
  - If not as indicated in the table, replace the relay.



am2zzw0000262

POWER SYSTEMS

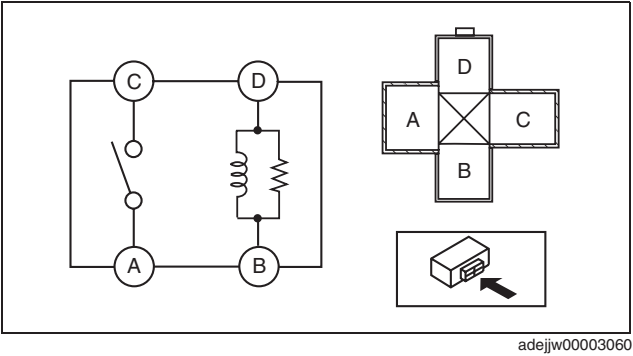
○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | E        | A      | C   | D |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

am2zzw0000195

Type B

1. Verify that the continuity is as indicated in the table.
- If not as indicated in the table, replace the relay.



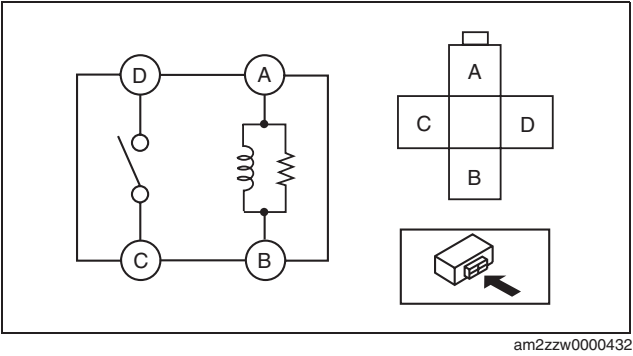
○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | D        | B      | A   | C |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

am2zzw0000195

Type C

1. Verify that the continuity is as indicated in the table.
- If not as indicated in the table, replace the relay.



○—○ : CONTINUITY

| STEP | TERMINAL |        |     |   |
|------|----------|--------|-----|---|
|      | A        | B      | C   | D |
| 1    | ○—○      |        |     |   |
| 2    | B+       | GROUND | ○—○ |   |

am2zzw0000195

## **09-22 INSTRUMENTATION/DRIVER INFO.**

### **INSTRUMENTATION/DRIVER INFO.**

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vehicles)..... **09-22-8**

Speedometer (AutoAlliance

Thailand (AAT) manufactured

vehicles)..... **09-22-9**

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**INSPECTION .....09-22-18**

### **PASSENGER SEAT BELT REMINDER**

**REMOVAL/INSTALLATION .....09-22-19**

### **PASSENGER SEAT BELT REMINDER**

**INSPECTION .....09-22-19**

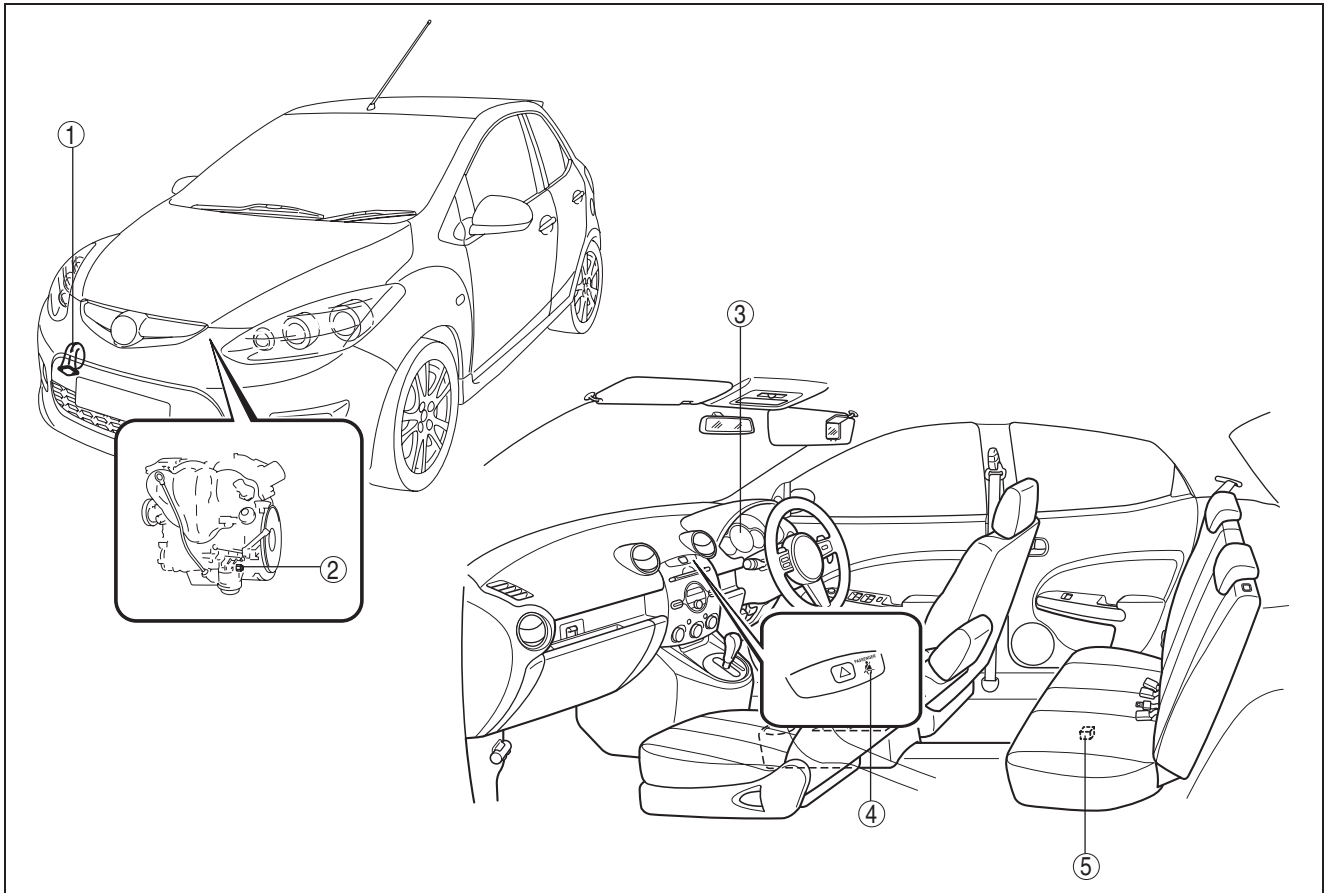
**HORN REMOVAL/INSTALLATION .....09-22-20**

## INSTRUMENTATION/DRIVER INFO.

### INSTRUMENTATION/DRIVER INFO. LOCATION INDEX

id092200495000

R.H.D.



am2zzw0000086

|   |                                                                                                                                                                                                                                                                                                                       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Horn<br>(See 09-22-20 HORN REMOVAL/INSTALLATION.)                                                                                                                                                                                                                                                                     |
| 2 | Oil pressure switch<br>(See 09-22-18 OIL PRESSURE SWITCH INSPECTION.)                                                                                                                                                                                                                                                 |
| 3 | Instrument cluster<br>(See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)<br>(See 09-22-7 INSTRUMENT CLUSTER CONFIGURATION.)<br>(See 09-22-8 INSTRUMENT CLUSTER DISASSEMBLY/ASSEMBLY.)<br>(See 09-22-8 INSTRUMENT CLUSTER INSPECTION.)<br>(See 09-22-14 INSTRUMENT CLUSTER CUSTOMIZED FUNCTION SETTING PROCEDURE.) |

|   |                                                                                                                                                              |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Passenger seat belt reminder<br>(See 09-22-19 PASSENGER SEAT BELT REMINDER REMOVAL/INSTALLATION.)<br>(See 09-22-19 PASSENGER SEAT BELT REMINDER INSPECTION.) |
| 5 | Fuel gauge sender unit<br>(See 09-22-15 FUEL GAUGE SENDER UNIT REMOVAL/INSTALLATION.)<br>(See 09-22-18 FUEL GAUGE SENDER UNIT INSPECTION.)                   |

### INSTRUMENT CLUSTER REMOVAL/INSTALLATION

id092200496

#### Caution

- When replacing the instrument cluster, always perform the configuration procedure before removing the instrument cluster. Replacing the instrument cluster without performing the configuration procedure will result in system malfunction.

## INSTRUMENTATION/DRIVER INFO.

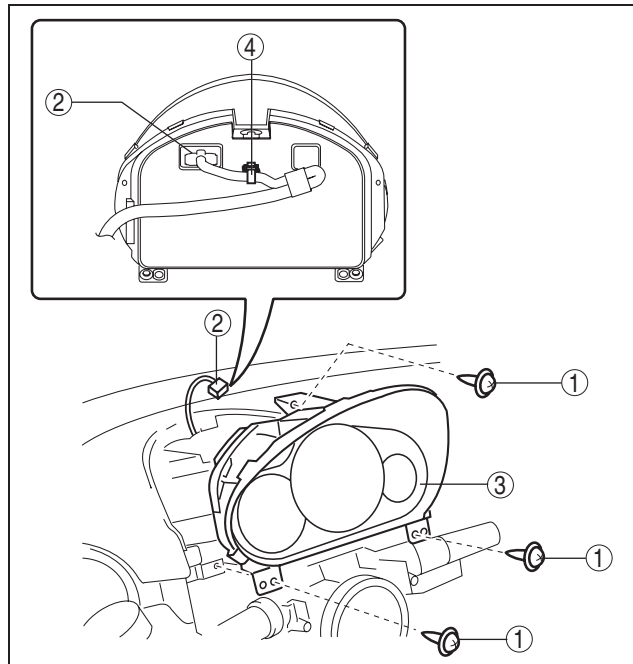
1. When replacing the instrument cluster, always perform the configuration procedure. (See 09-22-7 INSTRUMENT CLUSTER CONFIGURATION.)
2. Disconnect the negative battery cable.
3. Remove the meter hood. (See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

|   |                     |
|---|---------------------|
| 1 | Screw               |
| 2 | Connector           |
| 3 | Instrument cluster  |
| 4 | Wiring harness clip |

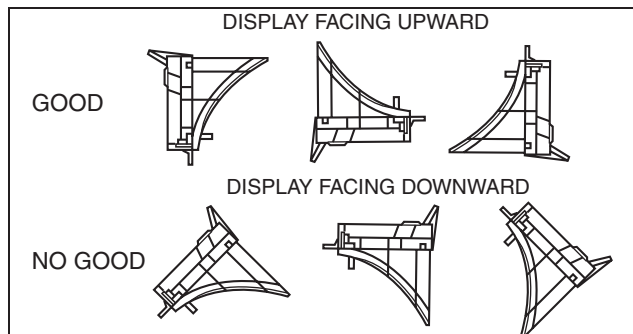
5. Install in the reverse order of removal.
6. Program the immobilizer system-related parts when replacing the instrument cluster. (With keyless entry system) (See 09-14-150 IMMOBILIZER SYSTEM-RELATED PARTS PROGRAMMING [KEYLESS ENTRY SYSTEM].)

### Caution

- Place the removed instrument cluster with the display surface facing upward. Otherwise grease could leak from the meter unit.



am2zzw0000260



am2zzw0000189

## INSTRUMENT CLUSTER CONFIGURATION

id092200496200

### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the INSTRUMENT CLUSTER CONFIGURATION.

### Note

- If all the following conditions are met, the odometer data (total traveled distance) in the previous instrument cluster is automatically transferred to a new instrument cluster during the configuration. If any of the conditions are not met, odometer-data transfer cannot be performed.

