

ELECTRICAL SYSTEM

GI

MA

EM

LC

EC

FE

CL

SECTION EL

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TF

PD

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

PRECAUTIONS

Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

NAEL0001

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER" used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. The SRS system composition which is available to NISSAN MODEL R50 is as follows:

- For a frontal collision
The Supplemental Restraint System consists of driver air bag module (located in the center of the steering wheel), front passenger air bag module (located on the instrument panel on passenger side), seat belt pre-tensioners, a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.
- For a side collision
The Supplemental Restraint System consists of side air bag module (located in the outer side of front seat), satellite sensor, diagnosis sensor unit (one of components of air bags for a frontal collision), wiring harness, warning lamp (one of components of air bags for a frontal collision).

Information necessary to service the system safely is included in the **RS section** of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the RS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. Spiral cable and wiring harnesses covered with yellow insulation tape either just before the harness connectors or for the complete harness are related to the SRS.**

Wiring Diagrams and Trouble Diagnosis

NAEL0002

When you read wiring diagrams, refer to the following:

- GI-11, "HOW TO READ WIRING DIAGRAMS"
- EL-9, "POWER SUPPLY ROUTING" for power distribution circuit

When you perform trouble diagnosis, refer to the following:

- GI-34, "HOW TO FOLLOW TEST GROUP IN TROUBLE DIAGNOSIS"
- GI-23, "HOW TO PERFORM EFFICIENT DIAGNOSIS FOR AN ELECTRICAL INCIDENT"

Check for any Service bulletins before servicing the vehicle.

HARNESS CONNECTOR

Description

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

GI

NAEL0003

MA

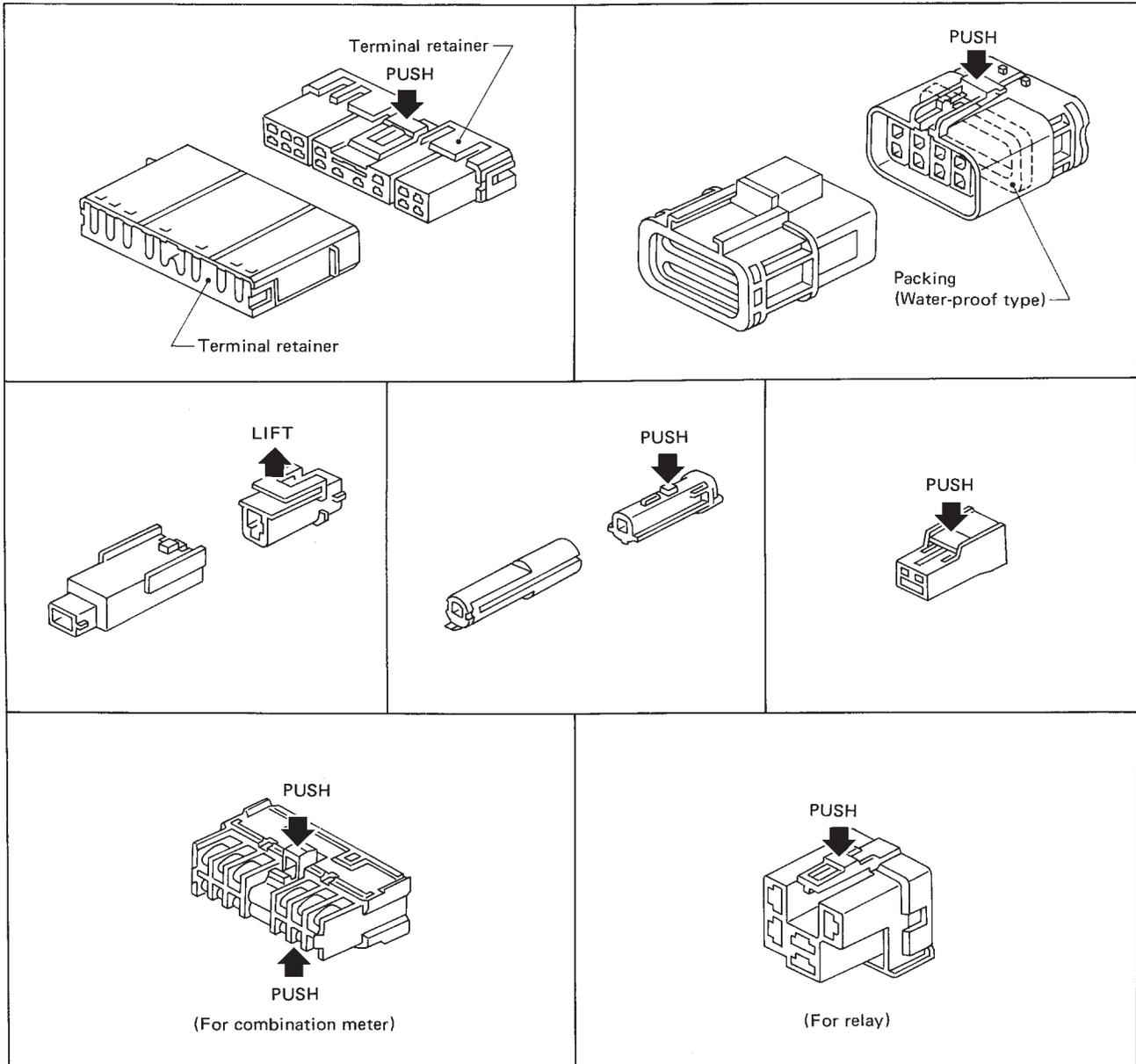
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

Refer to the next page for description of the slide-locking type connector.

CAUTION:

Do not pull the harness when disconnecting the connector.

[Example]



EM

LC

EC

FE

CL

MT

AT

TF

PD

AX

SU

BR

ST

RS

BT

HA

SC

SEL769D

EL

IDX

HARNESS CONNECTOR

Description (Cont'd)

HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

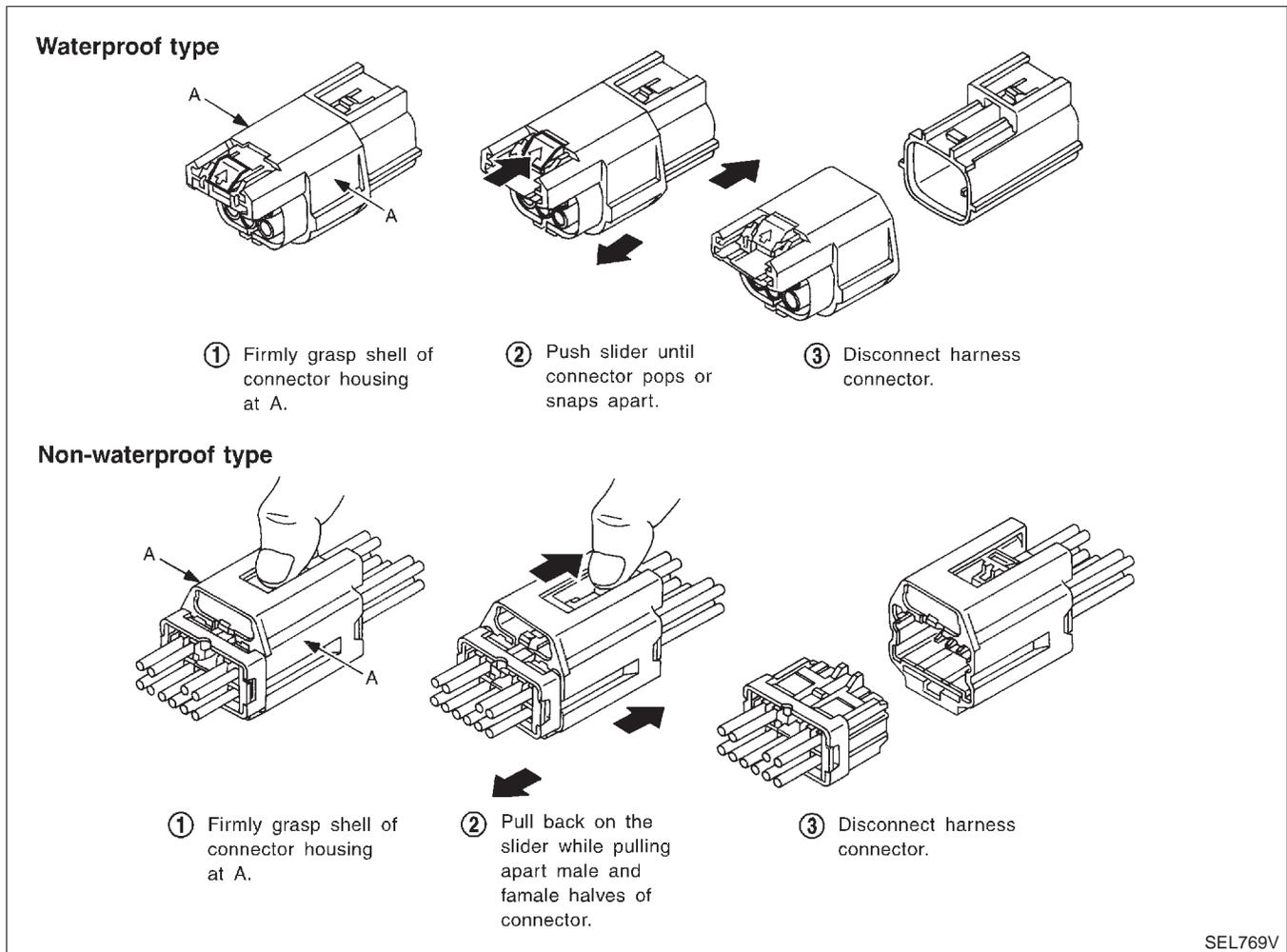
=NAEL0003S02

- A new style slide-locking type connector is used on certain systems and components, especially those related to OBD.
- The slide-locking type connectors help prevent incomplete locking and accidental looseness or disconnection.
- The slide-locking type connectors are disconnected by pushing or pulling the slider. Refer to the illustration below.

CAUTION:

- Do not pull the harness or wires when disconnecting the connector.
- Be careful not to damage the connector support bracket when disconnecting the connector.

[Example]



SEL769V

STANDARDIZED RELAY

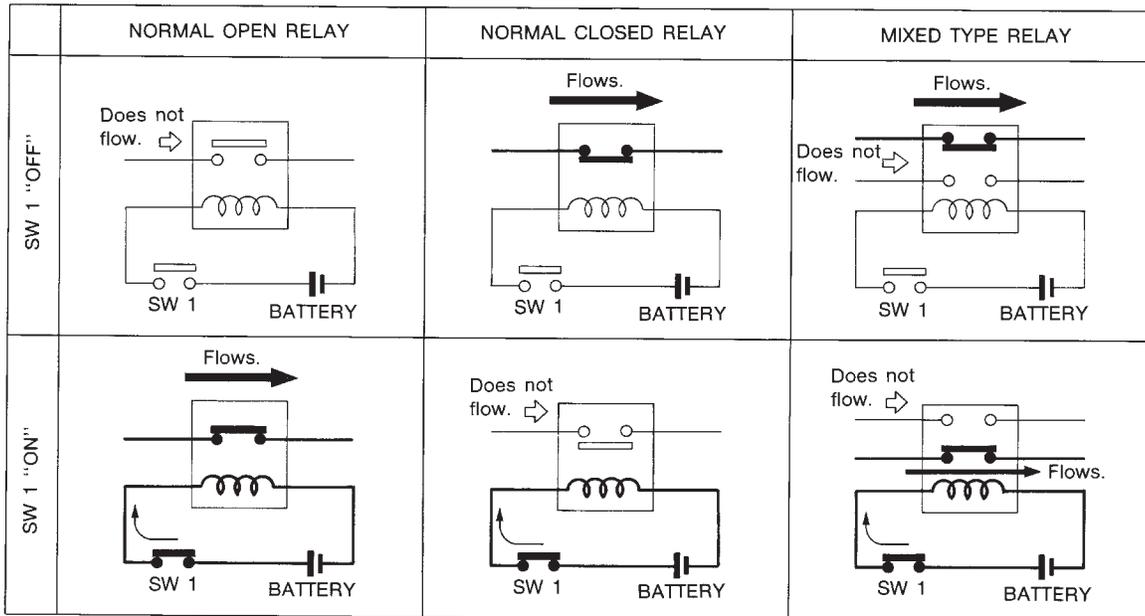
Description

Description

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.

GI
NAEL0004
NAEL0004S01
MA

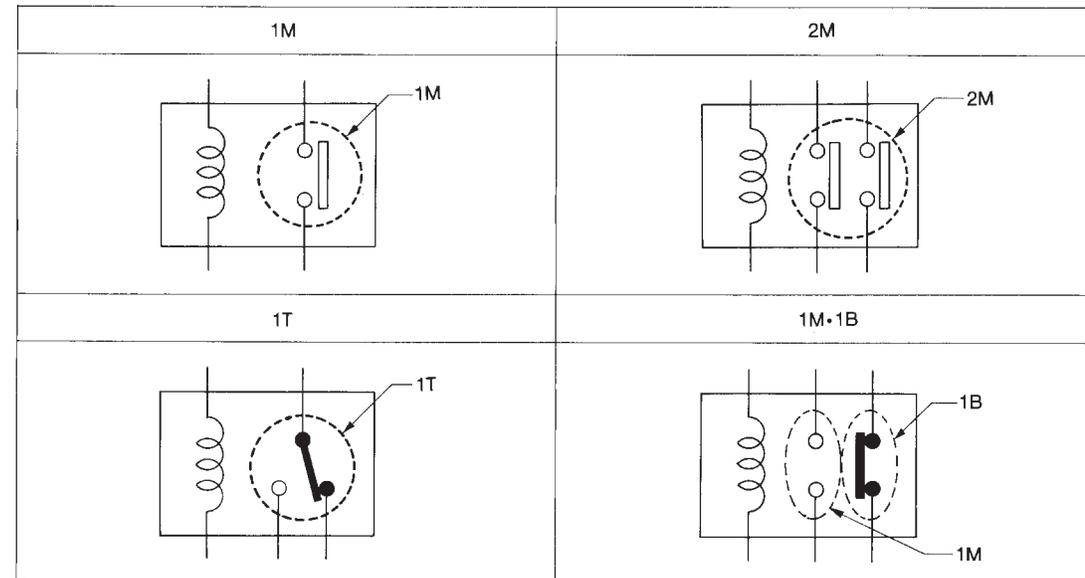


EM
LC
EC
FE
CL
MT
AT
SEL881H

TYPE OF STANDARDIZED RELAYS

TF
PD

1M	1 Make	2M	2 Make
1T	1 Transfer	1M·1B	1 Make 1 Break



AX
SU
BR
ST
RS
BT
HA
SEL882H

STANDARDIZED RELAY

Description (Cont'd)

Type	Outer view	Circuit	Connector symbol and connection	Case color
1T				BLACK
2M				BROWN
1M-1B				GRAY
1M				BLUE

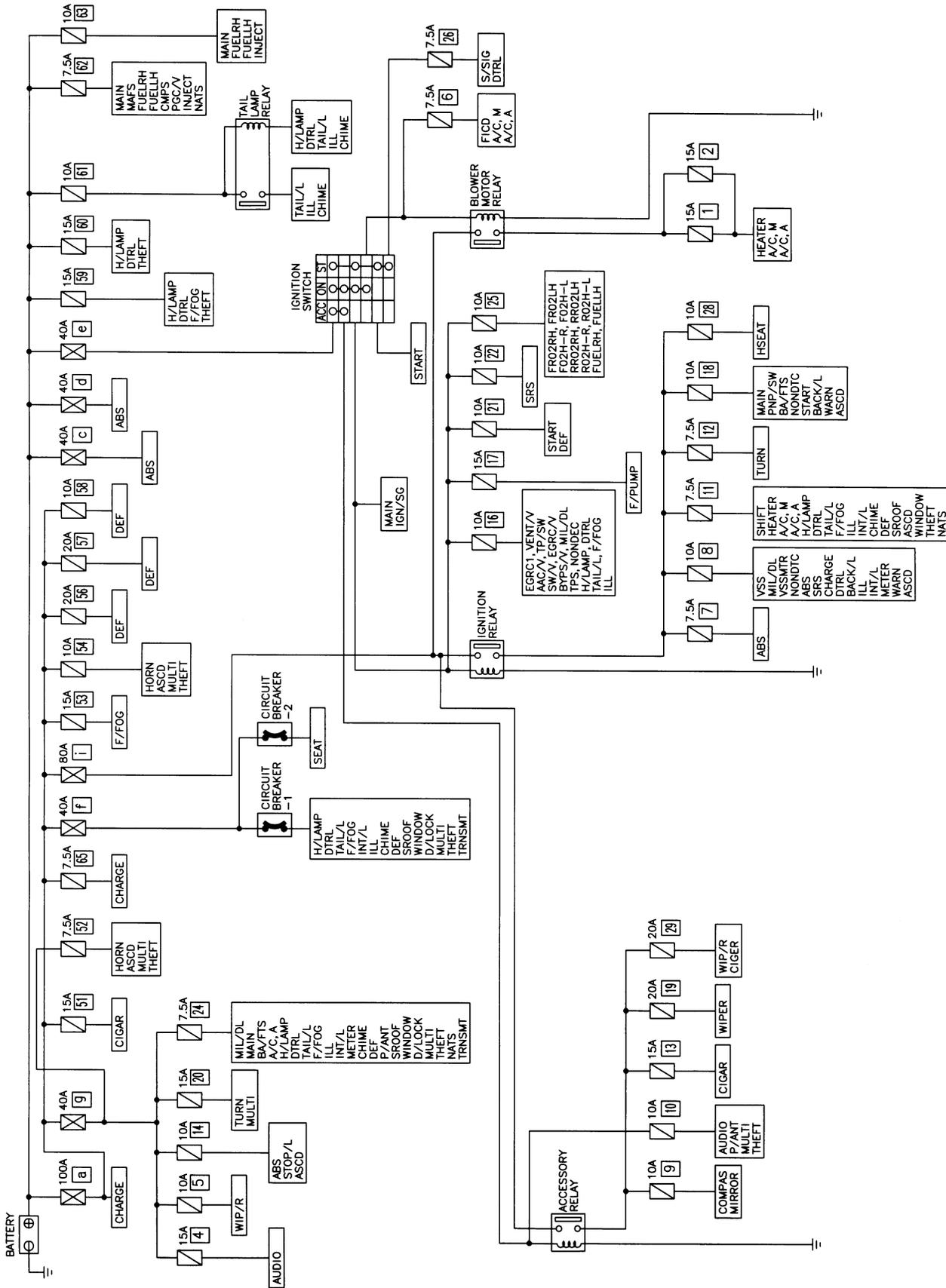
The arrangement of terminal numbers on the actual relays may differ from those shown above.

POWER SUPPLY ROUTING

Schematic

Schematic

NAEL0005



- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- TF
- PD
- AX
- SU
- BR
- ST
- RS
- BT
- HA
- SC
- EL
- IDX

POWER SUPPLY ROUTING

Wiring Diagram — POWER —

Wiring Diagram — POWER —

BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

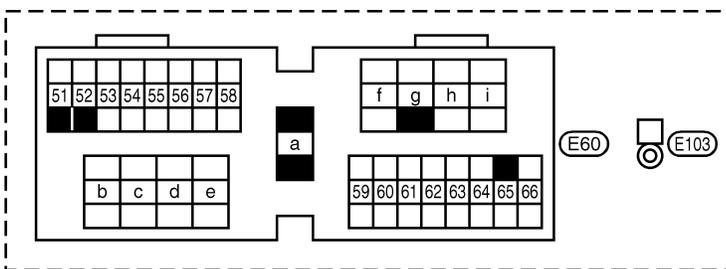
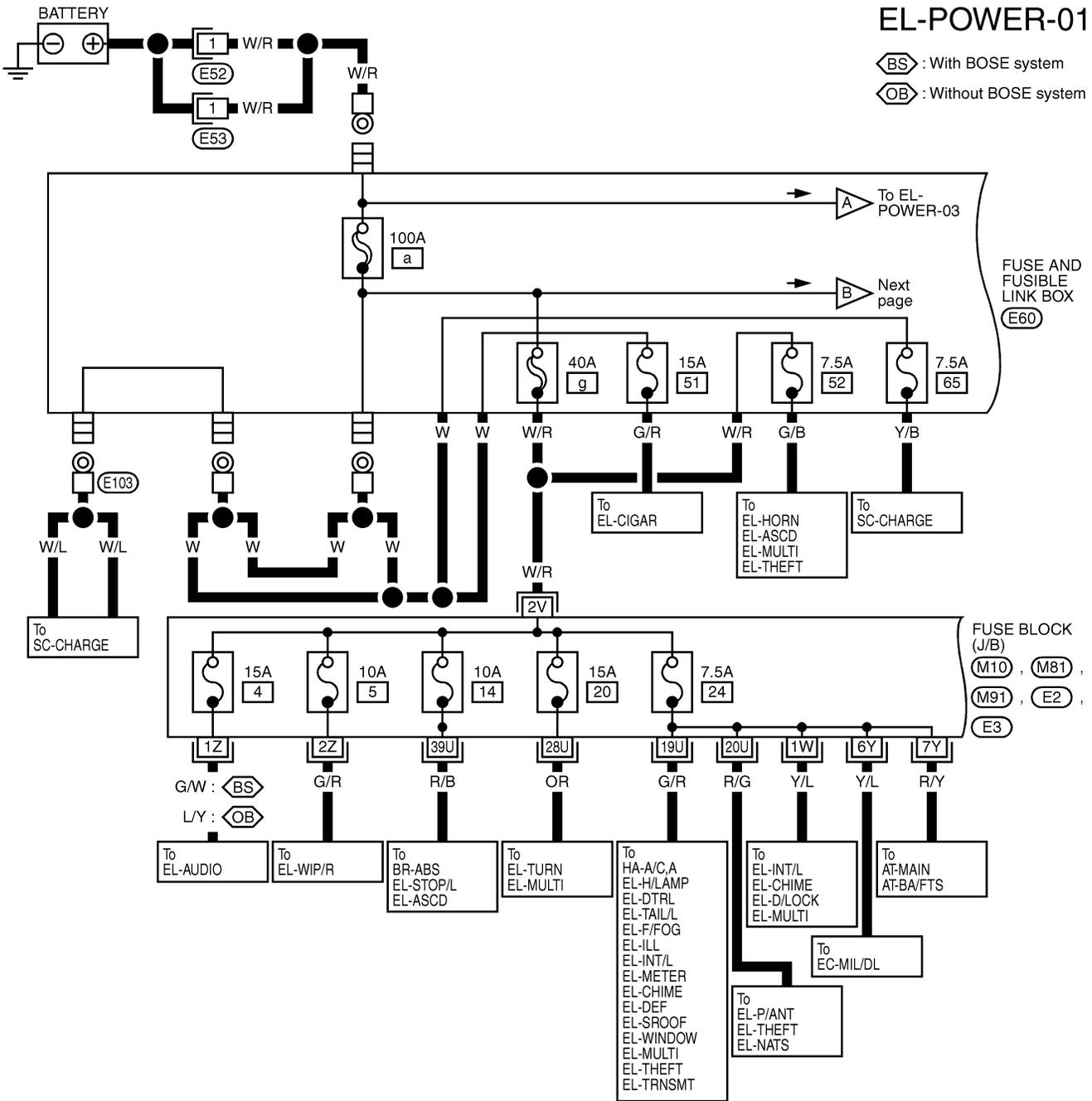
NAEL0006

NAEL0006S01

EL-POWER-01

BS : With BOSE system

OB : Without BOSE system



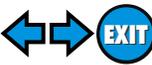
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M10, **M81**, **M91**,

E2, **E3**

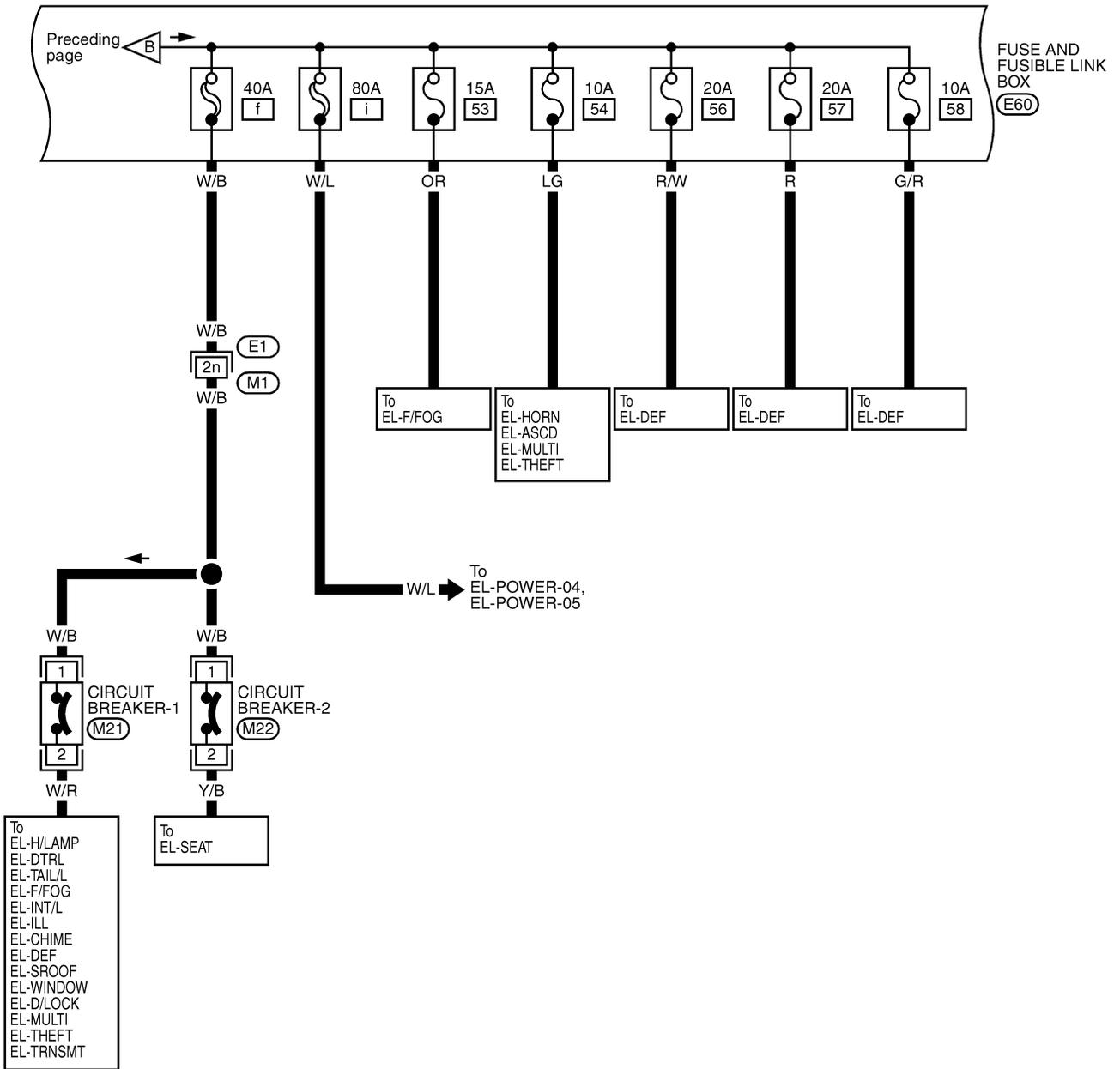
1	2	4	5
6	7	8	10
11	12	13	14
16	17	18	20
21	22		
24	25	26	
	28	29	

POWER SUPPLY ROUTING

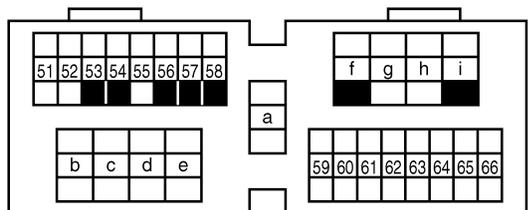


Wiring Diagram — POWER — (Cont'd)

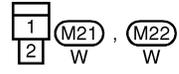
EL-POWER-02



- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- TF
- PD
- AX
- SU
- BR
- ST
- RS
- BT
- HA
- SC
- EL
- IDX



(E60)



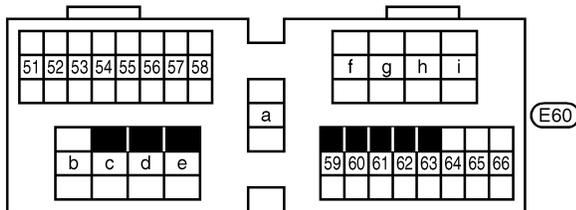
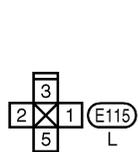
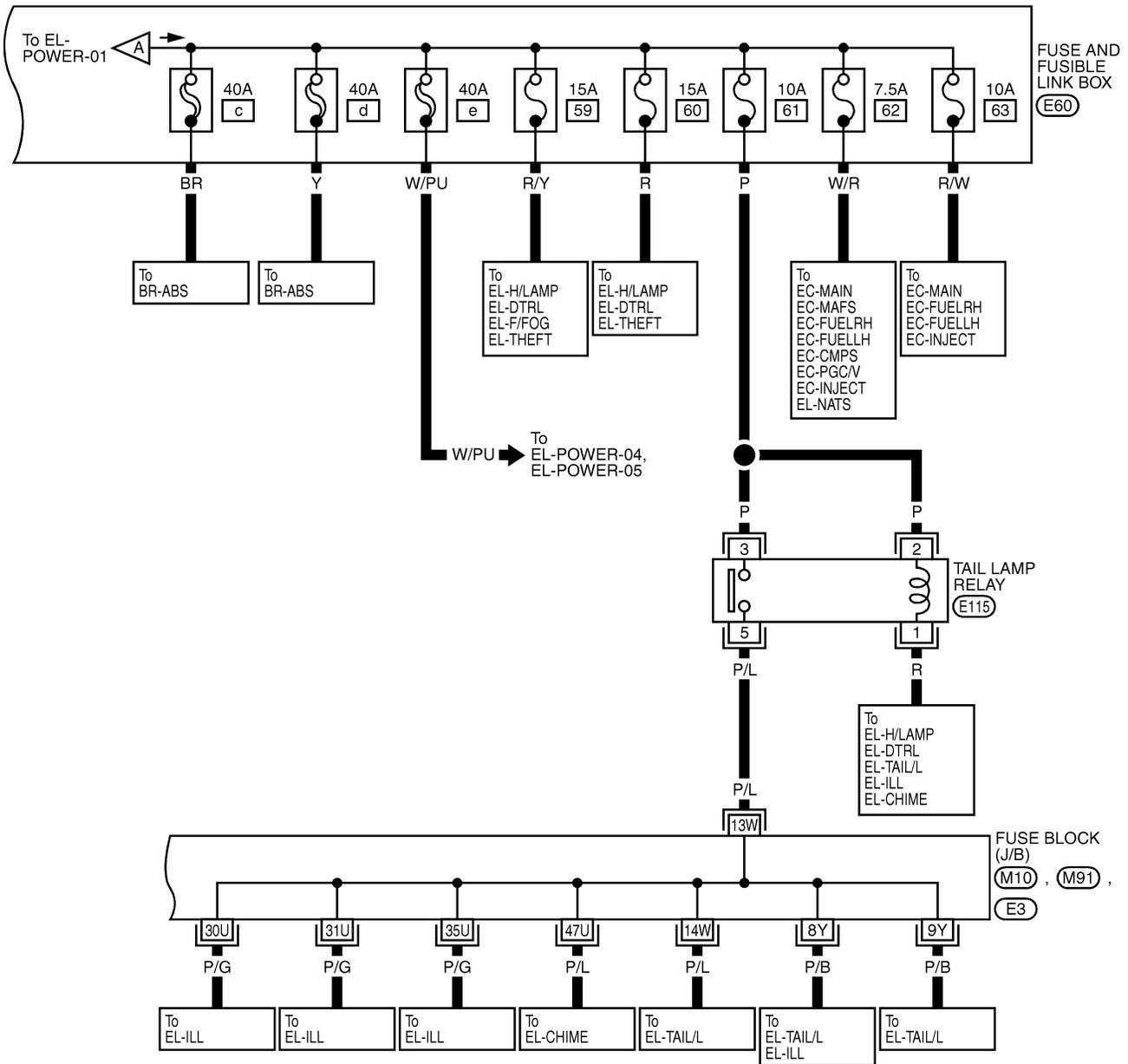
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(M1), (E1)

MEL019L

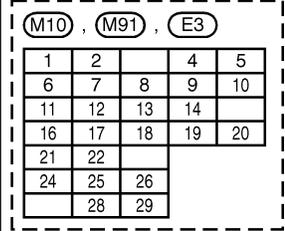
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-03



Refer to last page (Foldout page).



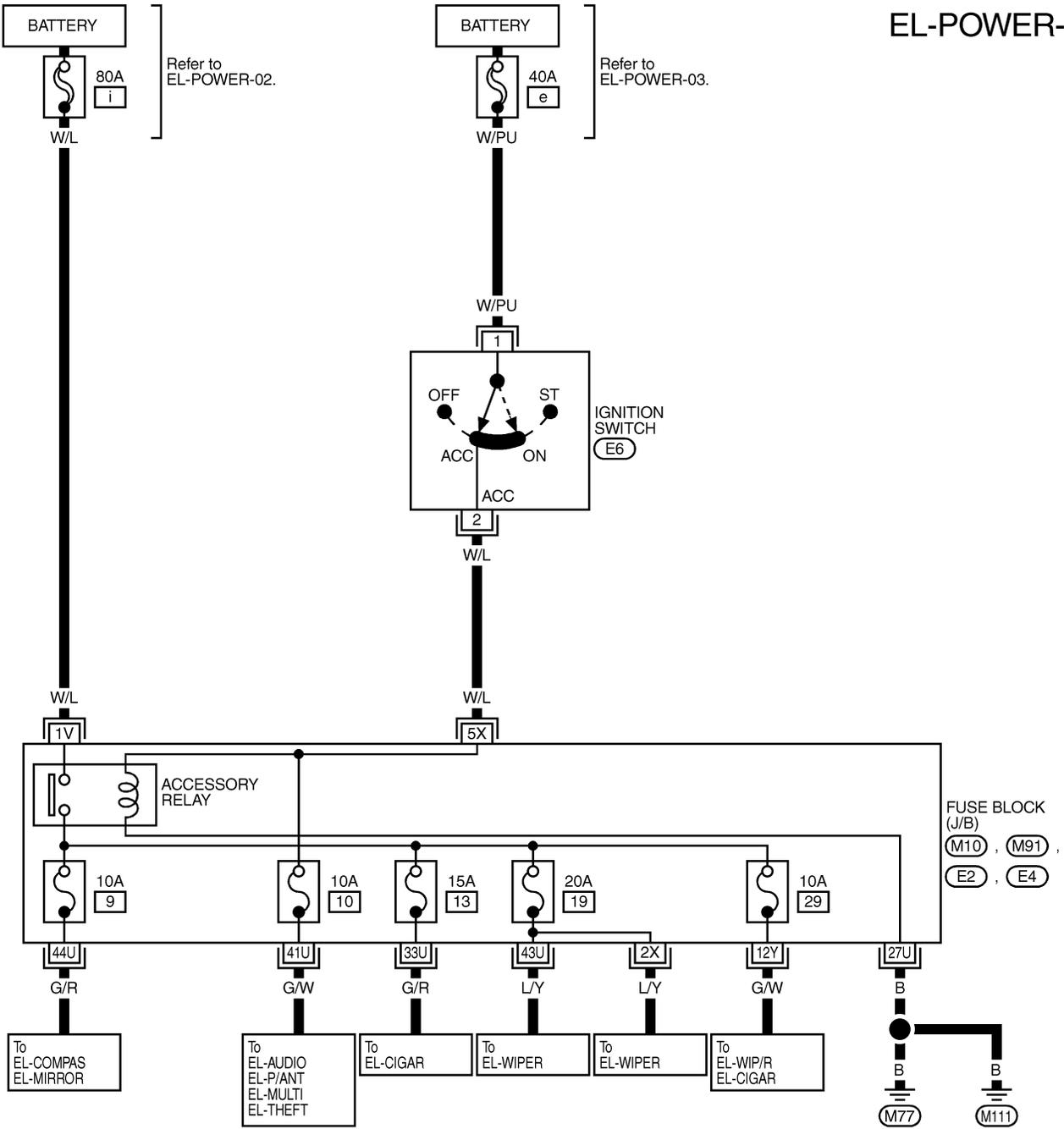
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

ACCESSORY POWER SUPPLY — IGNITION SW. IN "ACC" OR "ON"

NAEL0006S02

EL-POWER-04



GI
MA
EM
LC
EC
FE
CL
MT
AT
TF
PD
AX
SU
BR
ST
RS

3	5	1	E6 W
4	2	6	

Refer to last page (Foldout page).

M10, M91, E2, E4				
1	2	4	5	
6	7	8	9	10
11	12	13	14	
16	17	18	19	20
21	22			
24	25	26		
	28	29		

BT
HA
SC

EL

MEL912J

IDX

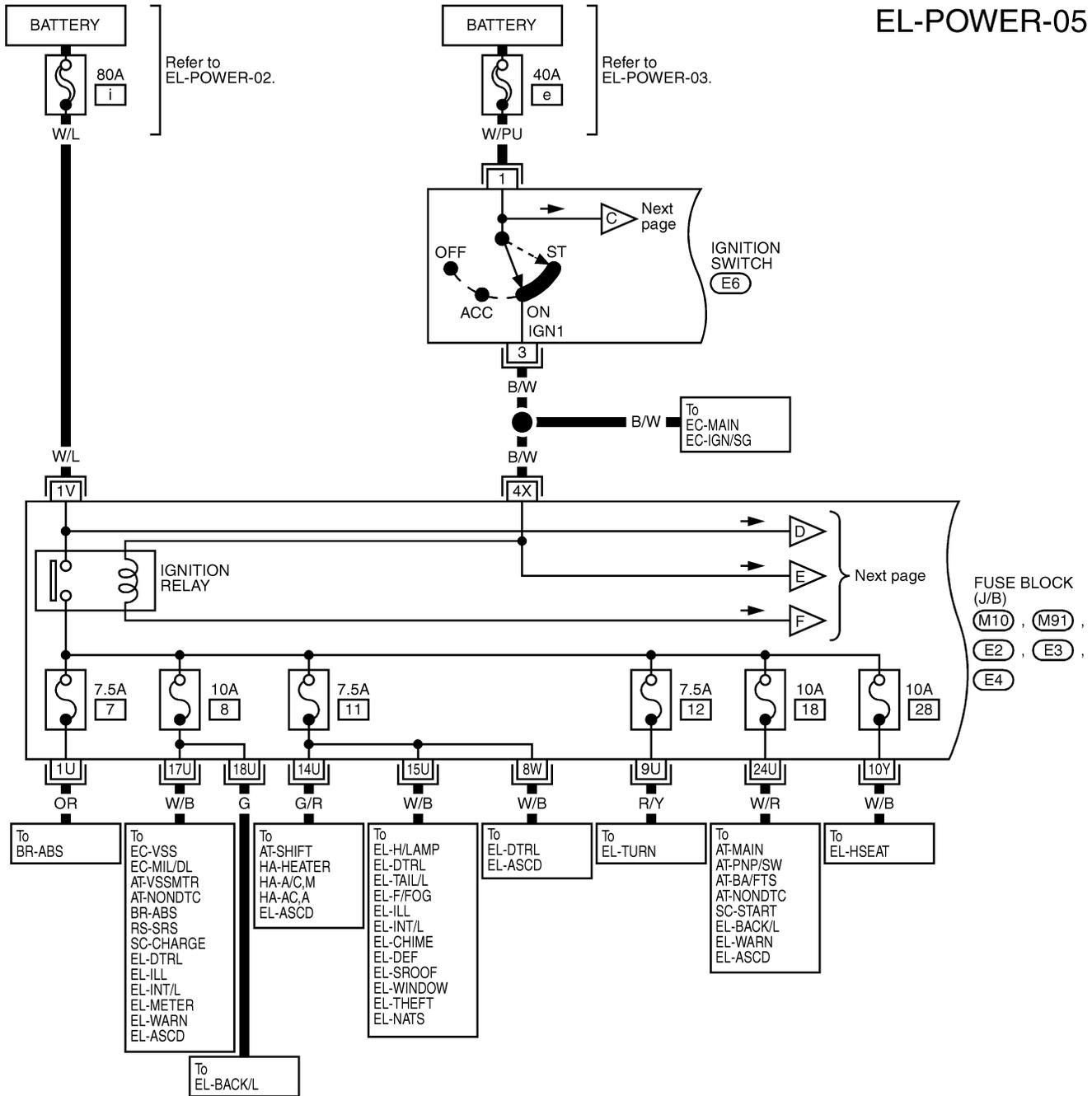
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START"

NAEL0006S03

EL-POWER-05



3	5	1	E6 W
4	2	6	

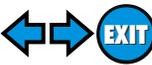
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M10, M91, E2,				
E3, E4				
1	2		4	5
6	7	8	9	10
11	12	13	14	
16	17	18	19	20
21	22			
24	25	26		
	28	29		

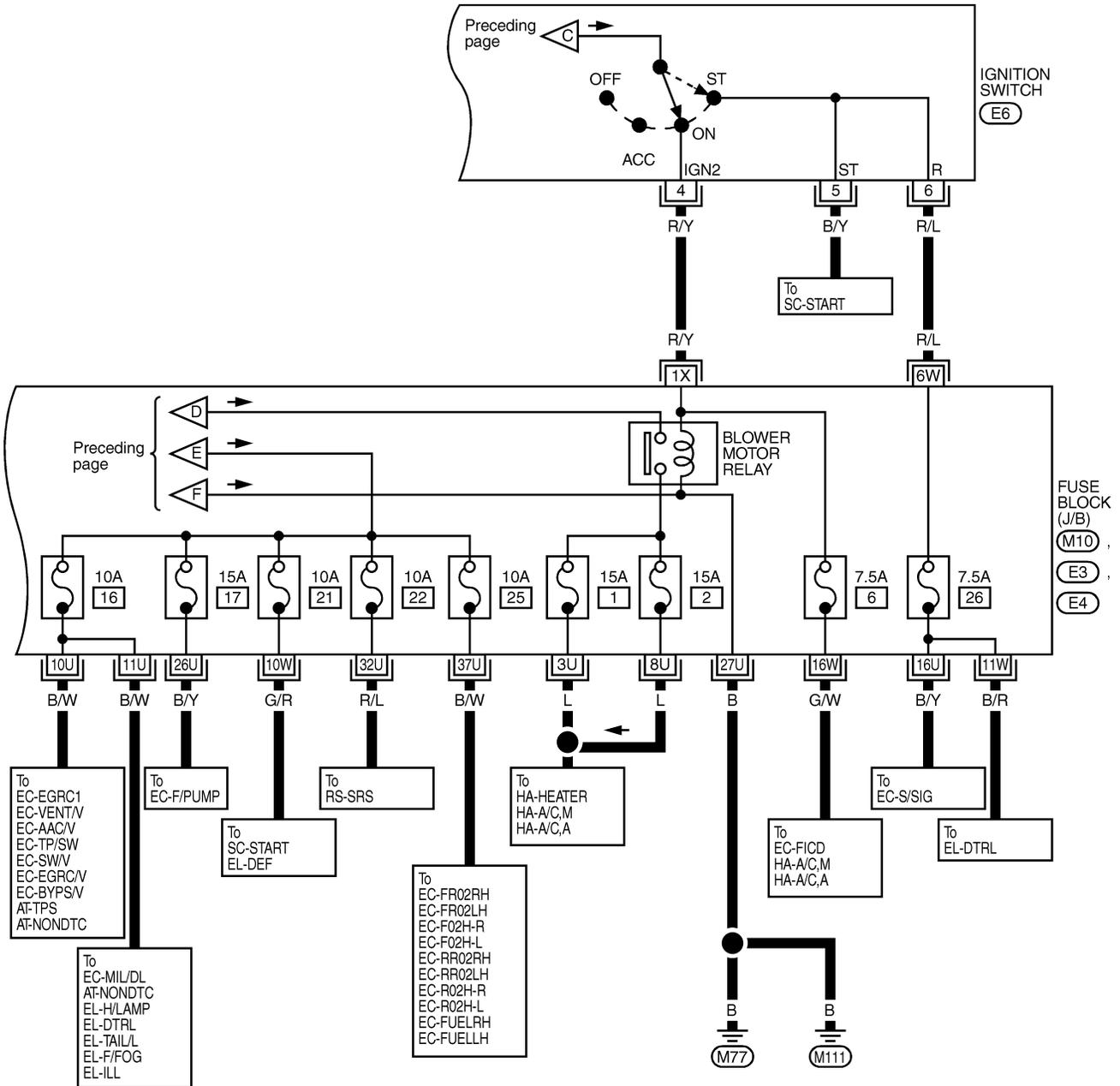
MEL926K

POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)



EL-POWER-06



3	5	1	E6 W
4	2	6	

Refer to last page (Foldout page).