#### Previous instrument cluster

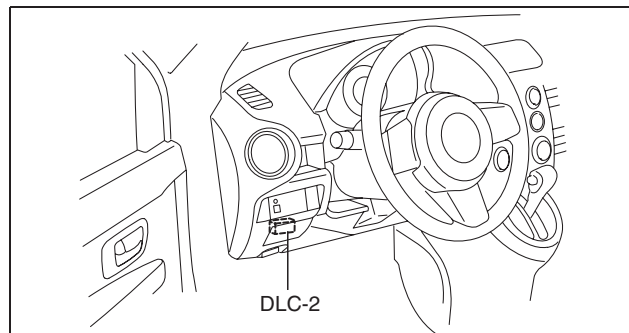
- No malfunction (Configuration data can be read using the M-MDS)

#### New instrument cluster

- Odometer display is less than 100 km
- Odometer has no malfunction

## INSTRUMENTATION/DRIVER INFO.

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  1. Select "Module Programming".
3. Then, select items from the screen menu in the following order.
  1. Select "Programmable Module Installation".
  2. Select "IC".
4. Perform the configuration according to the directions on the screen.
5. Select "Programmable Parameters" from the menu.
6. Select "Odometer Write", and perform the procedure following the screen.
7. Retrieve DTCs by the M-MDS, then verify that there is no DTC present.
  - If a DTC (s) is detected, perform the applicable DTC inspection. (See 09-02F-2 DTC TABLE [INSTRUMENT CLUSTER].)



am2zzw0000251

## INSTRUMENT CLUSTER DISASSEMBLY/ASSEMBLY

id092200496300

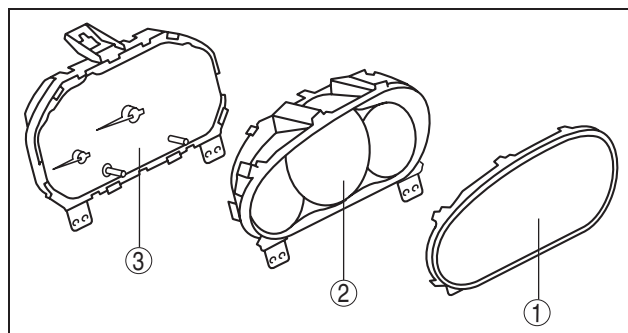
### Caution

- Do not drop the instrument cluster or damage the printed board. This will lead to a system malfunction.

1. Disconnect the negative battery cable.
2. Remove the meter hood. (See 09-17-24 METER HOOD REMOVAL/INSTALLATION.)
3. Remove the instrument cluster. (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
4. Disassemble in the order indicated in the figure.

|   |                         |
|---|-------------------------|
| 1 | Lens                    |
| 2 | Cover                   |
| 3 | Instrument cluster unit |

5. Assemble in the reverse order of disassembly.



adejjw00003498

## INSTRUMENT CLUSTER INSPECTION

id092200496400

### Speedometer (Except AutoAlliance Thailand (AAT) manufactured vehicles)

1. Adjust the tire pressure to the specification.
2. Using a speedometer tester, verify that the tester reading is as indicated in the table.
  - If the speedometer does not operate or the indication is not within the allowable range, inspect the PCM, ABS HU/CM or DSC HU/CM, and related wiring harnesses.
    - If the PCM, ABS HU/CM or DSC HU/CM, and related wiring harnesses do not have any malfunction, replace the instrument cluster.

## INSTRUMENTATION/DRIVER INFO.

---

### Hong Kong specs.

| Speedometer tester indication (km/h) | Allowable range (km/h) |
|--------------------------------------|------------------------|
| 20                                   | 20—25                  |
| 40                                   | 40—45                  |
| 60                                   | 61—66                  |
| 80                                   | 81—87                  |
| 100                                  | 102—108                |
| 120                                  | 122—129                |
| 140                                  | 143—150                |

### U.K. specs.

| Speedometer tester indication (mph) | Allowable range (mph) |
|-------------------------------------|-----------------------|
| 10                                  | 10—13                 |
| 20                                  | 20—23                 |
| 30                                  | 30—33                 |
| 40                                  | 40—43                 |
| 50                                  | 50—54                 |
| 60                                  | 60—64                 |
| 70                                  | 70—75                 |
| 80                                  | 80—85                 |

### Speedometer (AutoAlliance Thailand (AAT) manufactured vehicles)

1. Adjust the tire pressure to the specification.
2. Using a speedometer tester, verify that the tester reading is as indicated in the table.
  - If the speedometer does not operate or the indication is not within the allowable range, inspect the PCM, ABS HU/CM or DSC HU/CM, and related wiring harnesses.
    - If the PCM, ABS HU/CM or DSC HU/CM, and related wiring harnesses do not have any malfunction, replace the instrument cluster.

## INSTRUMENTATION/DRIVER INFO.

### Arab Gulf Cooperation Council, Australian specs.

| Speedometer tester indication (km/h) | Allowable range (km/h) |
|--------------------------------------|------------------------|
| 20                                   | 20—25                  |
| 40                                   | 40—44                  |
| 60                                   | 60—65                  |
| 80                                   | 80—86                  |
| 100                                  | 100—107                |
| 120                                  | 121—127                |
| 140                                  | 141—148                |

### Except Arab Gulf Cooperation Council; General (L.H.D. R.H.D.) specs., and Thailand

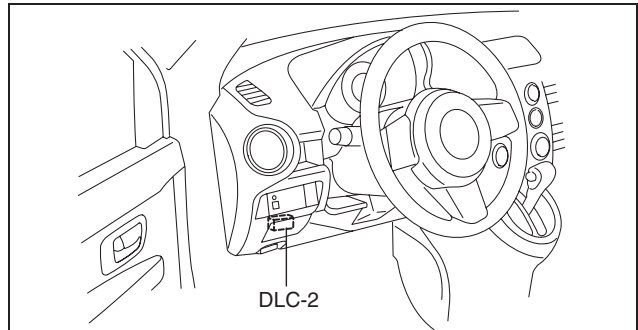
| Speedometer tester indication (km/h) | Allowable range (km/h) |
|--------------------------------------|------------------------|
| 20                                   | 18—22                  |
| 40                                   | 38—42                  |
| 60                                   | 58—62                  |
| 80                                   | 77—83                  |
| 100                                  | 97—103                 |
| 120                                  | 117—123                |
| 140                                  | 138—144                |

### Tachometer

#### Caution

- If the engine speed exceeds the allowable range, the engine could be damaged. Therefore, when inspecting the tachometer, do not allow the engine speed to exceed the allowable range indication on the tachometer.

1. Connect the M-MDS to the DLC-2.
2. After vehicle identification, the following can be selected from the M-MDS initialization screen.
  - Using an IDS (laptop PC):
    1. "Data logger"
    2. "Module"
    3. "IC"
  - Using a PDS (Pocket PC):
    1. "Module test"
    2. "IC"
    3. "Data logger"
3. Select "TACHOMTR" from PID/DATA Monitor Table.
4. Verify the monitored value according to the directions on the screen.



am2zzw0000251

#### Note

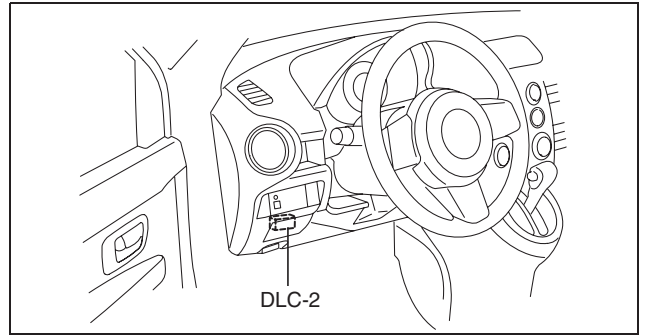
- The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.



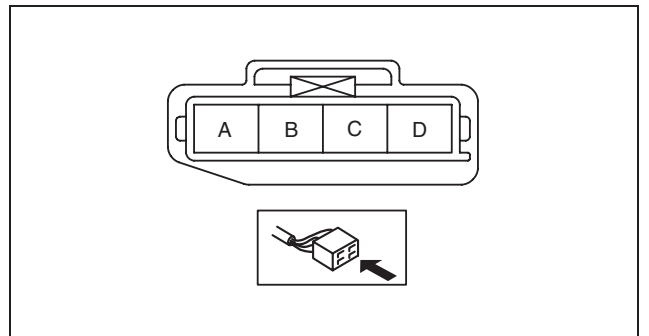
## INSTRUMENTATION/DRIVER INFO.

### Fuel gauge

1. Connect the M-MDS to the DLC-2.
2. After vehicle identification, the following can be selected from the M-MDS initialization screen.
  - Using an IDS (laptop PC):
    1. "Data logger"
    2. "Module"
    3. "IC"
  - Using a PDS (pocket PC):
    1. "Module test"
    2. "IC"
    3. "Data logger"
3. Verify that all the segments are displayed using "LCD\_SEG".
  - If any of the segments are not displayed, replace the instrument cluster. (See 09-22-5 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
4. Disconnect the negative battery cable.
5. Remove the rear seat cushion. (See 09-13-31 REAR SEAT CUSHION REMOVAL/INSTALLATION.)
6. Remove the service hole cover.
7. Disconnect the fuel pump connector.
8. Connect the negative battery cable.
9. Connect the **SST** (Fuel and thermometer checker) to fuel pump unit connector terminals C and D.
10. Verify the fuel gauge reading is as indicated in the table using the **SST** (Fuel and thermometer checker).
  - If not as indicated in the table, inspect the wiring harness.
    - If there is any malfunction, repair or replace the wiring harness.
    - If the wiring harness is normal, replace the instrument cluster.



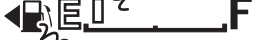
am2zzw0000251



adejiw00004328

## INSTRUMENTATION/DRIVER INFO.

### Except Hong Kong specs.

| Fuel gauge indication<br>(instrument cluster)                                     | Resistance of SST (Fuel<br>and thermometer<br>checker) (ohm) |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------|
|  | Approx. 60 or less                                           |
|  | Approx. 61—93                                                |
|  | Approx. 94—128                                               |
|  | Approx. 129—160                                              |
|  | Approx. 161—192                                              |
|  | Approx. 193—226                                              |
|  | Approx. 227—260                                              |
|  | Approx. 261—277                                              |
|  | Approx. 278—293                                              |
|  | Approx. 294 or more                                          |

### Hong Kong specs.

| Fuel gauge indication<br>(instrument cluster)                                       | Resistance of SST (Fuel<br>and thermometer<br>checker) (ohm) |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------|
|  | Approx. 71 or less                                           |
|  | Approx. 71—104                                               |
|  | Approx. 105—136                                              |
|  | Approx. 137—166                                              |
|  | Approx. 167—196                                              |
|  | Approx. 197—229                                              |
|  | Approx. 230—262                                              |
|  | Approx. 263—277                                              |
|  | Approx. 278—293                                              |
|  | Approx. 294 or more                                          |

## INSTRUMENT CLUSTER CUSTOMIZED FUNCTION SETTING PROCEDURE

id092200555500

### Note

- Use the IDS (laptop PC) because the PDS (pocket PC) does not support the customized functions setting procedure of the instrument cluster.

## INSTRUMENTATION/DRIVER INFO.

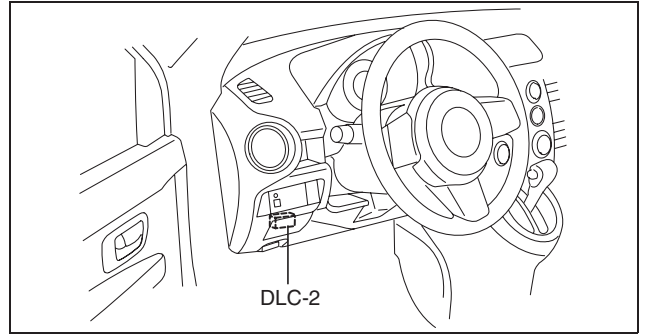
1. Connect the M-MDS to the DLC-2.
2. After vehicle identification, the following can be selected from the M-MDS initialization screen.
  1. "Module Programming"
3. Then, select the following from the screen menu.
  1. "Programmable Parameters"
  2. "Warning Lamps/Chimes"
4. Select the following items and change the setting according to the directions on the screen.

### Supported items

- DIS Correction (0%, 5%, 10%, 15%, -15%, -10%, -5%)
- Distance to Empty Response Data (1.50—5.25)
- Driver Beltminder Status (Disabled/Enabled)
- Passenger Beltminder Status (Disabled/Enabled)

### Caution

- The M-MDS screen displays the following items, however, do not change the setting. If the setting is changed, a difference occurs between the instrument cluster indication and actual fuel level leading to unexpected fuel shortage.
  - Fuel response data (level 1—16)



am2zzw0000251

## FUEL GAUGE SENDER UNIT REMOVAL/INSTALLATION

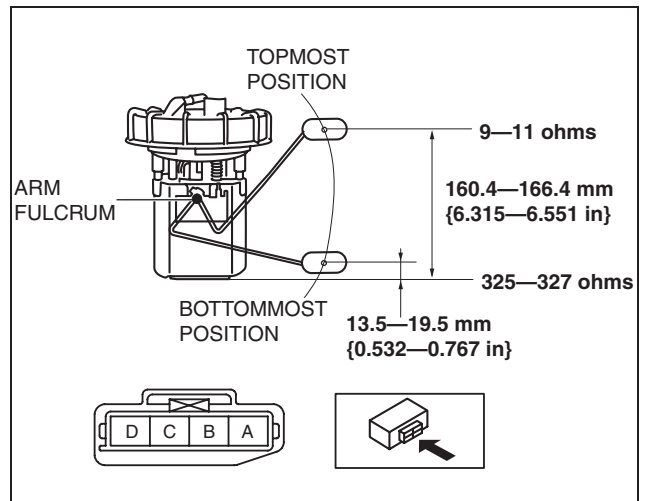
id092200497000

(See 01-14A-15 FUEL PUMP UNIT DISASSEMBLY/ASSEMBLY [ZJ, ZY].)

## FUEL GAUGE SENDER UNIT INSPECTION

id092200497100

1. Disconnect the negative battery cable.
2. Remove the fuel pump unit.
3. Move the float to the topmost and bottommost positions, and verify that the resistance between terminals C and D of the fuel gauge sender unit and the position of the float are as shown in the figure.
  - If they are not as shown in the figure, replace the fuel gauge sender unit.



am2zzw0000181

## OIL PRESSURE SWITCH INSPECTION

id092200495300

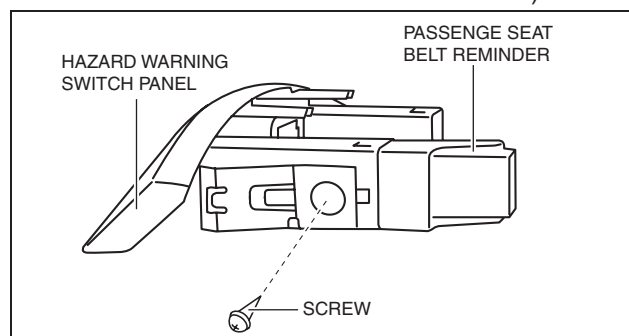
1. Turn the ignition switch to the ON position and verify that the oil pressure warning light illuminates.
2. Start the engine and verify that the oil pressure warning light turns off.
  - If the oil pressure warning light does not illuminate or remains illuminated, inspect the BCM and the related wiring harnesses. (See 09-02G-2 DTC INSPECTION [BCM].)
  - If the related wiring harnesses are normal, inspect the oil pressure.

## INSTRUMENTATION/DRIVER INFO.

### PASSENGER SEAT BELT REMINDER REMOVAL/INSTALLATION

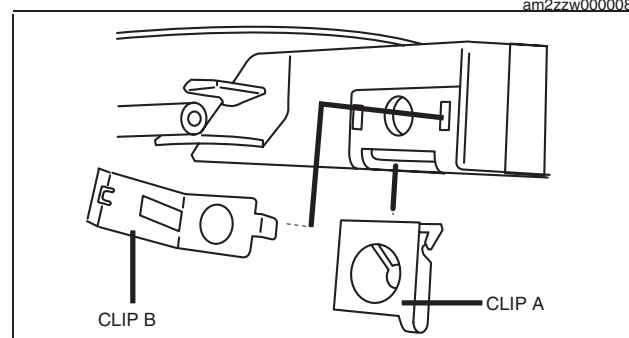
id092200997700

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)
  - (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (vehicles with audio unit) (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
  - (5) Center panel unit (vehicles without audio unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (6) Center panel (vehicles without audio unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (7) Hazard warning switch (See 09-18-40 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.)
3. Remove the screw from the hazard warning switch panel.



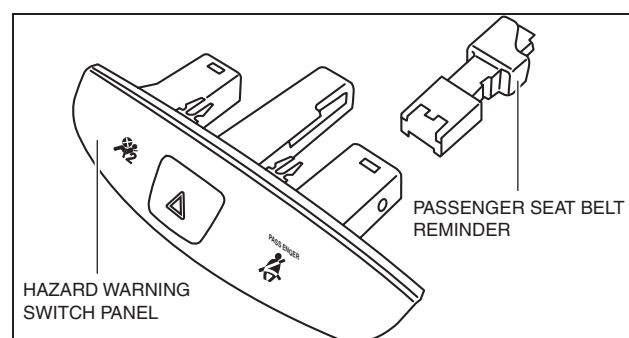
am2zzw0000087

4. Remove the clips A and B.



am2zzw0000088

5. Remove the seat belt reminder from the hazard warning switch panel.
6. Install in the reverse order of removal.



am2zzw0000089

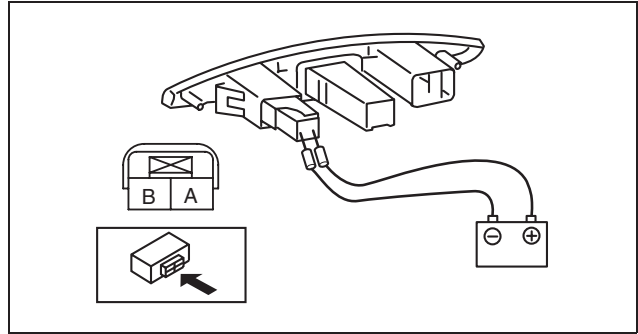
### PASSENGER SEAT BELT REMINDER INSPECTION

id092200997600

1. Disconnect the negative battery cable.
2. Remove the following parts:
  - (1) Shift lever knob (MTX) (See 05-16A-1 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [F35M-R].) (See 05-16B-2 MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [B65M-R].)

## INSTRUMENTATION/DRIVER INFO.

- (2) Side wall (See 09-17-33 SIDE WALL REMOVAL/INSTALLATION.)
  - (3) Front console component (See 09-17-36 FRONT CONSOLE COMPONENT REMOVAL/INSTALLATION.)
  - (4) Glove compartment (vehicles with audio unit) (See 09-17-28 GLOVE COMPARTMENT COVER REMOVAL/INSTALLATION.)
  - (5) Center panel unit (vehicles without audio unit) (See 09-20-3 CENTER PANEL UNIT REMOVAL/INSTALLATION.)
  - (6) Center panel (vehicles without audio unit) (See 09-17-35 CENTER PANEL REMOVAL/INSTALLATION.)
  - (7) Hazard warning switch (See 09-18-40 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.)
  - (8) Passenger seat belt reminder (See 09-22-19 PASSENGER SEAT BELT REMINDER REMOVAL/INSTALLATION.)
3. Apply battery positive voltage to passenger seat belt reminder terminal A, and connect terminal B to ground.
  4. Verify that the LED illuminates.
    - If the LED does not illuminate, replace the passenger seat belt reminder.

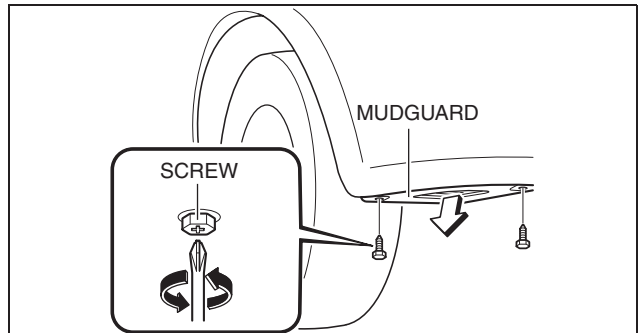


am2zzw0000190

## HORN REMOVAL/INSTALLATION

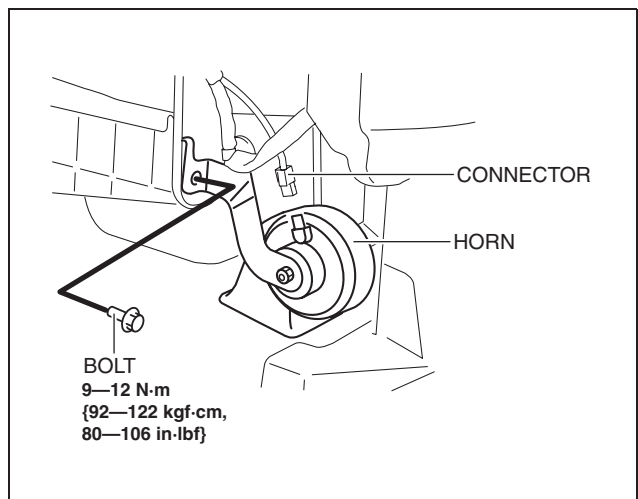
id092200497400

1. Disconnect the negative battery cable.
2. Remove the screws.
3. Slightly bend back the mudguard.



am2zzw0000192

4. Disconnect the connector.
5. Remove the bolt.
6. Remove the horn.
7. Install in the reverse order of removal.



adejjw00003495

## CONTROL SYSTEM

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### 09-40 CONTROL SYSTEM

#### CONTROL SYSTEM LOCATION

|                                       |          |
|---------------------------------------|----------|
| INDEX .....                           | 09-40-1  |
| <b>BODY CONTROL MODULE (BCM)</b>      |          |
| REMOVAL/INSTALLATION.....             | 09-40-1  |
| R.H.D. ....                           | 09-40-3  |
| <b>BODY CONTROL MODULE (BCM)</b>      |          |
| INSPECTION.....                       | 09-40-4  |
| Terminal Voltage Table (Reference)... | 09-40-5  |
| Generated pulse (reference) .....     | 09-40-13 |

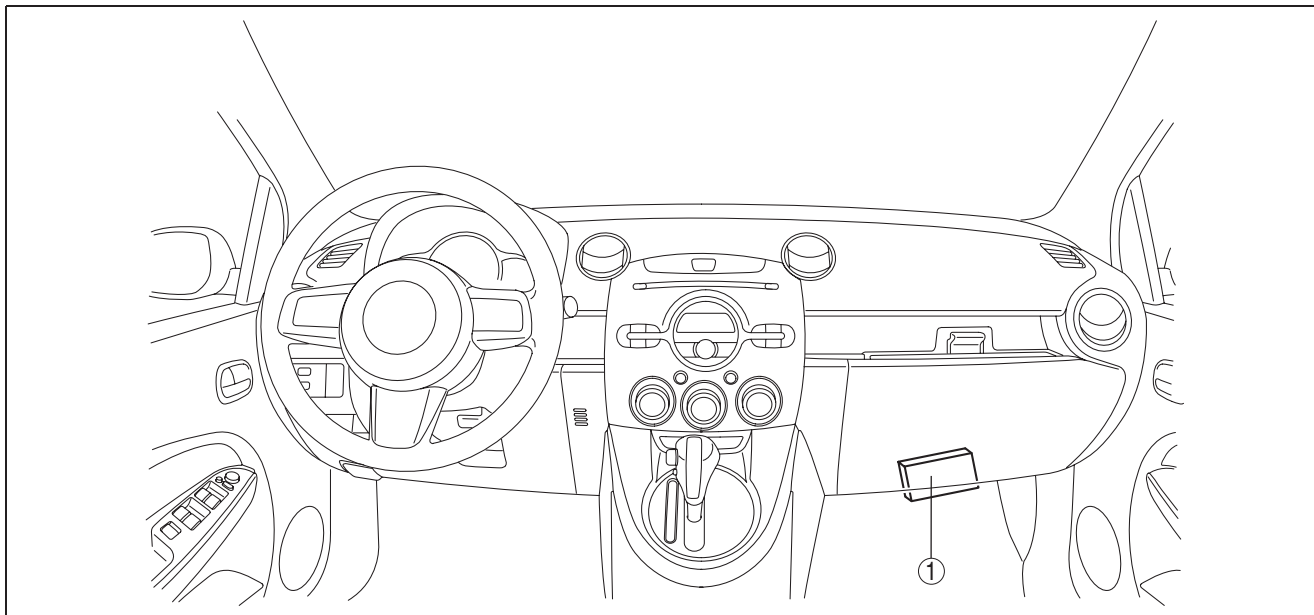
|                                     |          |
|-------------------------------------|----------|
| Liftgate Opener Switch Input Signal |          |
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| <b>BODY CONTROL MODULE (BCM)</b>    |          |
| BRACKET REMOVAL/INSTALLATION .      | 09-40-16 |
| Removal .....                       | 09-40-16 |
| Installation.....                   | 09-40-17 |

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## CONTROL SYSTEM

### CONTROL SYSTEM LOCATION INDEX

id094000801000



am2zzw0000025

|   |                                                                                                                                                                                                                                                                                        |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | BCM (body control module)<br>(See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)<br>(See 09-40-4 BODY CONTROL MODULE (BCM) INSPECTION.)<br>(See 09-40-16 BODY CONTROL MODULE (BCM) CONFIGURATION.)<br>(See 09-40-16 BODY CONTROL MODULE (BCM) BRACKET REMOVAL/INSTALLATION.) |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION

id094000800400

#### R.H.D.

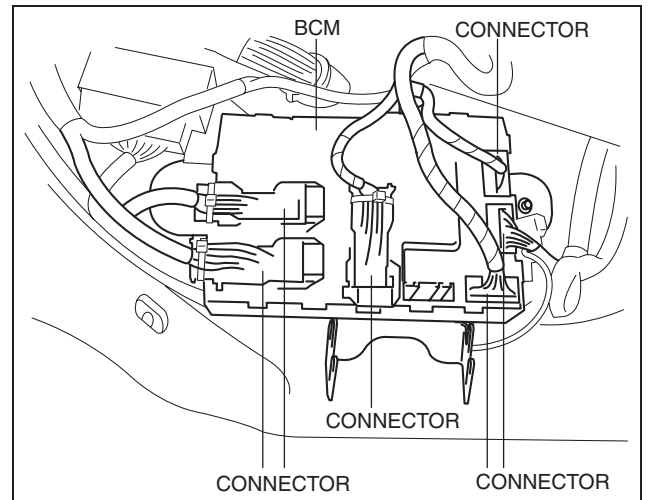
#### Caution

- When replacing the BCM, the configuration procedure must be performed before removing the BCM. Replacing the BCM without performing the configuration procedure will result in system malfunction.