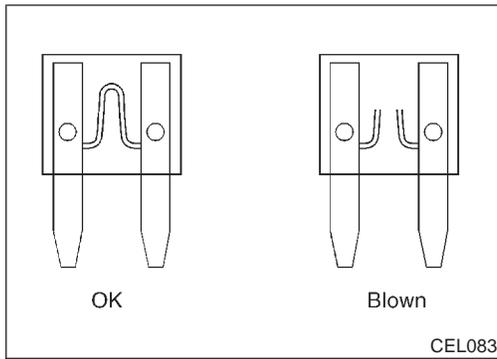
M10, E3, E4				
1	2		4	5
6	7	8	9	10
11	12	13	14	
16	17	18	19	20
21	22			
24	25	26		
	28	29		

GI
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SC
EL
IDX

MEL914J

POWER SUPPLY ROUTING

Inspection



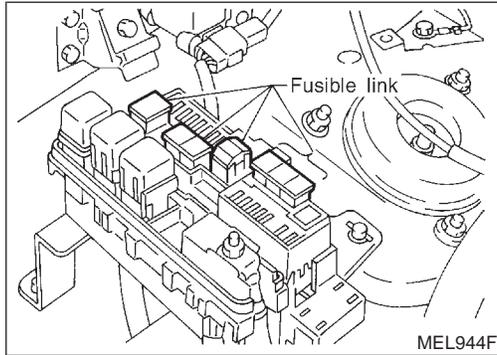
Inspection

NAEL0007

FUSE

NAEL0007S01

- If fuse is blown, be sure to eliminate cause of problem before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for “ELECTRICAL PARTS (BAT)” if vehicle is not used for a long period of time.



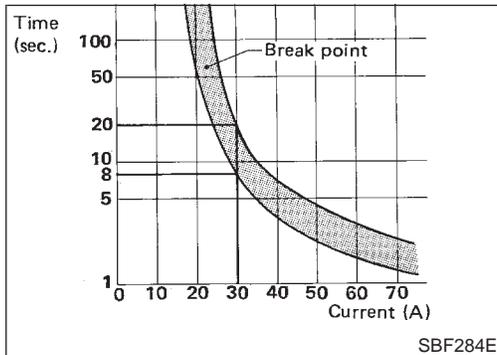
FUSIBLE LINK

NAEL0007S02

A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

CAUTION:

- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of problem.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring harness, vinyl or rubber parts.



CIRCUIT BREAKER

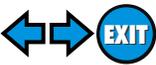
NAEL0007S03

For example, when current is 30A, the circuit is broken within 8 to 20 seconds.

Ground Distribution

NAEL0008

EARTH	CONNECT TO	CONN. NO.	CELL CODE	
M4/M66	AIR BAG DIAGNOSIS SENSOR UNIT	Z4	RS-SRS	GI
	AIR MIX DOOR MOTOR	M55	HA-A/C, A	MA
	ASCD CONTROL UNIT	M3	EL-ASCD	EM
	ASCD MAIN SWITCH	M18	EL-ASCD	LC
	CLUTCH INTERLOCK SWITCH	M28	SC-START	EC
	COMBINATION FLASHER UNIT	M15	EL-TURN	FE
	DOOR LOCK AND UNLOCK SWITCH RH	D38	EL-D/LOCK	CL
	DOOR MIRROR DEFOGGER RH	D31	EL-DEF	MT
	DOOR MIRROR REMOTE CONTROL SWITCH	M17	EL-MIRROR	AT
	FRONT DOOR KEY CYLINDER SWITCH RH	D39	EL-D/LOCK EL-THEFT	TF
	HEADLAMP BATTERY SAVER CONTROL UNIT	M115	EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL	PD
	HEADLAMP BATTERY SAVER CONTROL UNIT	M116	EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL	AX
	MODE DOOR MOTOR	M38	HA-A/C, A	SU
	POWER ANTENNA	M69	EL-P/ANT	BR
	POWER WINDOW RELAY	M23	EL-SROOF EL-WINDOW	ST
	REAR WINDOW DEFOGGER SWITCH	M36	EL-DEF	RS
	RECIRCULATION SWITCH	M42	HA-HEATER HA-A/C, M	BT
	SHIELD WIRE (FRONT DOOR SPEAKER LH)	D12	EL-AUDIO	HA
	SHIELD WIRE (TWEETER LH)	M8	EL-AUDIO	SC
	M77/M111	A/C AUTO AMP.	M102	HA-A/C, A
A/C AUTO AMP.		M103	HA-A/C, A	EL
AUDIO AMP. RELAY		B47	EL-AUDIO	EL
CIGARETTE LIGHTER SOCKET		M56	EL-CIGAR	EL
COMBINATION METER (4WD)		M25	EL-WARN	EL
COMBINATION METER (ABS)		M25	BR-ABS EL-WARN	EL
COMBINATION METER (AIR BAG)		M24	RS-SRS EL-WARN	EL
COMBINATION METER (CRUISE INDICATOR LAMP)		M25	EL-WARN EL-ASCD	EL
COMBINATION METER (FUEL GAUGE)		M24	EL-METER	EL
COMBINATION METER (HIGH BEAM INDICATOR)		M25	EL-H/LAMP EL-DTRL	EL
COMBINATION METER (SPEEDOMETER)		M24	EC-VSS AT-VSSMTR EL-METER EL-ASCD	EL
COMBINATION METER (TURN SIGNAL)		M25	EL-TURN	EL
COMBINATION METER (WATER TEMPERATURE GAUGE)		M24	EL-METER	EL
COMPASS AND THERMOMETER		R4	EL-COMPAS	EL
COMPASS AND THERMOMETER (ILLUMINATION)		R4	EL-ILL	EL

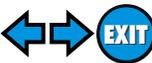


GROUND

Ground Distribution (Cont'd)

EARTH	CONNECT TO	CONN. NO.	CELL CODE
M77/M111	DATA LINK CONNECTOR FOR CONSULT	M11	EC-MIL/DL AT-NONDTC TF-T/F
	DATA LINK CONNECTOR FOR GST	M9	EC-MIL/DL
	DOOR MIRROR DEFOGGER LH	D1	EL-DEF
	FAN CONTROL AMP.	M60	HA-A/C, A
	FAN SWITCH	M43	HA-HEATER HA-A/C, M
	FRONT DOOR KEY CYLINDER SWITCH LH	D9	EL-D/LOCK EL-THEFT
	FRONT DOOR LOCK ACTUATOR LH	D7	EL-INT/L EL-MULTI EL-THEFT
	FRONT DOOR LOCK ACTUATOR RH	D37	EL-THEFT
	FRONT DOOR SPEAKER LH	D12	EL-AUDIO
	FRONT DOOR SPEAKER RH	D42	EL-AUDIO
	FRONT WIPER AMP.	M79	EL-WIPER
	FRONT WIPER MOTOR	M78	EL-WIPER
	FUSE BLOCK (ACCESSORY RELAY, IGNITION RELAY AND BLOWER MOTOR RELAY)	M10	EL-POWER
	HEADLAMP BATTERY SAVER CONTROL UNIT	M115	EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL
	HEADLAMP BATTERY SAVER CONTROL UNIT	M116	EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL
	HEATED SEAT SWITCH LH	M52	EL-HSEAT
	HEATED SEAT SWITCH RH	M53	EL-HSEAT
	ILLUMINATION CONTROL SWITCH	M19	EL-ILL
	INTEGRATED HOMELINK [™] TRANSMITTER	R5	EL-TRNSMT
	INTAKE DOOR MOTOR	M138	HA-A/C, A
	POWER WINDOW MAIN SWITCH	D6	EL-WINDOW
	POWER WINDOW MAIN SWITCH (DOOR LOCK AND UNLOCK SWITCH LH)	D6	EL-D/LOCK EL-MULTI
	SHIELD WIRE (FRONT DOOR SPEAKER LH)	D12	EL-AUDIO
	SHIELD WIRE (FRONT DOOR SPEAKER RH)	D42	EL-AUDIO
	SHIELD WIRE (TWEETER RH)	M64	EL-AUDIO
	SMART ENTRANCE CONTROL UNIT	M121	EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL EL-INT/L EL-CHIME EL-DEF EL-SROOF EL-WINDOW EL-D/LOCK EL-MULTI EL-THEFT EL-TRNSMT
	SPOT LAMP	R6	EL-INT/L
VANITY MIRROR LH (ILLUMINATION)	R5	EL-INT/L	
VANITY MIRROR RH (ILLUMINATION)	R3	EL-INT/L	
E13/E41	AMBIENT AIR TEMPERATURE SWITCH	E34	EC-FICD HA-A/C, A HA-A/C, M
	ASCD HOLD RELAY	E22 E27	EL-ASCD

GROUND



Ground Distribution (Cont'd)

EARTH	CONNECT TO	CONN. NO.	CELL CODE	
E13/E41	ATP RELAY	E24	EL-WARN	GI
	BRAKE FLUID LEVEL SWITCH	E28	EL-WARN	MA
	COMBINATION SWITCH (FRONT FOG LAMP SWITCH)	E63	EL-F/FOG	EM
	COMBINATION SWITCH (FRONT WIPER SWITCH)	E9	EL-WIPER	
	COMBINATION SWITCH (LIGHTING SWITCH)	E7	EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL EL-CHIME	LC
	COMBINATION SWITCH (REAR WIPER SWITCH)	E114	EL-WIP/R	EC
	DAYTIME LIGHT CONTROL UNIT	E45	EL-DTRL EL-THEFT	
	FRONT FOG LAMP LH	E61	EL-F/FOG	FE
	FRONT FOG LAMP RH	E62	EL-F/FOG	
	FRONT TURN SIGNAL LAMP LH	E12	EL-TURN	CL
	FRONT TURN SIGNAL LAMP RH	E40	EL-TURN	
	FRONT WASHER MOTOR	E44	EL-WIPER	MT
	HEADLAMP LH	E29	EL-H/LAMP EL-THEFT	
	HEADLAMP RH	E38	EL-H/LAMP EL-DTRL EL-THEFT	AT
	HOOD SWITCH	E31	EL-THEFT	
	PARKING LAMP LH	E12	EL-TAIL/L	TF
	PARKING LAMP RH	E40	EL-TAIL/L	
	REAR WASHER MOTOR	E43	EL-WIP/R	PD
	WASHER LEVEL SWITCH	E42	EL-WARN	
	E101	ALTERNATOR	E105	SC-CHARGE
POWER STEERING OIL PRESSURE SWITCH		E110	EC-PST/SW	SU
E112	ABS ACTUATOR AND ELECTRIC UNIT	E111	BR-ABS	
	SHIELD WIRE (FRONT WHEEL SENSOR LH)	E14	BR-ABS	BR
	SHIELD WIRE (FRONT WHEEL SENSOR RH)	E51	BR-ABS	
	SHIELD WIRE (REAR WHEEL SENSOR LH)	B8	BR-ABS	ST
	SHIELD WIRE (REAR WHEEL SENSOR RH)	B69	BR-ABS	
F20/F25	DATA LINK CONNECTOR FOR GST	M9	EC-MIL/DL	RS
	DISTRIBUTOR (CAMSHAFT POSITION SENSOR)	F7	EC-CMPS	
	DISTRIBUTOR (IGNITION)	F7	EC-IGN/SG	BT
	ECM	F24	EC-MAIN	
	NATS IMMU	E113	EL-NATS	HA
	REAR HEATED OXYGEN SENSOR LH	F3	EC-RRO2LH EC-RO2H-L	
	REAR HEATED OXYGEN SENSOR RH	F1	EC-RRO2RH EC-RO2H-R	SC
SHIELD WIRE (ABSOLUTE PRESSURE SENSOR)	E88	EC-AP/SEN		

EL

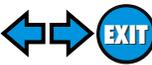
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GROUND

Ground Distribution (Cont'd)

EARTH	CONNECT TO	CONN. NO.	CELL CODE
F20/F25	SHIELD WIRE [CRANKSHAFT POSITION SENSOR (OBD)]	F110	EC-CKPS
	SHIELD WIRE [DISTRIBUTOR (CAMSHAFT POSITION SENSOR)]	F7	EC-CMPS
	SHIELD WIRE (EVAP CONTROL SYSTEM PRESSURE SENSOR)	B102	EC-PRE/SE
	SHIELD WIRE (FRONT HEATED OXYGEN SENSOR LH)	F4	EC-FRO2LH EC-FO2H-L EC-FUELLH
	SHIELD WIRE (FRONT HEATED OXYGEN SENSOR RH)	F2	EC-FRO2RH EC-FO2H-R EC-FUELRH
	SHIELD WIRE (KNOCK SENSOR)	F102	EC-KS
	SHIELD WIRE (MASS AIR FLOW SENSOR)	F10	EC-MAFS
	SHIELD WIRE (REAR HEATED OXYGEN SENSOR LH)	F3	EC-RRO2LH EC-RO2H-L
	SHIELD WIRE (REAR HEATED OXYGEN SENSOR RH)	F1	EC-RRO2RH EC-RO2H-R
	SHIELD WIRE (THROTTLE POSITION SENSOR)	F8	EC-TPS AT-TPS
	TCM (TRANSMISSION CONTROL MODULE)	M120	AT-MAIN
B11/B22/D210	BACK DOOR LOCK ACTUATOR	D207	EL-THEFT
	BACK DOOR KEY CYLINDER SWITCH	D201	EL-D/LOCK EL-THEFT
	BACK DOOR SWITCH	D208	EL-INT/L EL-D/LOCK EL-MULTI EL-THEFT
	DOOR MIRROR DEFOGGER RELAY	B112	EL-DEF
	FUEL PUMP	B13	EC-F/PUMP
	FUEL TANK GAUGE UNIT	B12	EC-TFTS EL-METER EL-WARN
	FRONT DOOR SWITCH LH	B9	RS-SRS EL-H/LAMP EL-DTRL EL-TAIL/L EL-F/FOG EL-ILL EL-INT/L EL-CHIME EL-SROOF EL-WINDOW EL-D/LOCK EL-MULTI EL-THEFT
	GLASS HATCH SWITCH	D209	EL-INT/L EL-WIP/R EL-THEFT
	HEATED SEAT LH	B5	EL-HSEAT
	HIGH-MOUNTED STOP LAMP	D302	EL-STOP/L
	LICENSE PLATE LAMP	D202 D203	EL-TAIL/L
	LUGGAGE ROOM LAMP	D103	EL-INT/L
	POWER SEAT LH	B7	EL-SEAT
	POWER SOCKET	B4	EL-CIGAR
	POWER SOCKET RELAY	B111	EL-CIGAR
	REAR COMBINATION LAMP LH (BACK-UP LAMP LH)	B26	EL-BACK/L
	REAR COMBINATION LAMP LH (STOP LAMP LH)	B26	EL-TAIL/L EL-STOP/L
REAR COMBINATION LAMP LH (TAIL LAMP LH)	B26	EL-TAIL/L EL-STOP/L	

GROUND



Ground Distribution (Cont'd)

EARTH	CONNECT TO	CONN. NO.	CELL CODE
B11/B22/D210	REAR COMBINATION LAMP LH (TURN SIGNAL LAMP LH)	B26	EL-TURN
	REAR WIPER AMP.	B14	EL-WIP/R
	REAR DOOR LOCK ACTUATOR LH	D54	EL-THEFT
	REAR WIPER MOTOR	D212	EL-WIP/R
	REAR SPEAKER AMP.	B46	EL-AUDIO
	SEAT BELT BUCKLE SWITCH	B6	RS-SRS EL-WARN EL-CHIME
B55/B75	A/T DEVICE (PARK POSITION SWITCH and OVER-DRIVE CONTROL SWITCH)	B59	AT-NONDTC AT-SHIFT
	ASHTRAY ILLUMINATION	B60 B76	EL-ILL
	HEATED SEAT RH	B56	EL-HSEAT
	NEUTRAL POSITION SWITCH	B203 B207	EC-PNP/SW
	PARK/NEUTRAL POSITION SWITCH	B66	EC-PNP/SW SC-START EL-ASCD
	POWER SEAT RH	B57	EL-SEAT
	REAR COMBINATION LAMP RH (BACK-UP LAMP RH)	B74	EL-BACK/L
	REAR COMBINATION LAMP RH (STOP LAMP RH)	B74	EL-TAIL/L EL-STOP/L
	REAR COMBINATION LAMP RH (TAIL LAMP RH)	B74	EL-TAIL/L EL-STOP/L
	REAR COMBINATION LAMP RH (TURN SIGNAL LAMP RH)	B74	EL-TURN
	REAR DOOR LOCK ACTUATOR RH	D74	EL-THEFT
	TIRE CARRIER SWITCH	B301	EL-WARN
B108	SHIELD WIRE (SATELLITE SENSOR LH)	B107	RS-SRS
B127	SHIELD WIRE (SATELLITE SENSOR RH)	B128	RS-SRS
D305	REAR WINDOW DEFOGGER	D304	EL-DEF

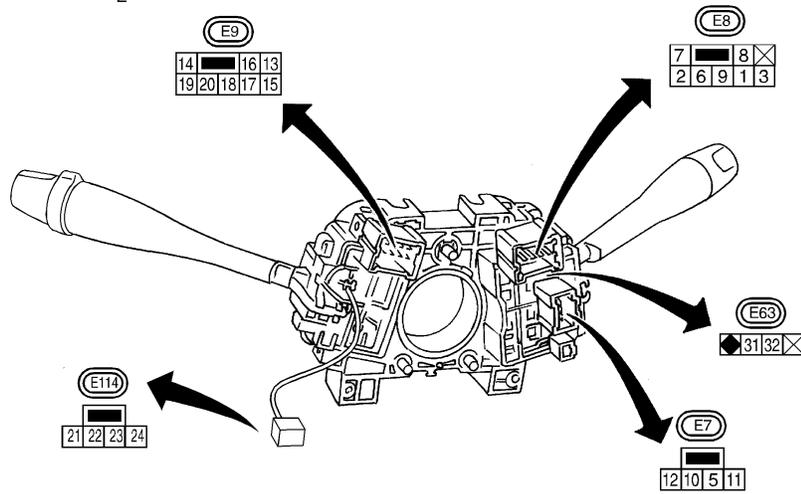
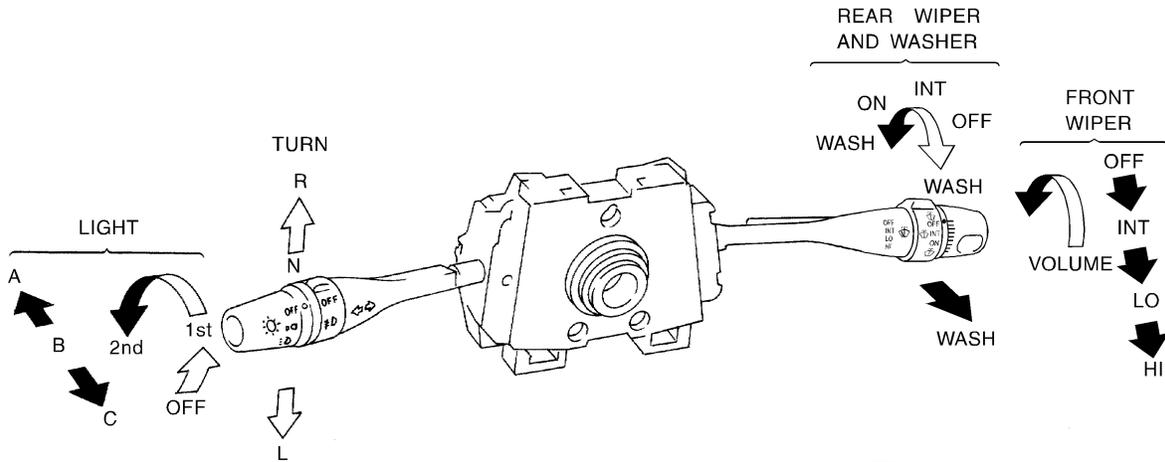
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COMBINATION SWITCH

Check

Check

NAEL0009

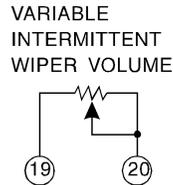


LIGHTING SWITCH

	OFF			1			2		
	A	B	C	A	B	C	A	B	C
5			○			○	○	○	○
6			○			○	○	○	○
7									○
8			○			○	○	○	○
9			○			○	○	○	○
10									○
11						○	○	○	○
12						○	○	○	○

FRONT WIPER SWITCH

	OFF	INT	LO	HI	WASH
13	○	○			
14	○	○	○		
15		○			
16				○	
17		○	○	○	○
18					○



FOG LAMP SWITCH

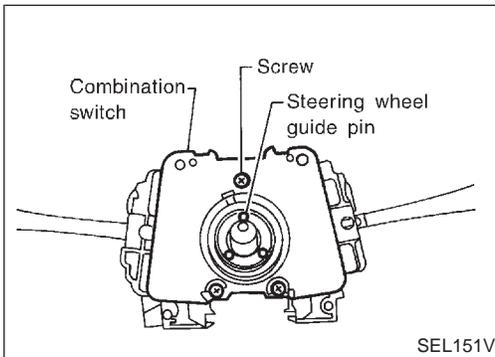
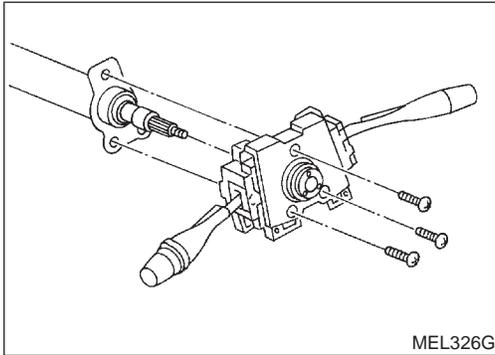
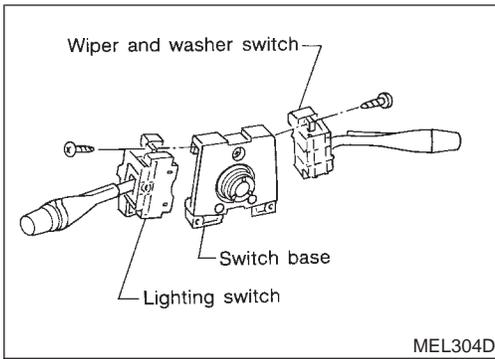
	OFF	ON
31		○
32		○

TURN SIGNAL SWITCH

	L	N	R
1	○		○
2			○
3	○		

REAR WIPER SWITCH

	WASH	OFF	INT	ON	WASH
21			○		
22				○	
23	○			○	○
24	○		○	○	○



Replacement

For removal and installation of spiral cable, refer to ^{NAEL0010}RS-20, "Installation — Air Bag Module and Spiral Cable", "SUPPLEMENTAL RESTRAINT SYSTEM (SRS)".

- Each switch can be replaced without removing combination switch base.
- To remove combination switch base, remove base attaching screw.
- Before installing the steering wheel, align the steering wheel guide pins with the screws which secure the combination switch as shown in the left figure.

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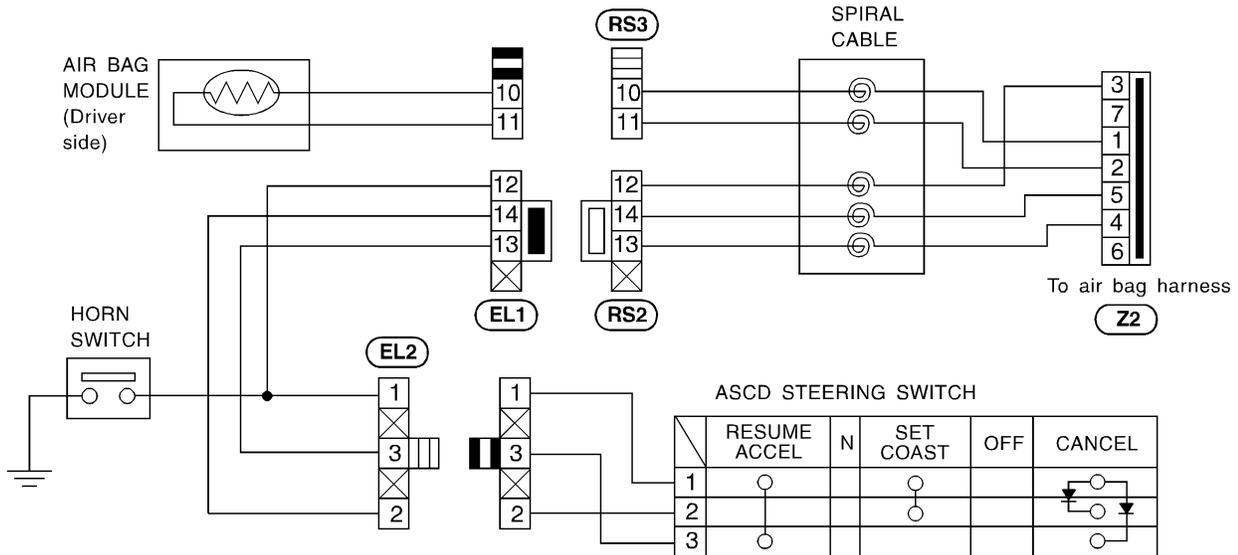
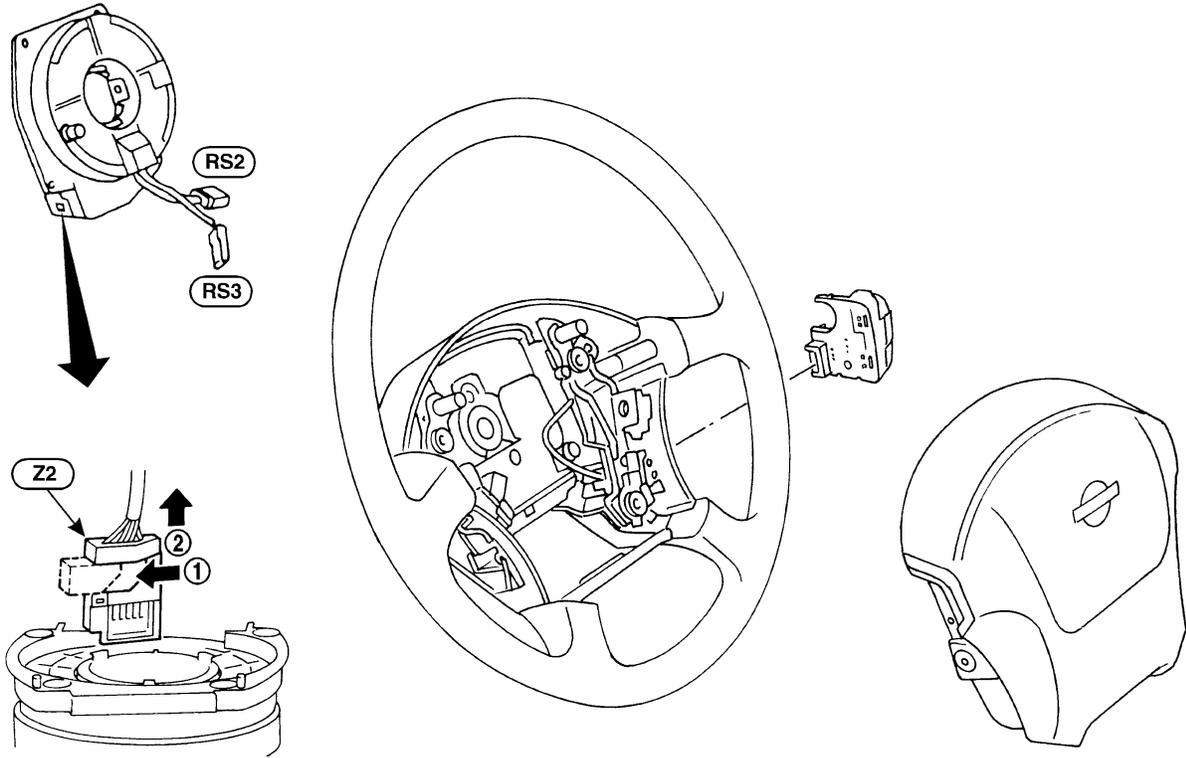
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STEERING SWITCH

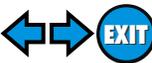
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Check

NAEL0011

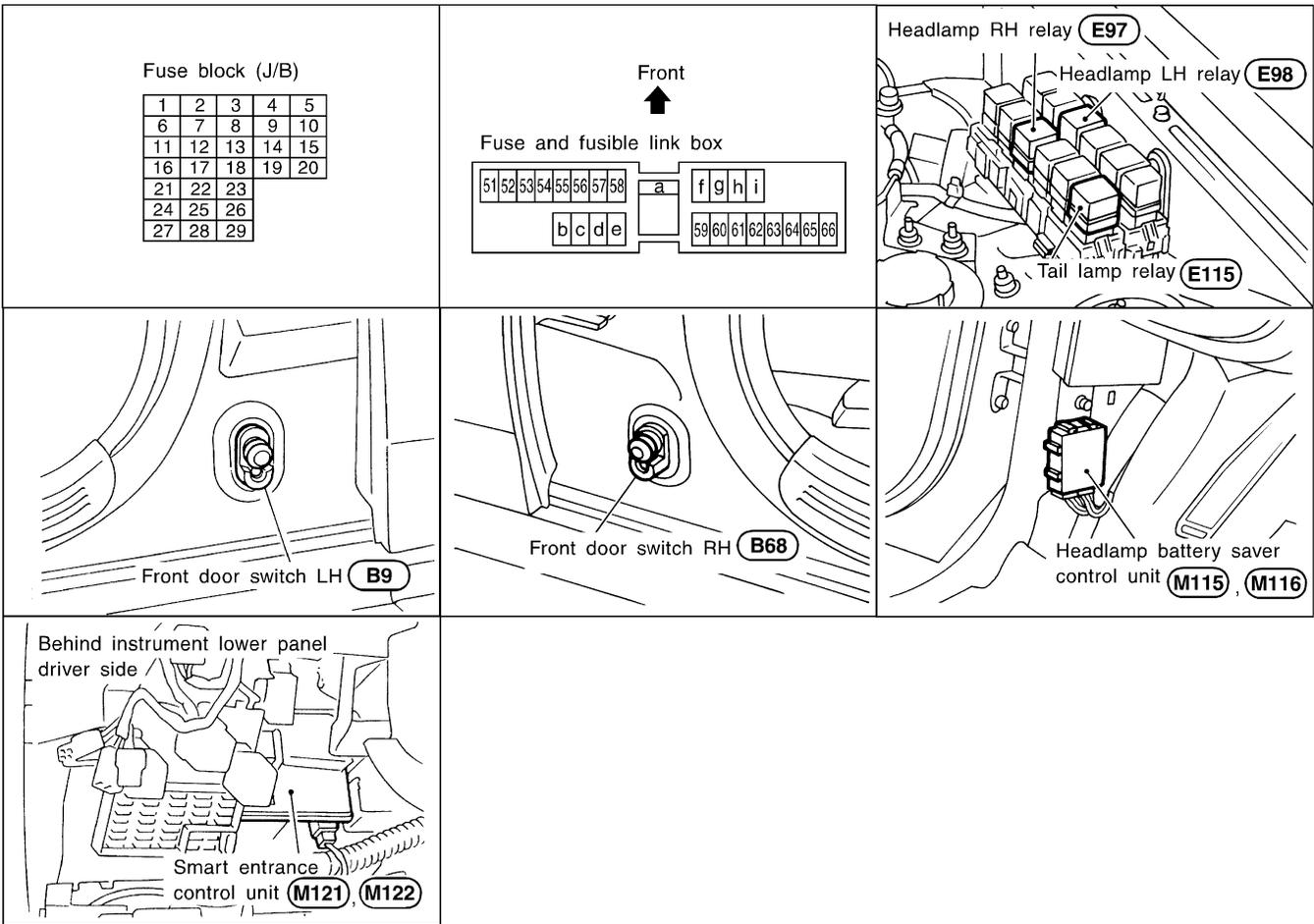


MEL031L



Component Parts and Harness Connector Location

NAEL0159



SEL044W

System Description

NAEL0012

The headlamp operation is controlled by the lighting switch which is built into the combination switch and headlamp battery saver control unit. And the headlamp battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

OUTLINE

NAEL0012S04

Power is supplied at all times

- to headlamp LH relay terminals 2 and 3
- through 15A fuse (No. 60, located in the fuse and fusible link box), and
- to headlamp RH relay terminals 2 and 3
- through 15A fuse (No. 59, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 7.5A fuse [No. 24, located in the fuse block (J/B)].

When the ignition switch is in the ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 16, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 7.5A fuse [No. 11, located in the fuse block (J/B)]

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

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IDX

HEADLAMP (FOR USA)

System Description (Cont'd)

When Ignition Switch is in ON or START Position

NAEL0012S0401

Ground is supplied

- to headlamp LH relay terminal 1 from headlamp battery saver control unit terminal 2
- through headlamp battery saver control unit terminal 3, and
- through body grounds M4 and M66, and
- to headlamp RH relay terminal 1 from headlamp battery saver control unit terminal 8
- through headlamp battery saver control unit terminal 9, and
- through body grounds M77 and M111.

Headlamp relays (LH and RH) are then energized.

When Ignition Switch is in OFF or ACC Position

NAEL0012S0402

When lighting switch is in 2ND (or 1ST) position, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13
- from lighting switch terminal 11.

And then, ground is also supplied to headlamp LH and RH relays terminal 1 from headlamp battery saver control unit. Headlamp relays (LH and RH) are then energized.

LOW BEAM OPERATION

NAEL0012S01

When the lighting switch is turned to the 2ND position and placed in LOW ("B") position, power is supplied

- from lighting switch terminal 10
- to terminal 2 of the LH headlamp, and
- from lighting switch terminal 7
- to terminal 2 of the RH headlamp.

Terminal 3 of each headlamp supplies ground through body grounds E13 and E41.

With power and ground supplied, the headlamp(s) will illuminate.

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

NAEL0012S02

When the lighting switch is turned to the 2ND position and placed in HIGH ("A") position or PASS ("C") position, power is supplied

- from lighting switch terminal 6
- to terminal 1 of the RH headlamp, and
- from lighting switch terminal 9
- to terminal 1 of the LH headlamp, and
- to combination meter terminal 33 for the high beam indicator.

Ground is supplied to terminal 19 of the combination meter through body grounds M77 and M111.

Terminal 3 of each headlamp supplies ground through body grounds E13 and E41.

With power and ground supplied, the high beams and the high beam indicator illuminate.

BATTERY SAVER CONTROL

NAEL0012S05

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps illuminate, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 1 of the headlamp LH and RH relay from headlamp battery saver control unit terminals 2 and 8 is terminated.

Then the headlamps are turned off.

The headlamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated.

When the lighting switch is turned from OFF to 2ND after headlamps are turned to off by the battery saver control, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to headlamp LH and RH relays terminal 1 from headlamp battery saver control unit terminals 2 and 8.

Then headlamps illuminate again.

THEFT WARNING SYSTEM

The theft warning system will flash the high beams if the system is triggered. Refer to “THEFT WARNING SYSTEM” (EL-245).

NAEL0012S03

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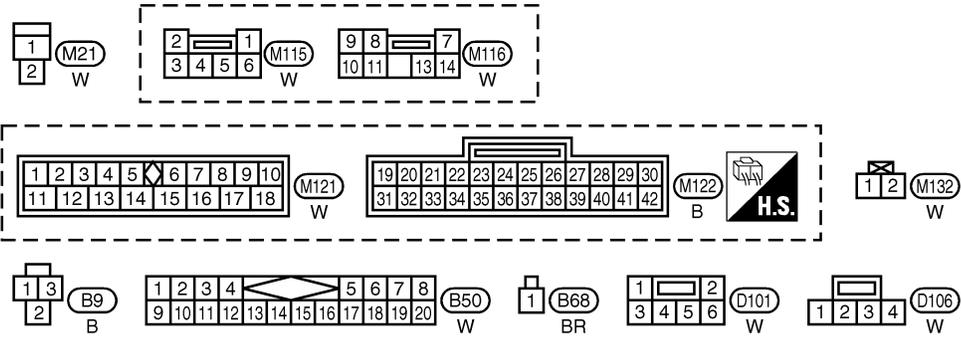
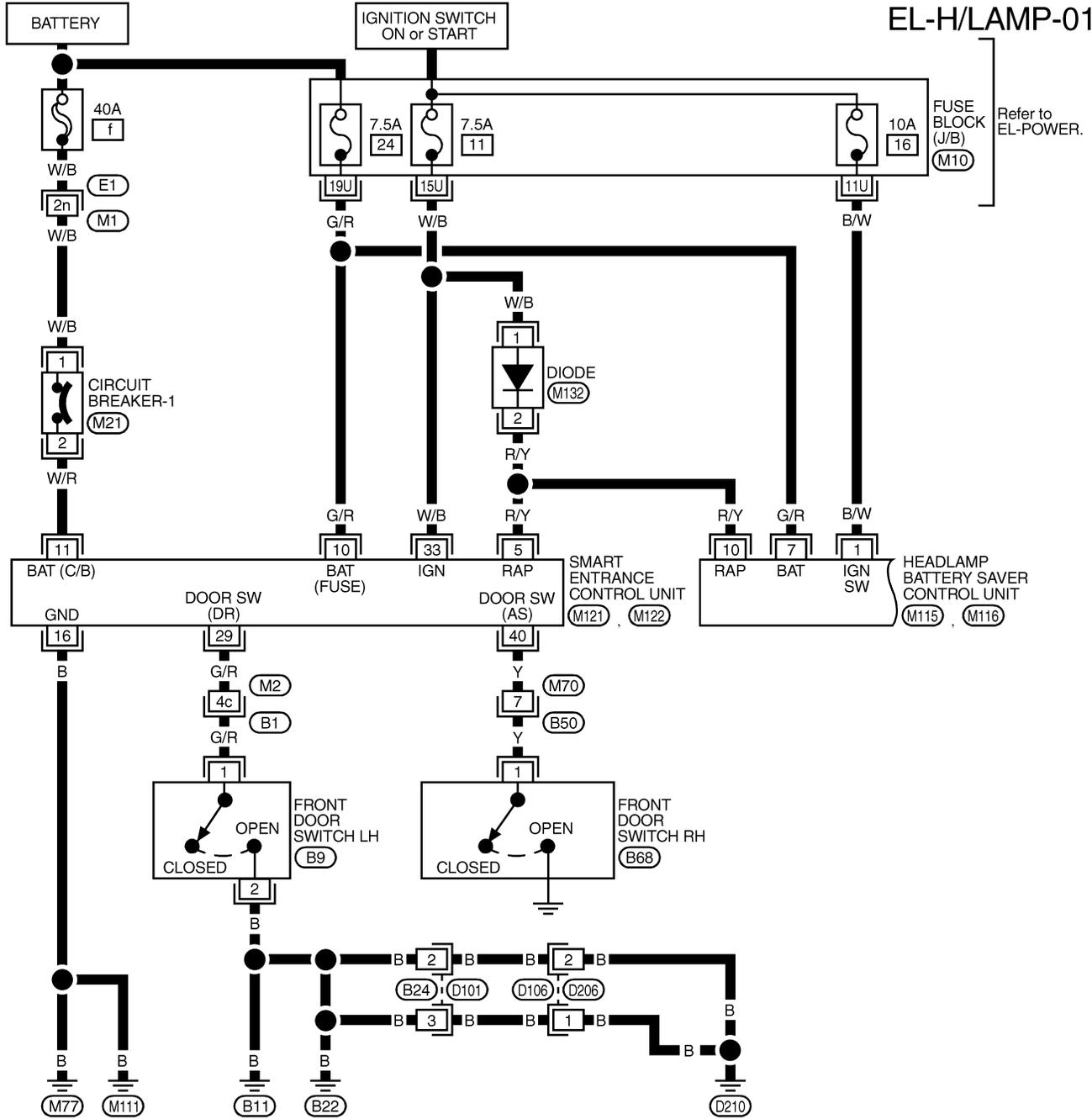
HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP —

Wiring Diagram — H/LAMP —

NAEL0013

EL-H/LAMP-01



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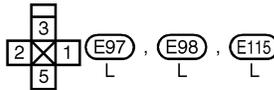
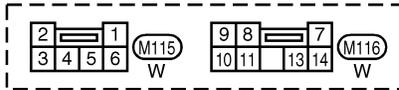
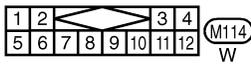
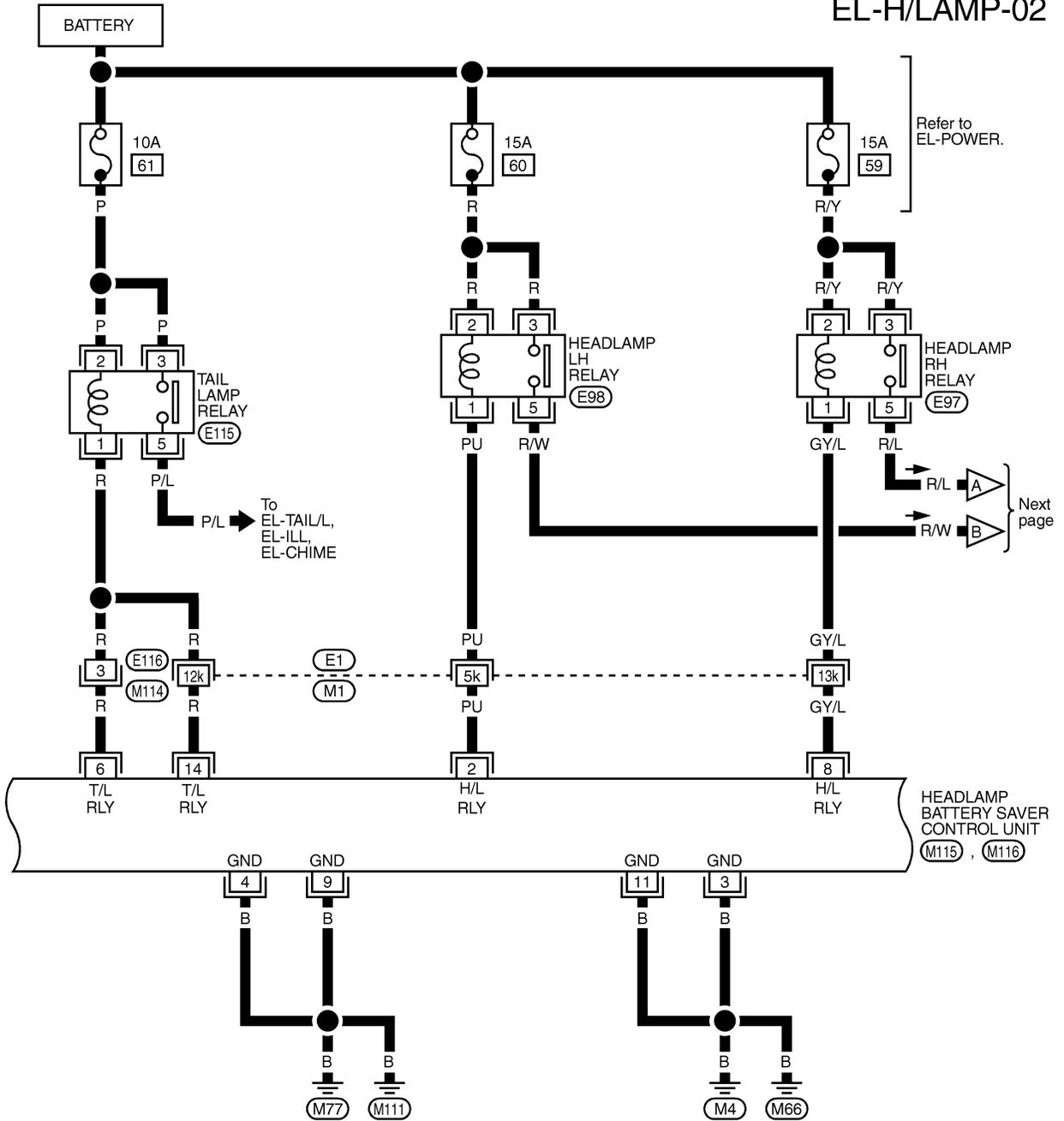
- (M1), (E1)
- (M2), (B1)
- (M10)

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HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP — (Cont'd)

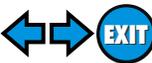
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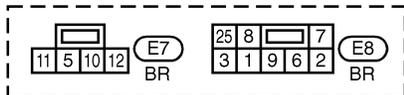
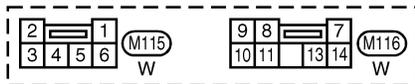
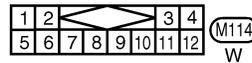
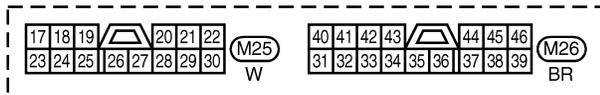
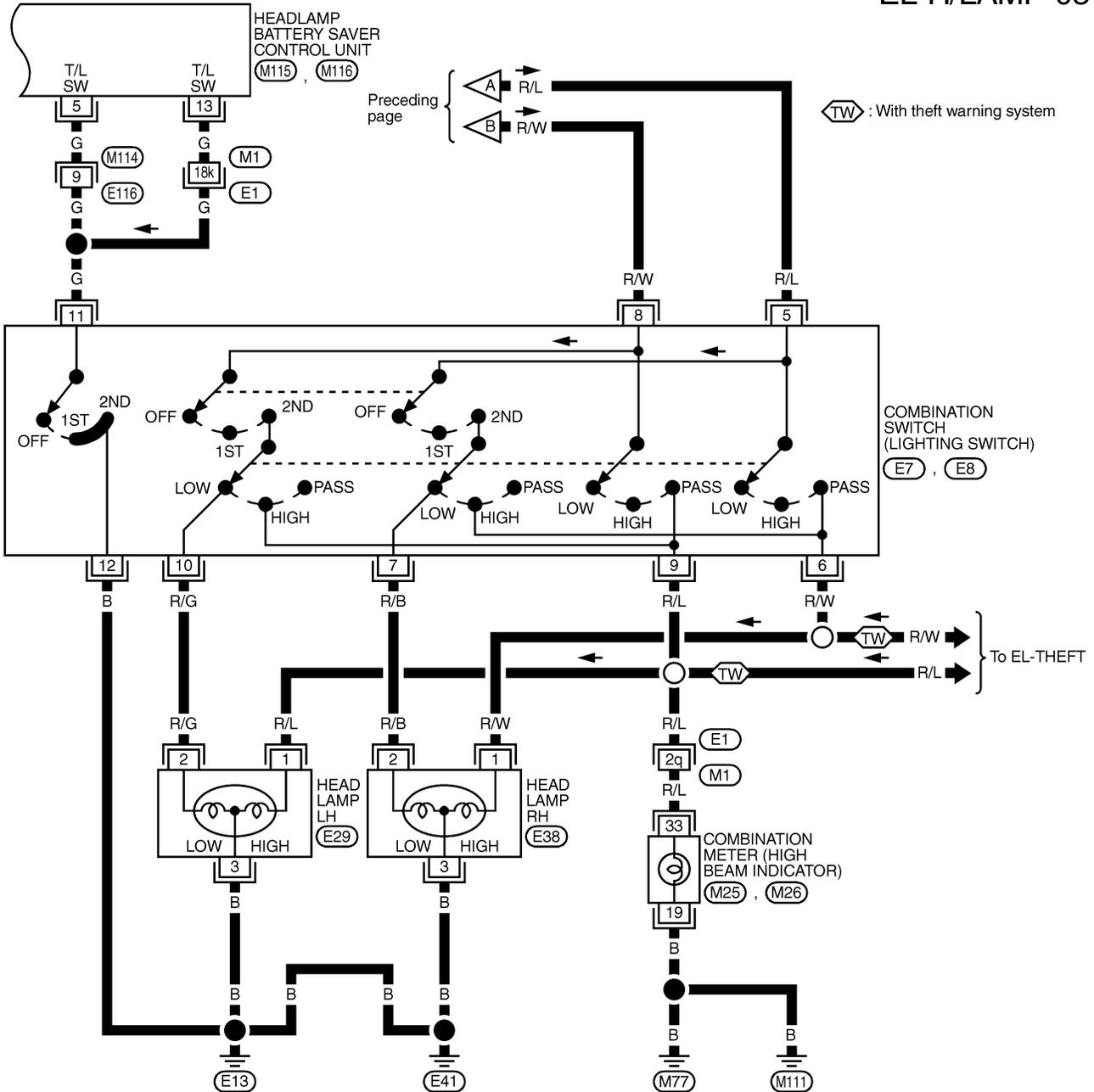
(M1), (E1)

HEADLAMP (FOR USA)



Wiring Diagram — H/LAMP — (Cont'd)

EL-H/LAMP-03



Refer to last page (Foldout page).