1. Perform the BCM configuration when replacing it. (See 09-40-16 BODY CONTROL MODULE (BCM) CONFIGURATION.)
2. Disconnect the negative battery cable.
3. Remove the dashboard under cover. (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)
4. Remove the front scuff plate. (passenger's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
5. Remove the front side trim. (passenger's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)

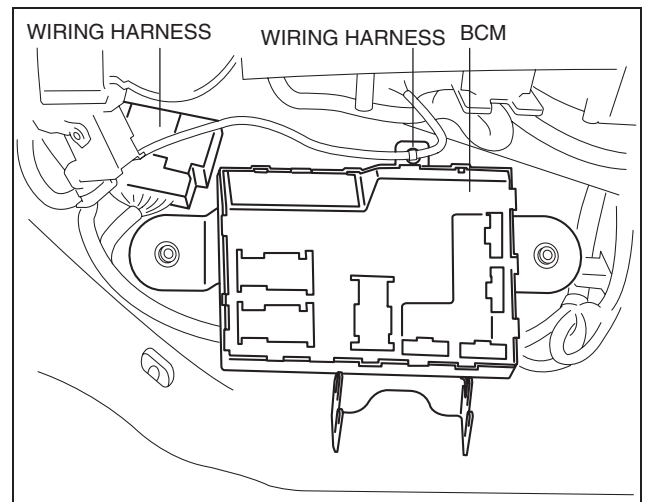
## CONTROL SYSTEM

6. Disconnect the connectors at the position shown in the figure.



am2zzw0000177

7. Disconnect the wiring harness at the position shown in the figure.

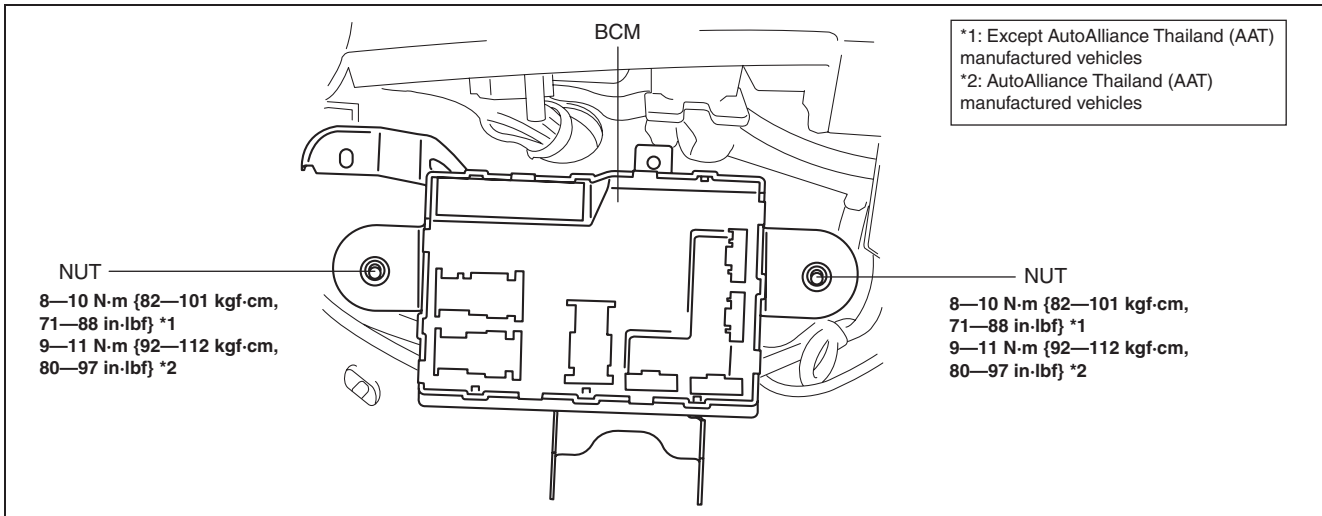


am2zzw0000177



## CONTROL SYSTEM

8. Remove the nuts.



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9. Remove the BCM.

10. Install in the reverse order of removal.

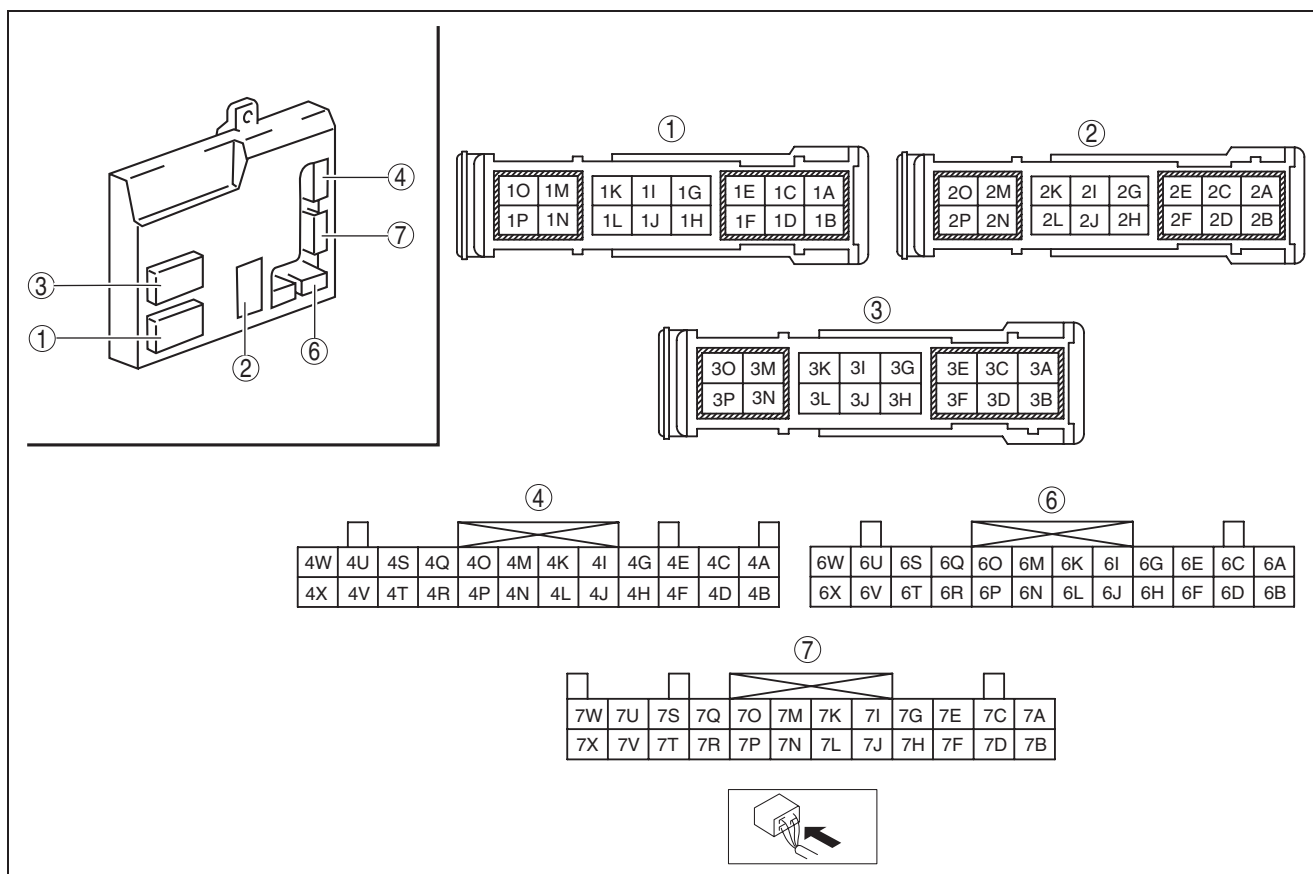
### BODY CONTROL MODULE (BCM) INSPECTION

id094000800300

1. Remove the dashboard under cover. (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/ INSTALLATION.)
2. Measure the voltage at each terminal and inspect for the continuity between the terminals and ground is as indicated in the Terminal Voltage Tables (Reference).
  - If the voltage or continuity is not as specified in the Terminal Voltage Table (Reference), inspect the parts under “Inspection item (s)”.
  - If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the BCM.

## CONTROL SYSTEM

Terminal Voltage Table (Reference)



adejjw00000675

| Terminal | Signal                             | Connected to           | Measurement condition   |                                    | Voltage (V) | Inspection item (s)                                                                                      |
|----------|------------------------------------|------------------------|-------------------------|------------------------------------|-------------|----------------------------------------------------------------------------------------------------------|
| 1A       | Windshield wiper signal            | Windshield wiper motor | Ignition switch at ON   | Windshield wiper operating at low  | B+          | <ul style="list-style-type: none"> <li>Windshield wiper motor</li> <li>Related wiring harness</li> </ul> |
|          |                                    |                        |                         | OFF                                | 1.0 or less |                                                                                                          |
| 1B       | Windshield wiper signal            | Windshield wiper motor | Ignition switch at ON   | Windshield wiper operating at high | B+          | <ul style="list-style-type: none"> <li>Windshield wiper motor</li> <li>Related wiring harness</li> </ul> |
|          |                                    |                        |                         | OFF                                | 1.0 or less |                                                                                                          |
| 1C       | Rear window defroster power supply | R.DEF 20 A fuse        | Under any condition     |                                    | B+          | <ul style="list-style-type: none"> <li>R.DEF 20A fuse</li> <li>Related wiring harness</li> </ul>         |
| 1D       | Windshield wiper power supply      | Windshield wiper motor | Ignition switch at ON   |                                    | B+          | <ul style="list-style-type: none"> <li>Windshield wiper motor</li> <li>Related wiring harness</li> </ul> |
|          |                                    |                        | Ignition switch is off. |                                    | 1.0 or less |                                                                                                          |
| 1E       | TNS power supply                   | TAIL 15 A fuse         | Under any condition     |                                    | B+          | <ul style="list-style-type: none"> <li>TAIL 15A fuse</li> <li>Related wiring harness</li> </ul>          |
| 1F       | Windshield wiper auto stop signal  | Windshield wiper motor | Ignition switch at ON   | Windshield wiper operating         | B+          | <ul style="list-style-type: none"> <li>Windshield wiper motor</li> <li>Related wiring harness</li> </ul> |
|          |                                    |                        |                         | Windshield wiper not operating     | 1.0 or less |                                                                                                          |
| 1G       | Front TNS inhibited                | Parking light          | TNS ON                  |                                    | B+          | <ul style="list-style-type: none"> <li>Parking light</li> <li>Related wiring harness</li> </ul>          |
|          |                                    |                        | TNS OFF                 |                                    | 1.0 or less |                                                                                                          |
| 1H       | Rear window washer motor control   | Washer motor           | Ignition switch at ON   | Rear washer motor operating        | B+          | <ul style="list-style-type: none"> <li>Washer motor</li> <li>Related wiring harness</li> </ul>           |
|          |                                    |                        |                         | Rear washer motor not operating    | 1.0 or less |                                                                                                          |

## CONTROL SYSTEM

| Terminal | Signal                                | Connected to                                                                                             | Measurement condition                 |                                       | Voltage (V)                           | Inspection item (s)                                                                                                                     |
|----------|---------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1I       | Windshield washer motor control       | Washer motor                                                                                             | Ignition switch at ON                 | Windshield washer motor operating     | B+                                    | <ul style="list-style-type: none"><li>Washer motor</li><li>Related wiring harness</li></ul>                                             |
|          |                                       |                                                                                                          |                                       | Windshield washer motor not operating | 1.0 or less                           |                                                                                                                                         |
| 1J       | Hazard power supply                   | HAZARD 10A fuse                                                                                          | Under any condition                   |                                       | B+                                    | <ul style="list-style-type: none"><li>HAZARD 10A fuse</li><li>Related wiring harness</li></ul>                                          |
| 1K       | Front turn light (RH) control         | <ul style="list-style-type: none"><li>Front turn light (RH)</li><li>Front side turn light (RH)</li></ul> | Turn switch (RH) on                   | Front turn light (RH) flashes         | Alternates between 1.0 or less and B+ | <ul style="list-style-type: none"><li>Front turn light (RH)</li><li>Front side turn light (RH)</li><li>Related wiring harness</li></ul> |
|          |                                       |                                                                                                          | Hazard warning switch on              |                                       |                                       |                                                                                                                                         |
|          |                                       |                                                                                                          | Front turn light (RH) not illuminated |                                       | 1.0 or less                           |                                                                                                                                         |
| 1L       | Front turn light (LH) control         | <ul style="list-style-type: none"><li>Front turn light (LH)</li><li>Front side turn light (LH)</li></ul> | Turn switch (LH) on                   | Front turn light (LH) flashes         | Alternates between 1.0 or less and B+ | <ul style="list-style-type: none"><li>Front turn light (LH)</li><li>Front side turn light (LH)</li><li>Related wiring harness</li></ul> |
|          |                                       |                                                                                                          | Hazard warning switch on              |                                       |                                       |                                                                                                                                         |
|          |                                       |                                                                                                          | Front turn light (LH) not illuminated |                                       | 1.0 or less                           |                                                                                                                                         |
| 1M       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 1N       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 1O       | Interior light power supply           | ROOM 15 A fuse                                                                                           | Under any condition                   |                                       | B+                                    | <ul style="list-style-type: none"><li>ROOM 15 A fuse</li><li>Related wiring harness</li></ul>                                           |
| 1P       | Door lock power supply                | D/L 20 A fuse                                                                                            | Under any condition                   |                                       | B+                                    | <ul style="list-style-type: none"><li>D/L 20 A fuse</li><li>Related wiring harness</li></ul>                                            |
| 2A       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2B       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2C       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2D       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2E       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2F       | Windshield wiper power supply (IG 2)  | <ul style="list-style-type: none"><li>F.WIP 20 A fuse</li><li>Ignition switch</li></ul>                  | Ignition switch at ON                 |                                       | B+                                    | <ul style="list-style-type: none"><li>F.WIP 20A fuse</li><li>Ignition switch</li><li>Related wiring harness</li></ul>                   |
|          |                                       |                                                                                                          | Ignition switch at off.               |                                       | 1.0 or less                           |                                                                                                                                         |
| 2G       | Meter power supply (IG 1)             | <ul style="list-style-type: none"><li>METER 10 A fuse</li><li>Ignition switch</li></ul>                  | Ignition switch at ON                 |                                       | B+                                    | <ul style="list-style-type: none"><li>METER 10A fuse</li><li>Ignition switch</li><li>Related wiring harness</li></ul>                   |
|          |                                       |                                                                                                          | Ignition switch is off.               |                                       | 1.0 or less                           |                                                                                                                                         |
| 2H       | Windshield washer switch signal       | Wiper and washer switch                                                                                  | Ignition switch at ON                 | Windshield washer switch on           | 1.0 or less                           | <ul style="list-style-type: none"><li>Wiper and washer switch</li><li>Related wiring harness</li></ul>                                  |
|          |                                       |                                                                                                          |                                       | Windshield washer switch off          | B+                                    |                                                                                                                                         |
| 2I       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2J       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2K       | —                                     | —                                                                                                        | —                                     |                                       | —                                     | —                                                                                                                                       |
| 2L       | Rear window washer switch signal      | Wiper and washer switch                                                                                  | Ignition switch at ON                 | Rear window washer switch on          | 1.0 or less                           | <ul style="list-style-type: none"><li>Wiper and washer switch</li><li>Related wiring harness</li></ul>                                  |
|          |                                       |                                                                                                          |                                       | Rear window washer switch off         | B+                                    |                                                                                                                                         |
| 2M       | Signal ground                         | Body ground                                                                                              | Under any condition                   |                                       | 1.0 or less                           | Related wiring harness                                                                                                                  |
| 2N       | Rear window wiper power supply (IG 2) | <ul style="list-style-type: none"><li>R.WIP 10 A fuse</li><li>Ignition switch</li></ul>                  | Ignition switch at ON                 |                                       | B+                                    | <ul style="list-style-type: none"><li>R.WIP 10 A fuse</li><li>Ignition switch</li><li>Related wiring harness</li></ul>                  |
|          |                                       |                                                                                                          | Ignition switch at off.               |                                       | 1.0 or less                           |                                                                                                                                         |
| 2O       | Illumination output                   | <ul style="list-style-type: none"><li>ILLUMI 7.5 A fuse</li><li>Illumination light</li></ul>             | TNS ON                                |                                       | B+                                    | <ul style="list-style-type: none"><li>ILLUMI 7.5 A fuse</li><li>Illumination light</li><li>Related wiring harness</li></ul>             |
|          |                                       |                                                                                                          | TNS OFF                               |                                       | 1.0 or less                           |                                                                                                                                         |

## CONTROL SYSTEM

| Terminal | Signal                                | Connected to                                                                           | Measurement condition                                           |                                         | Voltage (V)                           | Inspection item (s)                                                                                                   |
|----------|---------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 2P       | Power ground                          | Body ground                                                                            | Under any condition                                             |                                         | 1.0 or less                           | Related wiring harness                                                                                                |
| 3A*7     | Liftgate opener actuator ground       | Liftgate latch and lock actuator                                                       | Under any condition                                             |                                         | 1.0 or less                           | <ul style="list-style-type: none"><li>Liftgate latch and lock actuator</li><li>Related wiring harness</li></ul>       |
| 3B       | Rear window defroster output          | Filament                                                                               | Ignition switch at ON                                           | Rear window defroster on                | B+                                    | <ul style="list-style-type: none"><li>Filament</li><li>Related wiring harness</li></ul>                               |
|          |                                       |                                                                                        |                                                                 | Rear window defroster off               | 1.0 or less                           |                                                                                                                       |
| 3C       | Liftgate opener actuator power supply | Liftgate latch and lock actuator                                                       | Liftgate opener actuator switch pressed, lock release operation |                                         | B+                                    | <ul style="list-style-type: none"><li>Liftgate latch and lock actuator</li><li>Related wiring harness</li></ul>       |
|          |                                       |                                                                                        | Other                                                           |                                         | 1.0 or less                           |                                                                                                                       |
| 3D       | Rear window wiper power supply        | Rear wiper motor                                                                       | Ignition switch at ON                                           |                                         | B+                                    | <ul style="list-style-type: none"><li>Rear wiper motor</li><li>Related wiring harness</li></ul>                       |
|          |                                       |                                                                                        | Ignition switch is off.                                         |                                         | 1.0 or less                           |                                                                                                                       |
| 3E*6     | Door lock control                     | Door lock actuator                                                                     | Double locking system activated                                 |                                         | 1.0 or less<br>→ B+ → 1.0 or less     | <ul style="list-style-type: none"><li>Door lock actuator</li><li>Related wiring harness</li></ul>                     |
|          |                                       |                                                                                        | Other                                                           |                                         | 1.0 or less                           |                                                                                                                       |
| 3F       | Rear window wiper control             | Rear wiper motor                                                                       | Ignition switch at ON                                           | Rear wiper activated                    | 1.0 or less                           | <ul style="list-style-type: none"><li>Rear motor</li><li>Related wiring harness</li></ul>                             |
|          |                                       |                                                                                        |                                                                 | Rear wiper not activated                | B+                                    |                                                                                                                       |
| 3G       | —                                     | —                                                                                      | —                                                               |                                         | —                                     |                                                                                                                       |
| 3H       | Rear TNS light signal                 | <ul style="list-style-type: none"><li>Tail light</li><li>License plate light</li></ul> | TNS ON                                                          |                                         | B+                                    | <ul style="list-style-type: none"><li>Tail light</li><li>License plate light</li><li>Related wiring harness</li></ul> |
|          |                                       |                                                                                        | TNS OFF                                                         |                                         | 1.0 or less                           |                                                                                                                       |
| 3I       | Interior light control                | Interior light                                                                         | Interior light at DOOR position                                 | Any door is open                        | 1.0 or less                           | <ul style="list-style-type: none"><li>Interior light</li><li>Related wiring harness</li></ul>                         |
|          |                                       |                                                                                        |                                                                 | Within 5 seconds after all doors closed | 5                                     |                                                                                                                       |
|          |                                       |                                                                                        |                                                                 | Five seconds after all doors closed     | B+                                    |                                                                                                                       |
| 3J       | Rear turn light (RH) control          | Rear turn light (RH)                                                                   | Turn switch (RH) on                                             | Rear turn light (RH) flashes            | Alternates between 1.0 or less and B+ | <ul style="list-style-type: none"><li>Rear turn light (RH)</li><li>Related wiring harness</li></ul>                   |
|          |                                       |                                                                                        | Hazard warning switch on                                        |                                         |                                       |                                                                                                                       |
|          |                                       |                                                                                        | Rear turn light (RH) not illuminated                            |                                         | 1.0 or less                           |                                                                                                                       |
| 3K       | —                                     | —                                                                                      | —                                                               |                                         | —                                     | —                                                                                                                     |
| 3L       | Rear turn light (LH) control          | Rear turn light (LH)                                                                   | Turn switch (LH) on                                             | Rear turn light (LH) flashes            | Alternates between 1.0 or less and B+ | <ul style="list-style-type: none"><li>Rear turn light (LH)</li><li>Related wiring harness</li></ul>                   |
|          |                                       |                                                                                        | Hazard warning switch on                                        |                                         |                                       |                                                                                                                       |
|          |                                       |                                                                                        | Rear turn light (LH) not illuminated                            |                                         | 1.0 or less                           |                                                                                                                       |
| 3M       | Door lock control                     | Door lock actuator                                                                     | Door lock actuator locking (without double locking system)      |                                         | B+                                    | <ul style="list-style-type: none"><li>Door lock actuator</li><li>Related wiring harness</li></ul>                     |
|          |                                       |                                                                                        | Door lock actuator locking (with double locking system)         |                                         | 1.0 or less                           |                                                                                                                       |
|          |                                       |                                                                                        | Other                                                           |                                         | 1.0 or less                           |                                                                                                                       |
| 3N       | —                                     | —                                                                                      | —                                                               |                                         | —                                     | —                                                                                                                     |
| 3O       | Door unlock control                   | Door lock actuator                                                                     | Door lock actuator unlocking                                    |                                         | B+                                    | <ul style="list-style-type: none"><li>Door lock actuator</li><li>Related wiring harness</li></ul>                     |
|          |                                       |                                                                                        | Other                                                           |                                         | 1.0 or less                           |                                                                                                                       |

## CONTROL SYSTEM

| Terminal | Signal                                        | Connected to                                                                                                                                                                                                         | Measurement condition                                                                                      |                                                                 | Voltage (V)       | Inspection item (s)                                                                                                                                                                                                                                  |
|----------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3P       | Power supply                                  | <ul style="list-style-type: none"> <li>Climate control unit</li> <li>Instrument cluster</li> <li>Audio unit</li> <li>Keyless receiver</li> <li>Steering lock unit</li> <li>Theft-deterrent control module</li> </ul> | Under any condition                                                                                        |                                                                 | B+                | <ul style="list-style-type: none"> <li>Climate control unit</li> <li>Instrument cluster</li> <li>Audio unit</li> <li>Keyless receiver</li> <li>Steering lock unit</li> <li>Theft-deterrent control module</li> <li>Related wiring harness</li> </ul> |
| 4A       | Brake fluid level signal                      | Brake fluid level sensor                                                                                                                                                                                             | Ignition switch at ON                                                                                      | Brake fluid level less than MIN<br>Brake fluid level above MIN. | 1.0 or less<br>5  | <ul style="list-style-type: none"> <li>Brake fluid level sensor</li> <li>Related wiring harness</li> </ul>                                                                                                                                           |
| 4B*4     | Oil pressure switch signal                    | Oil pressure switch                                                                                                                                                                                                  | Engine running<br>Engine not running                                                                       |                                                                 | B+<br>1.0 or less | <ul style="list-style-type: none"> <li>Oil pressure switch</li> <li>Related wiring harness</li> </ul>                                                                                                                                                |
| 4C*3     | Back-up light signal                          | Back-up light switch                                                                                                                                                                                                 | Shift lever is in R position<br>Shift lever is not in R position                                           |                                                                 | B+<br>1.0 or less | <ul style="list-style-type: none"> <li>Back-up light switch</li> <li>Related wiring harness</li> </ul>                                                                                                                                               |
| 4D       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4E       | Rear fog light control                        | Rear fog light relay                                                                                                                                                                                                 | Headlight ON                                                                                               | Rear fog light switch ON<br>Rear fog light switch OFF           | 1.0 or less<br>B+ | <ul style="list-style-type: none"> <li>Rear fog light relay</li> <li>Related wiring harness</li> </ul>                                                                                                                                               |
| 4F       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4G       | Headlight low control (4-Beam Type Headlight) | Headlight low relay                                                                                                                                                                                                  | Headlights on<br>Headlights off                                                                            |                                                                 | 1.0 or less<br>B+ | <ul style="list-style-type: none"> <li>Headlight low relay</li> <li>Related wiring harness</li> </ul>                                                                                                                                                |
| 4H       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4I       | Front fog light control                       | Front fog light relay                                                                                                                                                                                                | Headlights on or TNS ON                                                                                    | Front fog light switch ON<br>Front fog light switch OFF         | 1.0 or less<br>B+ | <ul style="list-style-type: none"> <li>Front fog light relay</li> <li>Related wiring harness</li> </ul>                                                                                                                                              |
| 4J       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4K       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4L       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4M       | Headlight low control (2-Beam Type Headlight) | Headlight relay (LO)                                                                                                                                                                                                 | Headlights on<br>Headlights off                                                                            |                                                                 | 1.0 or less<br>B+ | <ul style="list-style-type: none"> <li>Headlight relay (LO)</li> <li>Related wiring harness</li> </ul>                                                                                                                                               |
| 4N       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4O       | Headlight high control                        | Headlight relay (HI)                                                                                                                                                                                                 | High beam during passing or lights on<br>Other                                                             |                                                                 | 1.0 or less<br>B+ | <ul style="list-style-type: none"> <li>Headlight relay (HI)</li> <li>Related wiring harness</li> </ul>                                                                                                                                               |
| 4P       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4Q       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4R       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4S       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4T       | —                                             | —                                                                                                                                                                                                                    | —                                                                                                          |                                                                 | —                 | —                                                                                                                                                                                                                                                    |
| 4U       | CAN_H                                         | <ul style="list-style-type: none"> <li>PCM</li> <li>ABS HU/CM (with ABS)</li> <li>DSC HU/CM (with DSC)</li> </ul>                                                                                                    | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                                 |                   |                                                                                                                                                                                                                                                      |
| 4V*8     | CAN_H                                         | TCM                                                                                                                                                                                                                  | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                                 |                   |                                                                                                                                                                                                                                                      |