(M1), (E1)

MEL200M

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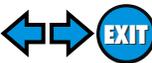
HEADLAMP (FOR USA)

Trouble Diagnoses

NAEL0014

Symptom	Possible cause	Repair order
Neither headlamp operates.	<ol style="list-style-type: none"> 1. 7.5A fuse 2. Lighting switch 3. Headlamp battery saver control unit 	<ol style="list-style-type: none"> 1. Check 7.5A fuse [No. 24, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 7 of headlamp battery saver control unit. 2. Check Lighting switch. 3. Check headlamp battery saver control unit.
LH headlamp (low and high beam) does not operate, but RH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> 1. Bulb 2. LH headlamp ground circuit 3. 15A fuse 4. Headlamp LH relay 5. Headlamp LH relay circuit 6. Lighting switch 7. Headlamp battery saver control unit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check harness between LH headlamp and ground. 3. Check 15A fuse (No. 60, located in fusible link and fuse box). Verify battery positive voltage is present at terminals 2 and 3 of headlamp LH relay. 4. Check headlamp LH relay. 5. Check harness between headlamp LH relay and lighting switch. Check harness between headlamp LH relay and headlamp battery saver control unit. 6. Check lighting switch. 7. Check headlamp battery saver control unit.
RH headlamp (low and high beam) does not operate, but LH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> 1. Bulb 2. RH headlamp ground circuit 3. 15A fuse 4. Headlamp RH relay 5. Headlamp RH relay circuit 6. Lighting switch 7. Headlamp battery saver control unit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check harness between RH headlamp and ground. 3. Check 15A fuse (No. 59, located in fusible link and fuse box). Verify battery positive voltage is present at terminals 2 and 3 of headlamp RH relay. 4. Check headlamp RH relay. 5. Check harness between headlamp RH relay and lighting switch. Check harness between headlamp RH relay and headlamp battery saver control unit. 6. Check lighting switch. 7. Check headlamp battery saver control unit.
LH high beam does not operate, but LH low beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Open in LH high beams circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check R/L wire between lighting switch and LH headlamp for an open circuit. 3. Check lighting switch.
LH low beam does not operate, but LH high beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Open in LH low beams circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check R/G wire between lighting switch and LH headlamp for an open circuit. 3. Check lighting switch.
RH high beam does not operate, but RH low beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Open in RH high beams circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check R/W wire between lighting switch and RH headlamp for an open circuit. 3. Check lighting switch.
RH low beam does not operate, but RH high beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Open in RH low beams circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check R/B wire between lighting switch and RH headlamp for an open circuit. 3. Check lighting switch.
High beam indicator does not work.	<ol style="list-style-type: none"> 1. Bulb 2. Ground circuit 3. Open in high beam circuit 	<ol style="list-style-type: none"> 1. Check bulb in combination meter. 2. Check harness between high beam indicator and ground. 3. Check R/L wire between lighting switch and combination meter for an open circuit.

HEADLAMP (FOR USA)



Trouble Diagnoses (Cont'd)

Symptom	Possible cause	Repair order	
Battery saver control does not operate properly.	<ol style="list-style-type: none"> 1. RAP signal circuit 2. Driver or passenger side door switch circuit 3. Lighting switch circuit 4. Headlamp battery saver control unit 5. Smart entrance control unit 	<ol style="list-style-type: none"> 1. Check harness between headlamp battery saver control unit terminal 10 and smart entrance control unit terminal 5 for open or short circuit. 2. Check harness between smart entrance control unit and driver or passenger side door switch for open or short circuit. Check driver or passenger side door switch ground circuit. Check driver or passenger side door switch. 3. Check harness between headlamp battery saver control unit terminals 5 or 13 and lighting switch terminal 11 for open or short circuit. Check harness between lighting switch terminal 12 and ground. Check lighting switch. 4. Check headlamp battery saver control unit. 5. Check smart entrance control unit. (EL-278) 	GI MA EM LC EC FE CL

BATTERY SAVER CONTROL UNIT INSPECTION TABLE

NAEL0014S01

Terminal No.	Item	Condition		Voltage (Approximate value)	
1	Ignition ON power supply	Ignition switch	OFF or ACC	Less than 1V	AT
			ON or START	Battery voltage	
2	Headlamp LH relay	Ignition switch (with lighting switch OFF)	OFF or ACC	Battery voltage	TF
			ON or START	Less than 1V	
		Lighting switch (with ignition switch OFF)	OFF	Battery voltage	PD
			1ST or 2ND	Less than 1V	
3	Ground	—		—	AX
4	Ground	—		—	
5	Tail lamp switch	Lighting switch	OFF	Battery voltage	SU
			1ST or 2ND	Less than 1V	
6	Tail lamp relay	Ignition switch (with lighting switch OFF)	OFF or ACC	Battery voltage	BR
			ON or START	Less than 1V	
		Lighting switch (with ignition switch OFF)	OFF	Battery voltage	ST
			1ST or 2ND	Less than 1V	
7	Power supply	—		Battery voltage	RS
8	Headlamp RH relay	Ignition switch (with lighting switch OFF)	OFF or ACC	Battery voltage	BT
			ON or START	Less than 1V	
		Lighting switch (with ignition switch OFF)	OFF	Battery voltage	HA
			1ST or 2ND	Less than 1V	
9	Ground	—		—	SC

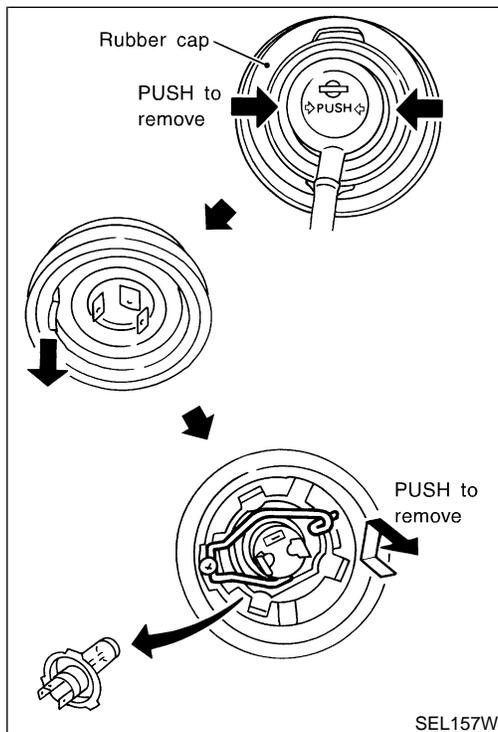
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HEADLAMP (FOR USA)

Trouble Diagnoses (Cont'd)

Terminal No.	Item	Condition		Voltage (Approximate value)
10	RAP signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Less than 1V
			ON or START	Battery voltage
11	Ground	—		—
13	Tail lamp switch	Lighting switch	OFF	Battery voltage
			1ST or 2ND	Less than 1V
14	Tail lamp relay	Ignition switch (with lighting switch OFF)	OFF or ACC	Battery voltage
			ON or START	Less than 1V
		Lighting switch (with ignition switch OFF)	OFF	Battery voltage
			1ST or 2ND	Less than 1V



Bulb Replacement

NAEL0015

The headlamp is a semi-sealed beam type which uses a replaceable halogen bulb. The bulb can be replaced from the engine compartment side without removing the headlamp body.

- **Grasp only the plastic base when handling the bulb. Never touch the glass envelope.**

1. Disconnect the battery cable.
2. Disconnect the harness connector from the back side of the bulb.
3. Pull off the rubber cap.
4. Remove the headlamp bulb carefully. Do not shake or rotate the bulb when removing it.
5. Install in the reverse order of removal.

CAUTION:

Do not leave headlamp reflector without bulb for a long period of time. Dust, moisture, smoke, etc. entering headlamp body may affect the performance of the headlamp. Remove headlamp bulb from the headlamp reflector just before a replacement bulb is installed.

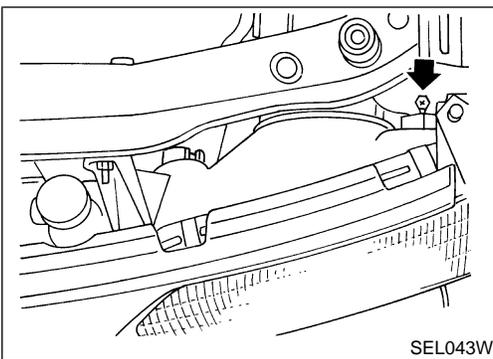
Aiming Adjustment

NAEL0016

Before performing aiming adjustment, check the following.

For details, refer to the regulations in your own country.

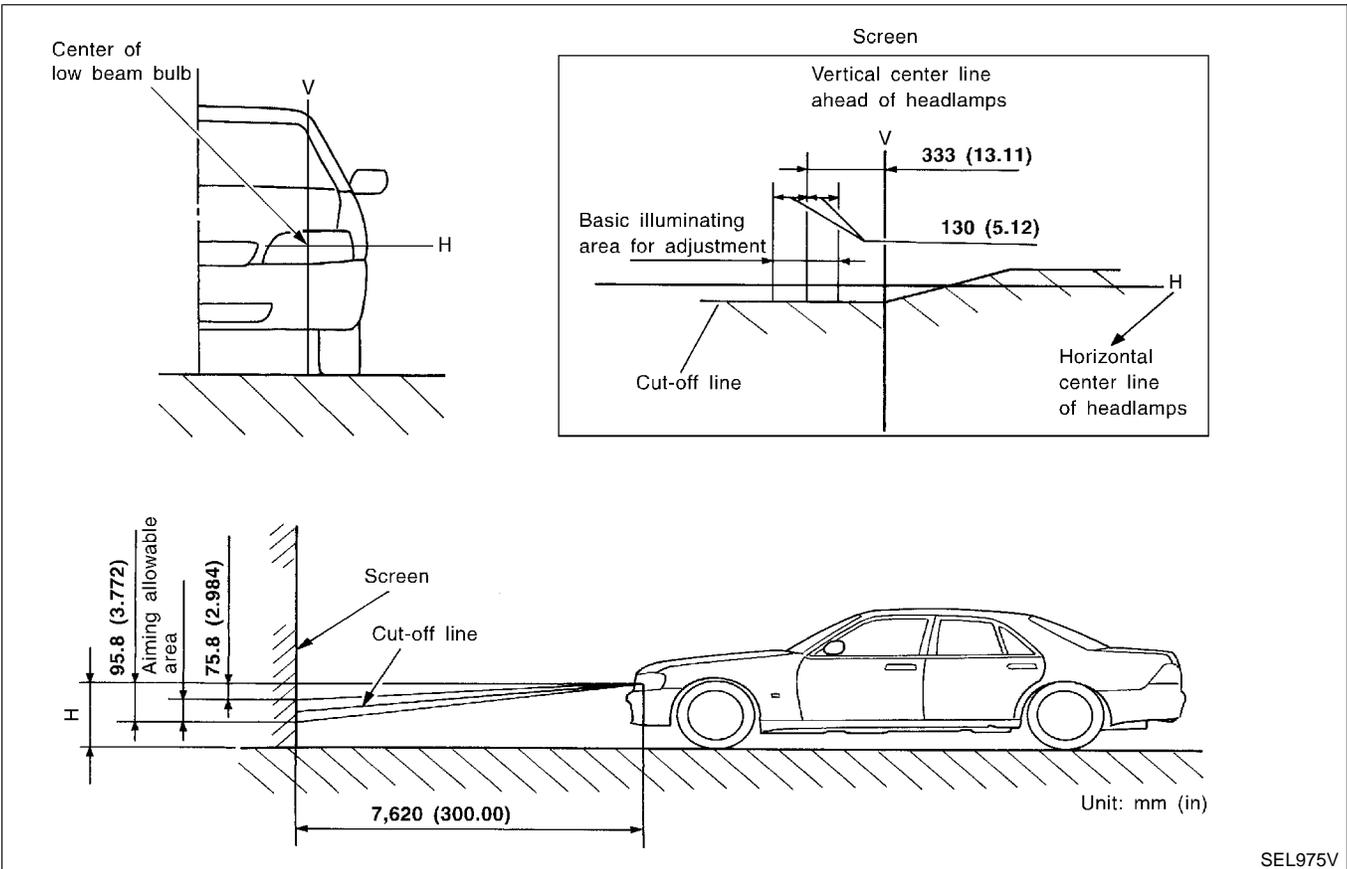
- 1) Keep all tires inflated to correct pressures.
- 2) Place vehicle flat surface.
- 3) See that there is no-load in vehicle (coolant, engine oil filled up to correct level and full fuel tank) other than the driver (or equivalent weight placed in driver's position).



LOW BEAM

NAEL0016S02

1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.
 - **First tighten the adjusting screw all the way and then make adjustment by loosening the screw.**



If the vehicle front body has been repaired and/or the headlamp assembly has been replaced, check aiming. Use the aiming chart shown in the figure.

- **Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.**

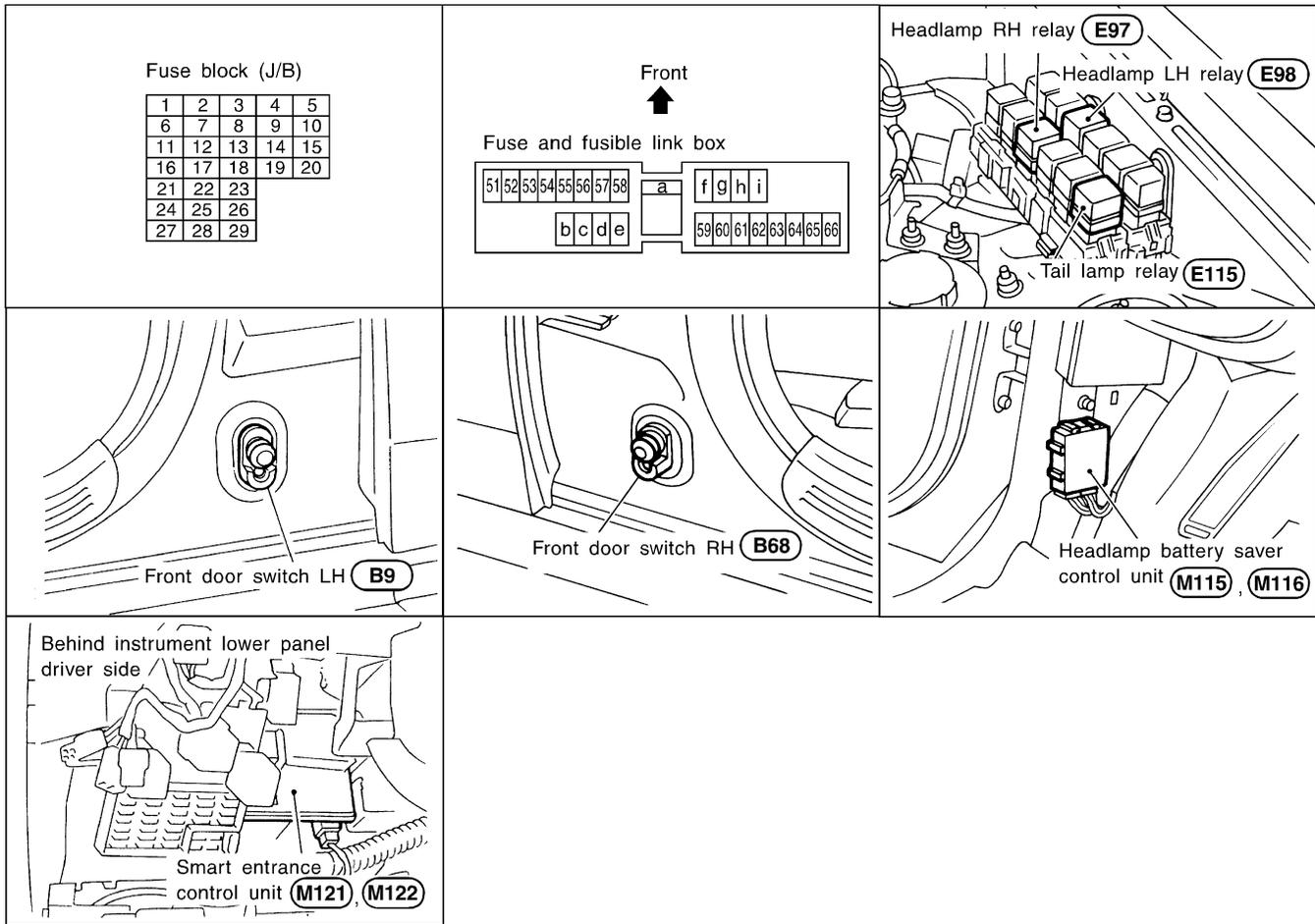
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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0161



SEL044W

System Description

NAEL0017

The headlamp system for Canada vehicles contains a daytime light control unit that activates the high beam headlamps at approximately half illumination whenever the engine is running. If the parking brake is applied before the engine is started the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is applied.

And battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

Power is supplied at all times

- to daytime light control unit terminal 3, and
- to headlamp LH relay terminals 2 and 3
- through 15A fuse (No. 60, located in the fuse and fusible link box), and
- to daytime light control unit terminal 2 and
- to headlamp RH relay terminals 2 and 3
- through 15A fuse (No. 59, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 7.5A fuse [No. 24, located in the fuse block (J/B)].

Ground is supplied

- to daytime light control unit terminal 9 and
- to headlamp battery saver control unit terminals 4 and 11

When the ignition switch is in the ON or START position, power is also supplied

- to daytime light control unit terminal 12,
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 7.5A fuse [No. 11, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 16, located in the fuse block (J/B)].

When the ignition switch is in the START position, power is supplied

- to daytime light control unit terminal 1
- through 7.5A fuse [No. 26, located in the fuse block (J/B)].

HEADLAMP OPERATION

When Ignition Switch is in ON or START Position

NAEL0017S01 EC

Ground is supplied

NAEL0017S0103

- to headlamp LH relay terminal 1 from headlamp battery saver control unit terminal 2
- through headlamp battery saver control unit terminal 3, and
- through body grounds M4 and M66, and
- to headlamp RH relay terminal 1 from headlamp battery saver control unit terminal 8
- through headlamp battery saver control unit terminal 9, and
- through body grounds M77 and M111.

Headlamp relays (LH and RH) are then energized.

When Ignition Switch is in OFF or ACC Position

NAEL0017S0104 AT

When lighting switch is in 1ST (or 2ND) position, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13
- from lighting switch terminal 11.

And then, ground is also supplied to headlamp LH and RH relays terminal 1 from headlamp battery saver control unit. Headlamp relays (LH and RH) are then energized.

Low Beam Operation

NAEL0017S0101

When the lighting switch is turned to the 2ND position and placed in LOW (“B”) position, power is supplied

- from lighting switch terminal 7
- to RH headlamp terminal 2
- to daytime light control unit terminal 4.

Ground is supplied to RH headlamp terminal 3 through body grounds E13 and E41.

Also, when the lighting switch is turned to the 2ND position and placed in LOW (“B”) position, power is supplied

- from lighting switch terminal 10
- to LH headlamp terminal 2.

Ground is supplied

- to LH headlamp terminal 3
- from daytime light control unit terminal 7
- through daytime light control unit terminal 9
- through body grounds E13 and E41.

With power and ground supplied, the low beam headlamps illuminate.

High Beam Operation/Flash-to-pass Operation

NAEL0017S0102

When the lighting switch is turned to the 2ND position and placed in HIGH (“A”) position, power is supplied

- from lighting switch terminal 6
- to terminal 1 of RH headlamp.

When the lighting switch is turned to the 2ND position and placed in HIGH (“A”) position, power is supplied

- from lighting switch terminal 9
- to daytime light control terminal 5
- to combination meter terminal 33 for the high beam indicator, and
- through daytime light control terminal 6

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

System Description (Cont'd)

- to terminal 1 of LH headlamp.

Ground is supplied in the same manner as low beam operation.

Ground is supplied to terminal 19 of the combination meter through body grounds M77 and M111.

With power and ground supplied, the high beam headlamps and HI BEAM indicator illuminate.

BATTERY SAVER CONTROL

NAEL0017S04

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated, The RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 1 of headlamp LH and RH relays from headlamp battery saver control unit terminals 2 and 8 is terminated.

Then headlamps are turned off.

The headlamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated.

When the lighting switch is turned from OFF to 2ND after headlamps are turned to off by the battery saver control, ground is supply

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to headlamp LH and RH relays terminal 1 from headlamp battery saver control unit terminals 2 and 8.

Then headlamps illuminate again.

DAYTIME LIGHT OPERATION

NAEL0017S02

With the engine running, the lighting switch in the OFF or 1ST position and parking brake released, power is supplied

- through daytime light control unit terminal 6
- to terminal 1 of LH headlamp, and
- through terminal 3 of LH headlamp
- to daytime light control unit terminal 7, and
- through daytime light control unit terminal 8
- to terminal 1 of RH headlamp.

Ground is supplied to terminal 3 of RH headlamp through body grounds E13 and E41.

Because the high beam headlamps are now wired in series, they operate at half illumination.

OPERATION

NAEL0017S03

After starting the engine with the lighting switch in the "OFF" or "1ST" position, the headlamp high beam automatically turns on. Lighting switch operations other than the above are the same as conventional light systems.

Engine		With engine stopped									With engine running								
		OFF			1ST			2ND			OFF			1ST			2ND		
Lighting switch		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
		Headlamp	High beam	X	X	O	X	X	O	O	X	O	△*	△*	O	△*	△*	O	O
Low beam	X		X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	O	X
Clearance and tail lamp		X	X	X	O	O	O	O	O	O	X	X	X	O	O	O	O	O	O
License and instrument illumination lamp		X	X	X	O	O	O	O	O	O	X	X	X	O	O	O	O	O	O

A: "HIGH BEAM" position

B: "LOW BEAM" position

C: "FLASH TO PASS" position

O : Lamp "ON"

X : Lamp "OFF"

△ : Lamp dims. (Added functions)

*: When starting the engine with the parking brake released, the daytime light will come ON.

When starting the engine with the parking brake pulled, the daytime light won't come ON.

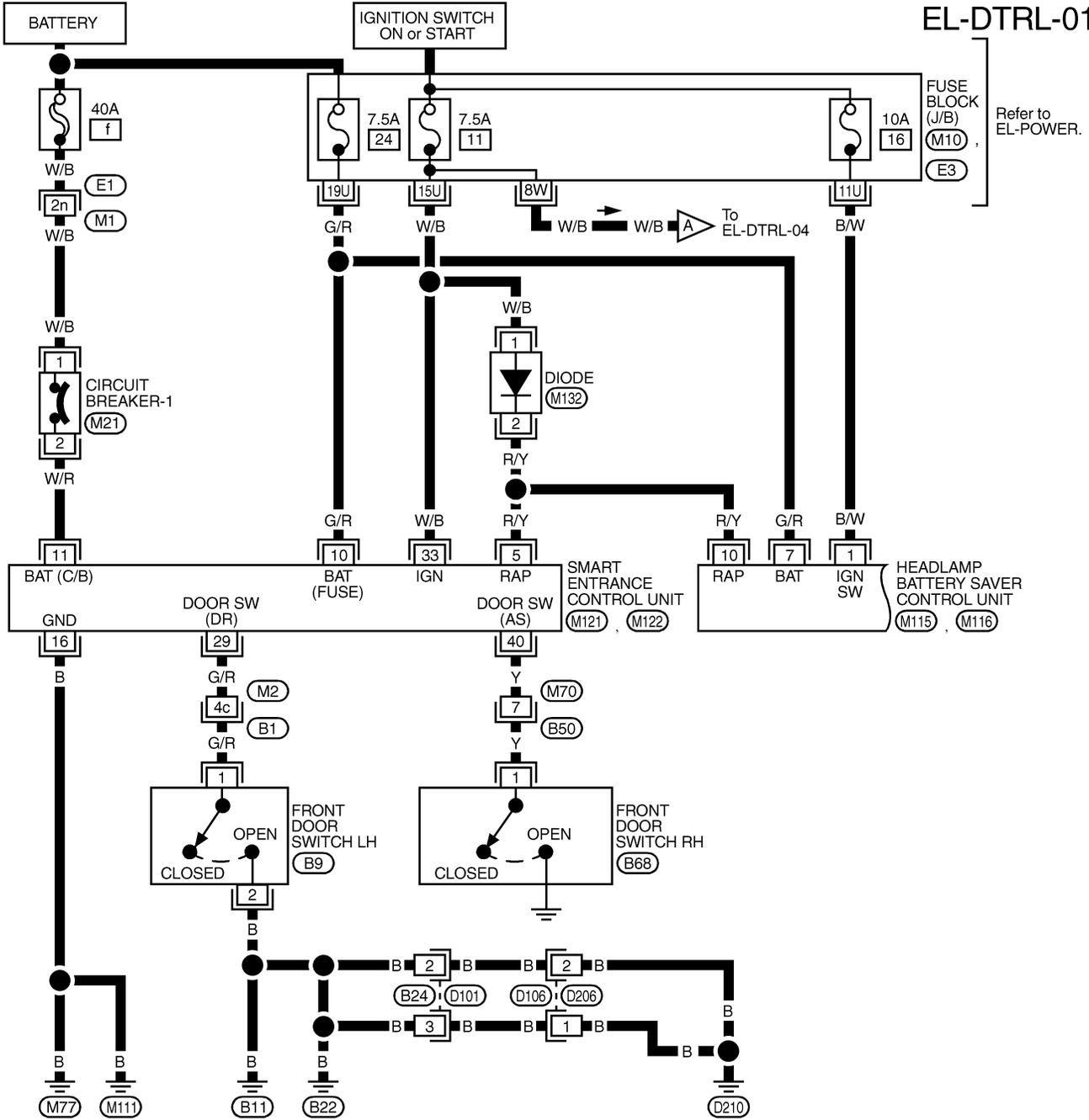
HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL —

Wiring Diagram — DTRL —

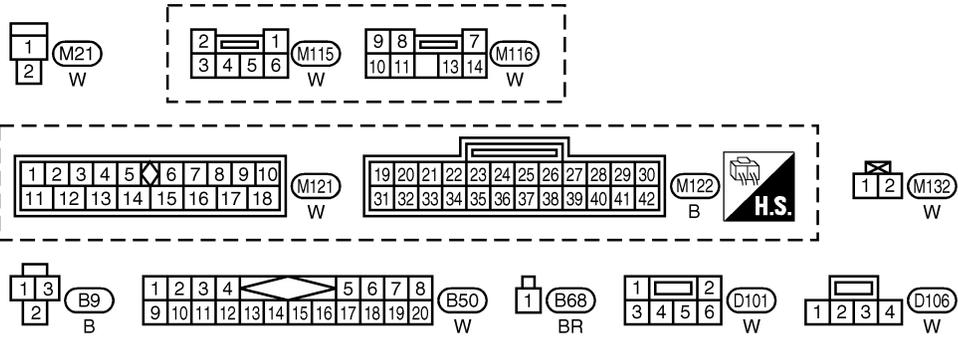
NAEL0020

EL-DTRL-01



Refer to EL-POWER.

HEADLAMP BATTERY SAVER CONTROL UNIT (M115, M116)



Refer to last page (Foldout page).

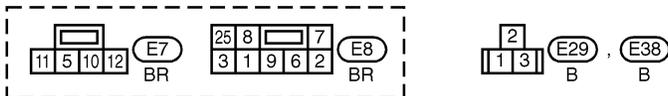
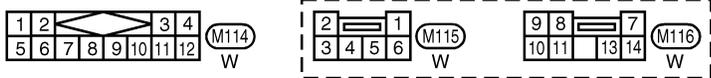
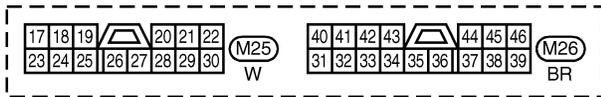
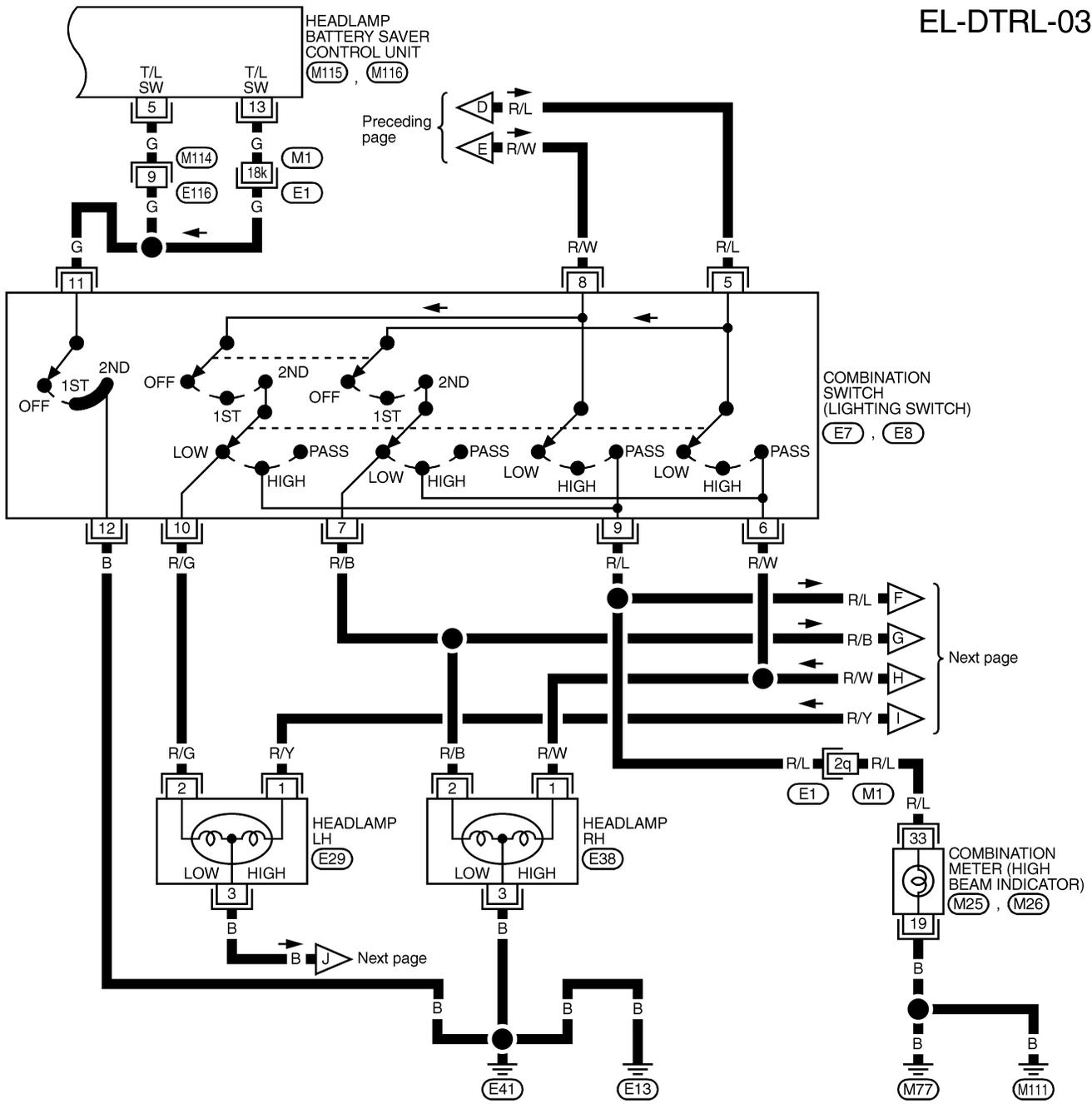
- (M1), (E1)
- (M2), (B1)
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- (E3)

MEL201M

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

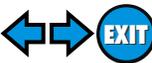
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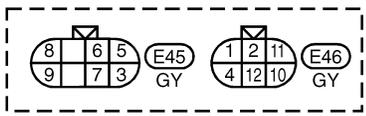
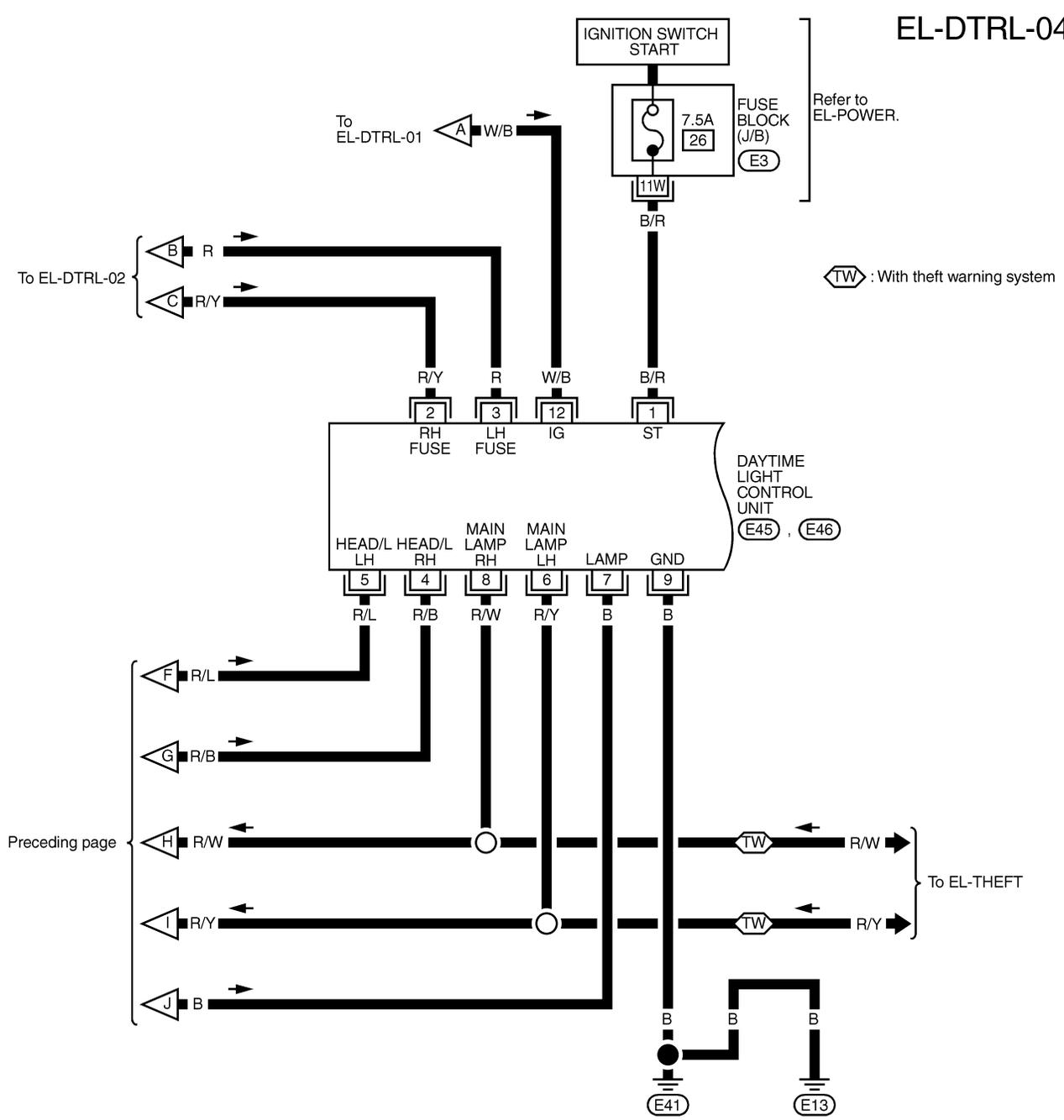
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(M1), (E1)

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —



Wiring Diagram — DTRL — (Cont'd)



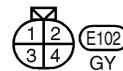
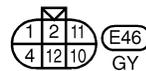
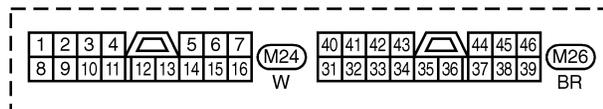
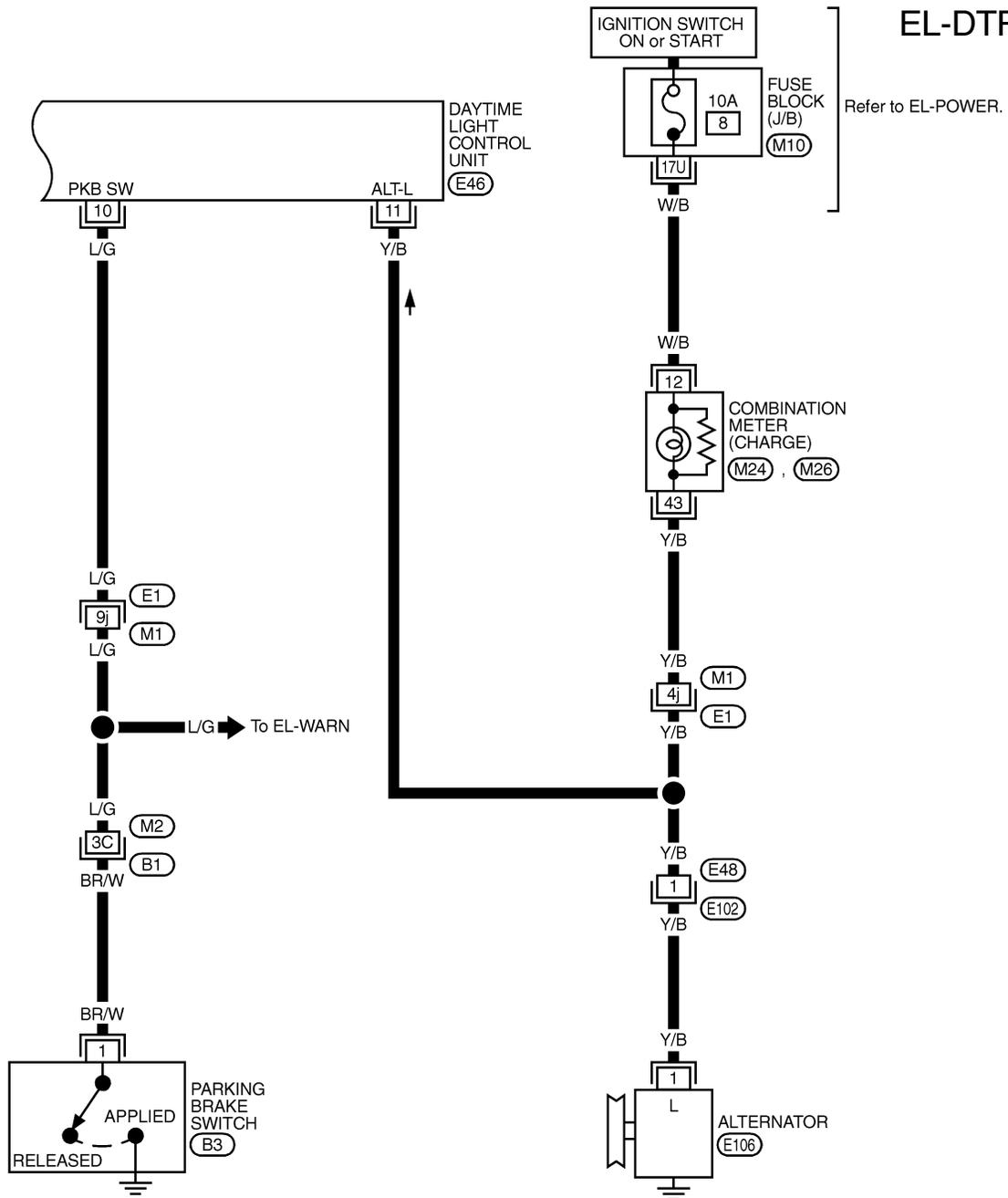
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(E3)

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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-05



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(M2), (B1)

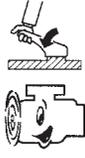
(M10)

Trouble Diagnoses

NAEL0021

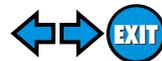
NAEL0021S01

DAYTIME LIGHT CONTROL UNIT INSPECTION TABLE

Terminal No.	Item	Condition	Voltage (Approximate values)
1	Start signal	 When turning ignition switch to "ST"	Battery voltage
		 When turning ignition switch to "ON" from "ST"	Less than 1V
		 When turning ignition switch to "OFF"	Less than 1V
2	Power source	 When turning ignition switch to "ON"	Battery voltage
		 When turning ignition switch to "OFF"	Battery voltage
3	Power source	 When turning ignition switch to "ON"	Battery voltage
		 When turning ignition switch to "OFF"	Battery voltage
4	Lighting switch (Lo beam)	When lighting switch is turned to the 2ND position with "LOW BEAM" position	Battery voltage
5	Lighting switch (Hi beam)	When turning lighting switch to "HI BEAM"	Battery voltage
		When turning lighting switch to "FLASH TO PASS"	Battery voltage
6	LH hi beam	When turning lighting switch to "HI BEAM"	Battery voltage
		 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Battery voltage
7	LH headlamp control (ground)	When lighting switch is turned to the 2ND position with "LOW BEAM" position	Less than 1V
		 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Approx. half battery voltage
8	RH hi beam	When lighting switch is turned to the 2ND position with "HI BEAM" position	Battery voltage
		 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Approx. half battery voltage
9	Ground	—	—

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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —



Trouble Diagnoses (Cont'd)

Terminal No.	Item	Condition	Voltage (Approximate values)
10	Parking brake switch	 When parking brake is released	Battery voltage
		When parking brake is set	Less than 1.5V
11	Alternator	 When turning ignition switch to "ON"	Less than 1V
		 When engine is running	Battery voltage
		 When turning ignition switch to "OFF"	Less than 1V
12	Power source	 When turning ignition switch to "ON"	Battery voltage
		 When turning ignition switch to "ST"	Battery voltage
		 When turning ignition switch to "OFF"	Less than 1V

BATTERY SAVER CONTROL UNIT INSPECTION TABLE

Refer to "HEADLAMP (FOR USA)" EL-33.

NAEL0021S02

Bulb Replacement

Refer to "HEADLAMP (FOR USA)" (EL-34).

NAEL0022

Aiming Adjustment

Refer to "HEADLAMP (FOR USA)" (EL-34).

NAEL0023

System Description

NAEL0162

The parking, license and tail lamp operation is controlled by the lighting switch which is built into the combination switch and headlamp battery saver control unit. The battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

Power is supplied at all times

- to tail lamp relay terminals 2 and 3
- through 10A fuse (No. 61, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 7.5A fuse [No. 24, located in the fuse block (J/B)].

When ignition switch is in ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 16, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 7.5A fuse [No. 11, located in the fuse block (J/B)].

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

LIGHTING OPERATION BY LIGHTING SWITCH

NAEL0162S01

When lighting switch is in 1ST (or 2ND) position, ground is supplied

- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13, and
- through body grounds E13 and E41.

Tail lamp relay is then energized and the parking, license and tail lamps illuminate.

BATTERY SAVER CONTROL

NAEL0162S02

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while parking, license and tail lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 1 of the tail lamp relay from headlamp battery saver control unit terminals 6 and 14 is terminated.

Then the parking, license and tail lamps are turned off.

The parking, license and tail lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while parking, license and tail lamps are illuminated.

When the lighting switch is turned from OFF to 1ST (or 2ND) after the parking, license and tail lamps are turned off by the battery saver control, ground is supplied.

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14.

Then the parking, license and tail lamps illuminate again.

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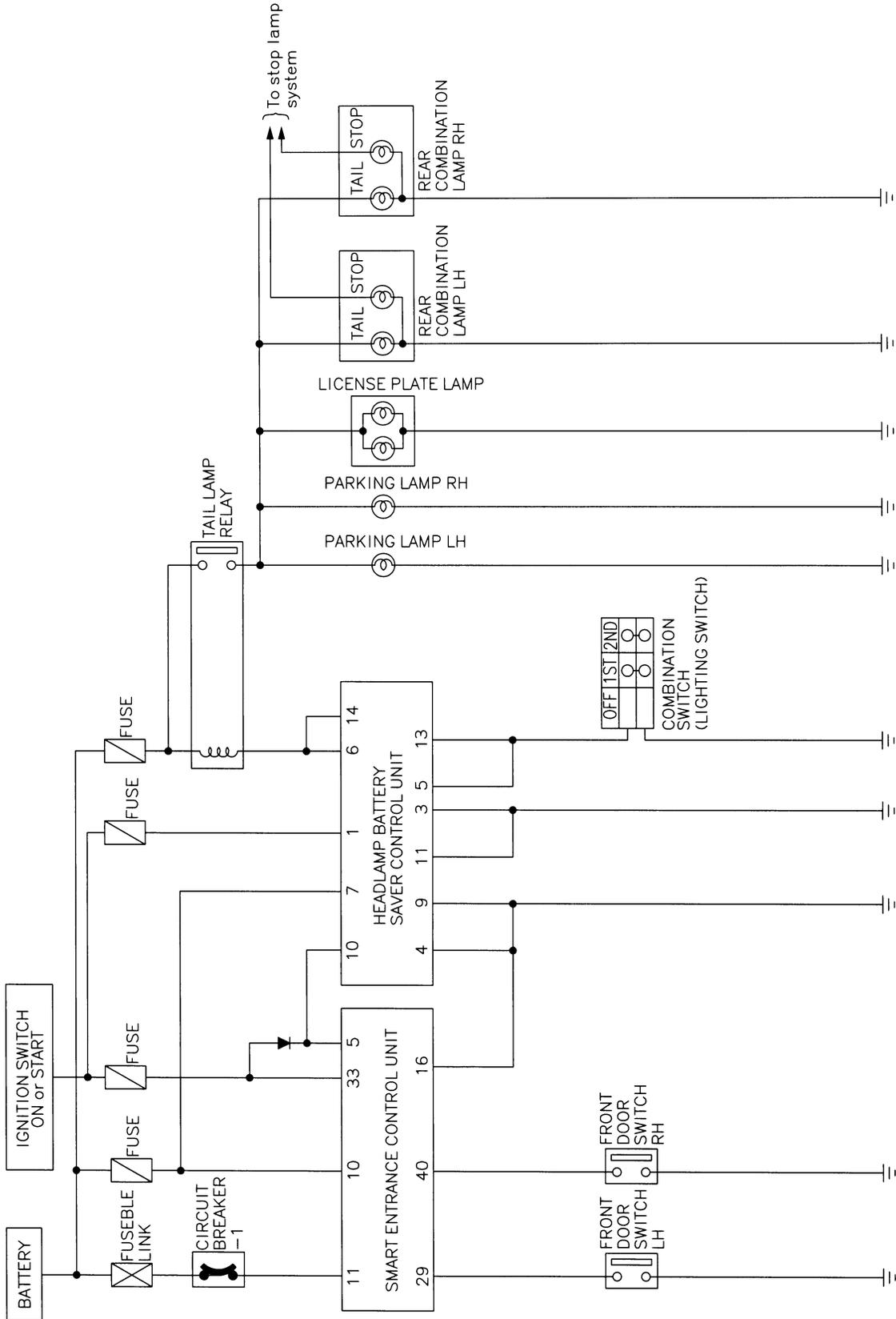
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PARKING, LICENSE AND TAIL LAMPS

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Schematic

NAEL0163



MEL076K

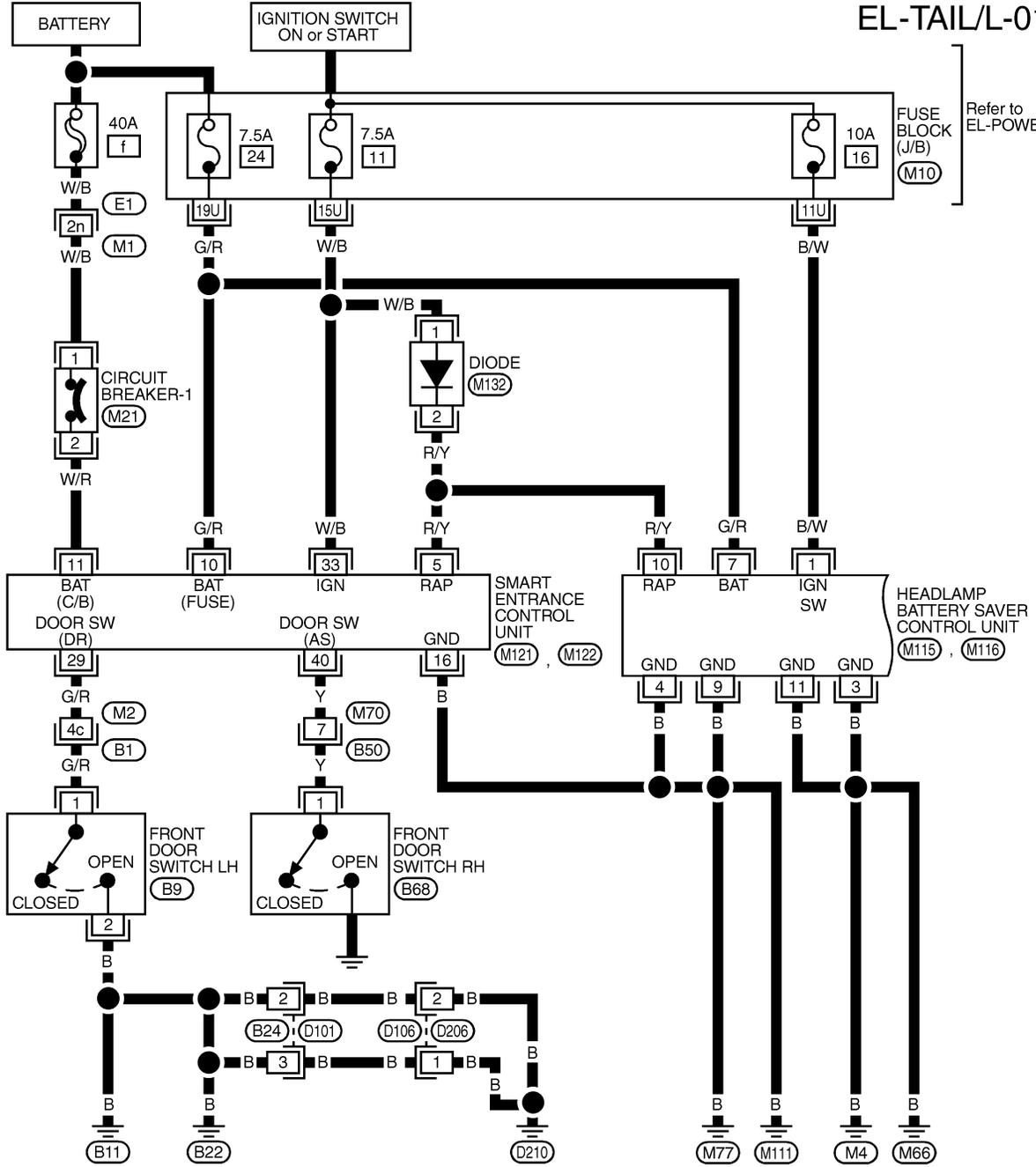
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L —

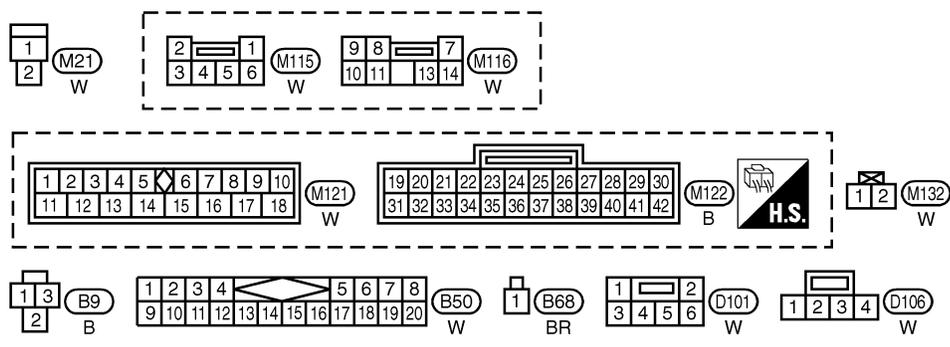
Wiring Diagram — TAIL/L —

NAEL0024

EL-TAIL/L-01



Refer to EL-POWER.



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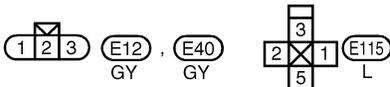
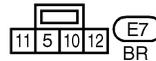
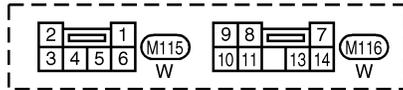
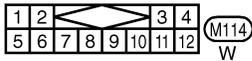
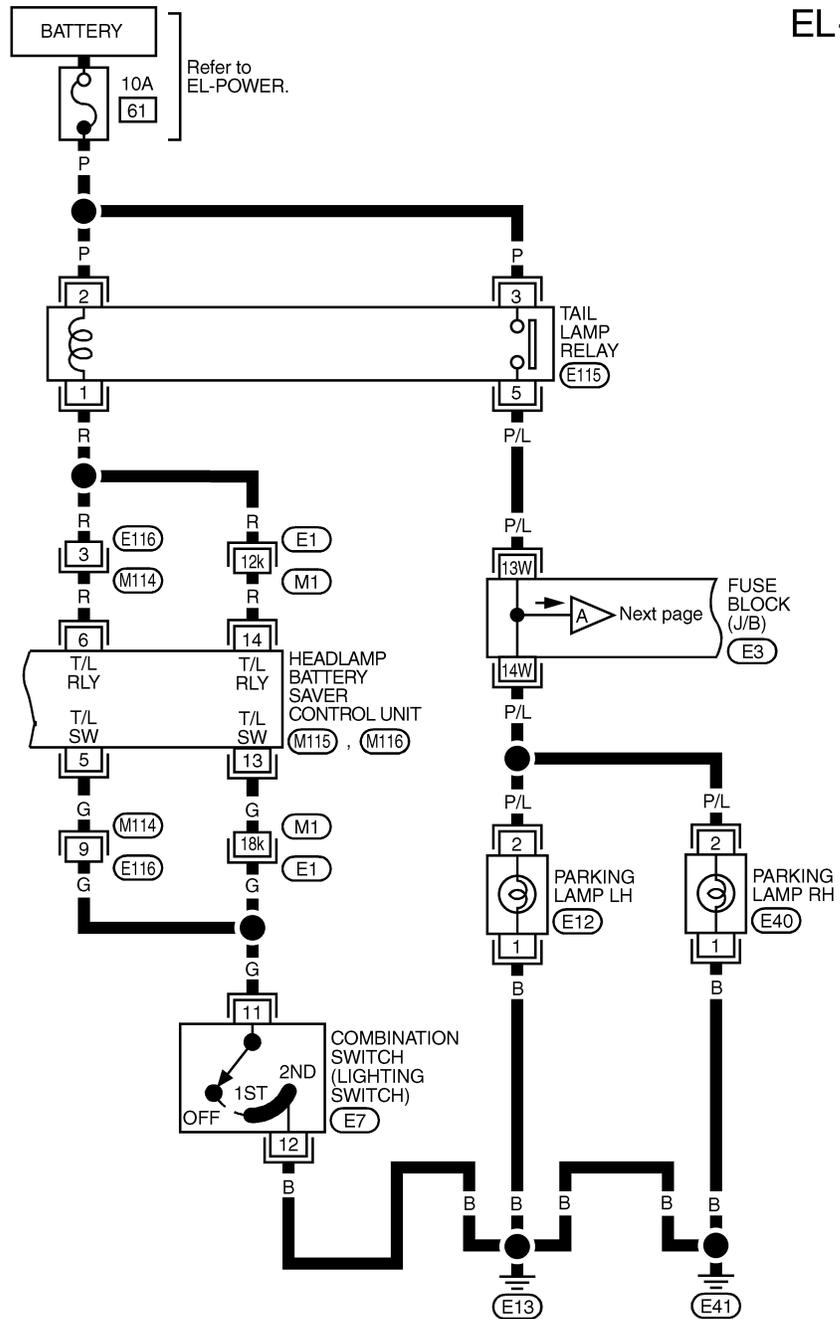
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- (M2), (B1)
- (M10)

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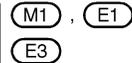
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-02



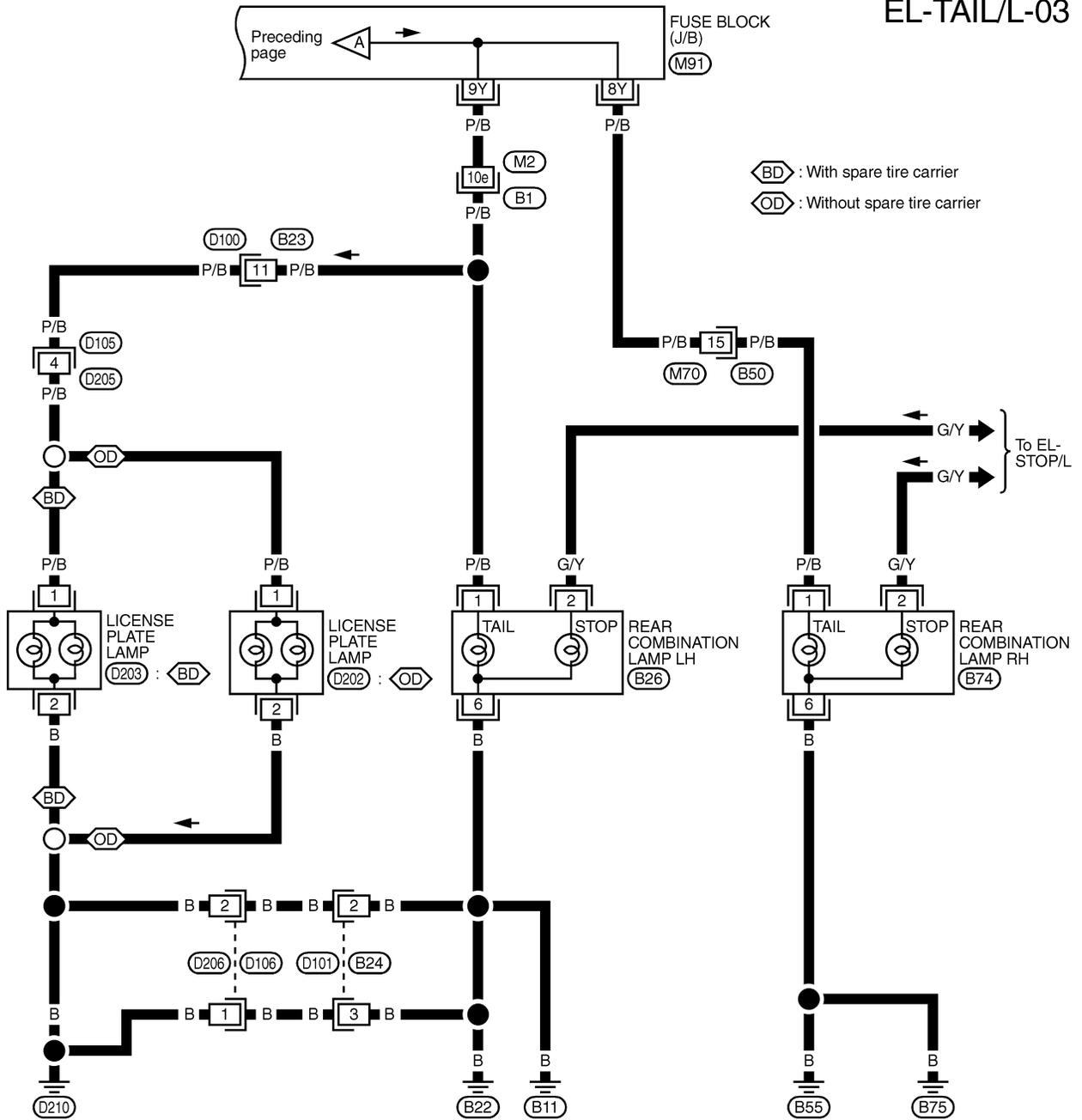
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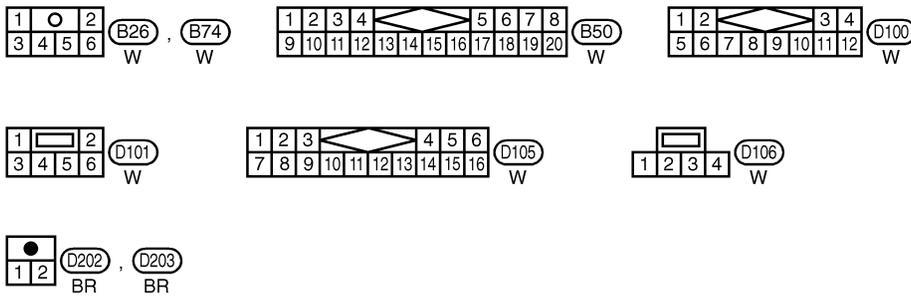
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-03



BD : With spare tire carrier
OD : Without spare tire carrier



Refer to last page (Foldout page).

M2, B1
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MEL923J

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PARKING, LICENSE AND TAIL LAMPS

Trouble Diagnoses

Trouble Diagnoses

NAEL0164

Symptom	Possible cause	Repair order
No lamps operate (including headlamps).	<ol style="list-style-type: none"> 1. 7.5A fuse 2. Lighting switch 3. Headlamp battery saver control unit 	<ol style="list-style-type: none"> 1. Check 7.5A fuse [No. 24, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 7 of headlamp battery saver control unit. 2. Check lighting switch. 3. Check headlamp battery saver control unit. (EL-33)
No parking, license and tail lamps operate, but headlamps do operate.	<ol style="list-style-type: none"> 1. 10A fuse 2. Tail lamp relay 3. Tail lamp relay circuit 4. Lighting switch 5. Lighting switch circuit 6. Headlamp battery saver control unit 	<ol style="list-style-type: none"> 1. Check 10A fuse (No. 61, located in fusible and fuse block). Verify battery positive voltage is present at terminals 2 and 3 of tail lamp relay. 2. Check tail lamp relay. 3. Check harness between headlamp battery saver control unit terminals 6 and 14 and tail lamp relay terminal 1. Check harness between tail lamp relay terminal 5 and fuse block. 4. Check lighting switch. 5. Check harness between lighting switch terminal 11 and headlamp battery saver control unit terminals 5 and 13. Check harness between lighting switch terminal 12 and ground. 6. Check headlamp battery saver control unit. (EL-33)
Battery saver control does not operate properly.	<ol style="list-style-type: none"> 1. RAP signal circuit 2. Driver or passenger side door switch circuit 3. Lighting switch circuit 4. Headlamp battery saver control unit 5. Smart entrance control unit 	<ol style="list-style-type: none"> 1. Check harness between headlamp battery saver control unit terminal 10 and smart entrance control unit terminal 5 for open or short circuit. 2. Check harness between smart entrance control unit and driver or passenger side door switch for open or short circuit. Check driver or passenger side door switch ground circuit. Check driver or passenger side door switch. 3. Check harness between headlamp battery saver control unit terminals 5 or 13 and lighting switch terminal 11 for open or short circuit. Check harness between lighting switch terminal 12 and ground. Check lighting switch. 4. Check headlamp battery saver control unit. (EL-33) 5. Check smart entrance control unit. (EL-278)

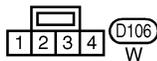
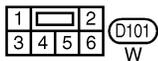
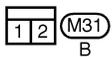
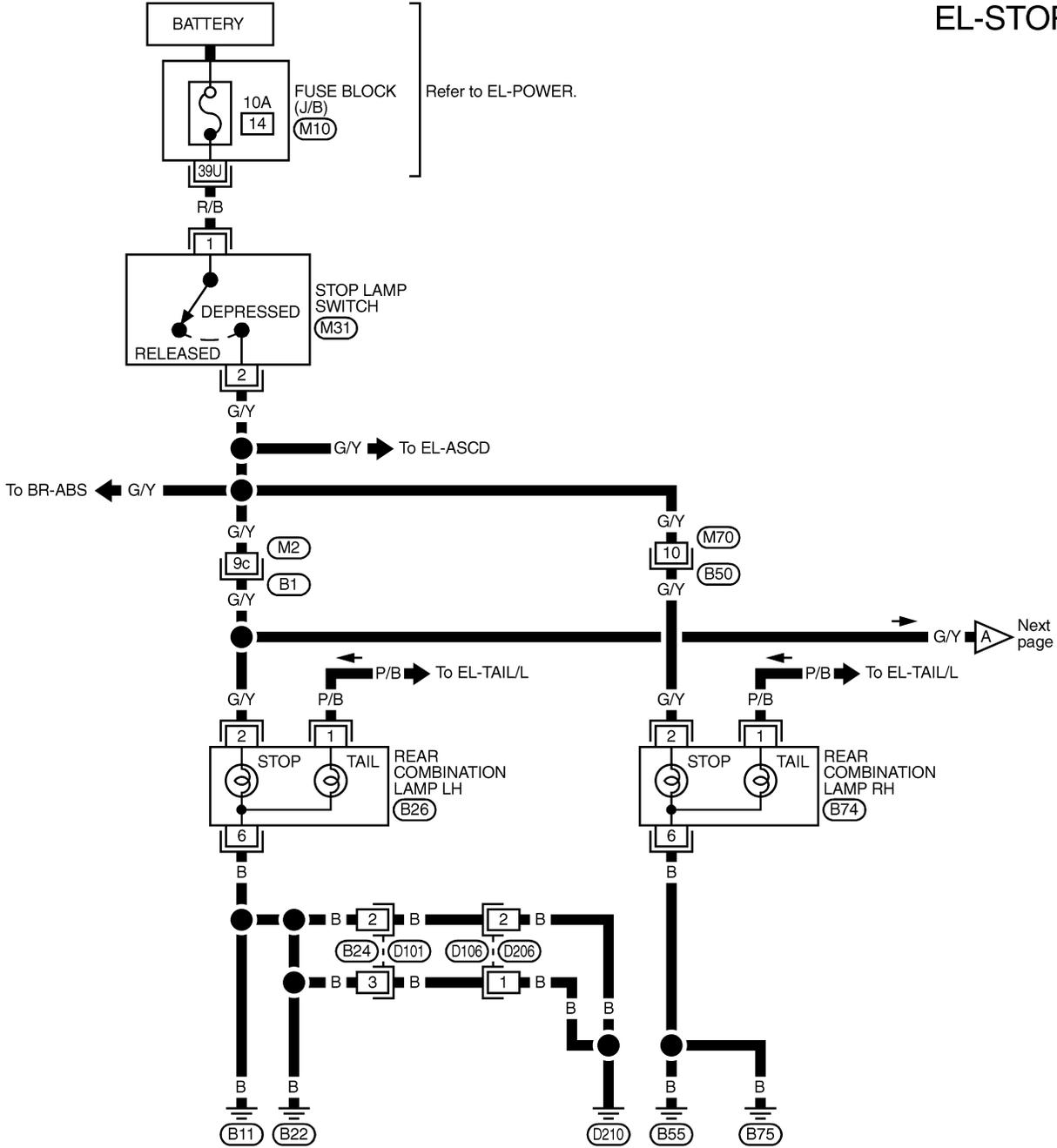
STOP LAMP

Wiring Diagram — STOP/L —

Wiring Diagram — STOP/L —

NAEL0025

EL-STOP/L-01



Refer to last page (Foldout page).

(M2), (B1)

(M10)

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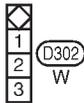
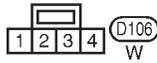
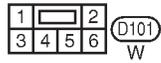
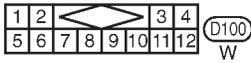
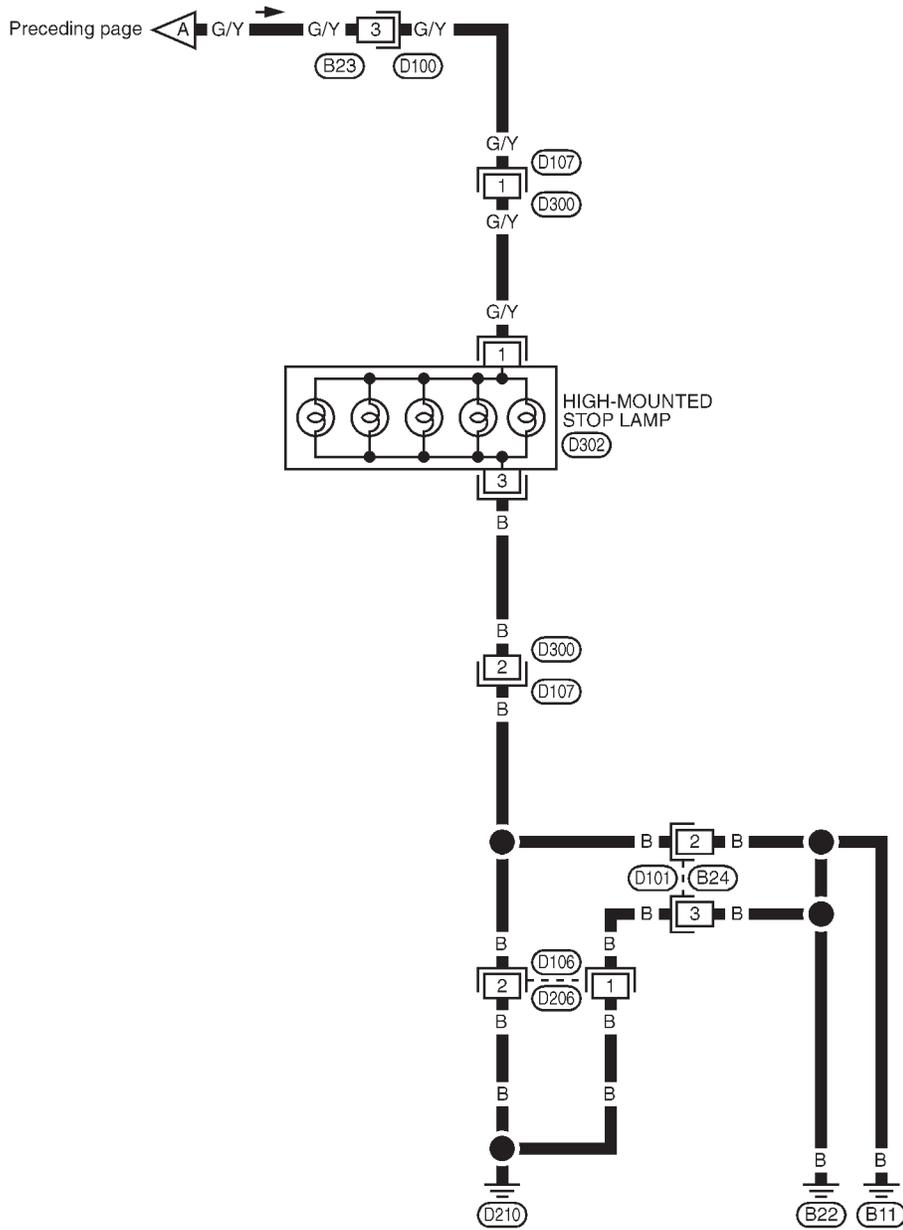
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STOP LAMP

Wiring Diagram — STOP/L — (Cont'd)

EL-STOP/L-02



MEL550F

BACK-UP LAMP

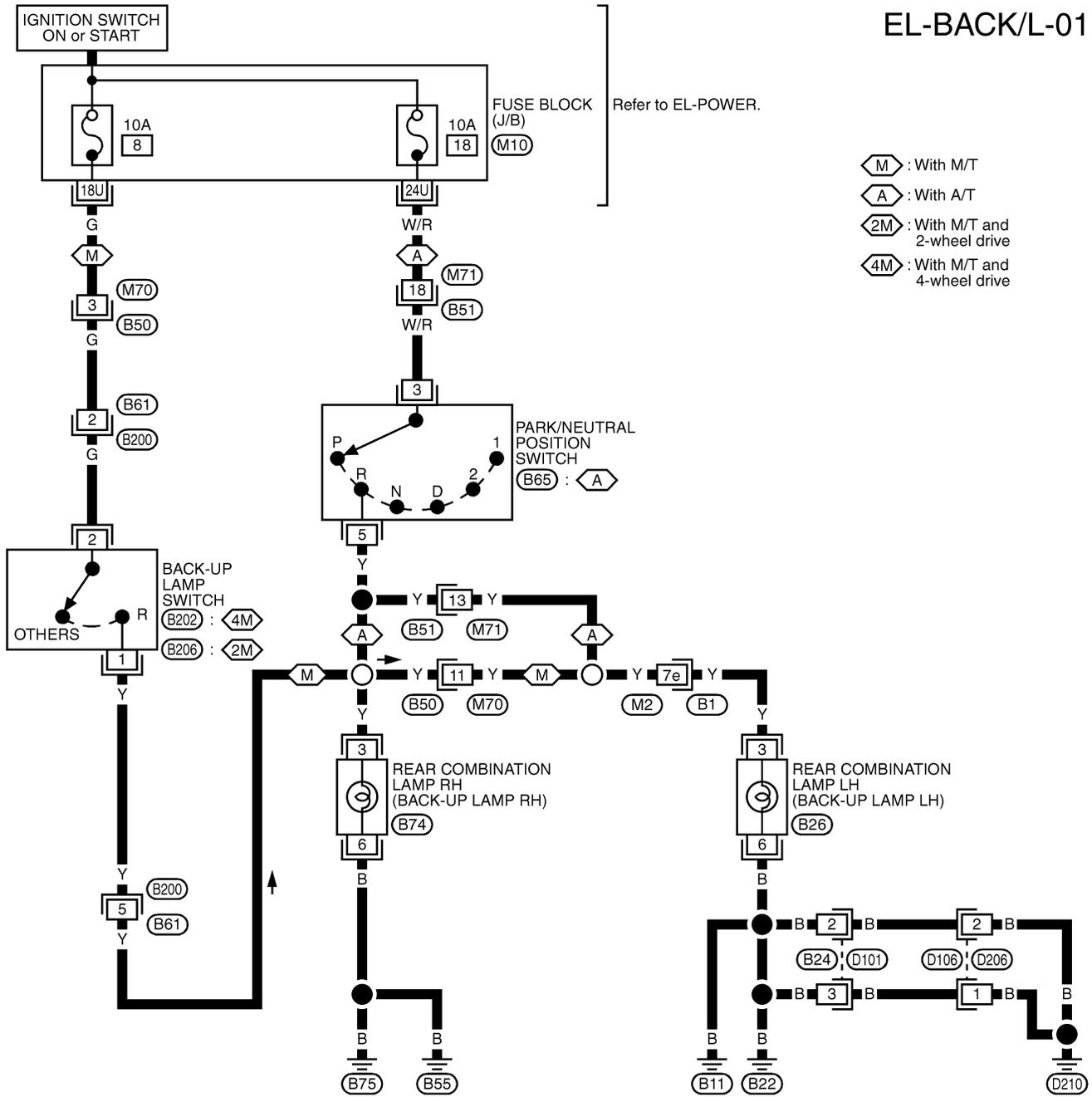
Wiring Diagram — BACK/L —

Wiring Diagram — BACK/L —

NAEL0026

EL-BACK/L-01

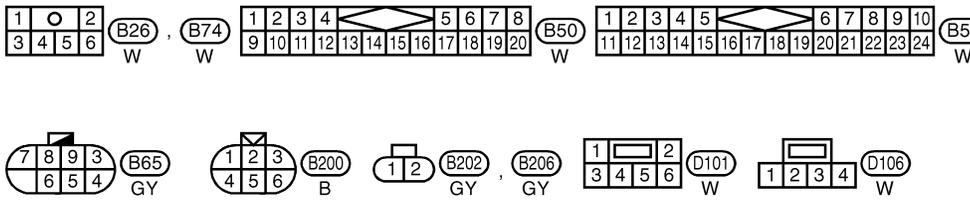
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Refer to EL-POWER.

- : With M/T
- : With A/T
- : With M/T and 2-wheel drive
- : With M/T and 4-wheel drive

Refer to last page (Foldout page).



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System Description

NAEL0027

NAEL0027S02

OUTLINE

Power is supplied at all times

- to headlamp RH relay terminals 2 and 3
- through 15A fuse (No. 59, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 7.5A fuse [No. 24, located in the fuse block (J/B)], and
- to front fog lamp relay terminal 3
- through 15A fuse (No. 53, located in the fuse and fusible link box).

When ignition switch is in ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 16, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 7.5A fuse [No. 11, located in the fuse block (J/B)].

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

When Ignition Switch is in ON or START Position

NAEL0027S0201

Ground is supplied

- to headlamp RH relay terminal 1 from headlamp battery saver control unit terminal 8.
- through headlamp battery saver control unit terminal 9, and
- through body grounds M77 and M111.

Headlamp RH relay is then energized.

When Ignition Switch is in OFF or ACC Position

NAEL0027S0202

When lighting switch is in 2ND (or 1ST) position, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13
- from lighting switch terminal 11.

And then, ground is also supplied to headlamp RH relay terminal 1 from the headlamp battery saver control unit. The headlamp RH relay is then energized.

FOG LAMP OPERATION

NAEL0027S01

The fog lamp switch is built into the combination switch. The lighting switch must be in the 2ND position and LOW ("B") position for fog lamp operation.

With the fog lamp switch in the ON position, ground is supplied

- to fog lamp relay terminal 2
- through the fog lamp switch and body grounds E13 and E41.

The fog lamp relay is energized and power is supplied

- from fog lamp relay terminal 5
- to terminal 1 of each fog lamp.

Ground is supplied to terminal 2 of each fog lamp through body grounds E13 and E41.

With power and ground supplied, the fog lamps illuminate.

BATTERY SAVER CONTROL

NAEL0027S03

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while fog lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

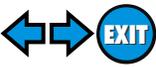
After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 1 of headlamp RH relay from headlamp battery saver control unit terminal 8 is terminated.

Then fog lamps are turned to off.

Fog lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while fog lamps are illuminated.

When the lighting switch is turned from OFF to 2ND after fog lamps are turned off by the battery saver control, ground is supplied

FRONT FOG LAMP



System Description (Cont'd)

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
 - to headlamp RH relay terminal 1 from headlamp battery saver control unit terminal 8.
- Then the fog lamps illuminate again.

NOTE:

For Trouble Diagnoses for battery saver control, refer to "HEADLAMP (FOR USA)" (EL-32).

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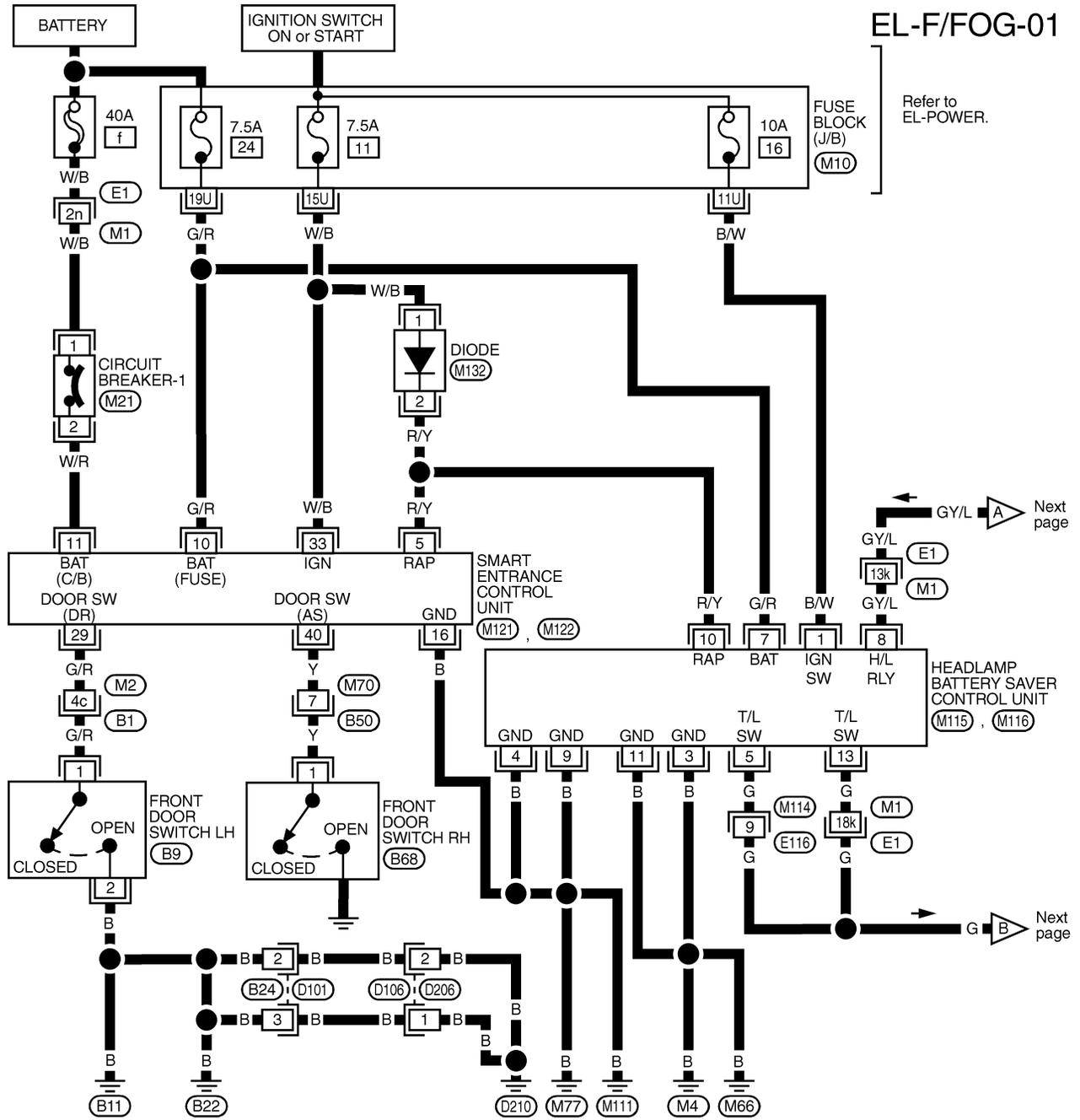
FRONT FOG LAMP

Wiring Diagram — F/FOG —

Wiring Diagram — F/FOG —

NAEL0028

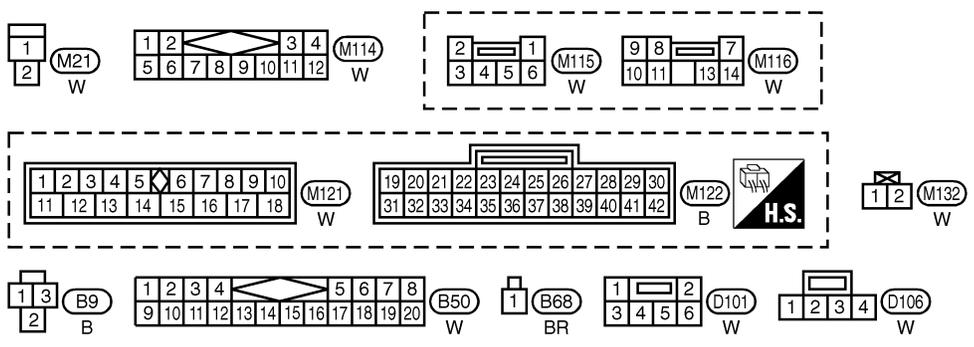
EL-F/FOG-01



Refer to EL-POWER.