## CONTROL SYSTEM

| Terminal        | Signal                                                         | Connected to                                                                                                      | Measurement condition                                                                                      |                                             | Voltage (V)                            | Inspection item (s)                                                                                                                      |
|-----------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 4W              | CAN_L                                                          | <ul style="list-style-type: none"> <li>PCM</li> <li>ABS HU/CM (with ABS)</li> <li>DSC HU/CM (with DSC)</li> </ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                             |                                        |                                                                                                                                          |
| 4X <sup>8</sup> | CAN_L                                                          | TCM                                                                                                               | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                             |                                        |                                                                                                                                          |
| 6A              | Turn switch input (RH)                                         | Turn switch                                                                                                       | Turn switch at RH position                                                                                 |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Turn switch</li> <li>Related wiring harness</li> </ul>                                            |
|                 |                                                                |                                                                                                                   | Turn switch at off position                                                                                |                                             | Wave pattern (See 09-40-13 Pattern 1.) |                                                                                                                                          |
| 6B              | Turn switch input (LH)                                         | Turn switch                                                                                                       | Turn switch at LH position                                                                                 |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Turn switch</li> <li>Related wiring harness</li> </ul>                                            |
|                 |                                                                |                                                                                                                   | Turn switch at off position                                                                                |                                             | Wave pattern (See 09-40-13 Pattern 1.) |                                                                                                                                          |
| 6C              | Rear wiper switch input (ON)                                   | Wiper and washer switch                                                                                           | Rear wiper at on position                                                                                  |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Wiper and washer switch</li> <li>Related wiring harness</li> </ul>                                |
|                 |                                                                |                                                                                                                   | Rear wiper at off position                                                                                 |                                             | Wave pattern (See 09-40-13 Pattern 1.) |                                                                                                                                          |
| 6D              | Rear window defroster switch input                             | Climate control unit (rear window defroster switch)                                                               | Rear window defroster switch pressed                                                                       |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Climate control unit (rear window defroster switch)</li> <li>Related wiring harness</li> </ul>    |
|                 |                                                                |                                                                                                                   | Rear window defroster switch not pressed                                                                   |                                             | Wave pattern (See 09-40-13 Pattern 1.) |                                                                                                                                          |
| 6E              | Headlight switch input (ON)                                    | Light switch                                                                                                      | Light switch in ON position                                                                                |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                           |
|                 |                                                                |                                                                                                                   | Light switch not at ON position                                                                            |                                             | B+                                     |                                                                                                                                          |
| 6F              | Windshield wiper switch input (HI)                             | Wiper and washer switch                                                                                           | Wiper switch in HI position                                                                                |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Wiper and washer switch</li> <li>Related wiring harness</li> </ul>                                |
|                 |                                                                |                                                                                                                   | Wiper switch not at HI position                                                                            |                                             | B+                                     |                                                                                                                                          |
| 6G              | Rear window defroster indicator signal                         | Climate control unit (rear window defroster indicator)                                                            | Ignition switch at ON                                                                                      | Rear window defroster indicator illuminated | 1.0 or less                            | <ul style="list-style-type: none"> <li>Climate control unit (rear window defroster indicator)</li> <li>Related wiring harness</li> </ul> |
|                 |                                                                |                                                                                                                   |                                                                                                            | Rear window defroster indicator turned off  | B+                                     |                                                                                                                                          |
| 6H              | Wiper speed volume ground                                      | Wiper and washer switch                                                                                           | Under any condition                                                                                        |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Wiper and washer switch</li> <li>Related wiring harness</li> </ul>                                |
| 6I              | Headlight switch input (HI)                                    | Light switch                                                                                                      | HI beam at passing position or lights on status                                                            |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                           |
|                 |                                                                |                                                                                                                   | Except above                                                                                               |                                             | B+                                     |                                                                                                                                          |
| 6J              | TNS switch signal                                              | Light switch                                                                                                      | TNS ON                                                                                                     |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                           |
|                 |                                                                |                                                                                                                   | TNS OFF                                                                                                    |                                             | B+                                     |                                                                                                                                          |
| 6K              | Headlight switch input (front fog light)                       | Light switch                                                                                                      | Front fog light switch in on position                                                                      |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                           |
|                 |                                                                |                                                                                                                   | Front fog light switch in off position                                                                     |                                             | B+                                     |                                                                                                                                          |
| 6L              | Headlight switch input (vehicles with auto light/wiper system) | Light switch                                                                                                      | Light switch in AUTO position                                                                              |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                           |
|                 |                                                                |                                                                                                                   | Light switch not at AUTO position                                                                          |                                             | Wave pattern (See 09-40-13 Pattern 1.) |                                                                                                                                          |
| 6M              | Headlight switch input (rear fog light)                        | Light switch                                                                                                      | Rear fog light switch in on position                                                                       |                                             | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                           |
|                 |                                                                |                                                                                                                   | Rear fog light switch in off position                                                                      |                                             | B+                                     |                                                                                                                                          |

## CONTROL SYSTEM

| Terminal | Signal                             | Connected to                                                                                                                                                 | Measurement condition                                                                                                                                                                                    |                                | Voltage (V)                            | Inspection item (s)                                                                                                                                                                          |
|----------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6N       | Windshield wiper switch input (Lo) | Wiper and washer switch                                                                                                                                      | Ignition switch at ON                                                                                                                                                                                    | Windshield wiper LO operation  | 1.0 or less                            | <ul style="list-style-type: none"> <li>Wiper and washer switch</li> <li>Related wiring harness</li> </ul>                                                                                    |
|          |                                    |                                                                                                                                                              |                                                                                                                                                                                                          | Windshield wiper not operation | B+                                     |                                                                                                                                                                                              |
| 6O       | Headlight switch input (LO)        | Light switch                                                                                                                                                 | Light switch at headlight position and low beam                                                                                                                                                          |                                | 1.0 or less                            | <ul style="list-style-type: none"> <li>Light switch</li> <li>Related wiring harness</li> </ul>                                                                                               |
|          |                                    |                                                                                                                                                              | Light switch at OFF or TNS position                                                                                                                                                                      |                                | B+                                     |                                                                                                                                                                                              |
| 6P       | Wiper speed volume signal          | Wiper and washer switch                                                                                                                                      | Voltage decreases when speed control volume is turned from - position to + position                                                                                                                      | Switch position 1 position     | 0.72                                   | <ul style="list-style-type: none"> <li>Wiper and washer switch</li> <li>Related wiring harness</li> </ul>                                                                                    |
|          |                                    |                                                                                                                                                              |                                                                                                                                                                                                          | Switch position 2 position     | 0.48                                   |                                                                                                                                                                                              |
|          |                                    |                                                                                                                                                              |                                                                                                                                                                                                          | Switch position 3 position     | 0.32                                   |                                                                                                                                                                                              |
|          |                                    |                                                                                                                                                              |                                                                                                                                                                                                          | Switch position 4 position     | 0.18                                   |                                                                                                                                                                                              |
|          |                                    |                                                                                                                                                              |                                                                                                                                                                                                          | Switch position 5 position     | 0.08                                   |                                                                                                                                                                                              |
|          |                                    |                                                                                                                                                              |                                                                                                                                                                                                          | Switch position 6 position     | 0                                      |                                                                                                                                                                                              |
| 6Q       | Hazard warning switch signal       | Hazard warning switch                                                                                                                                        | Hazard warning switch on                                                                                                                                                                                 |                                | 1.0 or less                            | <ul style="list-style-type: none"> <li>Hazard warning switch</li> <li>Related wiring harness</li> </ul>                                                                                      |
|          |                                    |                                                                                                                                                              | Hazard warning switch off                                                                                                                                                                                |                                | Wave pattern (See 09-40-14 Pattern 6.) |                                                                                                                                                                                              |
| 6R       | Key reminder switch                | <ul style="list-style-type: none"> <li>Steering lock unit (Advanced keyless and start system)</li> <li>Key reminder switch (Keyless entry system)</li> </ul> | Key inserted                                                                                                                                                                                             |                                | B+                                     | <ul style="list-style-type: none"> <li>Steering lock unit (Advanced keyless and start system)</li> <li>Key reminder switch (Keyless entry system)</li> <li>Related wiring harness</li> </ul> |
|          |                                    |                                                                                                                                                              | Key removed                                                                                                                                                                                              |                                | 1.0 or less                            |                                                                                                                                                                                              |
| 6S       | Windshield wiper switch input      | Wiper and washer switch                                                                                                                                      | <ul style="list-style-type: none"> <li>Wiper switch in AUTO position (vehicles with auto light/wiper system)</li> <li>Wiper switch in INT position (vehicles without auto light/wiper system)</li> </ul> |                                | 1.0 or less                            | <ul style="list-style-type: none"> <li>Wiper and washer switch</li> <li>Related wiring harness</li> </ul>                                                                                    |
|          |                                    |                                                                                                                                                              | Except above                                                                                                                                                                                             |                                | Wave pattern (See 09-40-13 Pattern 1.) |                                                                                                                                                                                              |
| 6T       | —                                  | —                                                                                                                                                            | —                                                                                                                                                                                                        |                                | —                                      | —                                                                                                                                                                                            |
| 6U*2     | Liftgate opener switch input       | Liftgate opener switch                                                                                                                                       | Wave pattern (See 09-40-15 Liftgate Opener Switch Input Signal Pulse (Reference).)                                                                                                                       |                                |                                        | <ul style="list-style-type: none"> <li>Liftgate opener switch</li> <li>Related wiring harness</li> </ul>                                                                                     |
| 6V       | CAN_L                              | <ul style="list-style-type: none"> <li>CAN system related module (L.H.D.)</li> <li>Keyless control module (R.H.D.)</li> </ul>                                | Terminal used for communication therefore determination based on terminal voltage inspection not possible.                                                                                               |                                |                                        |                                                                                                                                                                                              |