Next page

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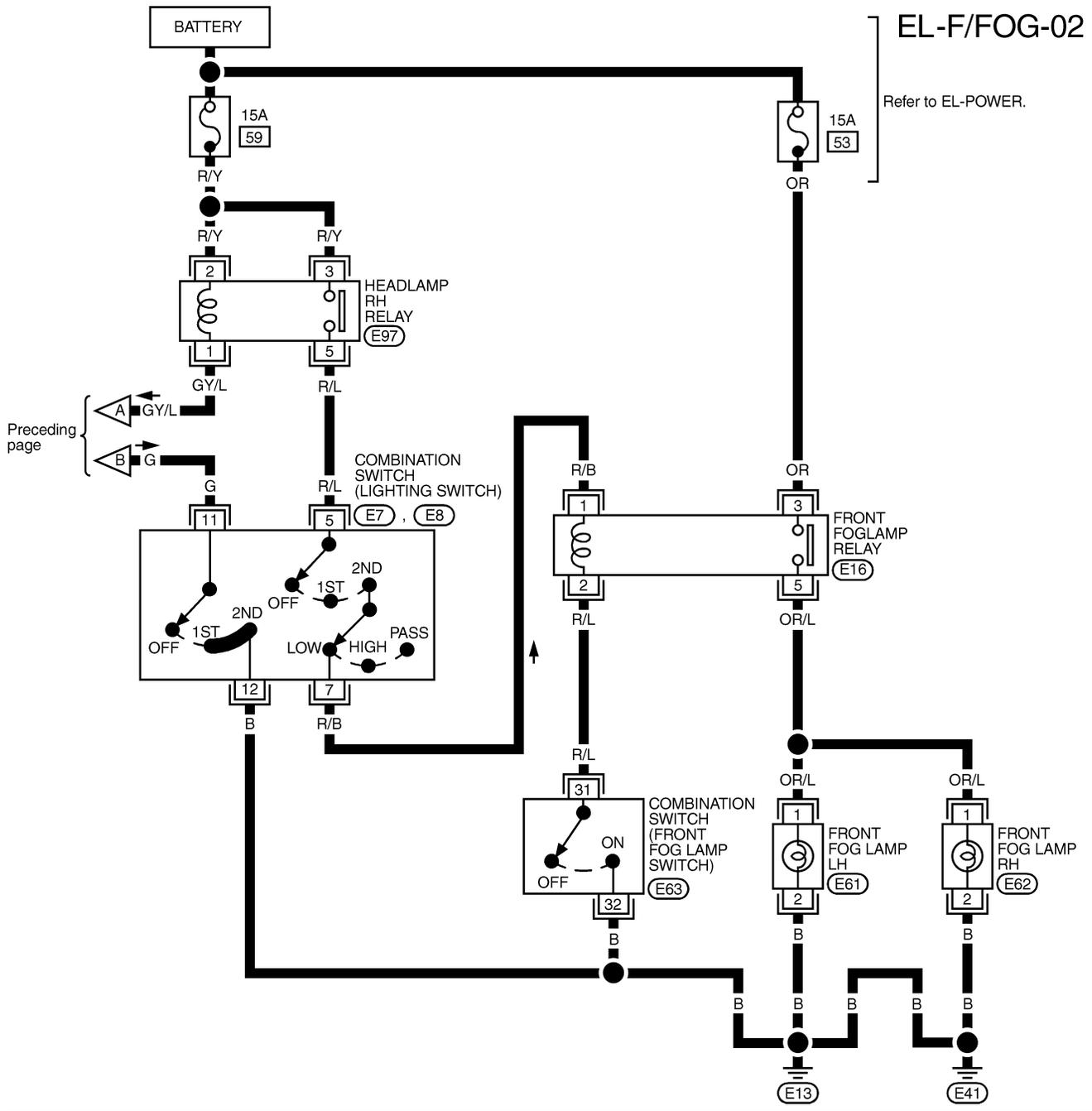


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- (M1) , (E1)
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- (M10)

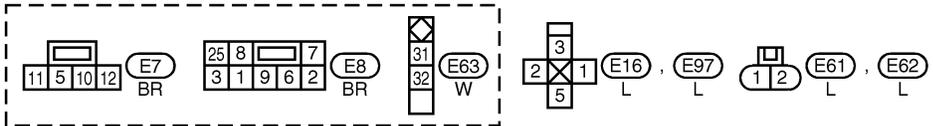
FRONT FOG LAMP

Wiring Diagram — F/FOG — (Cont'd)



EL-F/FOG-02
Refer to EL-POWER.

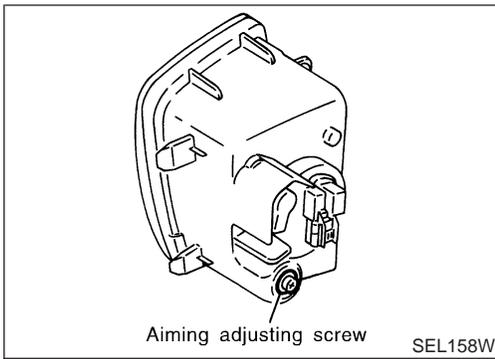
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FRONT FOG LAMP

Aiming Adjustment



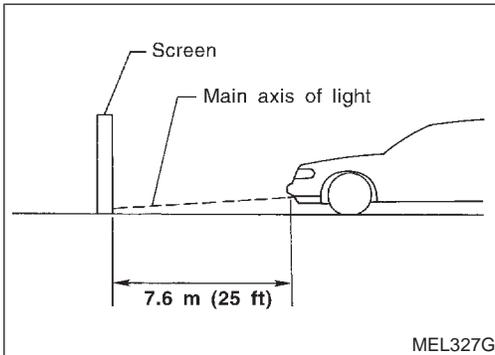
Aiming Adjustment

NAEL0029

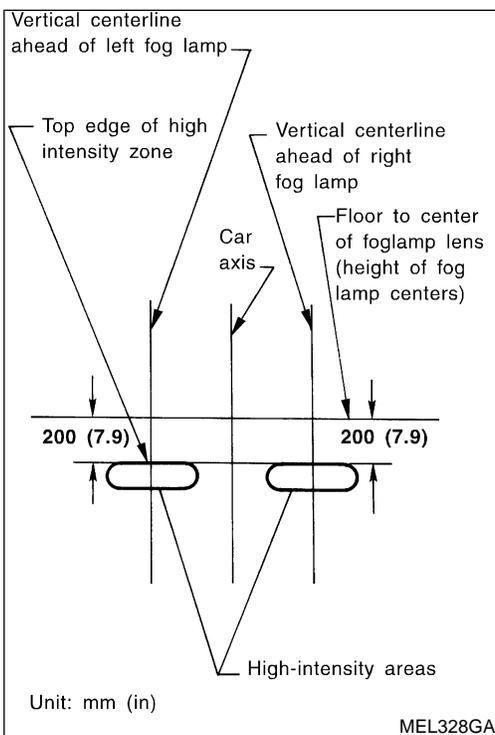
Before performing aiming adjustment, make sure of the following.

- 1) Keep all tires inflated to correct pressure.
- 2) Place vehicle on level ground.
- 3) See that vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in driver's seat.

Adjust aiming in the vertical direction by turning the adjusting screw.



1. Set the distance between the screen and the center of the fog lamp lens as shown at left.
2. Turn front fog lamps ON.



3. Adjust front fog lamps so that the top edge of the high intensity zone is 200 mm (7.9 in) below the height of the fog lamp centers as shown at left.
- When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

System Description

GI
NAEL0030

TURN SIGNAL OPERATION

With the hazard switch in the OFF position and the ignition switch in the ON or START position, power is supplied

MA
NAEL0030S01

- through 7.5A fuse [No. 12, located in the fuse block (J/B)]
- to hazard switch terminal 2
- through terminal 1 of the hazard switch
- to combination flasher unit terminal 1
- through terminal 3 of the combination flasher unit
- to turn signal switch terminal 1.

EM

LC

Ground is supplied to combination flasher unit terminal 2 through body grounds M4 and M66.

EC

LH Turn

When the turn signal switch is moved to the LH position, power is supplied from turn signal switch terminal 3 to

FE
NAEL0030S0101

- front turn signal lamp LH terminal 3
- combination meter terminal 34
- rear combination lamp LH terminal 5.

CL

Ground is supplied to the front turn signal lamp LH terminal 1 through body grounds E13 and E41.

MT

Ground is supplied to the rear combination lamp LH terminal 6 through body grounds B11, B22 and D210.

Ground is supplied to combination meter terminal 19 through body grounds M77 and M111.

With power and ground supplied, the combination flasher unit controls the flashing of the LH turn signal lamps.

AT

RH Turn

When the turn signal switch is moved to the RH position, power is supplied from turn signal switch terminal 2 to

TF
NAEL0030S0102

- front turn signal lamp RH terminal 3
- combination meter terminal 32
- rear combination lamp RH terminal 5.

PD

Ground is supplied to the front turn signal lamp RH terminal 1 through body grounds E13 and E41.

AX

Ground is supplied to the rear combination lamp RH terminal 6 through body grounds B55 and B75.

Ground is supplied to combination meter terminal 19 through body grounds M77 and M111.

With power and ground supplied, the combination flasher unit controls the flashing of the RH turn signal lamps.

SU

HAZARD LAMP OPERATION

Power is supplied at all times to hazard switch terminal 3 through:

BR
NAEL0030S02

- 15A fuse [No. 20, located in the fuse block (J/B)].

With the hazard switch in the ON position, power is supplied

- through terminal 1 of the hazard switch
- to combination flasher unit terminal 1
- through terminal 3 of the combination flasher unit
- to hazard switch terminal 4.

ST

Ground is supplied to combination flasher unit terminal 2 through body grounds M4 and M66.

RS

Power is supplied through terminal 5 of the hazard switch to

- front turn signal lamp LH terminal 3
- combination meter terminal 34
- rear combination lamp LH terminal 5.

BT

Power is supplied through terminal 6 of the hazard switch to

- front turn signal lamp RH terminal 3
- combination meter terminal 32
- rear combination lamp RH terminal 5.

HA

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TURN SIGNAL AND HAZARD WARNING LAMPS

System Description (Cont'd)

Ground is supplied to terminal 1 of each front turn signal lamp through body grounds E13 and E41.

Ground is supplied to terminal 6 of the rear combination lamp LH through body grounds B11, B22 and D210.

Ground is supplied to terminal 6 of the rear combination lamp RH through body grounds B55 and B75.

Ground is supplied to combination meter terminal 19 through body grounds M77 and M111.

With power and ground supplied, the combination flasher unit controls the flashing of the hazard warning lamps.

MULTI-REMOTE CONTROL SYSTEM OPERATION

NAEL0030S03

Power is supplied at all times

- through 15A fuse [No. 20, located in the fuse block (J/B)]
- to multi-remote control relay terminals 1, 3 and 6.

Ground is supplied to multi-remote control relay terminal 2, when the multi-remote control system is triggered through the smart entrance control unit.

Refer to "MULTI-REMOTE CONTROL SYSTEM", EL-222.

The multi-remote control relay is energized.

Power is supplied through terminal 7 of the multi-remote control relay

- to front turn signal lamp LH terminal 3
- to combination meter terminal 34
- to rear combination lamp LH terminal 5.

Power is supplied through terminal 5 of the multi-remote control relay

- to front turn signal lamp RH terminal 3
- to combination meter terminal 32
- to rear combination lamp RH terminal 5.

Ground is supplied to terminal 1 of each front turn signal lamp through body grounds E13 and E41.

Ground is supplied to terminal 6 of the rear combination lamp LH through body grounds B11, B22 and D210.

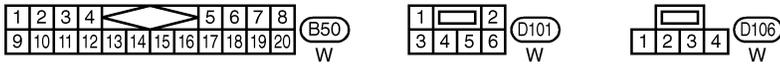
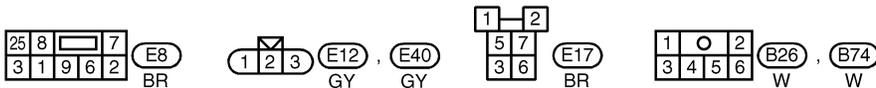
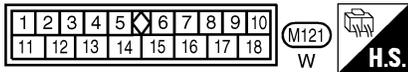
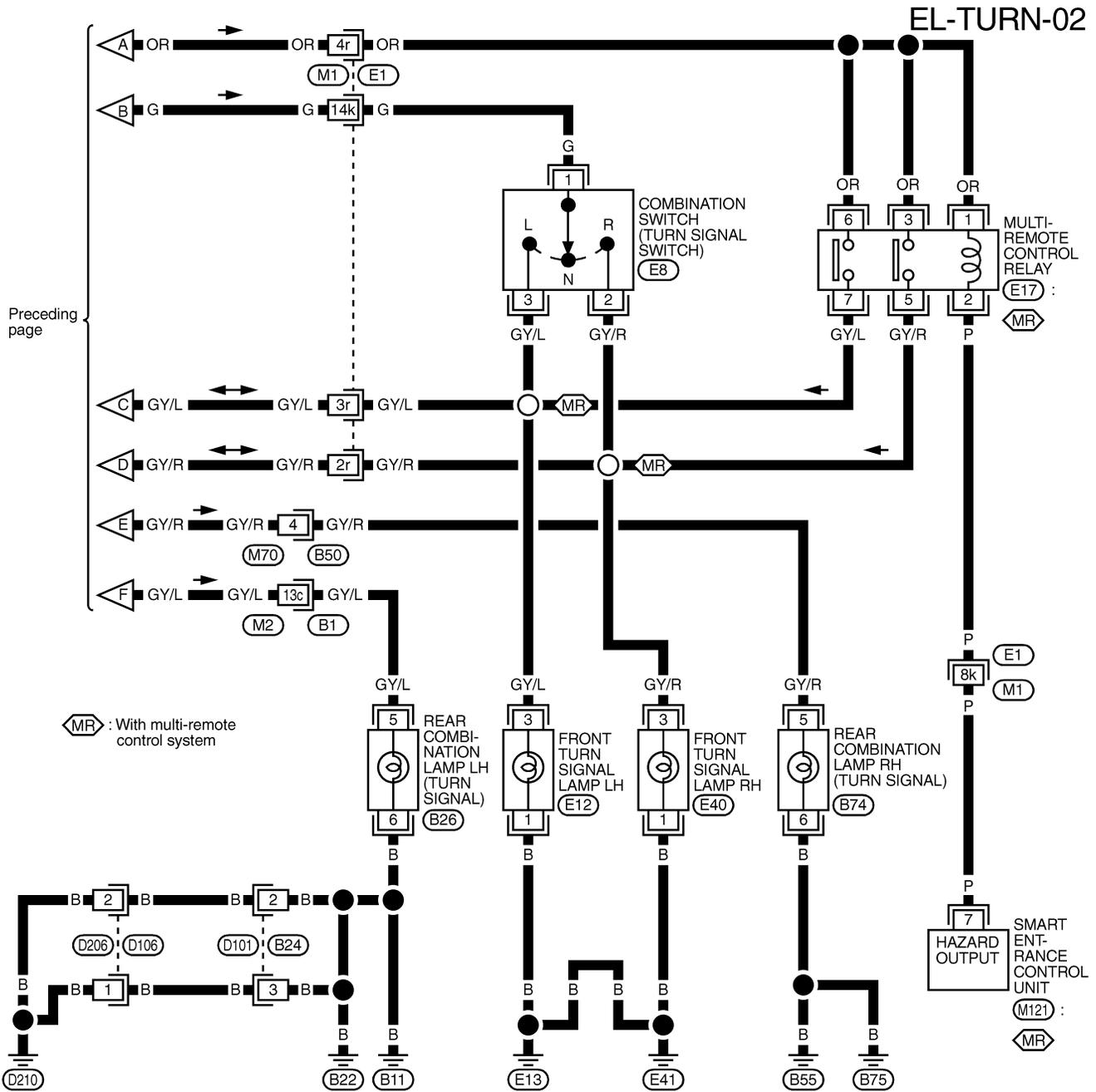
Ground is supplied to terminal 6 of the rear combination lamp RH through body grounds B55 and B75.

Ground is supplied to combination meter terminal 19 through body grounds M77 and M111.

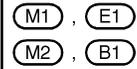
With power and ground supplied, the smart entrance control unit controls the flashing of the hazard warning lamps.

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)



Refer to last page (Foldout page).



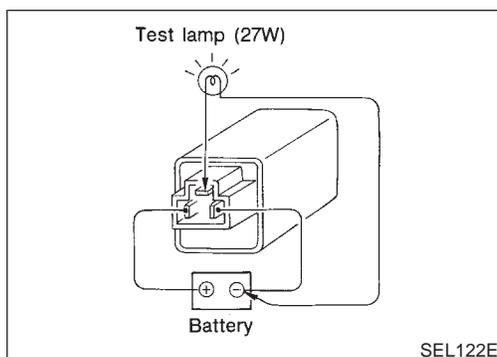
TURN SIGNAL AND HAZARD WARNING LAMPS

Trouble Diagnoses

Trouble Diagnoses

NAEL0033

Symptom	Possible cause	Repair order
Turn signal and hazard warning lamps do not operate.	<ol style="list-style-type: none"> 1. Hazard switch 2. Combination flasher unit 3. Open in combination flasher unit circuit 	<ol style="list-style-type: none"> 1. Check hazard switch. 2. Refer to combination flasher unit check. 3. Check wiring to combination flasher unit for open circuit.
Turn signal lamps do not operate but hazard warning lamps operate.	<ol style="list-style-type: none"> 1. 7.5A fuse 2. Hazard switch 3. Turn signal switch 4. Open in turn signal switch circuit 	<ol style="list-style-type: none"> 1. Check 7.5A fuse [No. 12, located in fuse block (J/B)]. Turn ignition switch ON and verify battery positive voltage is present at terminal 2 of hazard switch. 2. Check hazard switch. 3. Check turn signal switch. 4. Check G wire between combination flasher unit and turn signal switch for open circuit.
Hazard warning lamps do not operate but turn signal lamps operate.	<ol style="list-style-type: none"> 1. 15A fuse 2. Hazard switch 3. Open in hazard switch circuit 	<ol style="list-style-type: none"> 1. Check 15A fuse [No. 20, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 3 of hazard switch. 2. Check hazard switch. 3. Check G wire between combination flasher unit and hazard switch for open circuit.
Front turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds E13 and E41 3. Open in front turn signal lamp circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds E13 and E41. 3. Check harness between front turn signal lamp and combination switch.
Rear turn signal lamp LH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds B11, B22 and D210 3. Open in rear turn signal lamp LH circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds B11, B22 and D210. 3. Check harness between rear turn signal lamp LH and hazard switch.
Rear turn signal lamp RH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds B55 and B75 3. Open in rear turn signal lamp RH circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds B55 and B75. 3. Check harness between rear turn signal lamp RH and hazard switch.
LH and RH turn indicators do not operate.	<ol style="list-style-type: none"> 1. Ground 	<ol style="list-style-type: none"> 1. Check grounds M77 and M111.
LH or RH turn indicator does not operate.	<ol style="list-style-type: none"> 1. Bulb 	<ol style="list-style-type: none"> 1. Check bulb in combination meter.



Electrical Components Inspection COMBINATION FLASHER UNIT CHECK

NAEL0034

NAEL0034S01

- Before checking, ensure that bulbs meet specifications.
- Connect a battery and test lamp to the combination flasher unit, as shown. Combination flasher unit is properly functioning if it blinks when power is supplied to the circuit.

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ILLUMINATION

System Description

System Description

NAEL0035

The illumination lamp operation is controlled by the lighting switch which is built into the combination switch and headlamp battery saver control unit. The battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

Power is supplied at all times

- to tail lamp relay terminals 2 and 3
- through 10A fuse (No. 61, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 7.5A fuse [No. 24, located in the fuse block (J/B)].

When ignition switch is in ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 16, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 7.5A fuse [No. 11, located in the fuse block (J/B)].

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

LIGHTING OPERATION BY LIGHTING SWITCH

NAEL0035S01

When lighting switch is 1ST (or 2ND) position, ground is supplied

- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13, and
- through body grounds E13 and E41.

Tail lamp relay is then energized and illumination lamps illuminate.

The lighting switch must be in the 1ST (or 2ND) position for illumination.

The illumination control switch that controls the amount of current to the illumination system. As the amount of current increases, the illumination becomes brighter.

The following chart shows the power and ground connector terminals for the components included in the illumination system.

Component	Connector No.	Power terminal	Ground terminal
Illumination control switch	M19	1	3
A/C switch	M45	2	1
Cigarette lighter	M57	3	4
Audio unit	M48	8	7
CD player	M92, M93	3	5
Compass and thermometer	R4	5	2
Rear window defogger switch	M36	5	6
ASCD main switch	M18	5	6
Power window main switch	D6	4	2
A/C auto amp.	M102	24	25
Hazard switch	M35	7	8
Ashtray	B60, B76	1	2
A/T device	B59	3	4
Combination meter	M25, M26	37	29
Odo trip (Combination meter)	M24, M25	12	29

The ground for all of the components except for compass, thermometer and ashtray are controlled through terminals 2 and 3 of the illumination control switch and body grounds M77 and M111.

BATTERY SAVER CONTROL

NAEL0035S02

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while illumination lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 1 of the tail lamp relay from headlamp battery saver control unit terminals 6 and 14 is terminated.

Then illumination lamps are turned off.

Illumination lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while illumination lamps are illuminated.

When the lighting switch is turned from OFF to 1ST (or 2ND) after illumination lamps are turned off by the battery saver control, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14.

Then illumination lamps illuminate again.

NOTE:

For Trouble Diagnoses for battery saver control, refer to "PARKING, LICENSE AND TAIL LAMPS" (EL-52).

GI

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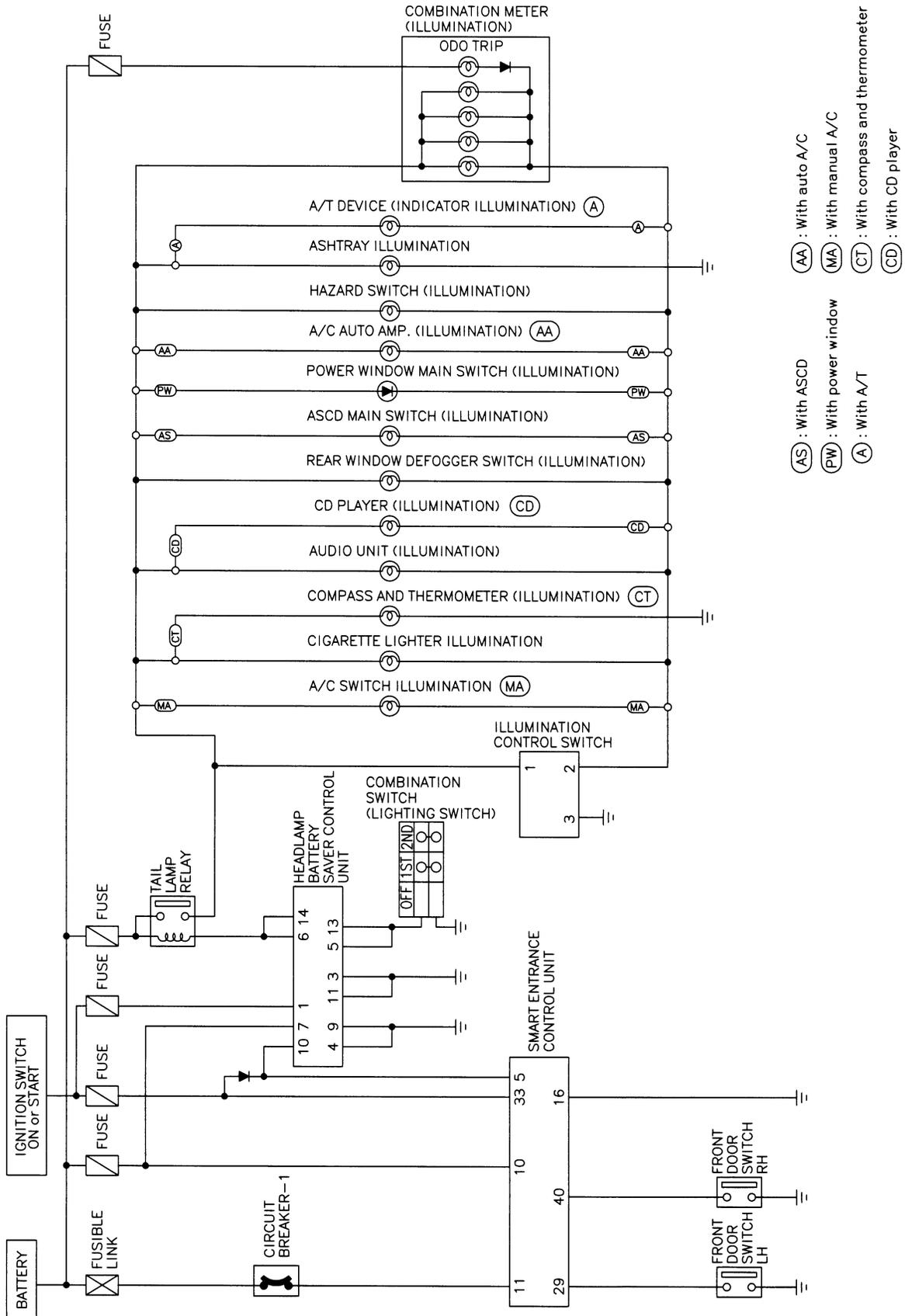
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ILLUMINATION

Schematic

Schematic

NAEL0036



MEL204M

ILLUMINATION

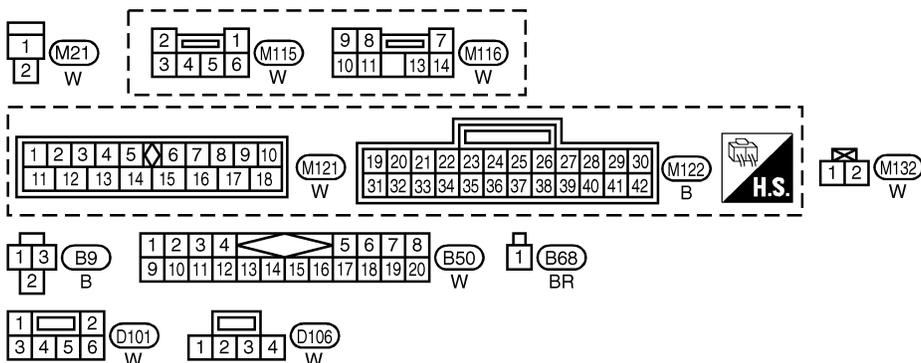
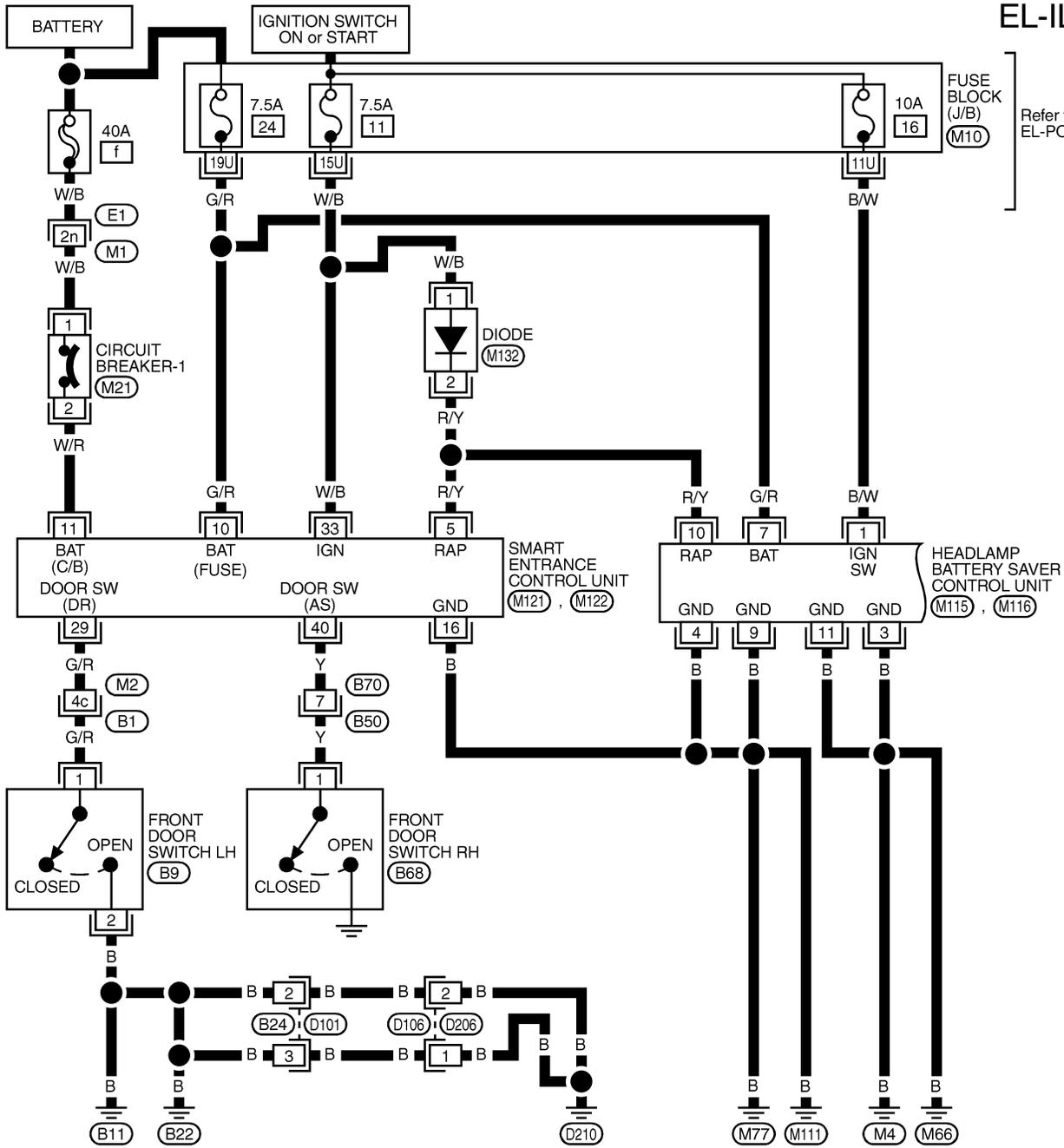
Wiring Diagram — ILL —

Wiring Diagram — ILL —

NAEL0037

EL-ILL-01

Refer to EL-POWER.



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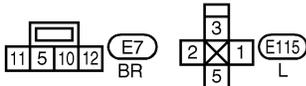
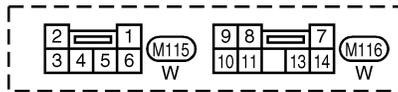
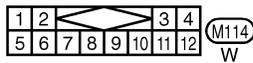
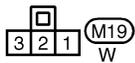
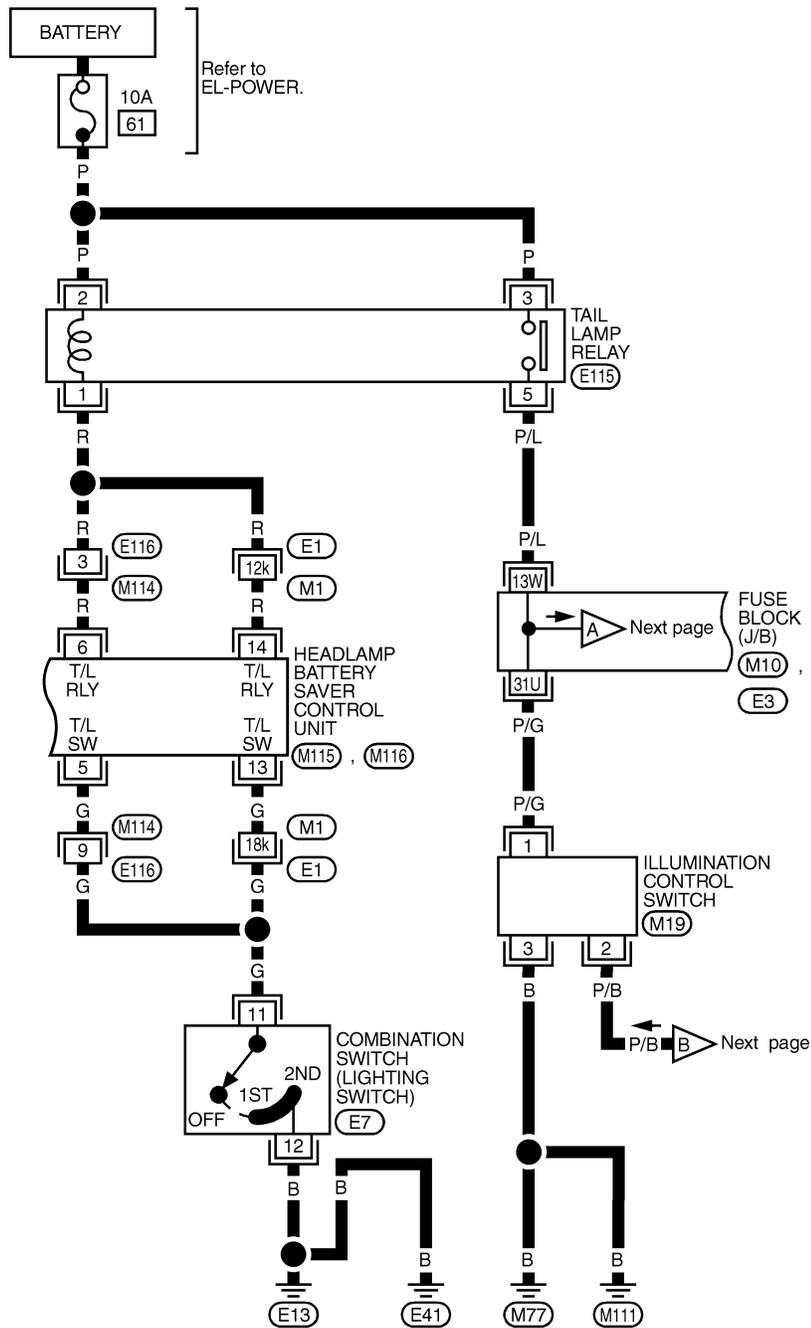
- M1, E1
- M2, B1
- M10

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ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-02

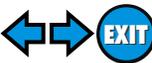


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- (M1) , (E1)
- (M10)
- (E3)

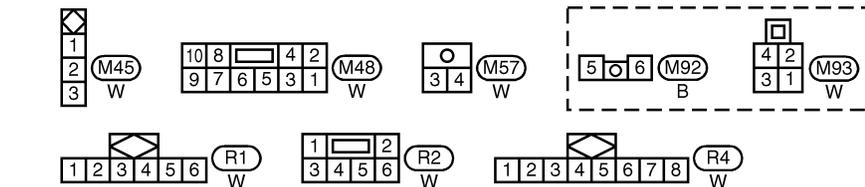
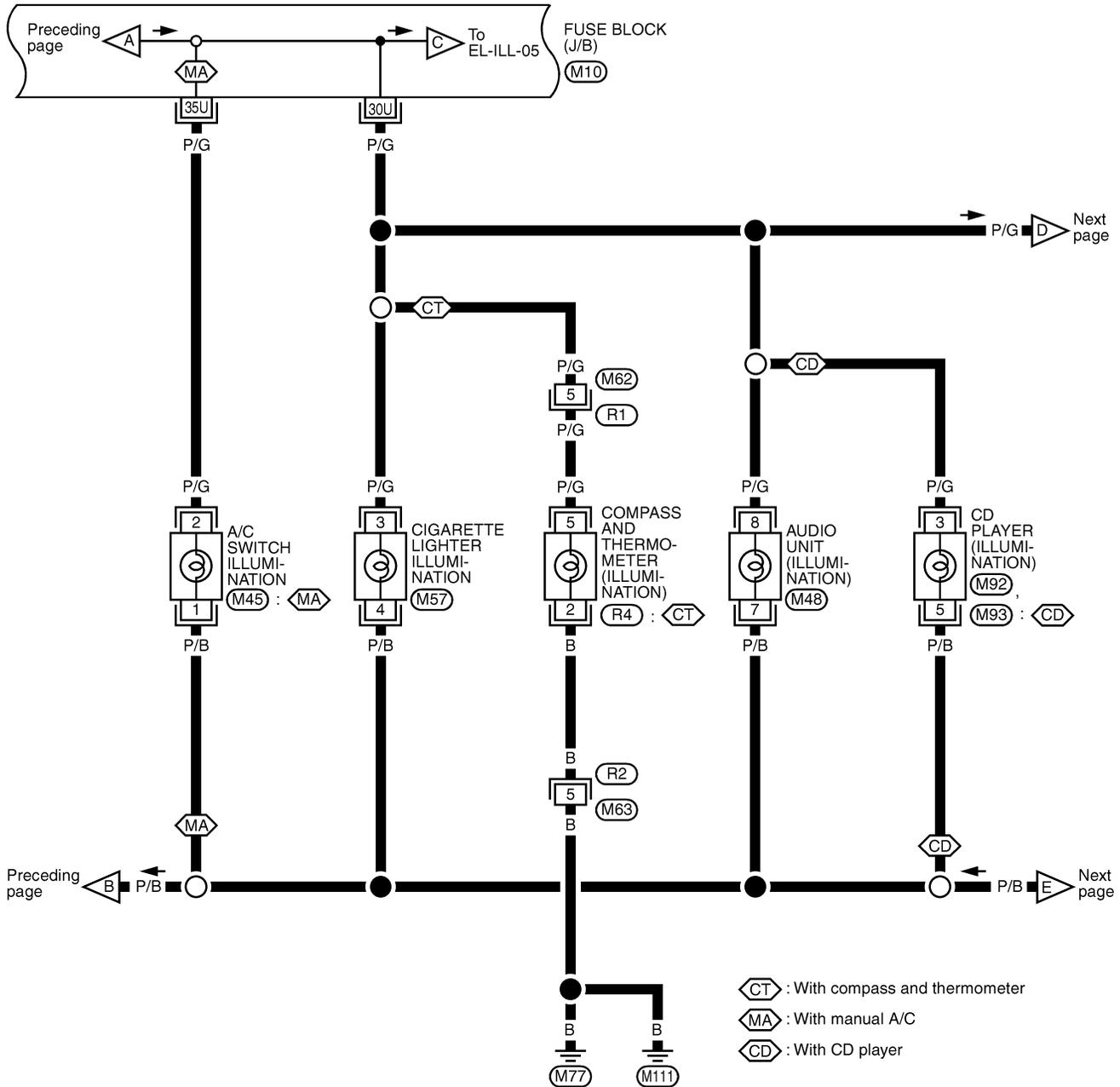
MEL930J

ILLUMINATION



Wiring Diagram — ILL — (Cont'd)

EL-ILL-03



Refer to last page (Foldout page).

M10

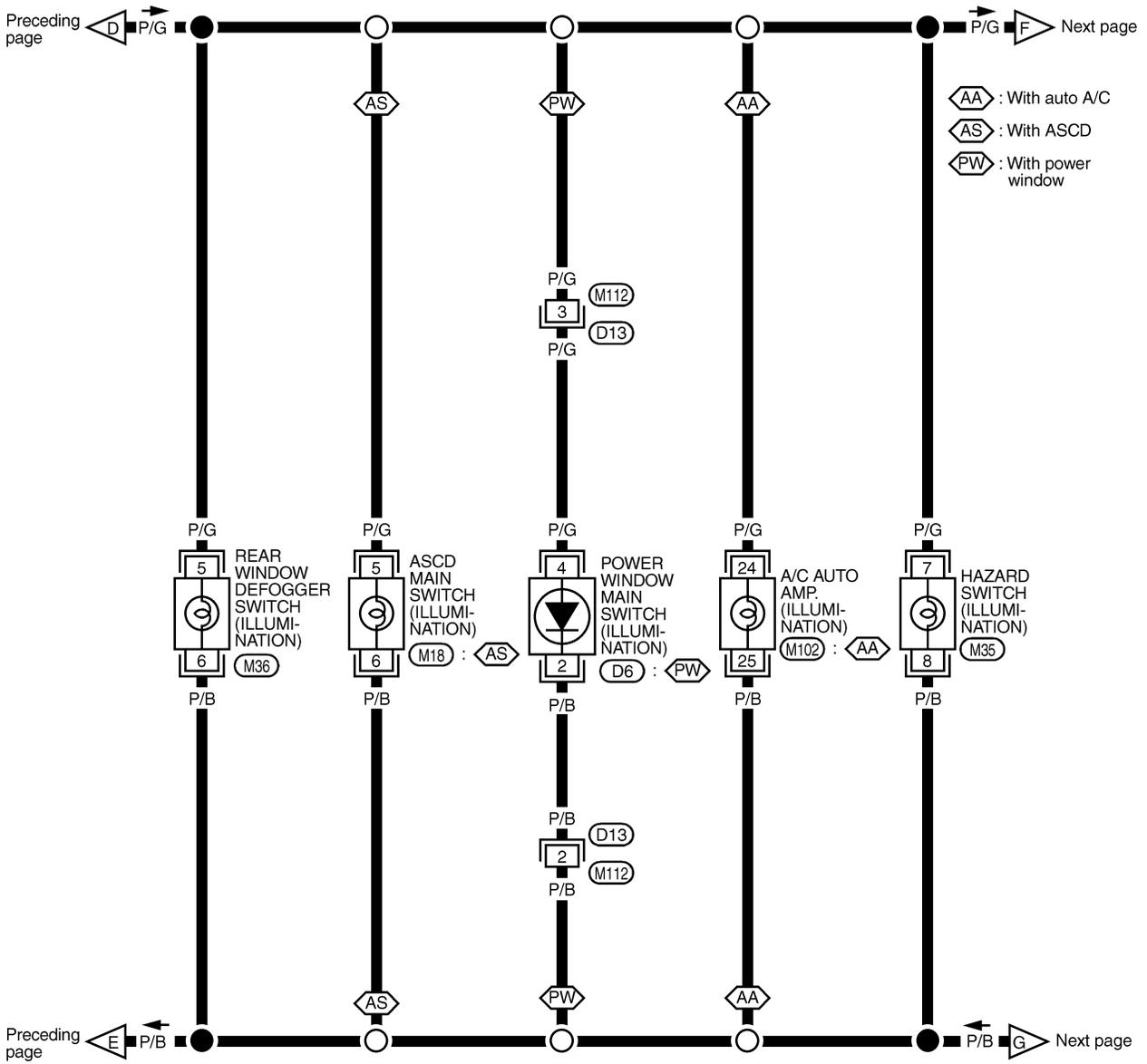
MEL205M

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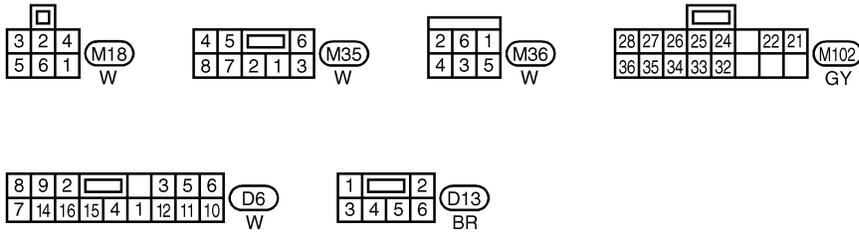
ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-04

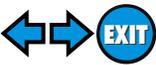


AA : With auto A/C
 AS : With ASCD
 PW : With power window

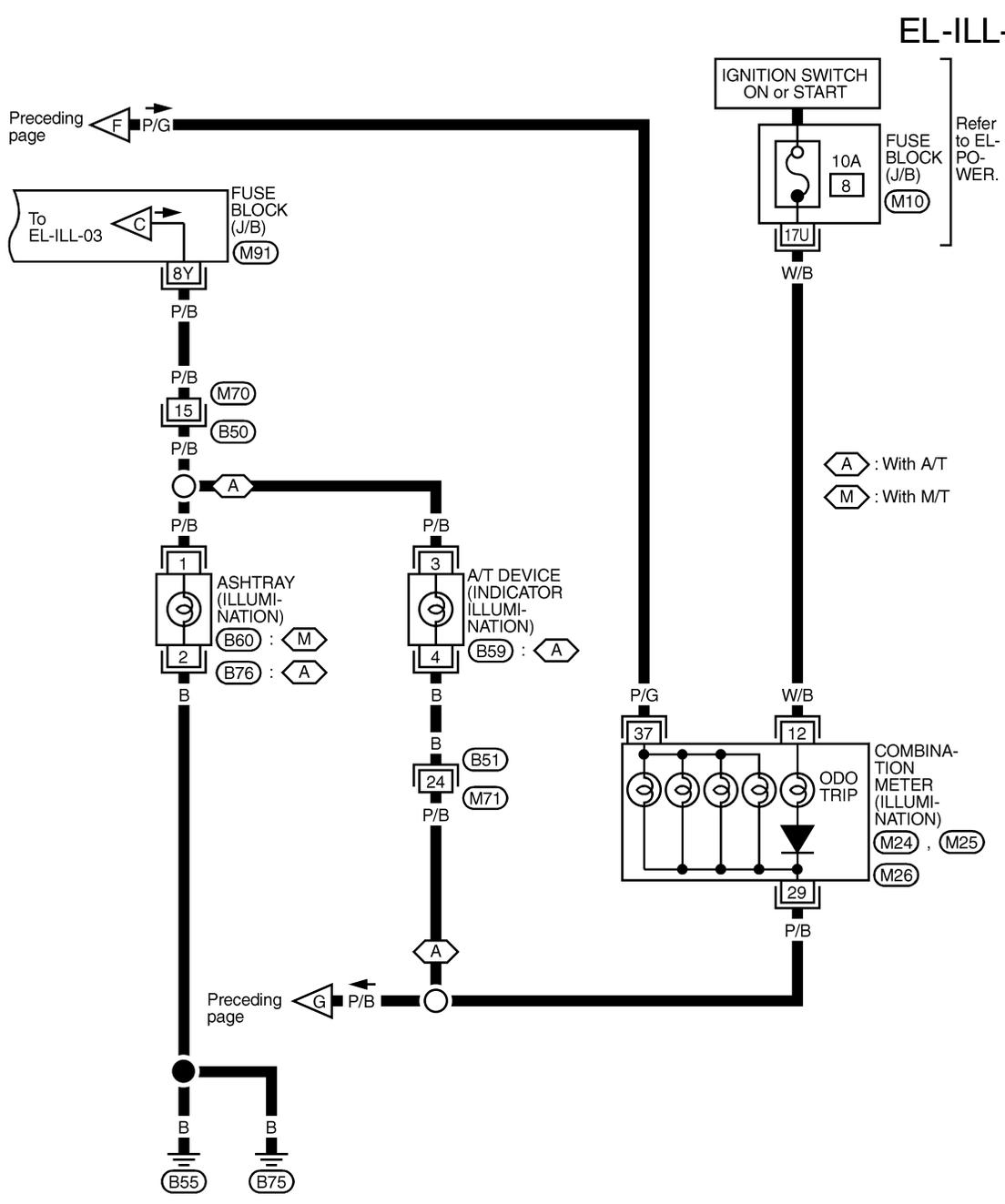


MEL206M

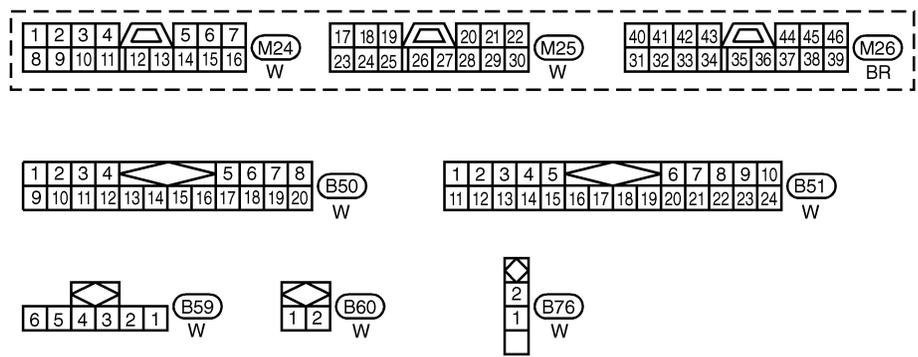
ILLUMINATION



Wiring Diagram — ILL — (Cont'd)



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- EM
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- BT
- HA
- SC
- EL
- IDX



Refer to last page (Foldout page).