## CONTROL SYSTEM

| Terminal         | Signal                                | Connected to                                                                                                                                                                     | Measurement condition                                                                                      | Voltage (V)                                             | Inspection item (s)                                                                                                     |
|------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 6W               | Serial communication                  | <ul style="list-style-type: none"> <li>Keyless control module (with advanced keyless and start system)</li> <li>Keyless receiver (vehicles with keyless entry system)</li> </ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                         |                                                                                                                         |
| 6X               | CAN_H                                 | <ul style="list-style-type: none"> <li>CAN system related module (L.H.D.)</li> <li>Keyless control module (R.H.D.)</li> </ul>                                                    | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                                                         |                                                                                                                         |
| 7A               | Liftgate opener switch                | Liftgate opener switch                                                                                                                                                           | Liftgate opener switch not pressed                                                                         | 1.0 or less                                             | <ul style="list-style-type: none"> <li>Liftgate opener switch</li> <li>Related wiring harness</li> </ul>                |
|                  |                                       |                                                                                                                                                                                  | Liftgate opener switch pressed                                                                             | Wave pattern* <sup>2</sup><br>(See 09-40-13 Pattern 2.) |                                                                                                                         |
|                  |                                       |                                                                                                                                                                                  |                                                                                                            | approx. 3* <sup>1</sup>                                 |                                                                                                                         |
| 7B               | Parking brake switch signal           | Parking brake switch                                                                                                                                                             | Parking brake applied                                                                                      | 1.0 or less                                             | <ul style="list-style-type: none"> <li>Parking brake switch</li> <li>Related wiring harness</li> </ul>                  |
|                  |                                       |                                                                                                                                                                                  | Parking brake not applied                                                                                  | Wave pattern (See 09-40-13 Pattern 3.)                  |                                                                                                                         |
| 7C               | Key cylinder switch signal            | Door key cylinder switch                                                                                                                                                         | Driver's door key cylinder rotated to lock direction                                                       | Wave pattern (See 09-40-14 Pattern 4.)                  | <ul style="list-style-type: none"> <li>Door key cylinder switch</li> <li>Related wiring harness</li> </ul>              |
|                  |                                       |                                                                                                                                                                                  | Driver's door key cylinder rotated to unlock direction                                                     | 1.0 or less                                             |                                                                                                                         |
|                  |                                       |                                                                                                                                                                                  | Driver's door key cylinder at neutral position after rotating in lock or unlock direction                  | Wave pattern (See 09-40-14 Pattern 5.)                  |                                                                                                                         |
| 7D               | —                                     | —                                                                                                                                                                                | —                                                                                                          | —                                                       | —                                                                                                                       |
| 7E               | All outer door handles                | Power window main switch                                                                                                                                                         | Any door open                                                                                              | 1.0 or less                                             | <ul style="list-style-type: none"> <li>Power window main switch</li> <li>Related wiring harness</li> </ul>              |
|                  |                                       |                                                                                                                                                                                  | All doors closed                                                                                           | B+                                                      |                                                                                                                         |
| 7F               | —                                     | —                                                                                                                                                                                | —                                                                                                          | —                                                       | —                                                                                                                       |
| 7G* <sup>5</sup> | Rear door latch switch (LH)           | Rear door latch switch (LH)                                                                                                                                                      | Rear door (LH) open                                                                                        | Wave pattern (See 09-40-14 Pattern 6.)                  | <ul style="list-style-type: none"> <li>Rear door latch switch (LH)</li> <li>Related wiring harness</li> </ul>           |
|                  |                                       |                                                                                                                                                                                  | Rear door (LH) closed                                                                                      | 1.0 or less                                             |                                                                                                                         |
| 7H               | —                                     | —                                                                                                                                                                                | —                                                                                                          | —                                                       | —                                                                                                                       |
| 7I               | Front door latch switch (driver side) | Front door latch switch (driver side)                                                                                                                                            | Front door (driver side) open                                                                              | Wave pattern (See 09-40-14 Pattern 6.)                  | <ul style="list-style-type: none"> <li>Front door latch switch (driver side)</li> <li>Related wiring harness</li> </ul> |
|                  |                                       |                                                                                                                                                                                  | Front door (driver side) closed                                                                            | 1.0 or less                                             |                                                                                                                         |
| 7J               | —                                     | —                                                                                                                                                                                | —                                                                                                          | —                                                       | —                                                                                                                       |



## CONTROL SYSTEM

| Terminal | Signal                                   | Connected to                                                                                | Measurement condition                                                                                      |                   | Voltage (V)                            | Inspection item (s)                                                                                                         |
|----------|------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 7K       | Lock input (door lock-link switch)       | Door lock-link switch                                                                       | Driver's door locked                                                                                       |                   | Wave pattern (See 09-40-14 Pattern 6.) | <ul style="list-style-type: none"><li>• Door lock-link switch</li><li>• Related wiring harness</li></ul>                    |
|          |                                          |                                                                                             | Driver's door unlocked                                                                                     |                   | Wave pattern (See 09-40-14 Pattern 7.) |                                                                                                                             |
| 7L       | —                                        | —                                                                                           | —                                                                                                          |                   | —                                      | —                                                                                                                           |
| 7M       | Front door latch switch (passenger side) | Front door latch switch (passenger side)                                                    | Front door (passenger side) open                                                                           |                   | Wave pattern (See 09-40-14 Pattern 6.) | <ul style="list-style-type: none"><li>• Front door latch switch (passenger side)</li><li>• Related wiring harness</li></ul> |
|          |                                          |                                                                                             | Front door (passenger side) closed                                                                         |                   | 1.0 or less                            |                                                                                                                             |
| 7N       | —                                        | —                                                                                           | —                                                                                                          |                   | —                                      | —                                                                                                                           |
| 7O*5     | Rear door latch switch (RH)              | Rear door latch switch (RH)                                                                 | Rear door (RH) open                                                                                        |                   | Wave pattern (See 09-40-14 Pattern 6.) | <ul style="list-style-type: none"><li>• Rear door latch switch (RH)</li><li>• Related wiring harness</li></ul>              |
|          |                                          |                                                                                             | Rear door (RH) closed                                                                                      |                   | 1.0 or less                            |                                                                                                                             |
| 7P       | —                                        | —                                                                                           | —                                                                                                          |                   | —                                      | —                                                                                                                           |
| 7Q       | Unlock input (door lock-link switch)     | Door lock-link switch                                                                       | Driver's door locked                                                                                       |                   | Wave pattern (See 09-40-14 Pattern 6.) | <ul style="list-style-type: none"><li>• Door lock-link switch</li><li>• Related wiring harness</li></ul>                    |
|          |                                          |                                                                                             | Driver's door unlocked                                                                                     |                   | 1.0 or less                            |                                                                                                                             |
| 7R       | —                                        | —                                                                                           | —                                                                                                          |                   | —                                      | —                                                                                                                           |
| 7S       | Liftgate switch signal                   | Liftgate switch                                                                             | Liftgate opened                                                                                            |                   | 1.0 or less                            | <ul style="list-style-type: none"><li>• Liftgate switch</li><li>• Related wiring harness</li></ul>                          |
|          |                                          |                                                                                             | Liftgate closed                                                                                            |                   | B+                                     |                                                                                                                             |
| 7T       | —                                        | —                                                                                           | —                                                                                                          |                   | —                                      | —                                                                                                                           |
| 7U       | LIN communication                        | Rain sensor                                                                                 | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                   |                                        |                                                                                                                             |
| 7V       | CAN_L                                    | <ul style="list-style-type: none"><li>• CAN system related module</li><li>• DLC-2</li></ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                   |                                        |                                                                                                                             |
| 7W       | Windshield wiper auto stop signal        | Rain sensor                                                                                 | Ignition switch at ON                                                                                      | Wipers moving     | B+                                     | <ul style="list-style-type: none"><li>• Rain sensor</li><li>• Related wiring harness</li></ul>                              |
|          |                                          |                                                                                             |                                                                                                            | Wipers not moving | 1.0 or less                            |                                                                                                                             |
| 7X       | CAN_H                                    | <ul style="list-style-type: none"><li>• CAN system related module</li><li>• DLC-2</li></ul> | Terminal used for communication therefore determination based on terminal voltage inspection not possible. |                   |                                        |                                                                                                                             |

\*1 : Vehicles with advanced keyless and start system

\*2 : Vehicles without advanced keyless and start system

\*3 : MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)

\*4 : Except MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)

\*5 : 5HB

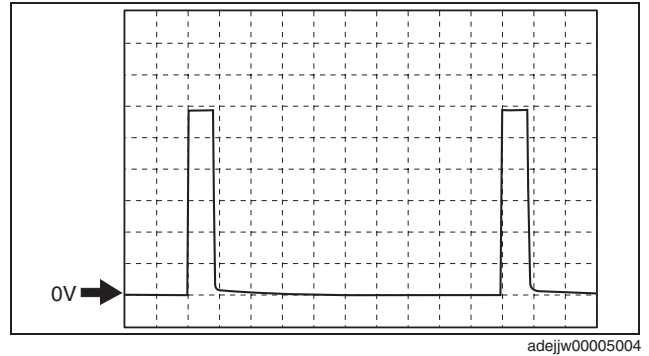
\*6 : With double locking system

\*7 : With terminal 3A

\*8 : CVT

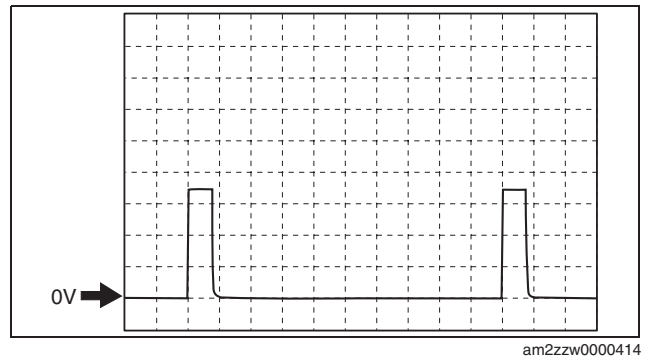
## CONTROL SYSTEM

### Generated pulse (reference) Pattern 1



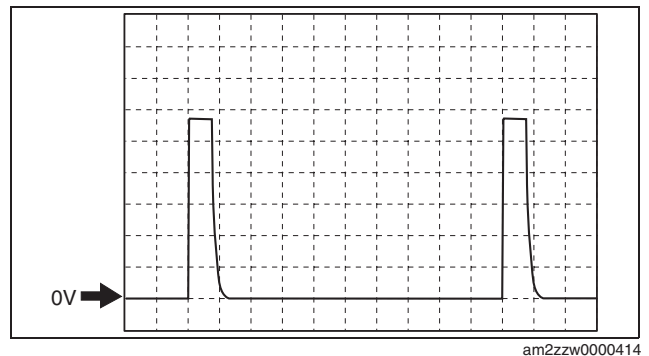
- Terminal:
  - Turn switch input (RH): 6A (+)  $\Leftrightarrow$  body ground (-)
  - Turn switch input (LH): 6B (+)  $\Leftrightarrow$  body ground (-)
  - Rear wiper switch input (ON): 6C (+)  $\Leftrightarrow$  body ground (-)
  - Rear defroster switch input: 6D (+)  $\Leftrightarrow$  body ground (-)
  - Headlight switch input: 6L (+)  $\Leftrightarrow$  body ground (-)
  - Windshield wiper switch input: 6S (+)  $\Leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

### Pattern 2



- Terminal: 7A (+)  $\Leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

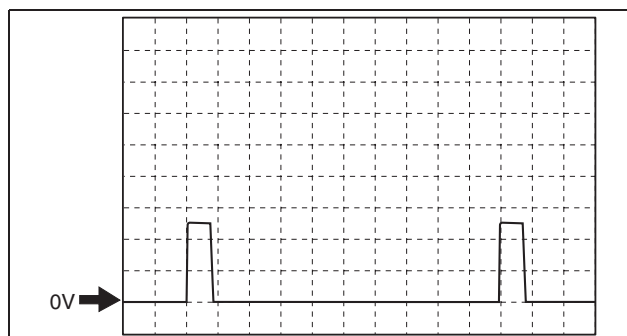
### Pattern 3



- Terminal: 7B (+)  $\Leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

## CONTROL SYSTEM

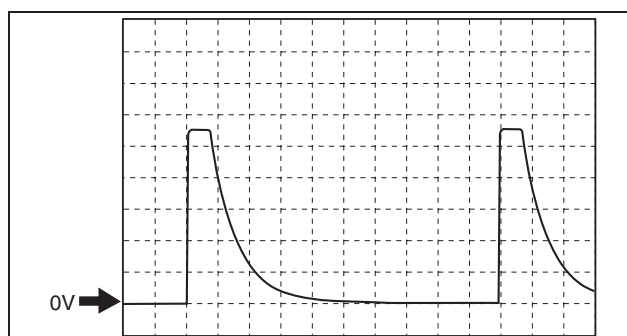
### Pattern 4



am2zzw0000414

- Terminal: 7C (+)  $\Leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

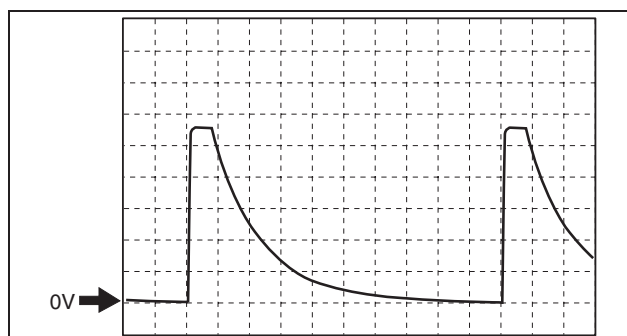
### Pattern 5



am2zzw0000414

- Terminal: 7C (+)  $\Leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

### Pattern 6



am2zzw0000414

- Terminal:
  - Hazard warning switch signal: 6Q (+)  $\Leftrightarrow$  body ground (-)
  - Rear door latch switch (LH): 7G (+)  $\Leftrightarrow$  body ground (-)
  - Front door latch switch (driver side): 7I (+)  $\Leftrightarrow$  body ground (-)
  - Lock input (door lock-link switch) (vehicles without advanced keyless and start system): 7K (+)  $\Leftrightarrow$  body ground (-)
  - Front door latch switch (passenger side): 7M (+)  $\Leftrightarrow$  body ground (-)
  - Rear door latch switch (RH): 7O (+)  $\Leftrightarrow$  body ground (-)
  - Unlock input (door lock-link switch): 7Q (+)  $\Leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