- (M10)
- (M91)

MEL207M

System Description

NAEL0038

NAEL0038S06

POWER SUPPLY AND GROUND

Power is supplied at all times:

- through 40A fusible link (Letter f, located in the fuse and fusible link box)
- to circuit breaker-1 terminal 1
- through circuit breaker-1 terminal 2
- to smart entrance control unit terminal 11.

Power is supplied at all times:

- through 7.5A fuse [No. 24, located in the fuse block (J/B)]
- to key switch terminal 2 and
- to smart entrance control unit terminal 10.

When the key is removed from ignition key cylinder, power is interrupted:

- through key switch terminal 1
- to smart entrance control unit terminal 32.

With the ignition key switch in the ON or START position, power is supplied:

- through 7.5A fuse [No. 11, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

Ground is supplied:

- to smart entrance control unit terminal 16
- through body grounds terminals M77 and M111.

When the front driver side door is opened, ground is supplied:

- through body grounds B11, B22 and B210
- to front door switch (driver side) terminal 2
- from front door switch (driver side) terminal 1
- to smart entrance control unit terminal 29.

When the front passenger side door is opened, ground is supplied:

- through case ground of front door switch (passenger side)
- from front door switch (passenger side) terminal 1
- to smart entrance control unit terminal 40.

When any other door (except front door) is opened, ground is supplied to smart entrance control unit terminal 28 in the same manner as the front door switch (front passenger side).

When the front driver side door is unlocked, the smart entrance control unit receives a ground signal:

- through body grounds terminals M77 and M111
- to front door lock actuator (driver side unlock sensor) terminal 2
- from front door lock actuator (driver side unlock sensor) terminal 4
- to smart entrance control unit terminal 36.

When a signal, or combination of signals is received by the smart entrance control unit, ground is supplied:

- through smart entrance control unit terminal 8
- to interior lamp terminal 2.

With power and ground supplied, the interior lamp illuminates.

SWITCH OPERATION

When interior lamp switch is ON, ground is supplied:

- through case grounds of interior lamp
- to interior lamp.

And power is supplied:

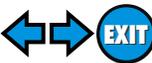
- to interior lamp terminal 1
- from smart entrance control unit terminal 17.

When spot lamp (LH and/or RH) is ON, ground is supplied:

- through body grounds M77 and M111
- to spot lamp terminal 2

And power is supplied:

NAEL0038S07



- to spot lamp terminal 1
 - from smart entrance control unit terminal 17.
- When vanity mirror illumination (LH and/or RH) is ON, ground is supplied:
- through body grounds M77 and M111
 - to vanity mirror illuminations (LH and RH) terminals 2.
- And power is supplied:
- to vanity mirror illuminations (LH and RH) terminals 1
 - from smart entrance control unit terminal 17.
- With power and ground supplied, interior lamps turn ON.

INTERIOR LAMP TIMER OPERATION

When interior lamp switch is in the "DOOR" position, the smart entrance control unit keeps the interior lamp illuminated for about 30 seconds when:

- unlock signal is supplied from driver's door unlock sensor while all doors are closed and key is removed from ignition key cylinder
- key is removed from ignition key cylinder while all doors are closed
- driver's door is opened and then closed while key is removed from the ignition key cylinder. (However, if the driver's door is closed with the key inserted in the ignition key cylinder after the driver's door is opened with the key removed, the timer is operated.)

When the interior lamp switch is in the "DOOR" position and the unlock signal is supplied from the multi-remote controller while the driver's door is locked and all doors are closed (even if key is inserted), the smart entrance control unit keeps the interior lamp illuminated for about 30 seconds.

The timer is canceled when:

- driver's door is locked,
- driver's door is opened, or
- ignition switch is turned ON.

ON-OFF CONTROL

When the driver side door, front passenger door, rear LH or RH door is opened, the interior room lamp turns on while the interior room lamp switch is in the "DOOR" position.

BATTERY SAVER

The lamp turns off automatically when interior lamp, luggage room lamp, spot lamp and/or vanity mirror illumination is illuminated with the ignition key is in OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in ON position for more than 10 minutes.

After lamps turn off by the battery saver system, the lamps illuminate again when:

- driver's door is locked or unlocked,
- door is opened or closed,
- key is inserted in ignition key cylinder.

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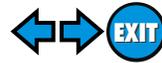
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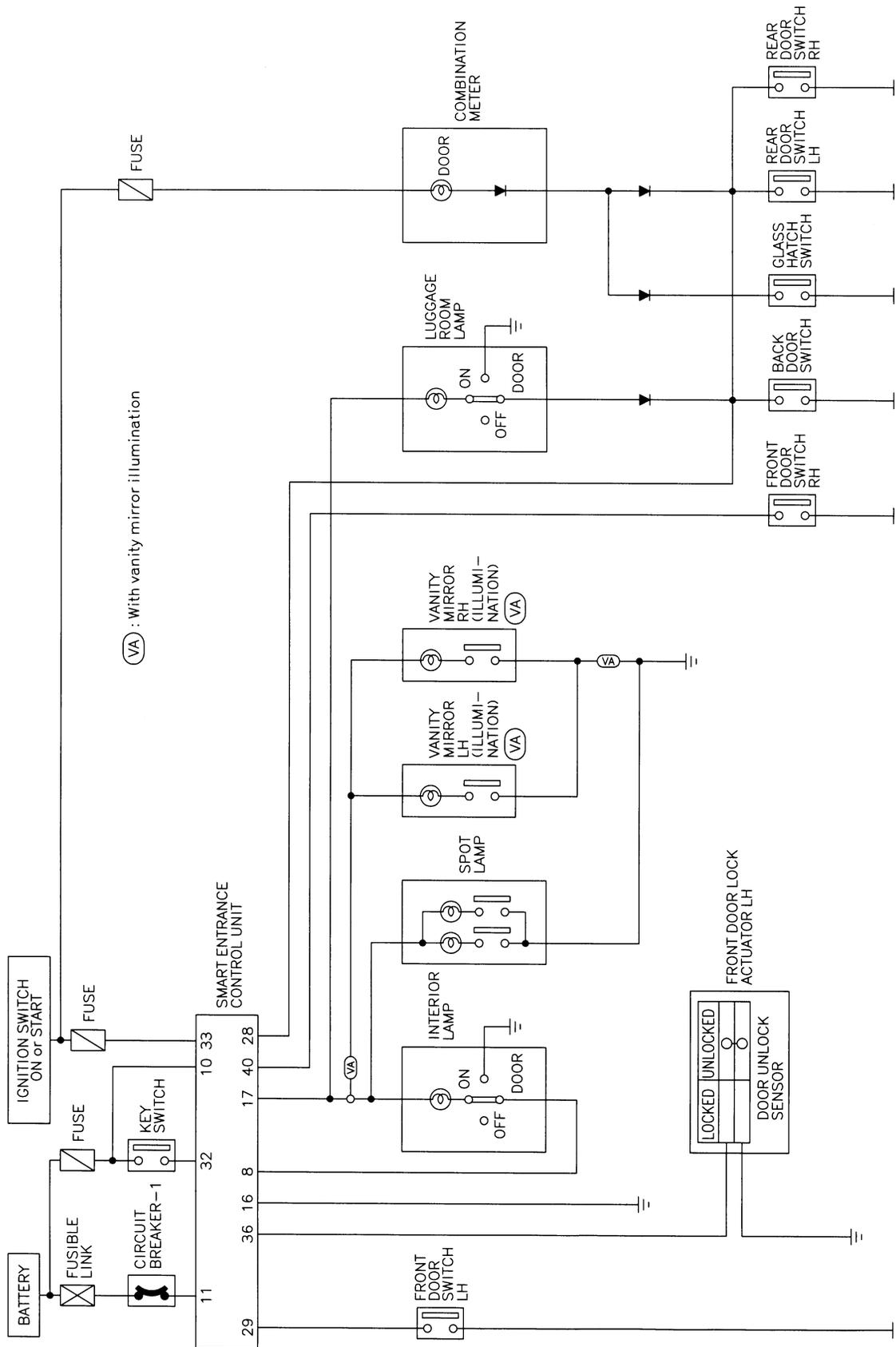
INTERIOR, SPOT, VANITY MIRROR AND LUGGAGE ROOM LAMPS



Schematic

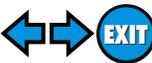
Schematic

NAEL0158



MEL934J

INTERIOR, SPOT, VANITY MIRROR AND LUGGAGE ROOM LAMPS

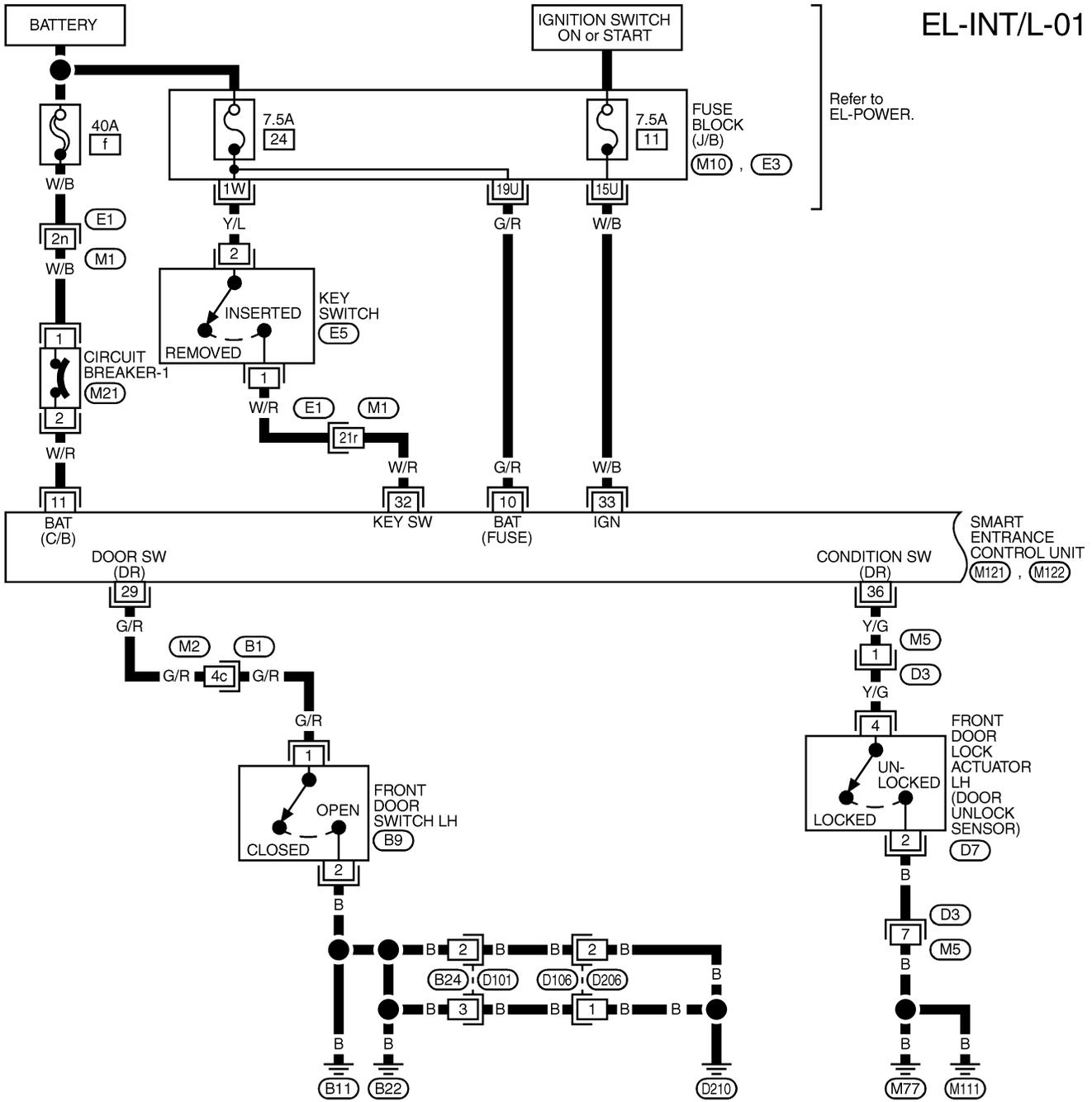


Wiring Diagram — INT/L —

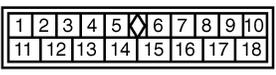
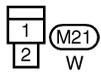
Wiring Diagram — INT/L —

NAEL0040

EL-INT/L-01



Refer to EL-POWER.



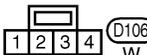
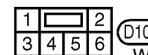
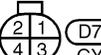
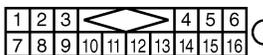
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M1, E1

M2, B1

M10

E3

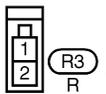
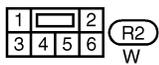
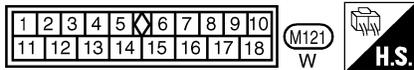
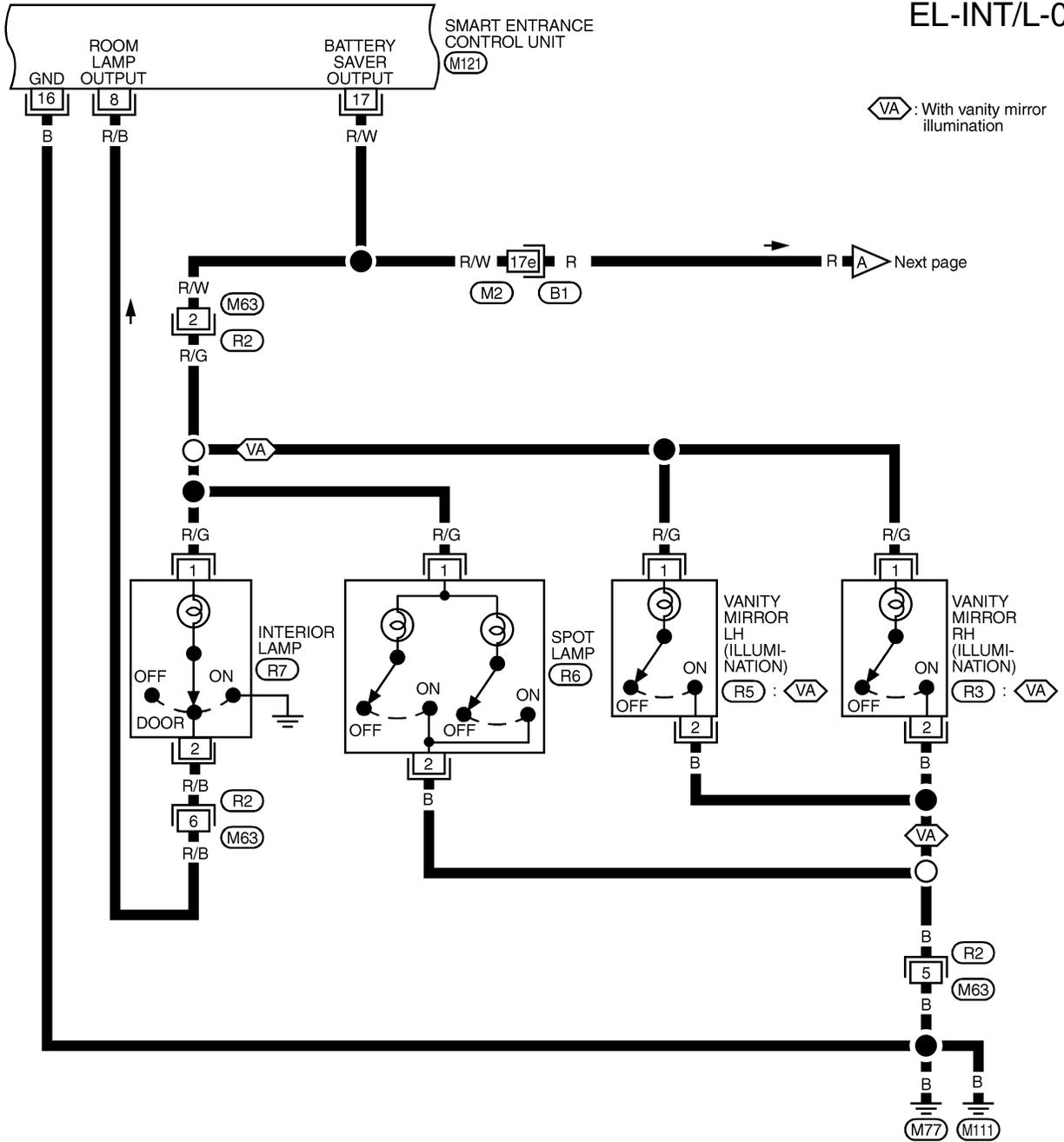


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INTERIOR, SPOT, VANITY MIRROR AND LUGGAGE ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-02

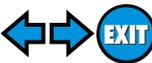


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(M2), (B1)

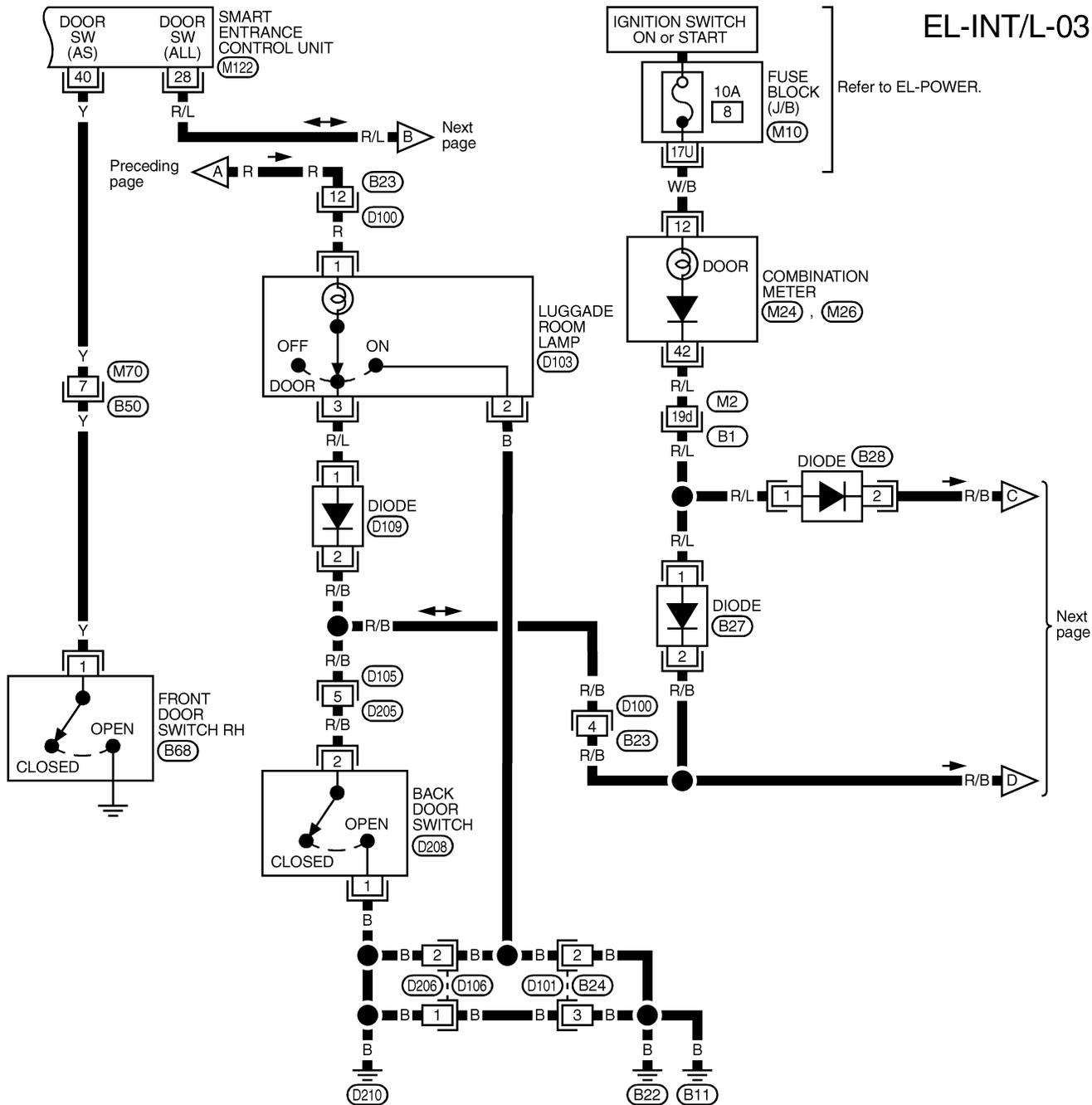
MEL936J

INTERIOR, SPOT, VANITY MIRROR AND LUGGAGE ROOM LAMPS

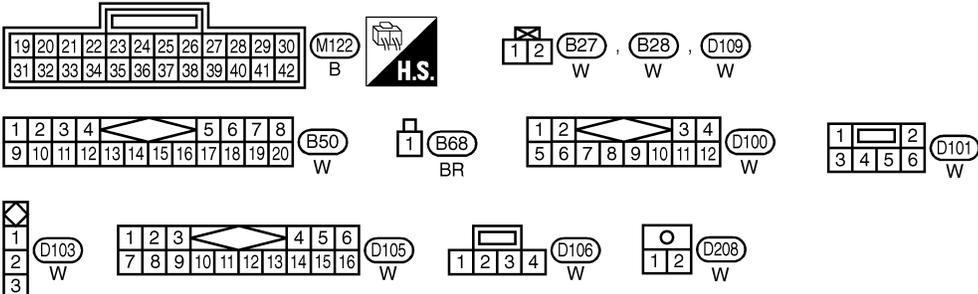
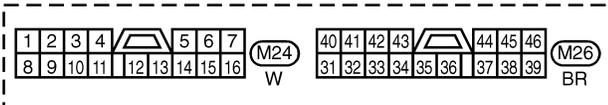


Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-03



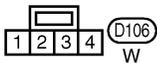
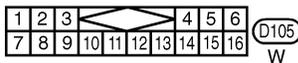
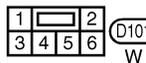
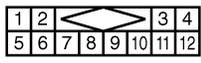
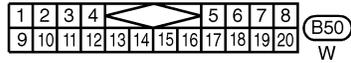
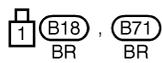
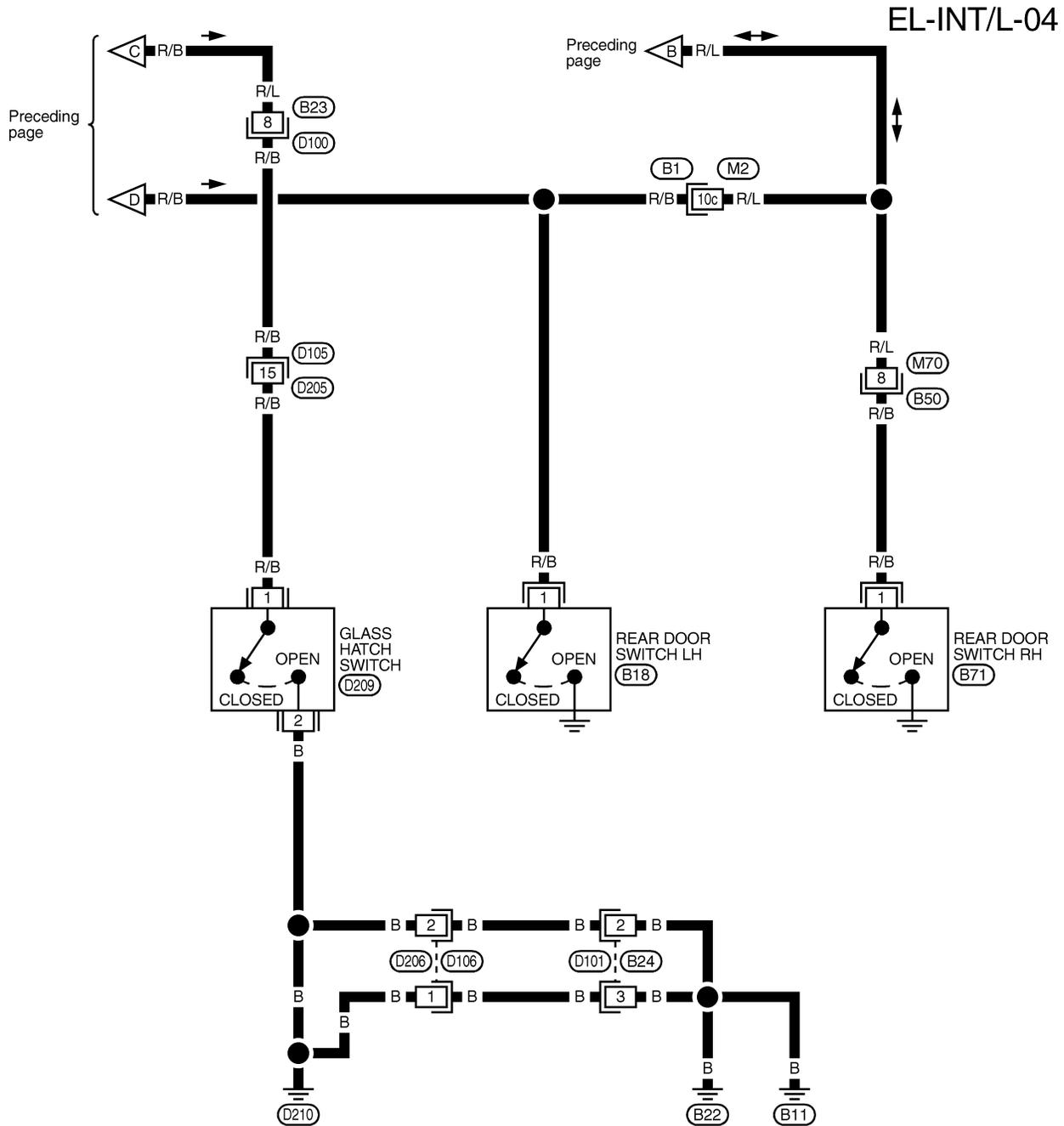
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- IDX

INTERIOR, SPOT, VANITY MIRROR AND LUGGAGE ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)



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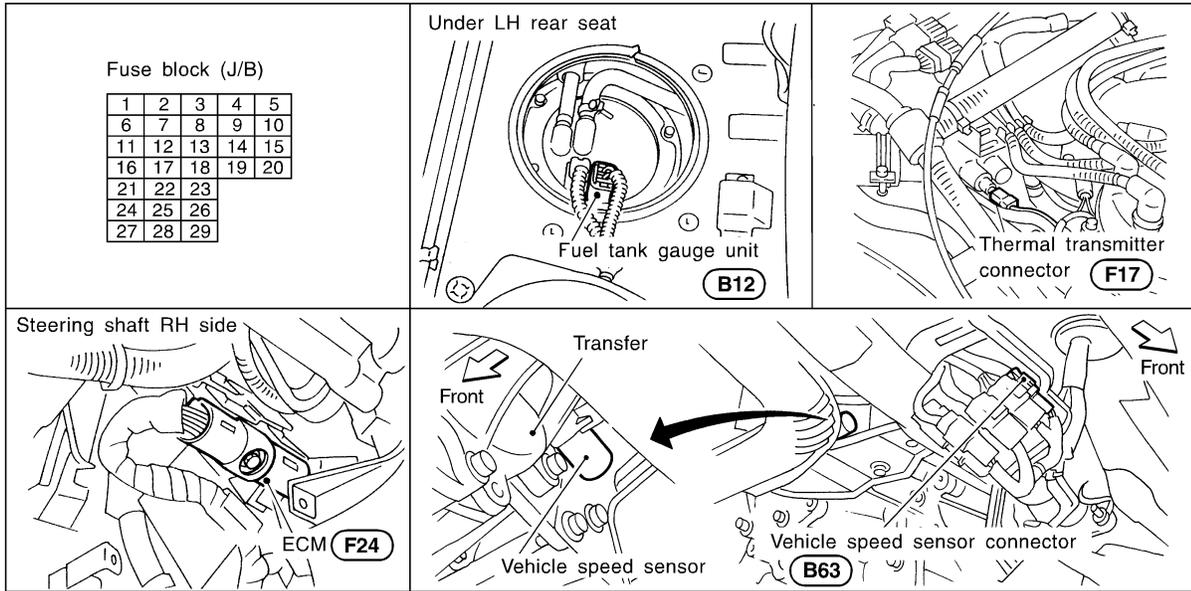
M2, B1

METERS AND GAUGES

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0041



SEL045W

System Description

NAEL0042

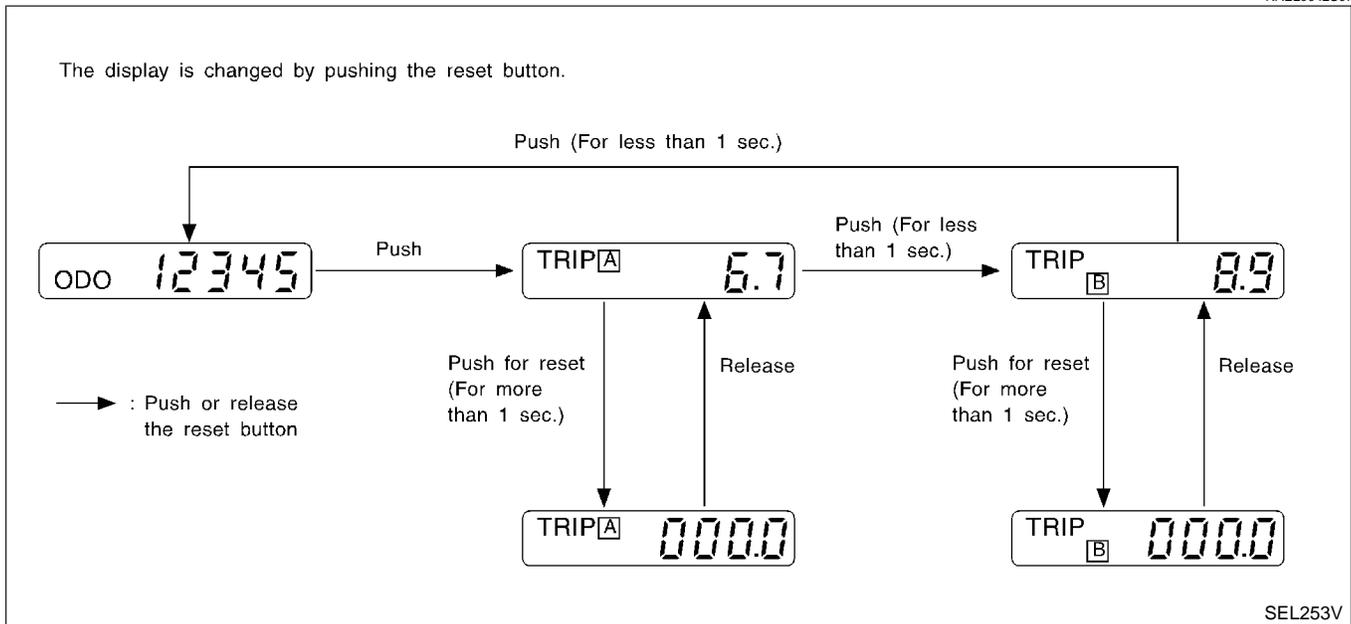
UNIFIED CONTROL METER

NAEL0042S06

- Speedometer, odo/trip meter, tachometer, fuel gauge and water temperature gauge are controlled totally by control unit combined with speedometer.
- Digital meter is adopted for odo/trip meter.*
*The record of the odo meter is kept even if the battery cable is disconnected. The record of the trip meter is erased when the battery cable is disconnected.
- Odo/trip meter segment can be checked in diagnosis mode.
- Meter/gauge can be checked in diagnosis mode.

HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

NAEL0042S07



SEL253V

NOTE:

Turn ignition switch to the "ON" position to operate odo/trip meter.

POWER SUPPLY AND GROUND CIRCUIT

NAEL0042S08

Power is supplied at all times

- through 7.5A fuse [No. 24, located in the fuse block (J/B)]
- to combination meter terminal 3.

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 8, located in the fuse block (J/B)]
- to combination meter terminal 12.

Ground is supplied

- to combination meter terminal 2
- through body grounds M77 and M111.

WATER TEMPERATURE GAUGE

NAEL0042S01

The water temperature gauge indicates the engine coolant temperature. The reading on the gauge is based on the resistance of the thermal transmitter.

As the temperature of the coolant increases, the resistance of the thermal transmitter decreases. A variable ground is supplied to terminal 6 of the combination meter for the water temperature gauge. The needle on the gauge moves from “C” to “H”.

TACHOMETER

NAEL0042S02

The tachometer indicates engine speed in revolutions per minute (rpm).

The tachometer is regulated by a signal

- from terminal 3 of the ECM
- to combination meter terminal 15 for the tachometer.

FUEL GAUGE

NAEL0042S03

The fuel gauge indicates the approximate fuel level in the fuel tank.

The fuel gauge is regulated by a variable ground signal supplied

- to combination meter terminal 7 for the fuel gauge
- from terminal 3 of the fuel tank gauge unit
- through terminal 2 of the fuel tank gauge unit and
- through body grounds B11, B22 and D210.

SPEEDOMETER

NAEL0042S04

The vehicle speed sensor provides a voltage signal to the combination meter for the speedometer.

The voltage is supplied

- to combination meter terminals 16 and 14 for the speedometer
- from terminals 2 and 1 of the vehicle speed sensor.

The speedometer converts the voltage into the vehicle speed displayed.

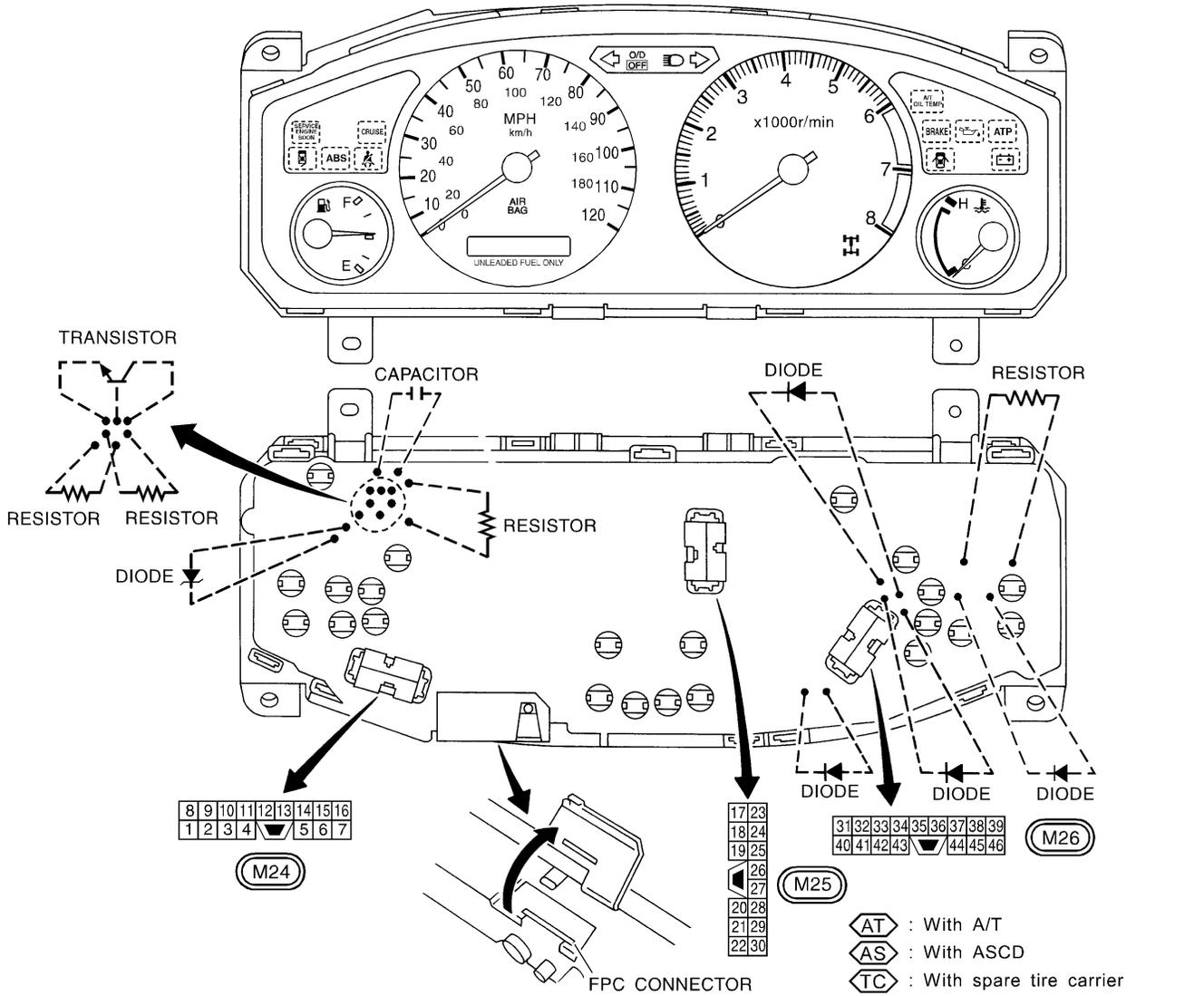
METERS AND GAUGES

Combination Meter/For USA

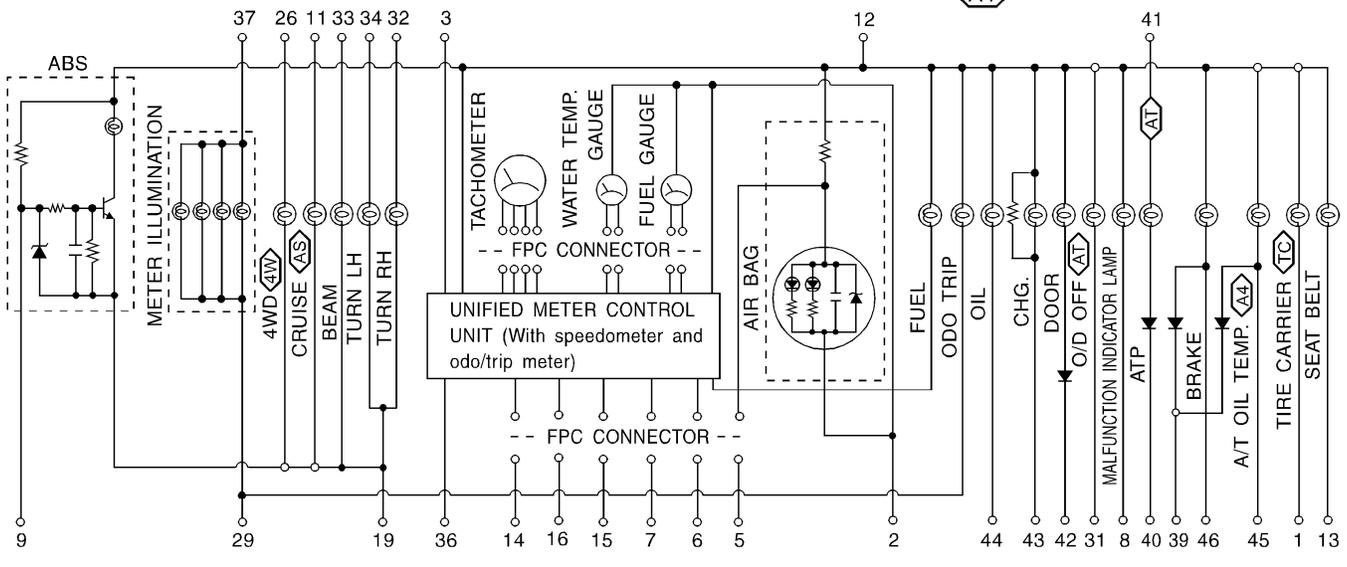
Combination Meter/For USA

NAEL0043

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- (AT) : With A/T
- (AS) : With ASCD
- (TC) : With spare tire carrier
- (4W) : With 4-wheel drive
- (A4) : With A/T and 4-wheel drive



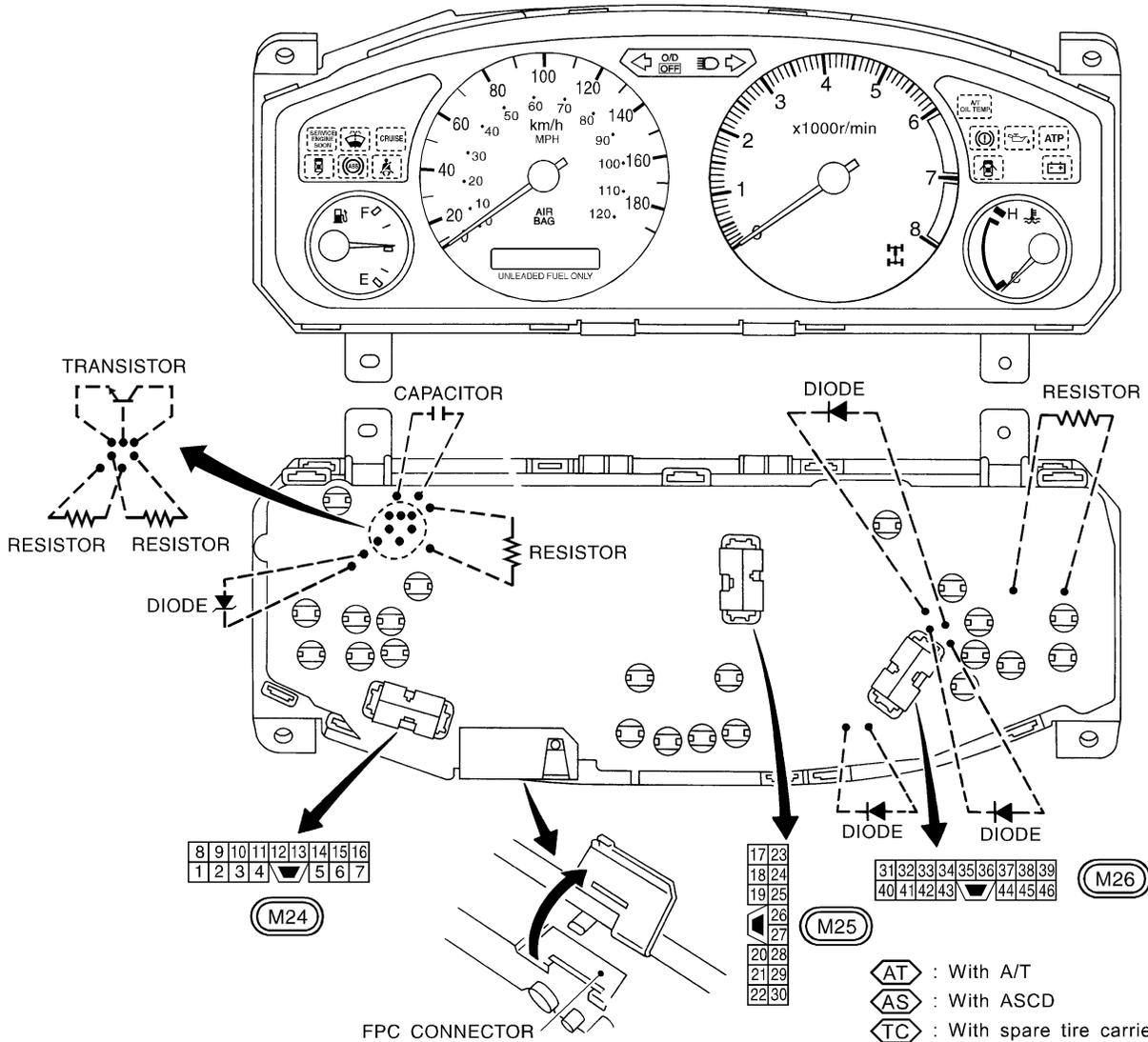
MEL886J

METERS AND GAUGES

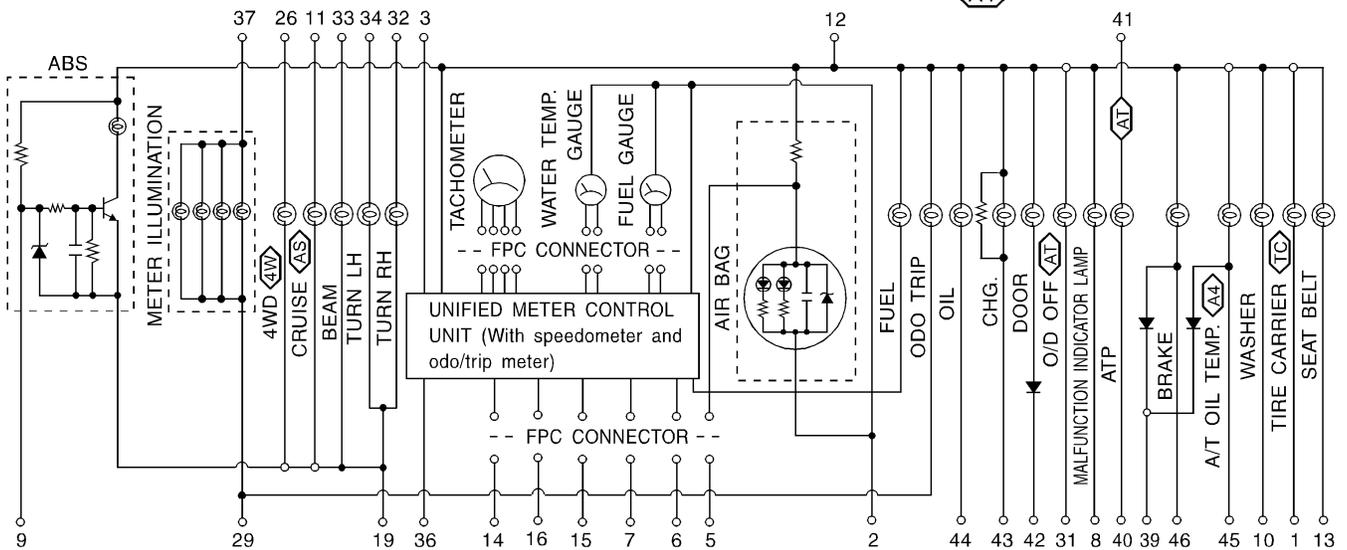
Combination Meter/For Canada

Combination Meter/For Canada

NAEL0165



- ⓐ : With A/T
- ⓑ : With ASCD
- ⓒ : With spare tire carrier
- ⓓ : With 4-wheel drive
- ⓔ : With A/T and 4-wheel drive



MEL887J

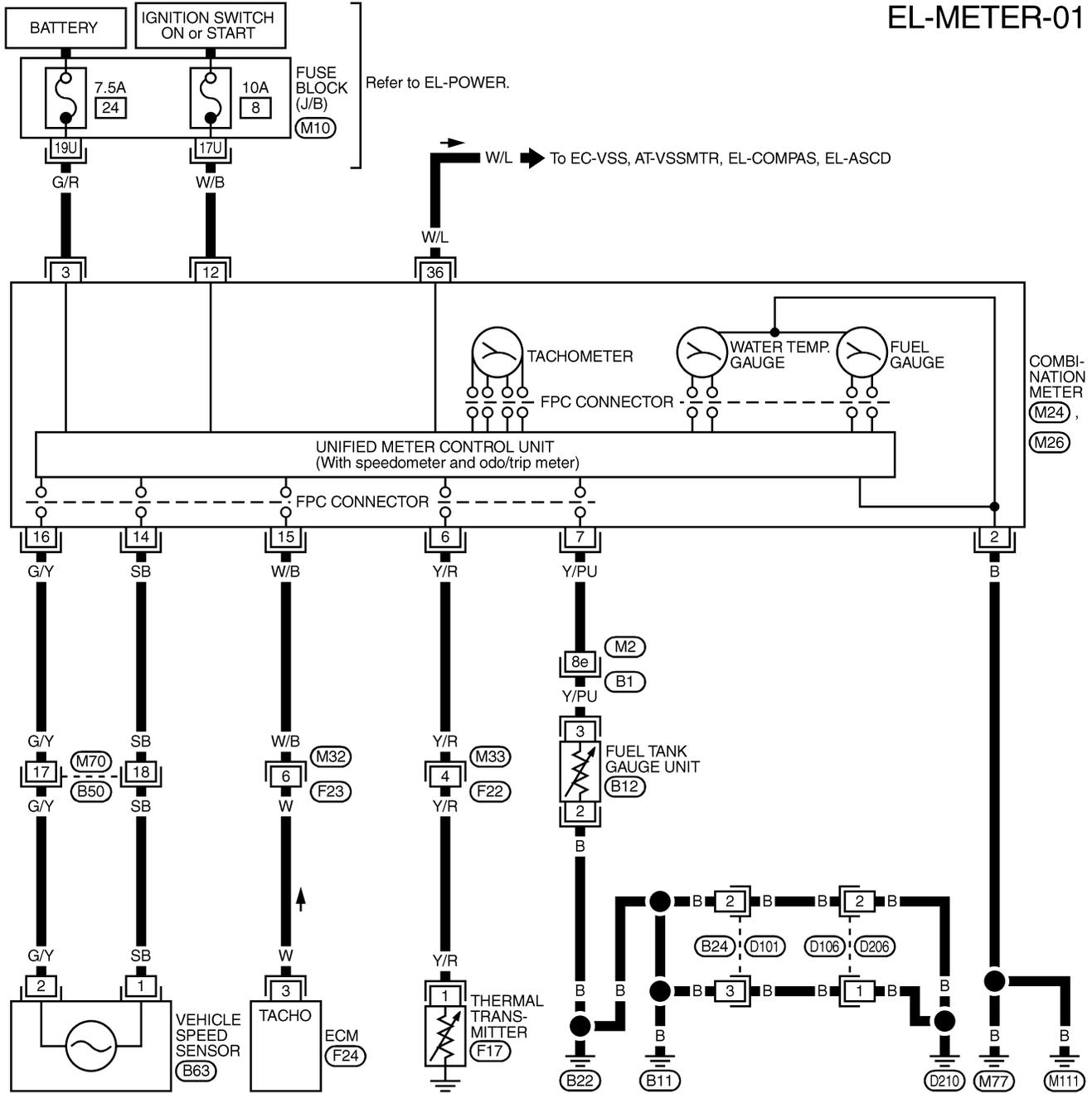
METERS AND GAUGES

Wiring Diagram — METER —

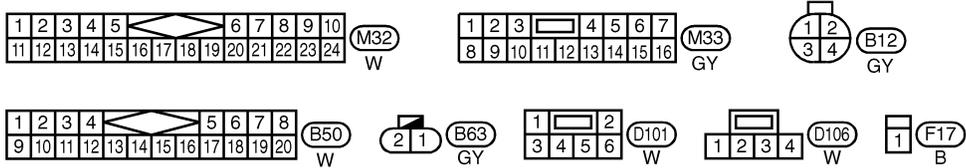
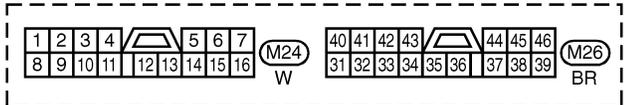
Wiring Diagram — METER —

NAEL0045

EL-METER-01



COMBINATION METER (M24), (M26)



Refer to last page (Foldout page).

(M2), (B1), (M10), (F24)

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METERS AND GAUGES

Meter/Gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode

Meter/Gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode

NAEL0151

DIAGNOSIS FUNCTION

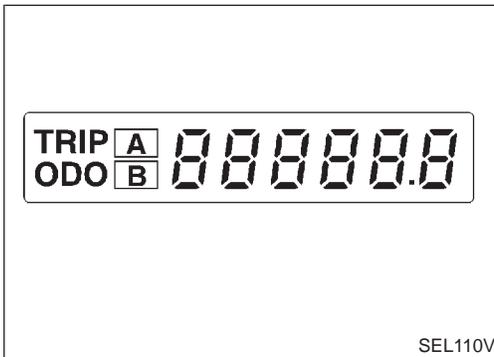
NAEL0151S01

- Odo/trip meter segment can be checked in diagnosis mode.
- Meters/gauges can be checked in diagnosis mode.

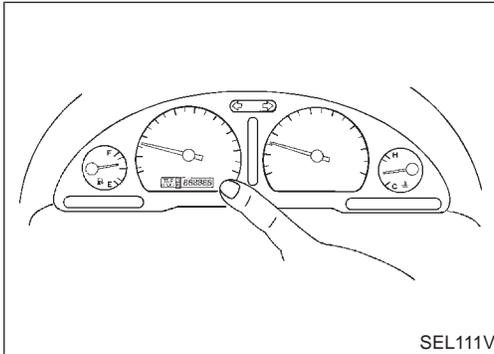
HOW TO ALTERNATE DIAGNOSIS MODE

NAEL0151S02

1. Turn ignition switch to ON and change odo/trip meter to "TRIP A" or "TRIP B".
2. Turn ignition switch to OFF.
3. Turn ignition switch to ON when pushing odo/trip meter switch.
4. Confirm that trip meter indicates "000.0".
5. Push odo/trip meter switch more than three times within 5 seconds.



SEL110V



SEL111V

6. All odo/trip meter segments should be turned on.

NOTE:

If some segments are not turned on, speedometer (unified meter control unit) with odo/trip meter should be replaced.

At this point, the unified control meter is turned to diagnosis mode.

7. Push odo/trip meter switch. Indication of each meter/gauge should be as shown left during pushing odo/trip meter switch if it is no malfunctioning.

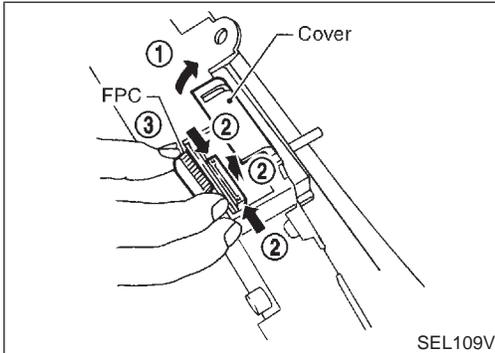
NOTE:

It takes about 1 minute for indication of fuel gauge to become stable.

Flexible Print Circuit (FPC)

=NAEL0152

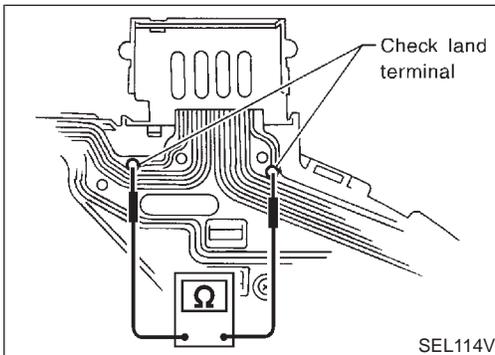
Tachometer, fuel gauge and water temperature gauge are connected with unified meter control unit (speedometer) by Flexible Print Circuit (FPC) connector. When replace or remove and install unified control unit (speedometer), disconnect and connect FPC connector according to the following steps.



DISCONNECT

NAEL0152S01

1. Open connector cover.
2. Release connector lock by holding both ends of it and pulling it up.
3. Disconnect FPC by pulling it up.



CONNECT

NAEL0152S02

1. Insert FPC into connector and lock connector pushing FPC downward.
2. Check secure connection of FPC.
3. Check continuity of check land terminal for secure connection of FPC.

Resistance: 0Ω

4. Close connector cover.

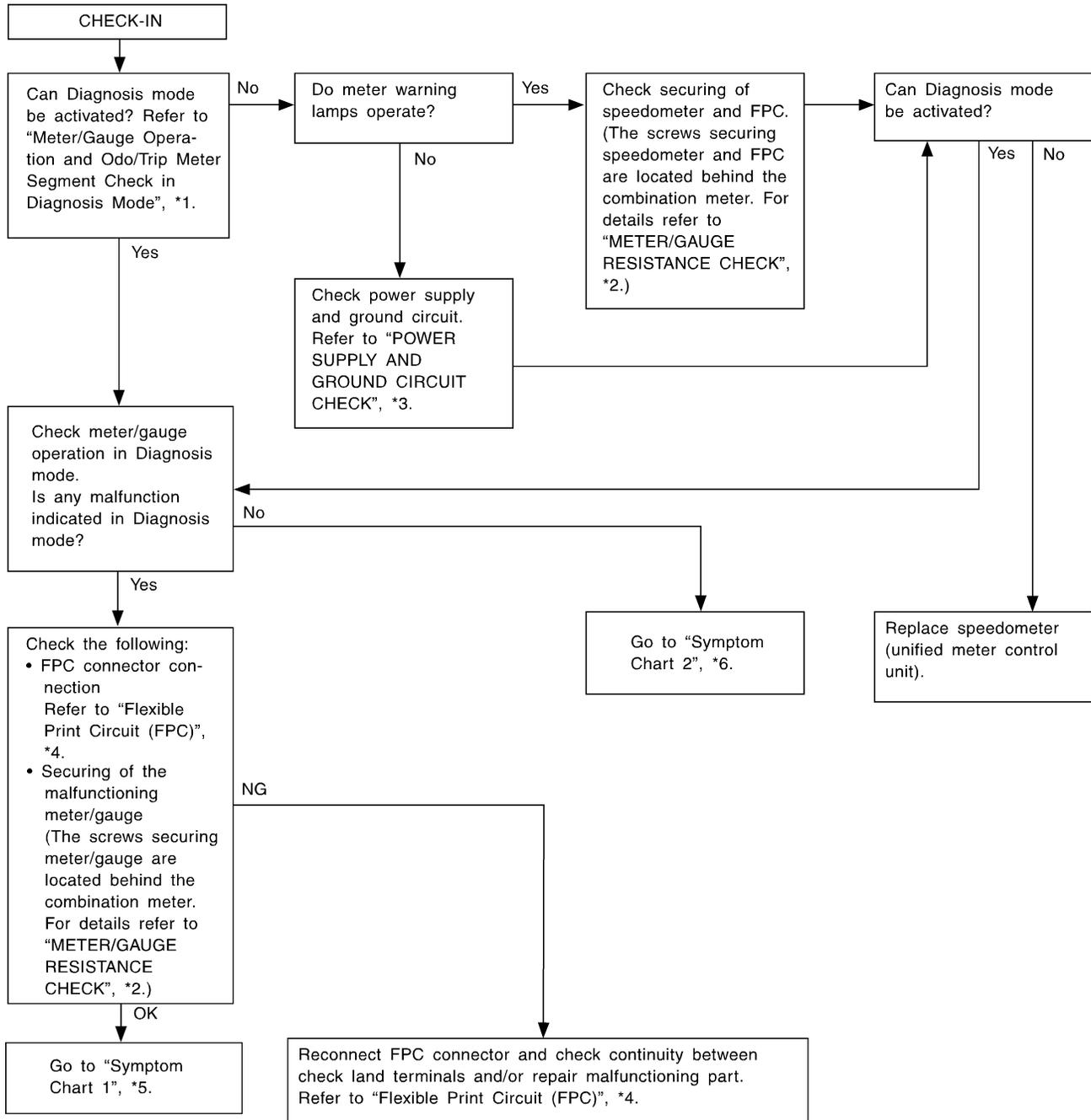
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METERS AND GAUGES

Trouble Diagnoses PRELIMINARY CHECK

NAEL0046

NAEL0046S04



MEL474HA

*1: Meter/Gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode (EL-86)
*2: METER/GAUGE RESISTANCE CHECK (EL-94)

*3: POWER SUPPLY AND GROUND CIRCUIT CHECK (EL-90)
*4: Flexible Print Circuit (FPC) (EL-87)

*5: Symptom Chart 1 (EL-89)
*6: Symptom Chart 2 (EL-89)

SYMPTOM CHART

Symptom Chart 1 (Malfunction is Indicated in Diagnosis Mode)

NAEL0046S10

NAEL0046S1001

Symptom	Possible causes	Repair order
Speedometer and/or odo/trip meter indicate(s) malfunction in Diagnosis mode.	<ul style="list-style-type: none"> Speedometer (Unified meter control unit) 	<ul style="list-style-type: none"> Replace speedometer (unified meter control unit).
Multiple meter/gauge indicate malfunction in Diagnosis mode.		
One of tachometer/fuel gauge/water temp. gauge indicates malfunction in Diagnosis mode.	<ul style="list-style-type: none"> Meter/Gauge Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check resistance of meter/gauge indicating malfunction. If the resistance is NG, replace the meter/gauge. Refer to "METER/GAUGE RESISTANCE CHECK", EL-94. If the resistance is OK, replace speedometer (unified meter control unit).

Symptom Chart 2 (No Malfunction is Indicated in Diagnosis Mode)

NAEL0046S1002

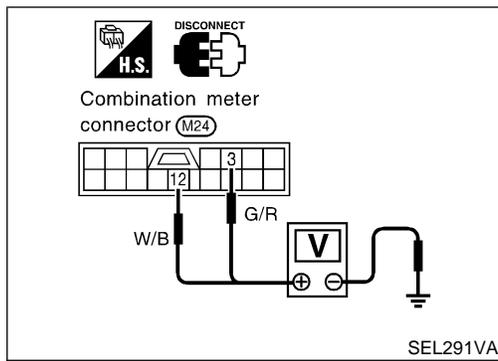
Symptom	Possible causes	Repair order
Speedometer and odo/trip meter are malfunctioning.	<ol style="list-style-type: none"> Sensor <ul style="list-style-type: none"> Speedometer, Odo/Trip meter FPC connector Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check vehicle speed sensor. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-91.) Check FPC connector. Refer to "Flexible Print Circuit (FPC)", EL-87. Replace speedometer (unified meter control unit).
Multiple meter/gauge are malfunctioning. (except speedometer, odo/trip meter)	<ol style="list-style-type: none"> FPC connector Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check FPC connector. Refer to "Flexible Print Circuit (FPC)", EL-87. Replace speedometer (unified meter control unit).
One of tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none"> Sensor/Engine revolution signal <ul style="list-style-type: none"> Tachometer Fuel gauge Water temp. gauge FPC connector Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check the sensor for malfunctioning meter/gauge. INSPECTION/ENGINE REVOLUTION SIGNAL (Refer to EL-92.) INSPECTION/FUEL TANK GAUGE UNIT (Refer to EL-92.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-93.) Check FPC connector. Refer to "Flexible Print Circuit (FPC)", EL-87. Replace speedometer (unified meter control unit).

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-88.

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METERS AND GAUGES

Trouble Diagnoses (Cont'd)



POWER SUPPLY AND GROUND CIRCUIT CHECK

=NAEL0046S07

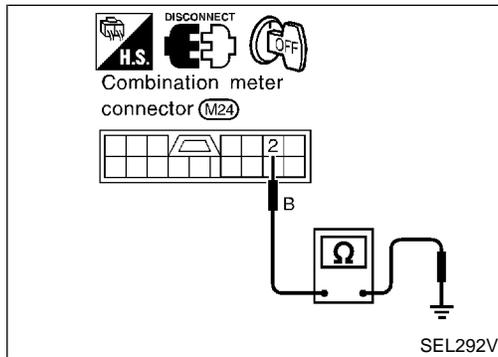
Power Supply Circuit Check

NAEL0046S0701

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
3	Ground	Battery voltage	Battery voltage	Battery voltage
12	Ground	0V	0V	Battery voltage

If NG, check the following.

- 7.5A fuse [No. 24, located in fuse block (J/B)]
- 10A fuse [No. 8, located in fuse block (J/B)]
- Harness for open or short between fuse and combination meter



Ground Circuit Check

NAEL0046S0702

Terminals	Continuity
2 - Ground	Yes

INSPECTION/VEHICLE SPEED SENSOR

=NAEL0046S03

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1	CHECK VEHICLE SPEED SENSOR OUTPUT	<p>1. Remove vehicle speed sensor from transmission. 2. Check voltage between combination meter terminals 14 and 16 while quickly turning speed sensor pinion.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>DISCONNECT H.S. </p> <p>Combination meter connector (M24)</p> </div> </div> <p>NOTE: Vehicle speed sensor connector should remain connected.</p> <p style="color: blue;">Voltage: Approx. 0.5V</p> <p style="text-align: center;">OK or NG</p>	SEL293V
OK	▶	Vehicle speed sensor is OK.	
NG	▶	GO TO 2.	

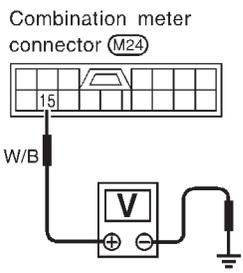
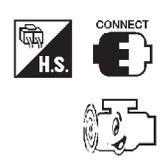
2	CHECK VEHICLE SPEED SENSOR	<p>Check resistance between vehicle speed sensor terminals 1 and 2.</p> <div style="text-align: center;"> <p>DISCONNECT T.S. </p> <p>Vehicle speed sensor connector (B63)</p> </div> <p style="color: blue;">Resistance: Approx. 250Ω</p> <p style="text-align: center;">OK or NG</p>	SEL344V
OK	▶	Check harness or connector between speedometer and vehicle speed sensor.	
NG	▶	Replace vehicle speed sensor.	

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

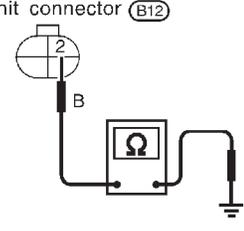
INSPECTION/ENGINE REVOLUTION SIGNAL

NAEL0046S02

1	CHECK ECM OUTPUT		
<p>1. Start engine. 2. Check voltage between combination meter terminals 15 and ground at idle and 2,000 rpm.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Combination meter connector (M24)</p>  </div> <div style="text-align: center;"> <p>CONNECT</p>  </div> </div> <p style="text-align: right;">SEL294V</p> <p>Higher rpm = Higher voltage Lower rpm = Lower voltage Voltage should change with rpm.</p> <p style="text-align: center;">OK or NG</p>			
OK		▶	Engine revolution signal is OK.
NG		▶	Harness for open or short between ECM and combination meter

INSPECTION/FUEL TANK GAUGE UNIT

NAEL0046S08

1	CHECK GROUND CIRCUIT FOR FUEL TANK GAUGE UNIT		
<p>Check harness continuity between fuel tank gauge unit terminal 2 and ground.</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center;"> <p>DISCONNECT</p>  </div> <div style="text-align: center;"> <p>Fuel tank gauge unit connector (B12)</p>  </div> </div> <p style="text-align: right;">MEL839G</p> <p style="text-align: center;">Does continuity exist?</p>			
Yes		▶	GO TO 2.
No		▶	Repair harness or connector.

2	CHECK GAUGE UNITS		
<p>Refer to "FUEL TANK GAUGE UNIT CHECK" (EL-94).</p> <p style="text-align: center;">OK or NG</p>			
OK		▶	GO TO 3.
NG		▶	Replace fuel tank gauge unit.

3	CHECK HARNESS FOR OPEN OR SHORT	
<ol style="list-style-type: none"> 1. Disconnect combination meter connector and fuel tank gauge unit connector. 2. Check continuity between combination meter terminal 7 and fuel tank gauge unit terminal 3. 3. Check continuity between combination meter terminal 7 and ground. 		
<p>Continuity: Combination meter terminal 7 and fuel tank gauge unit terminal 3 Yes Combination meter terminal 7 and ground No</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Fuel tank gauge unit is OK.
NG	▶	Repair harness or connector.

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INSPECTION/THERMAL TRANSMITTER

NAEL0046S09

1	CHECK THERMAL TRANSMITTER	
Refer to "THERMAL TRANSMITTER CHECK" (EL-95).		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Replace.

TF
PD
AX

2	CHECK HARNESS FOR OPEN OR SHORT	
<ol style="list-style-type: none"> 1. Disconnect combination meter connector and thermal transmitter connector. 2. Check continuity between combination meter terminal 6 and thermal transmitter terminal 1. 3. Check continuity between combination meter terminal 6 and ground. 		
<p>Continuity: Combination meter terminal 6 and thermal transmitter terminal 1 Yes Combination meter terminal 6 and ground No</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Thermal transmitter is OK.
NG	▶	Repair harness or connector.

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METERS AND GAUGES

Electrical Components Inspection

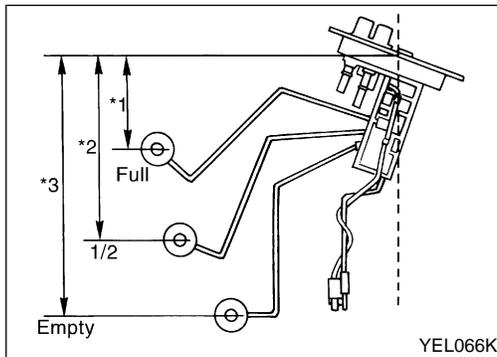
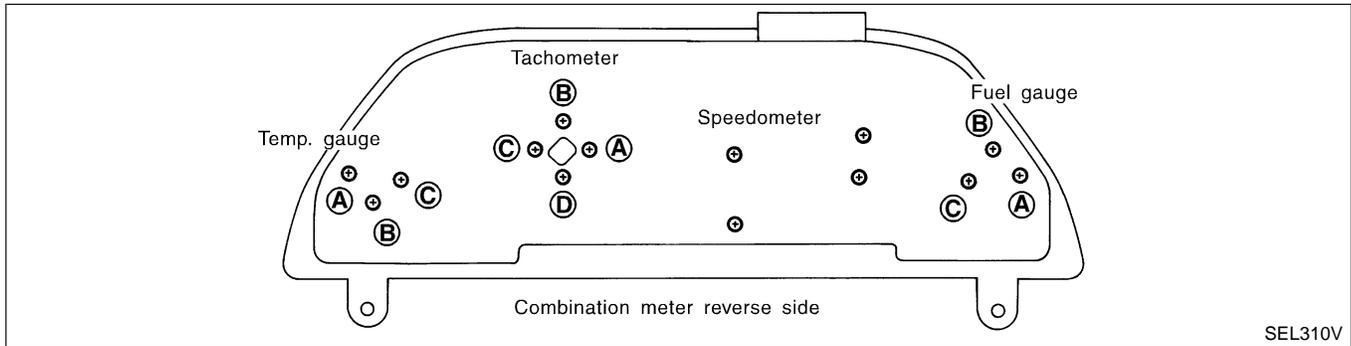
NAEL0047

METER/GAUGE RESISTANCE CHECK

NAEL0047S04

1. Disconnect FPC connector. Refer to "Flexible Print Circuit (FPC)" (EL-87).
2. Check resistance between installation screws of meter/gauge after removing meter/gauge.

Screws		Resistance Ω
Tachometer	Fuel/Temp. gauge	
A - C	A - C	Approx. 70 - Approx. 140
B - D	B - C	Approx. 90 - Approx. 170



FUEL TANK GAUGE UNIT CHECK

NAEL0047S01

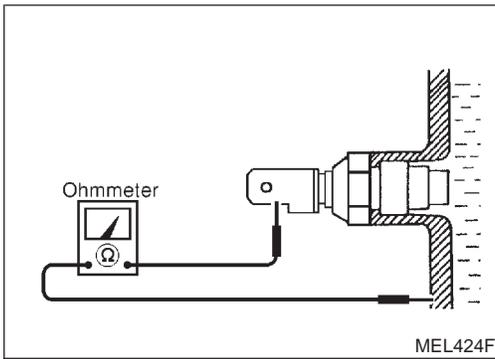
- For removal, refer to FE section.
- Check the resistance between terminals 3 and 2.

Ohmmeter		Float position		Resistance value Ω
(+)	(-)		mm (in)	
3	2	*1	Full	95 (3.74)
		*2	1/2	184 (7.24)
		*3	Empty	265 (10.43)

*1 and *3: When float rod is in contact with stopper.

METERS AND GAUGES

Electrical Components Inspection (Cont'd)

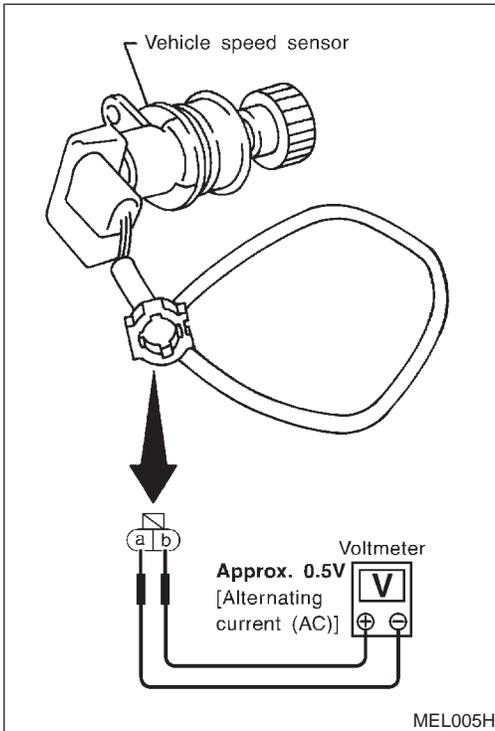


THERMAL TRANSMITTER CHECK

NAEL0047S02

Check the resistance between the terminals of thermal transmitter and body ground.

Water temperature	Resistance
60°C (140°F)	Approx. 170 - 210Ω
100°C (212°F)	Approx. 47 - 53Ω



VEHICLE SPEED SENSOR SIGNAL CHECK

NAEL0047S03

1. Remove vehicle speed sensor from transmission.
2. Turn vehicle speed sensor pinion quickly and measure voltage across a and b.

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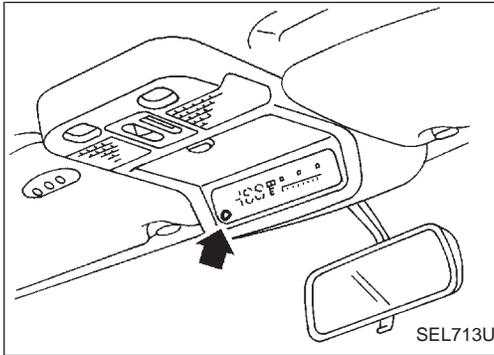
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System Description

NAEL0153



This unit displays following items:

- Earth magnetism and heading direction of vehicle.
- Outside air temperature.
- Caution for frozen road surfaces.

OUTSIDE TEMPERATURE DISPLAY

NAEL0153S01

Push the switch when the ignition key is in the “ACC” or “ON” position. The outside temperature will be displayed in “°F”.

- Selecting the indication range
Push the switch to change from “°F” to “°C”.
- When the outside temperature drops below freezing point, ICE is displayed on the unit.
- When the outside temperature is between 55°C (130°F) and 70°C (158°F), the display shows 55°C (130°F).
- When the outside temperature is lower than -30°C (-20°F) or higher than 70°C (158°F), the display shows only “---” though it is operating. This is not a problem.
- The indicated temperature on the thermometer is not readily affected by engine heat. It changes only when one of the following conditions is present.
 - a) The temperature detected by the ambient air temperature sensor is lower than the indicated temperature on the thermometer.
 - b) The difference in temperature detected during a period of 40 seconds is less than 1°C (1.8°F) when vehicle speed has been greater than 24 km/h (15 MPH) for more than 100 seconds.
(This is to prevent the indicated temperature from being affected by engine heat or cooling fan operation during low-speed driving.)
 - c) The ignition key has been turned to the “OFF” position for more than 4 hours. (The engine is cold.)

DIRECTION DISPLAY

NAEL0153S02

Push the switch when the ignition key is in the “ACC” or “ON” position. The direction will be displayed.

COMPASS AND THERMOMETER

Trouble Diagnoses

Trouble Diagnoses PRELIMINARY CHECK FOR THERMOMETER

NAEL0048

NAEL0048S02

1	COOL DOWN CHECK	
1. Turn the ignition key switch to the "ACC" position. 2. Cool down the ambient air temperature sensor with water or ice, so that the indicated temperature falls.		
Does the indicated temperature fall?		
Yes	▶	GO TO 2.
No	▶	The system is malfunctioning. Check the system following "INSPECTION/COMPASS AND THERMOMETER".

2	WARM UP CHECK	
1. Leave the vehicle for 10 minutes, so that the indicated temperature rises. 2. With the ignition key in the "ACC" position, disconnect and reconnect the ambient air temperature sensor connector.		
Does the indicated temperature rise?		
Yes	▶	The system is OK.
No	▶	The system is malfunctioning. Check the system following "INSPECTION/COMPASS AND THERMOMETER".

NOTE:

- When the outside temperature is between 55°C (130°F) and 70°C (158°F), the display shows 55°C (130°F). When the outside temperature is lower than -30°C (-20°F) or higher than 70°C (158°F), the display shows only "---".
- The indicated temperature on the thermometer is not readily affected by engine heat. It changes only when one of the following conditions is present.
 - a) The temperature detected by the ambient air temperature sensor is lower than the indicated temperature on the thermometer.
 - b) The difference in temperature detected during a period of 40 seconds is less than 1°C (1.8°F) when vehicle speed has been greater than 24 km/h (15 MPH) for more than 100 seconds. (This is to prevent the indicated temperature from being affected by engine heat or cooling fan operation during low-speed driving.)
 - c) The ignition key has been turned to the "OFF" position for more than 4 hours. (The engine is cold.)

INSPECTION/COMPASS AND THERMOMETER

NAEL0048S01

Symptom	Possible causes	Repair order
No display at all	1. 10A fuse 2. Ground circuit 3. Compass and thermometer	1. Check 10A fuse [No. 9, located in fuse block (J/B)]. Turn the ignition switch ON and verify that battery positive voltage is at terminal 7 of compass and thermometer. 2. Check ground circuit for compass and thermometer. 3. Replace compass and thermometer.
Forward direction indication slips off the mark or incorrect.	1. In manual correction mode (Bar and display vanish.) 2. Zone variation change is not done.	1. Drive the vehicle and turn at an angle of 90°. 2. Perform the zone variation change.
Compass reading remains unchanged.	1. Vehicle speed sensor is not entered. 2. Compass and thermometer	1. Check harness for open or short between combination meter terminal 36 and compass and thermometer terminal 1. 2. Replace compass and thermometer.

COMPASS AND THERMOMETER

Trouble Diagnoses (Cont'd)

Symptom	Possible causes	Repair order
Displays wrong temperature when ambient temperature is between -30°C (-20°F) and 55°C (130°F). (See NOTE above.)	<ol style="list-style-type: none"> 1. Check operation 2. Ambient air temperature sensor circuit 3. Vehicle speed sensor is not entered. 4. Ambient air temperature sensor 5. Compass and thermometer 	<ol style="list-style-type: none"> 1. Perform preliminary check shown above. 2. Check harness for open or short between ambient air temperature sensor and compass and thermometer. 3. Check harness for open or short between combination meter terminal 36 and compass and thermometer terminal 1. 4. Replace ambient air temperature sensor. 5. Replace compass and thermometer.

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Calibration Procedure for Compass

NAEL0155

The difference between magnetic North and geographical North can sometimes be great enough to cause false compass readings. In order for the compass to operate accurately in a particular zone, it must be calibrated using the following procedure.

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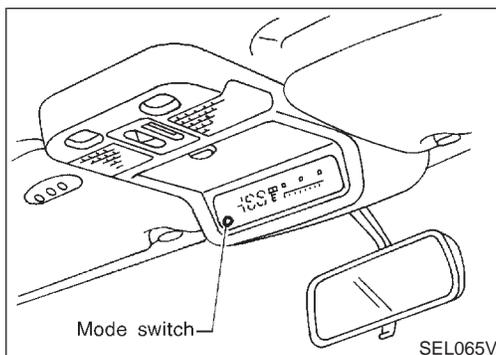
Zone Variation Chart

1. Determine your location on the zone map. Record your zone number.
2. Turn the ignition switch to ACC or ON position.
3. Push the "Mode" switch continuously for five seconds until the current zone entry number is displayed.
4. Press the "Mode" switch repeatedly until the desired zone number is displayed.

Once the desired zone number is displayed, stop pressing the "Mode" switch and the display will show compass direction after a few seconds.

SEL738UA

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CORRECTION FUNCTIONS OF COMPASS

NAEL0155S01

The direction display is equipped with automatic correction function. If the direction is not shown correctly, carry out initial correction.

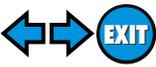
INITIAL CORRECTION PROCEDURE FOR COMPASS

NAEL0155S02

1. Pushing the "Mode" switch for about 10 seconds will enter the initial correction mode. The direction bar starts blinking.
2. Turn the vehicle slowly in an open, safe place. The initial correction is completed in one or two turns.

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COMPASS AND THERMOMETER



Calibration Procedure for Compass (Cont'd)

NOTE:

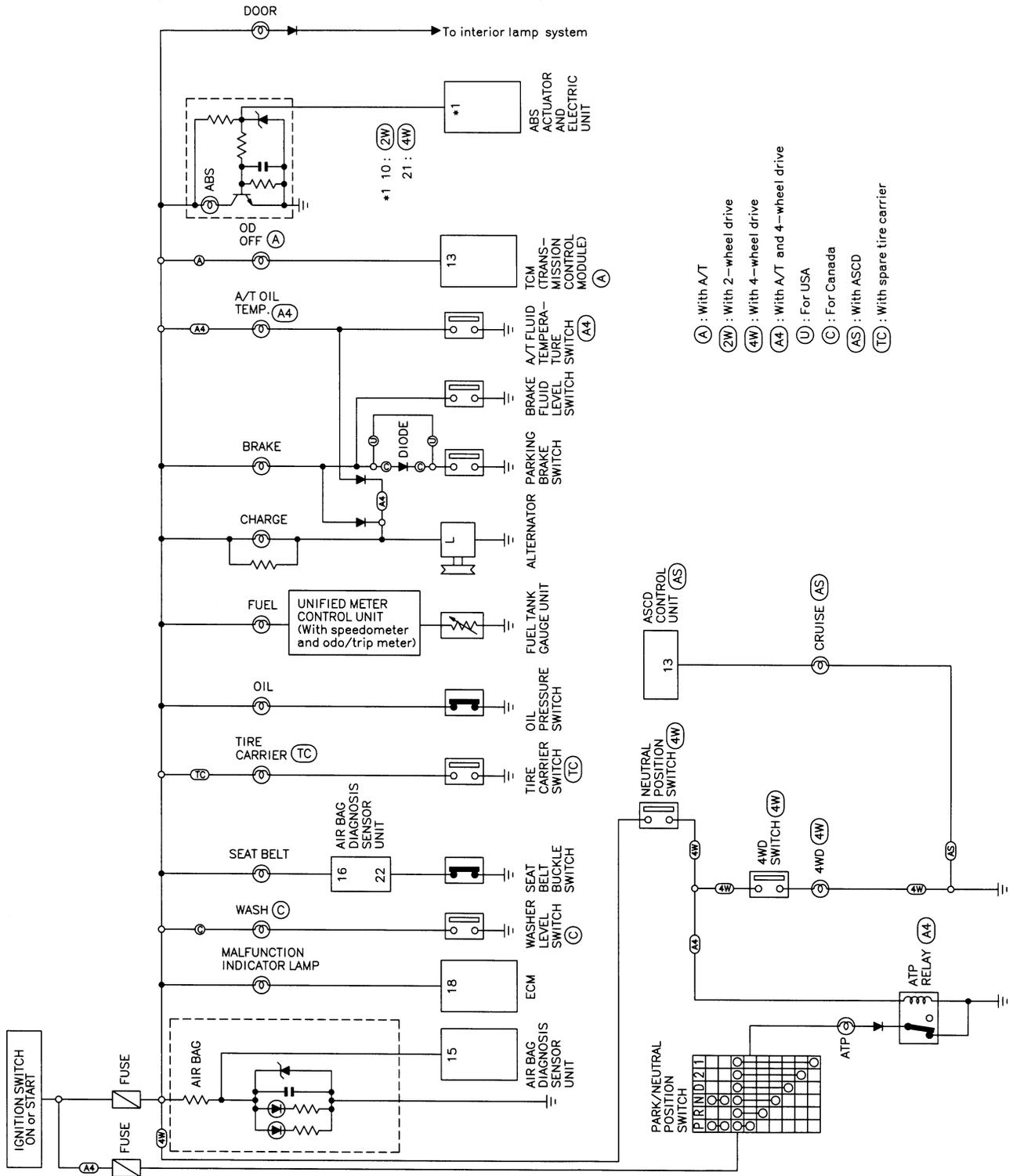
In places where the terrestrial magnetism is extremely disturbed, the initial correction may start automatically.