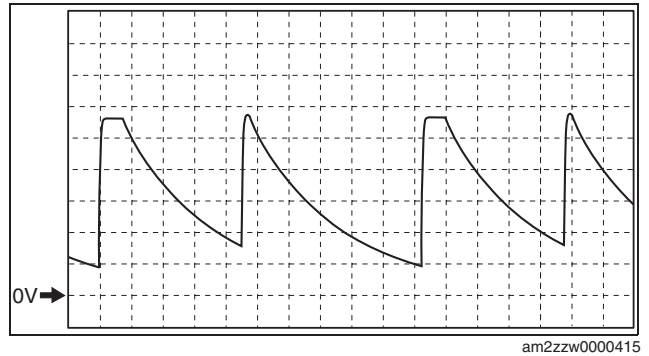
### Pattern 7

#### Note

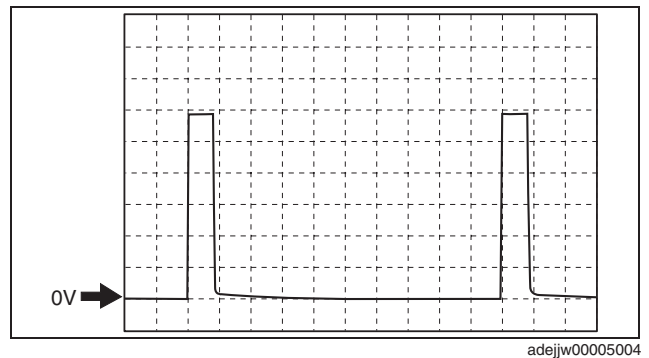
- The output signals from BCM terminal 7K and keyless control module terminal 3P are displayed simultaneously and the wave patterns may overlap each other.

## CONTROL SYSTEM

- Terminal: 7K (+)  $\leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range

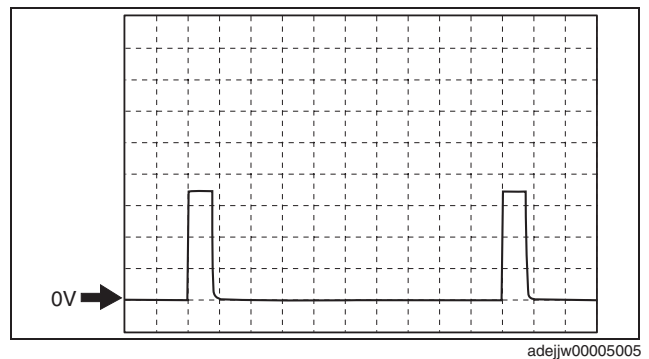


### Liftgate Opener Switch Input Signal Pulse (Reference) Liftgate opener switch not pressed



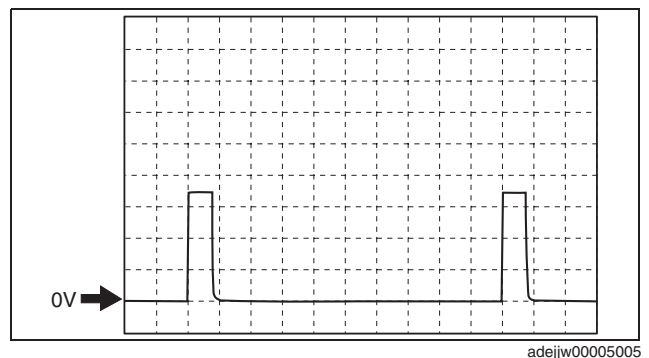
- Terminal: 6U (+)  $\leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range
- Measurement condition: Liftgate opener switch not pressed

### Liftgate opener switch pressed



- Terminal: 6U (+)  $\leftrightarrow$  body ground (-)
- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range
- Measurement condition: Liftgate opener switch pressed

### Liftgate Opener Switch Signal Pulse (Reference)



- Terminal: 7A (+)  $\leftrightarrow$  body ground (-)

## CONTROL SYSTEM

- Oscilloscope setting: 2 V/DIV (Y), 1 ms/DIV (X), DC range
- Measurement condition: Liftgate opener switch pressed

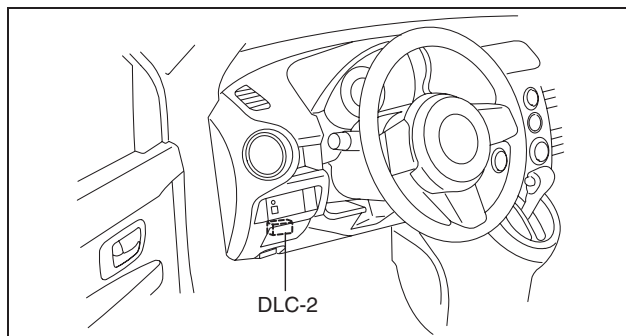
### BODY CONTROL MODULE (BCM) CONFIGURATION

id094000800900

#### Note

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the BCM CONFIGURATION.

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - When using the IDS (laptop PC)
    1. Select "Module Programming".
3. Then, select items from the screen menu in the following order.
  1. Select "Programmable Module Installation".
  2. Select "BCM/GEM".
4. Perform the configuration according to the directions on the screen.
5. Retrieve DTCs by the M-MDS, then verify that there is no DTC present.
  - If a DTC (s) is detected, perform the applicable DTC inspection. (See 09-02G-3 DTC TABLE [BCM].)



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### BODY CONTROL MODULE (BCM) BRACKET REMOVAL/INSTALLATION

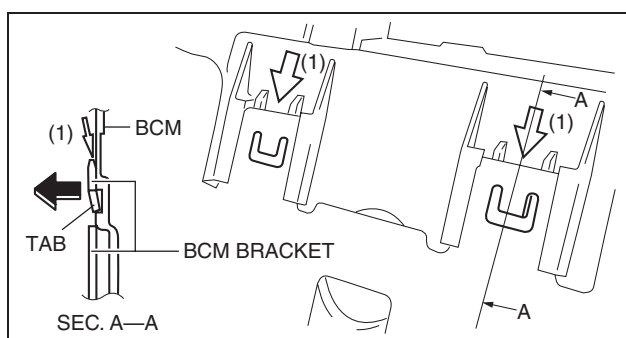
id094000801500

#### Removal

1. Disconnect the negative battery cable.
2. Remove the dashboard under cover. (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)
3. Remove the front scuff plate. (passenger's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
4. Remove the front side trim. (passenger's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
5. Remove the BCM. (See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
6. Insert a fastener remover in the direction of the arrow (1) shown in the figure and release the tabs.

#### Caution

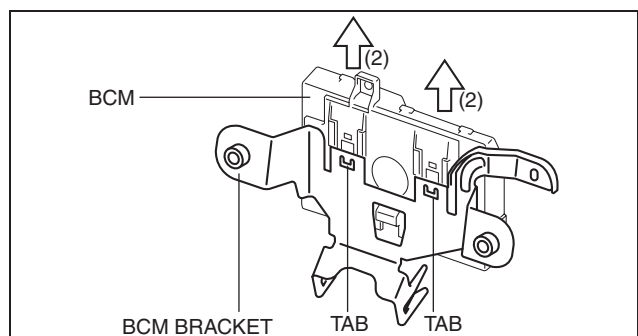
- Because the tabs will break if they are bent excessively, bend the tabs only so far as to allow them to release from the BCM.



am2zzw0000412

## CONTROL SYSTEM

7. Pull the BCM in the direction of the arrow (2) as shown in the figure and remove the BCM bracket.



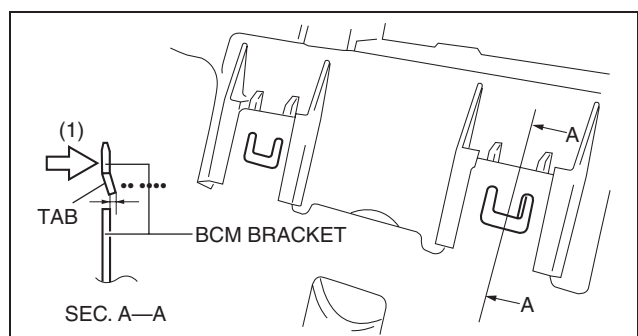
am2zzw0000412

### Installation

1. Bend the tabs in the direction of the arrow (1) so that clearance (a) indicated in the figure is within the specification.

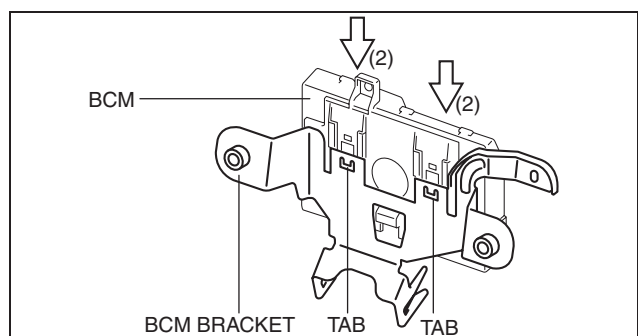
#### Clearance

a: 0.8—1.2 mm {0.032—0.047 in}



am2zzw0000412

2. Press the BCM in the direction of the arrow (2) as shown in the figure and install it.
3. Install the BCM. (See 09-40-1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
4. Install the front scuff plate. (passenger's side) (See 09-17-56 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
5. Install the front side trim. (passenger's side) (See 09-17-53 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
6. Install the dashboard under cover. (See 09-17-35 DASHBOARD UNDER COVER REMOVAL/INSTALLATION.)



am2zzw0000412

## 09-50 TECHNICAL DATA

### BODY AND ACCESSORIES

TECHNICAL DATA ..... 09-50-2

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## TECHNICAL DATA

### BODY AND ACCESSORIES TECHNICAL DATA

id095000498800

| Item                         |                                                        | Specifications (W) X number                              |          |
|------------------------------|--------------------------------------------------------|----------------------------------------------------------|----------|
| Exterior light bulb capacity | Headlight bulb (HI)                                    |                                                          | 60 × 2   |
|                              | Headlight bulb (LO)                                    |                                                          | 55 × 2   |
|                              | Parking light bulb                                     |                                                          | 5 × 2    |
|                              | Front fog light bulb                                   | Except AutoAlliance Thailand (AAT) manufactured vehicles | 55 × 2   |
|                              |                                                        | AutoAlliance Thailand (AAT) manufactured vehicles        | 51 × 2   |
|                              | Rear fog light bulb                                    |                                                          | 21 × 1   |
|                              | Front turn light bulb                                  |                                                          | 21 × 2   |
|                              | Front side turn light bulb                             |                                                          | 5 × 2    |
|                              | Brake/taillight bulb                                   |                                                          | 21/5 × 2 |
|                              | Rear turn light bulb                                   |                                                          | 21 × 2   |
|                              | Back-up light bulb (5HB/3HB)                           |                                                          | 16 × 2   |
|                              | Back-up light bulb (4SD)                               |                                                          | 21 × 2   |
|                              | License plate light bulb                               |                                                          | 5 × 2    |
|                              | High-mount brake light (LED) (5HB/3HB)                 |                                                          | 2.4 × 1  |
|                              | High-mount brake light bulb (4SD)                      |                                                          | 18 × 1   |
| Interior light bulb capacity | Interior light bulb (Vehicles with intruder sensor)    |                                                          | 8 × 2    |
|                              | Interior light bulb (Vehicles without intruder sensor) |                                                          | 10 × 1   |
|                              | Cargo compartment light bulb (5HB/3HB)                 |                                                          | 5 × 1    |
|                              | Trunk compartment light bulb (4SD)                     |                                                          | 5 × 1    |



## **09-60 SERVICE TOOLS**

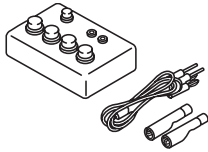
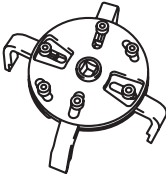
BODY AND ACCESSORIES SST . . . . . 09-60-2

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## SERVICE TOOLS

### BODY AND ACCESSORIES SST

id096000800100

|                                                                                                                                                  |                                                                                                                      |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>49 N088 0A0</p> <p>Fuel and<br/>Thermometer<br/>Checker</p>  | <p>49 F042 001*</p> <p>Wrench</p>  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|

\* : MZ-CD 1.4 DI Turbo, MZ-CD 1.6 (Y6)