WARNING LAMPS

Schematic

Schematic

NAEL0049



- (A) : With A/T
- (2W) : With 2-wheel drive
- (4W) : With 4-wheel drive
- (A4) : With A/T and 4-wheel drive
- (U) : For USA
- (C) : For Canada
- (AS) : With ASCD
- (TC) : With spare tire carrier

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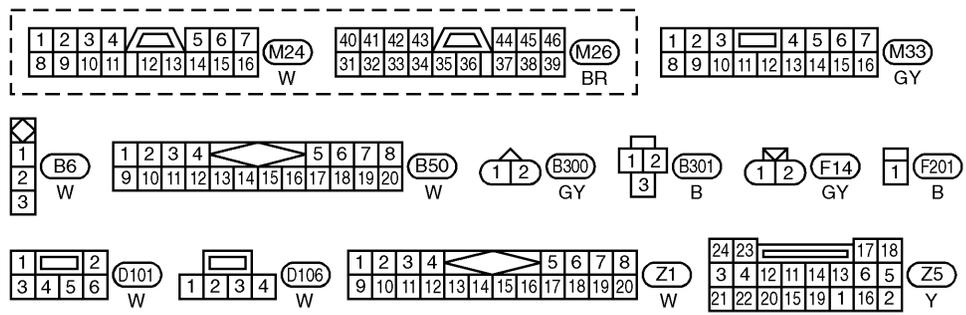
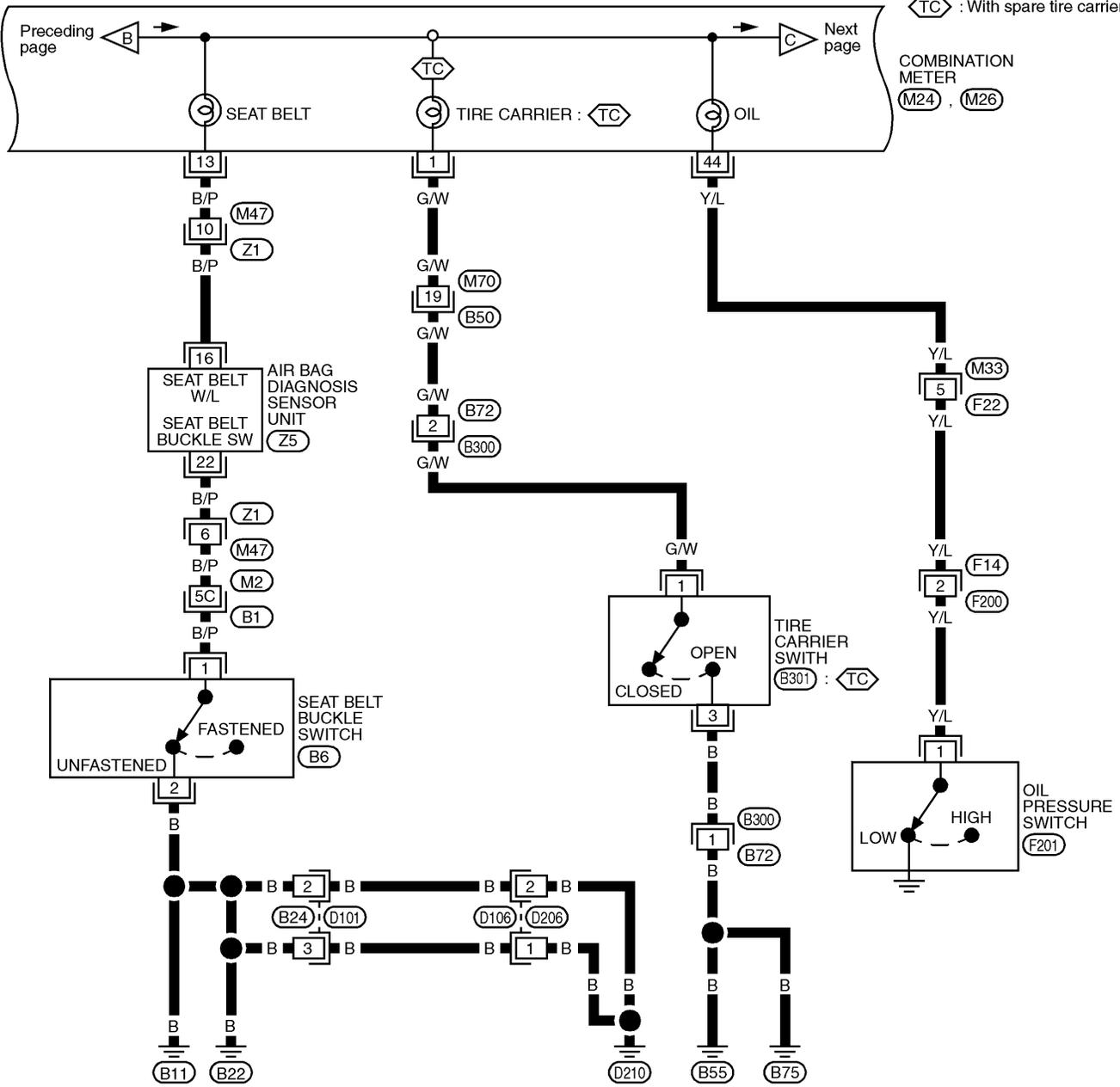
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WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-02

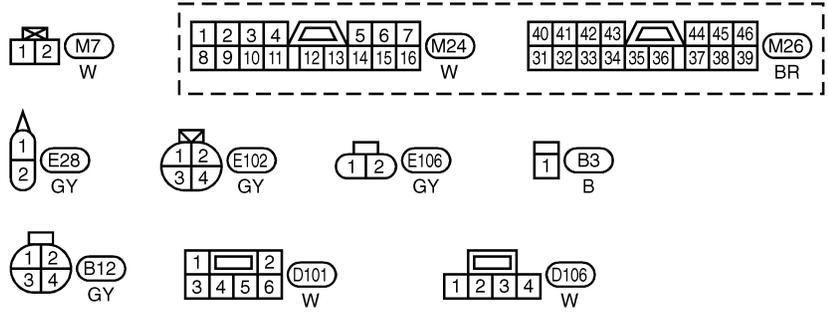
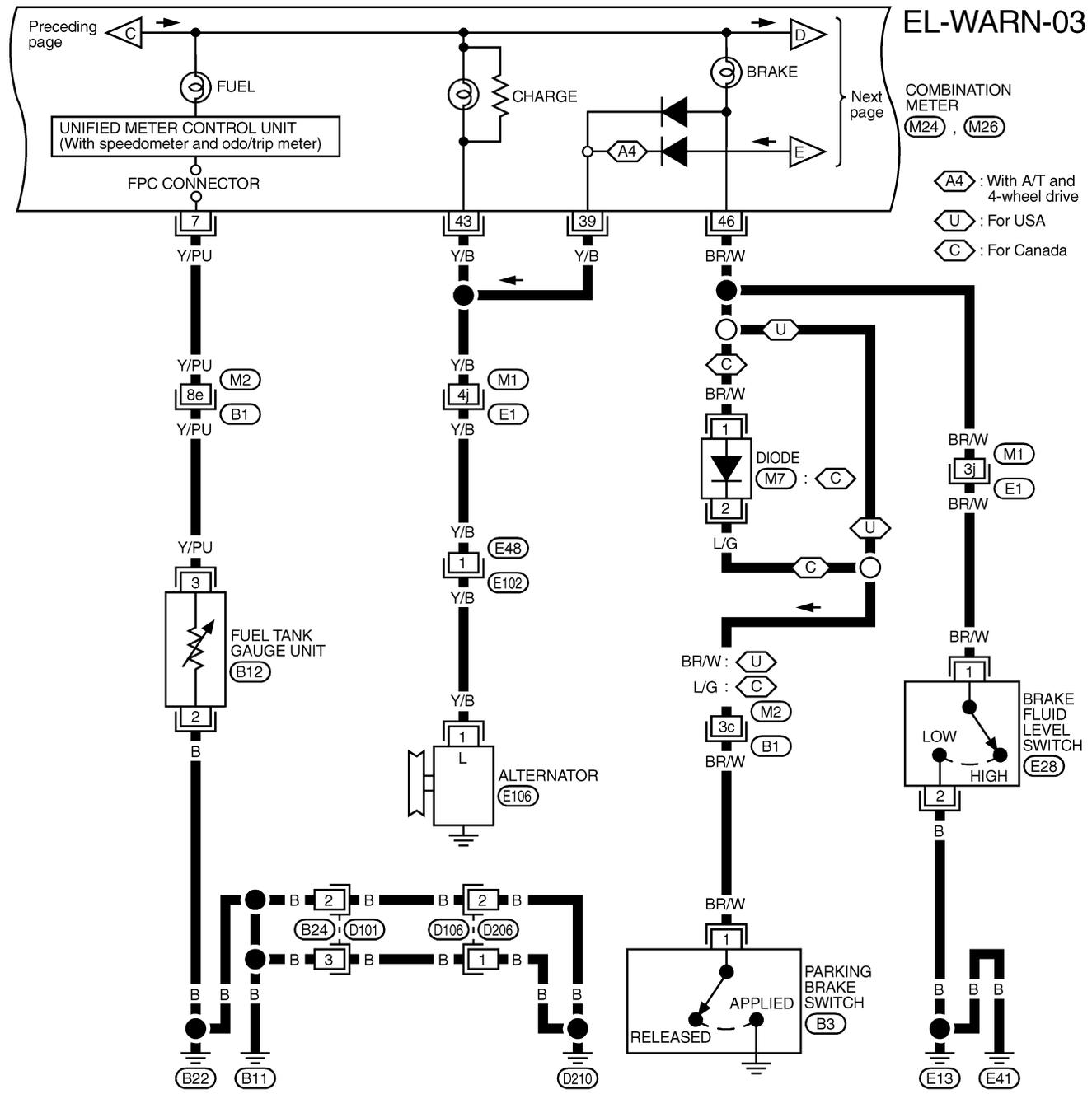
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M2, B1

WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)



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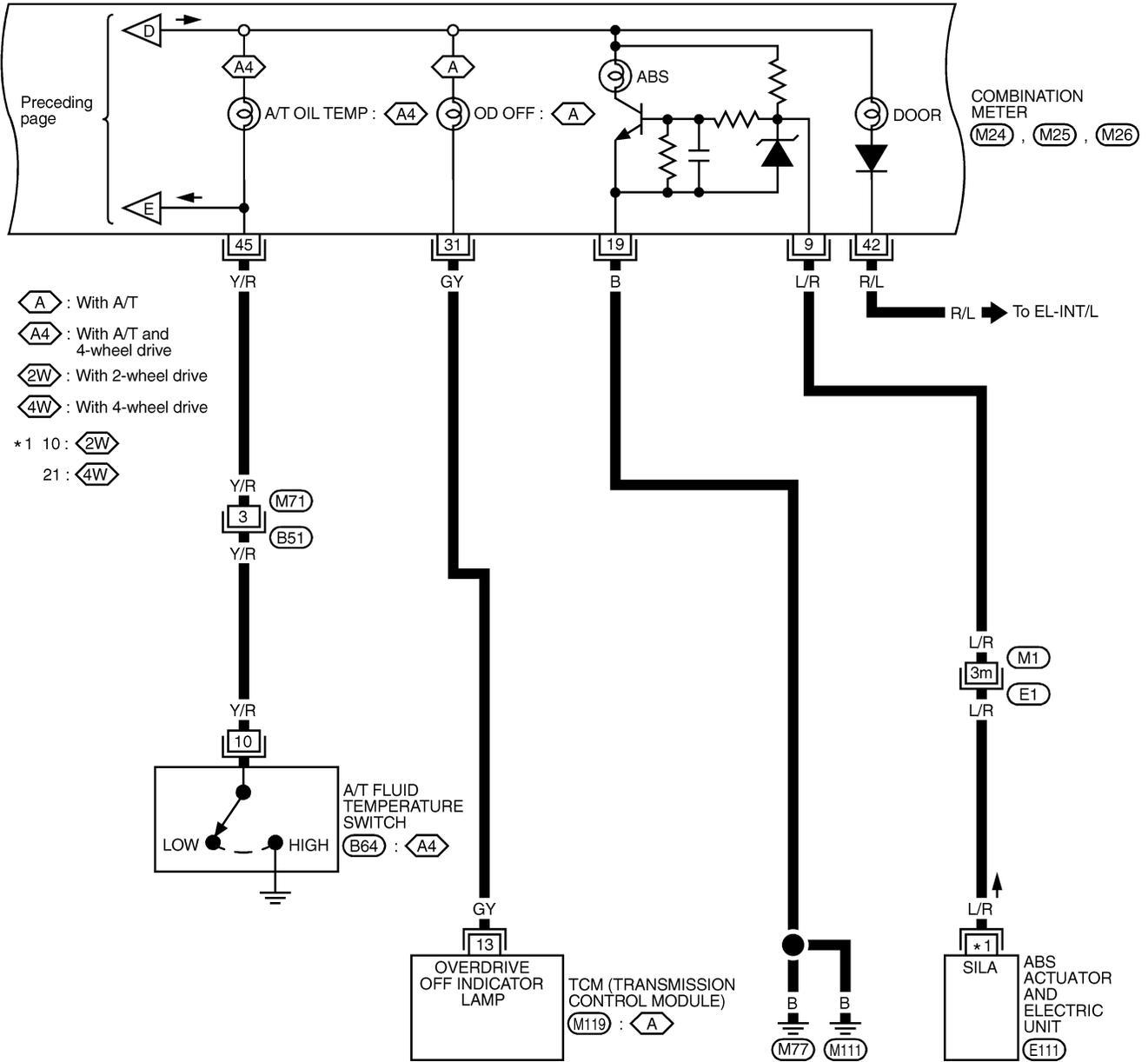
- (M1), (E1)
- (M2), (B1)

MEL944J

WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-04

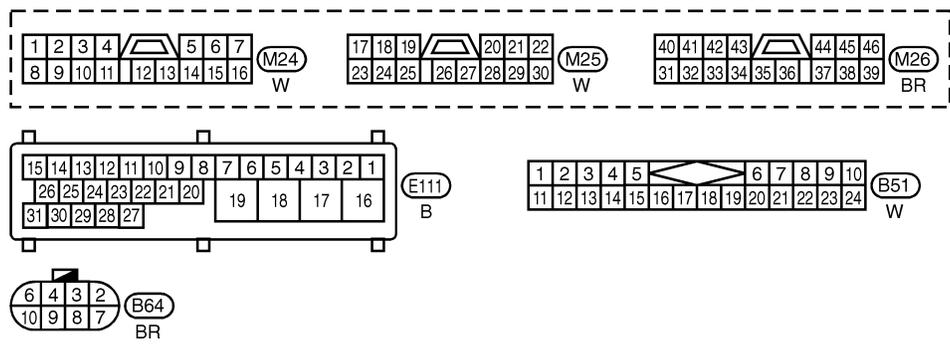


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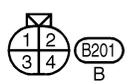
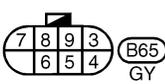
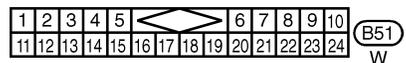
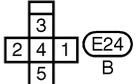
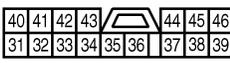
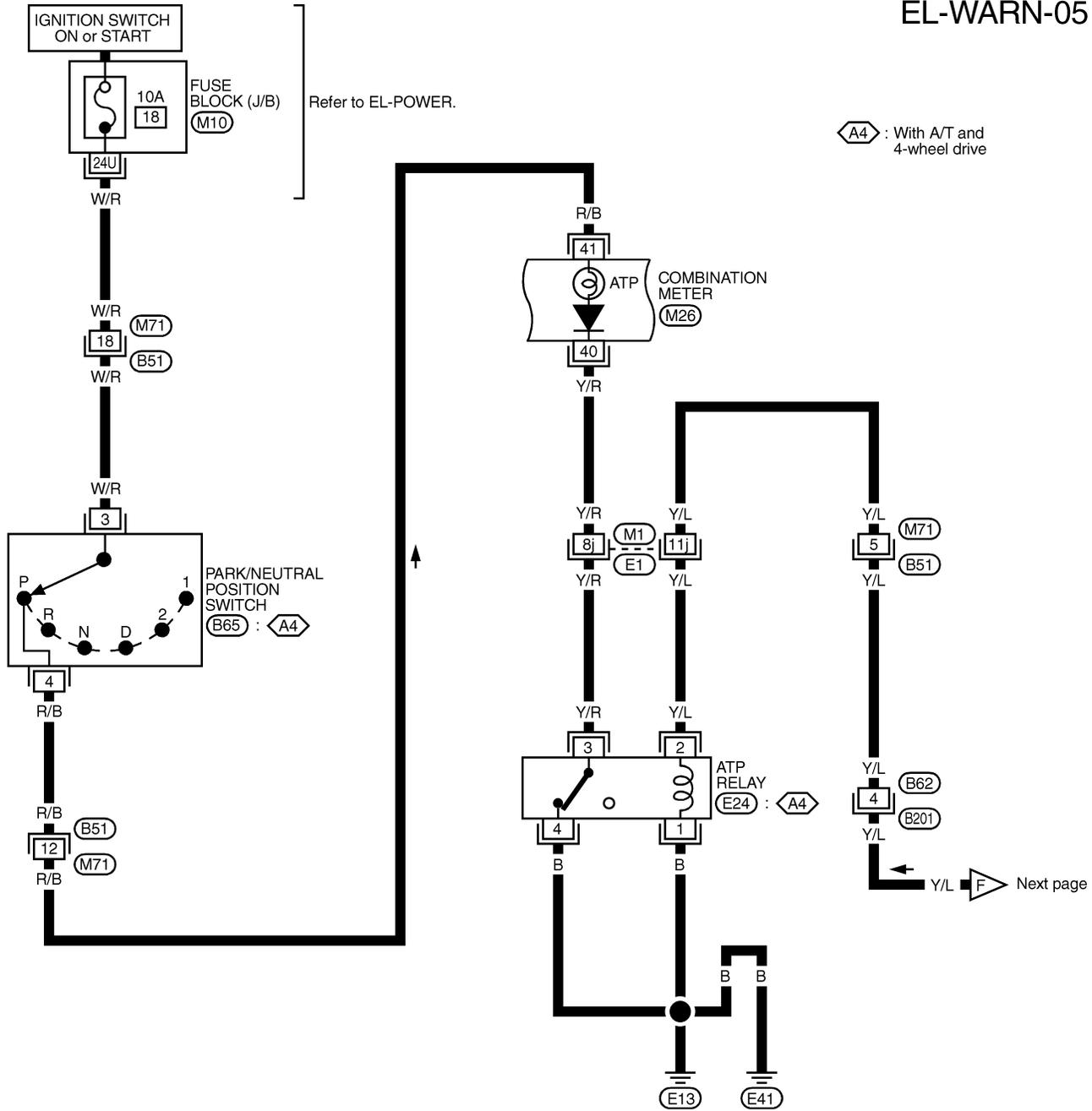
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(M1), (E1)
(M119)

WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-05



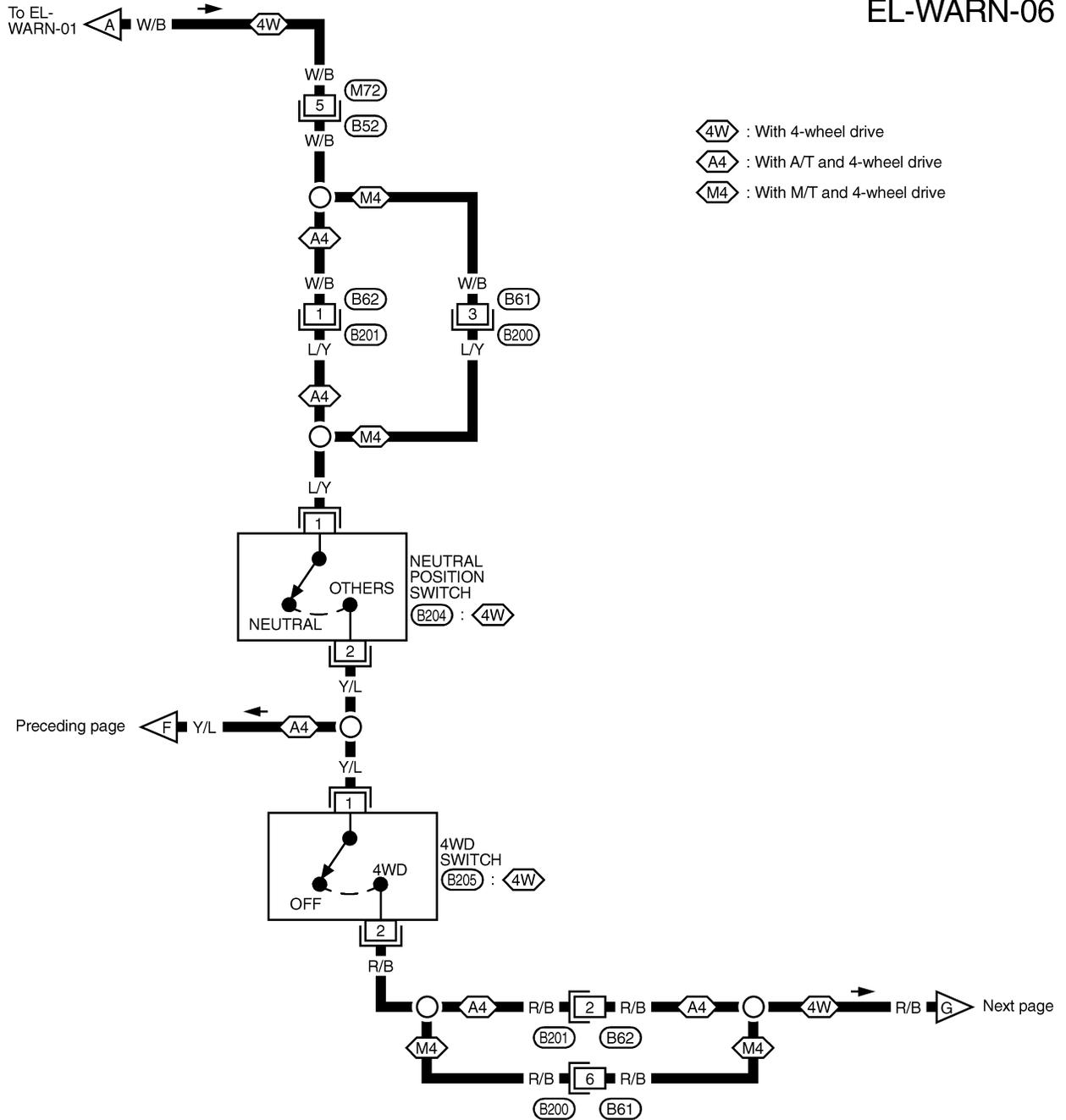
Refer to last page (Foldout page).

- (M1), (E1)
- (M10)

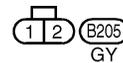
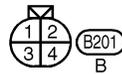
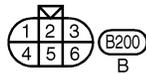
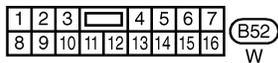
WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-06



- : With 4-wheel drive
- : With A/T and 4-wheel drive
- : With M/T and 4-wheel drive



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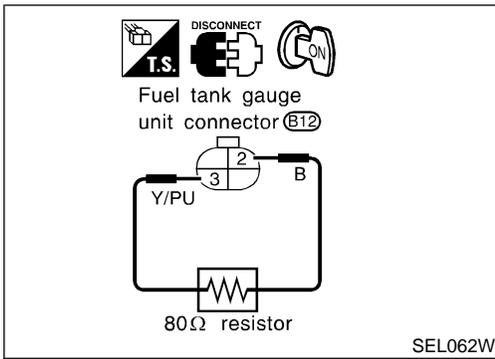
EL

MEL947J

IDX

WARNING LAMPS

Fuel Warning Lamp Sensor Check



Fuel Warning Lamp Sensor Check

NAEL0166

1. Turn ignition switch "OFF".
2. Disconnect fuel tank gauge unit harness connector B12.
3. Connect a resistor (80Ω) between fuel tank gauge unit harness connector terminals 2 and 3.
4. Turn ignition switch "ON".

The fuel warning lamp should come on.

NOTE:

ECM might store the 1st trip DTC P0180 during this inspection. If the DTC is stored in ECM memory, erase the DTC after reconnecting fuel tank gauge unit harness connector. Refer to EC-68, "HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION".

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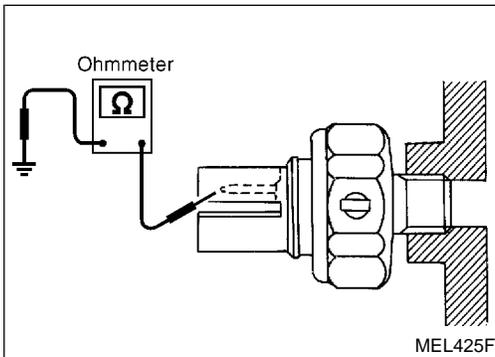
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Electrical Components Inspection

NAEL0051

OIL PRESSURE SWITCH CHECK

NAEL0051S02

	Oil pressure kPa (kg/cm ² , psi)	Continuity
Engine start	More than 10 - 20 (0.1 - 0.2, 1 - 3)	NO
Engine stop	Less than 10 - 20 (0.1 - 0.2, 1 - 3)	YES

Check the continuity between the terminals of oil pressure switch and body ground.

PD

AX

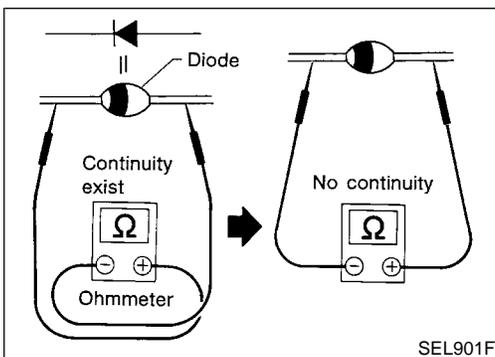
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DIODE CHECK

NAEL0051S03

- Check continuity using an ohmmeter.
- Diode is functioning properly if test results are as shown in the figure at left.

NOTE:

Specification may vary depending on the type of tester. Before performing this inspection, be sure to refer to the instruction manual for the tester to be used.

- Diodes for warning lamps are built into the combination meter printed circuit.
- For location of diodes, refer to Combination Meter, EL-83.

HA

SC

EL

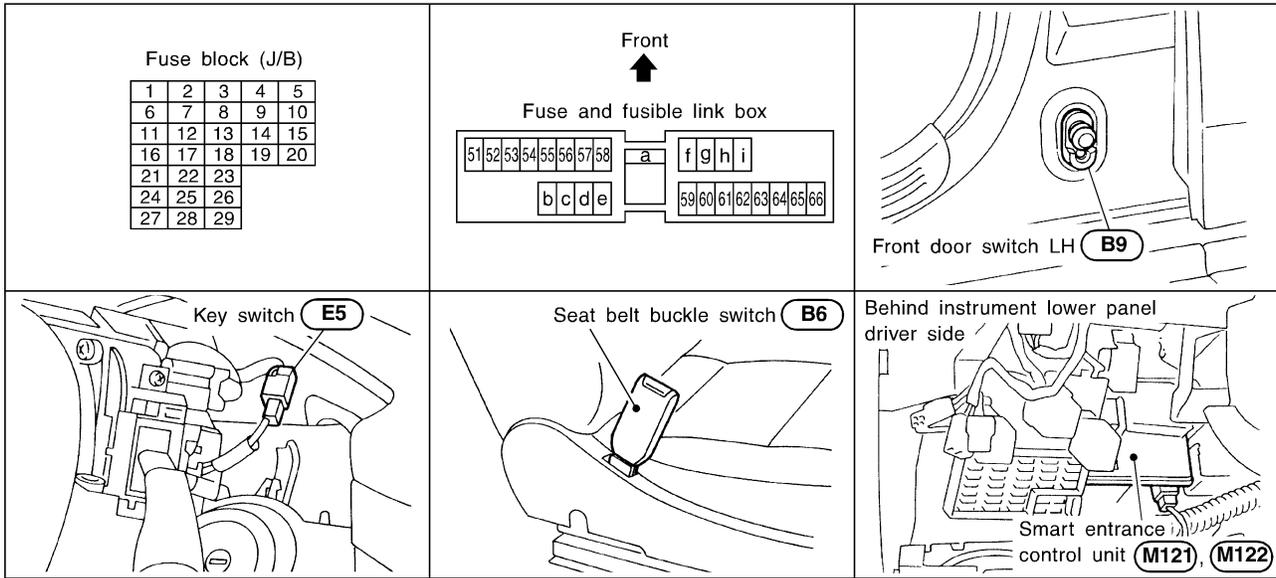
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WARNING CHIME

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0052



SEL046W

System Description

NAEL0053

The warning chime is controlled by the smart entrance control unit. The warning chime is located in the smart entrance control unit. Power is supplied at all times

- through 7.5A fuse [No. 24, located in the fuse block (J/B)]
- to key switch terminal 2.

Power is supplied at all times

- through 10A fuse [No. 61, located in the fuse block (J/B)]
- to tail lamp relay terminals 2 and 3.

Power is supplied at all times

- through 40A fusible link (letter f, located in the fuse and fusible link box).
- to smart entrance control unit terminal 11.

With the ignition switch in the ON or START position, power is supplied

- through 7.5A fuse [No. 11, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

Ground is supplied to smart entrance control unit terminal 16 through body grounds M77 and M111.

IGNITION KEY WARNING CHIME

NAEL0053S01

With the key in the ignition switch in the OFF or ACC position, and the driver's door open, the warning chime will sound. A battery positive voltage is supplied

- from key switch terminal 1
- to smart entrance control unit terminal 32.

Ground is supplied

- from front door switch LH terminal 1
- to smart entrance control unit terminal 29.

Front door switch LH terminal 2 is grounded through body grounds B11, B22 and D210.

LIGHT WARNING CHIME

NAEL0053S02

With ignition switch OFF or ACC, driver's door open, warning chime will sound. [Except when headlamp battery saver control operates (for 45 seconds after ignition switch is turned to OFF or ACC position) and headlamps do not illuminate.] A battery positive voltage is supplied.

- from tail lamp relay terminal 5

- to smart entrance control unit terminal 34.

Ground is supplied

- from front door switch LH terminal 1
- to smart entrance control unit terminal 29.

Front door switch LH terminal 2 is grounded through body grounds B11, B22 and D210.

SEAT BELT WARNING CHIME

With ignition switch turned ON and seat belt unfastened (seat belt switch ON), warning chime will sound for approximately 6 seconds.

NAEL0053S03

Ground is supplied

- from seat belt switch terminal 1
- to smart entrance control unit terminal 22.

Seat belt switch terminal 2 is grounded through body grounds B11, B22 and D210.

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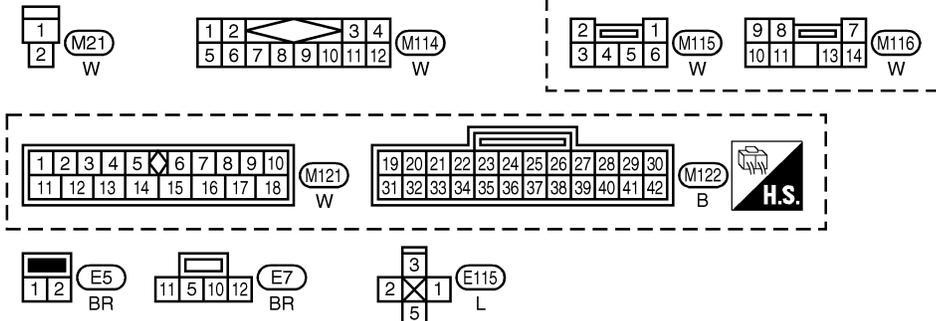
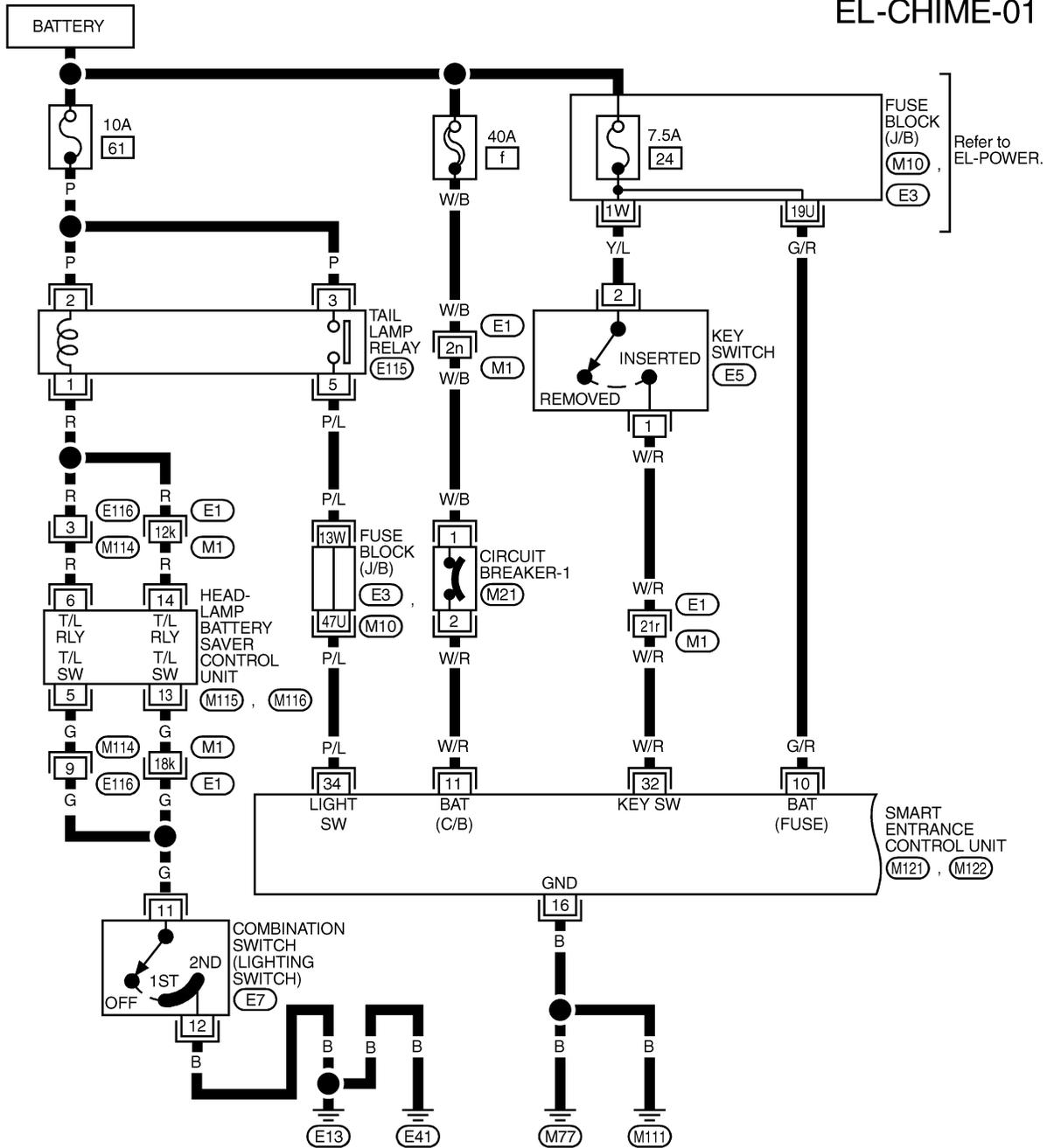
WARNING CHIME

Wiring Diagram — CHIME —

Wiring Diagram — CHIME —

NAEL0054

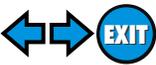
EL-CHIME-01



Refer to last page (Foldout page).

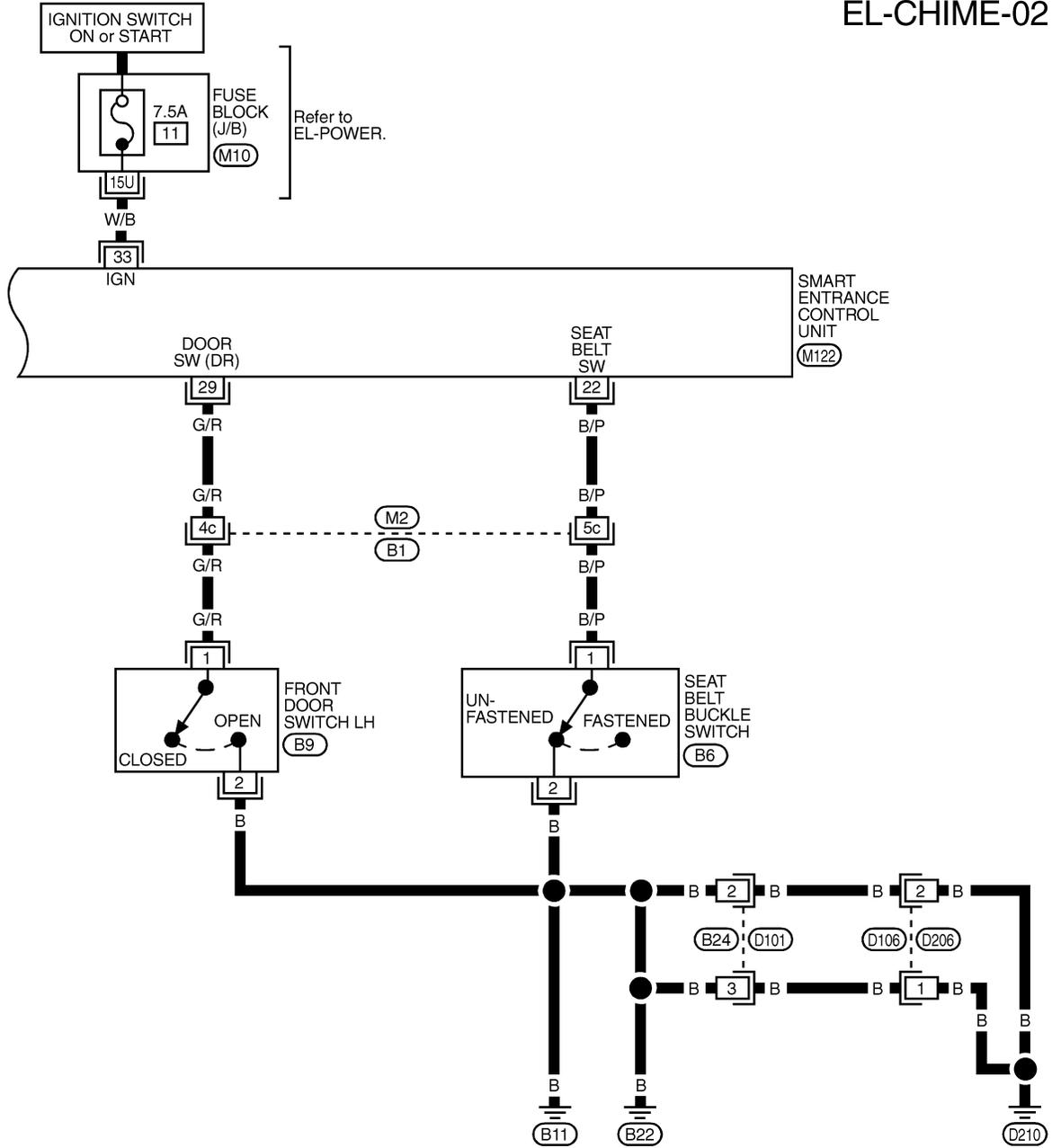
- M1, E1
- M10
- E3

WARNING CHIME

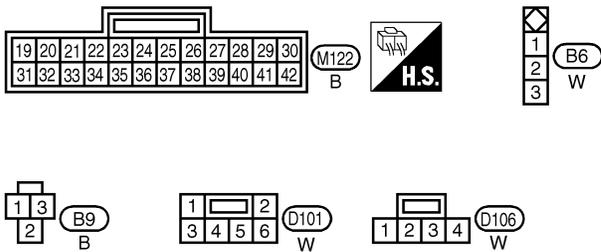


Wiring Diagram — CHIME — (Cont'd)

EL-CHIME-02



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Refer to last page (Foldout page).

M2, B1

M10

MEL950J

WARNING CHIME

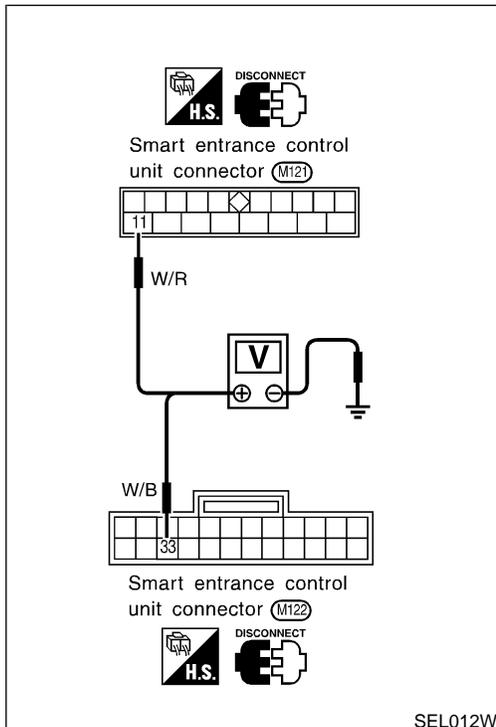
Trouble Diagnoses

Trouble Diagnoses SYMPTOM CHART

NAEL0055

NAEL0055S01

REFERENCE PAGE (EL-)	114	115	117	118	119
SYMPTOM	POWER SUPPLY AND GROUND CIRCUIT CHECK	LIGHTING SWITCH INPUT SIGNAL CHECK	KEY SWITCH (INSERT) CHECK	SEAT BELT BUCKLE SWITCH CHECK	DRIVER SIDE DOOR SWITCH CHECK
Light warning chime does not activate.	X	X			X
Ignition key warning chime does not activate.	X		X		X
Seat belt warning chime does not activate.	X			X	
All warning chimes do not activate.	X				X



POWER SUPPLY AND GROUND CIRCUIT CHECK Power Supply Circuit Check

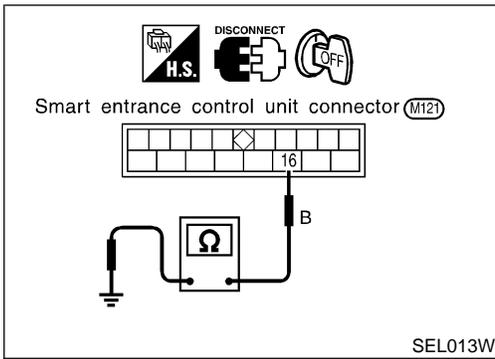
NAEL0055S02

NAEL0055S0201

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
11	Ground	Battery voltage	Battery voltage	Battery voltage
33	Ground	0V	0V	Battery voltage

WARNING CHIME

Trouble Diagnoses (Cont'd)



Ground Circuit Check

NAEL0055S0202

Terminals	Continuity
16 - Ground	Yes

LIGHTING SWITCH INPUT SIGNAL CHECK

NAEL0055S03

1	CHECK LIGHTING SWITCH INPUT SIGNAL						
<p>Check voltage between smart entrance control unit terminal 34 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M122)</p> <p>P/L</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL047W</p> <p>Voltage [V]: Condition of lighting switch: 1ST or 2ND Approx. 12 Condition of lighting switch: OFF 0</p> <p style="text-align: center;">OK or NG</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td>Lighting switch is OK.</td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>GO TO 2.</td> </tr> </table>		OK	▶	Lighting switch is OK.	NG	▶	GO TO 2.
OK	▶	Lighting switch is OK.					
NG	▶	GO TO 2.					

2	CHECK FUSE						
<p>Is 10A fuse (No. 61, located in the fuse and fusible link box) OK?</p> <p style="text-align: center;">OK or NG</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td>GO TO 3.</td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>Replace fuse.</td> </tr> </table>		OK	▶	GO TO 3.	NG	▶	Replace fuse.
OK	▶	GO TO 3.					
NG	▶	Replace fuse.					

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WARNING CHIME

Trouble Diagnoses (Cont'd)

3	CHECK TAIL LAMP RELAY CIRCUIT	<p>Check voltage between headlamp battery saver control unit terminal 6, 14 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL048W</p> <p>Voltage [V]: Condition of lighting switch: 1ST or 2ND 0 Condition of lighting switch: OFF Approx. 12</p> <p style="text-align: center;">OK or NG</p>
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Tail lamp relay ● Harness for open or short between headlamp battery saver control unit and tail lamp relay
NG	▶	GO TO 4.

4	CHECK TAIL LAMP SWITCH GROUND CIRCUIT	<p>1. Disconnect headlamp battery saver control unit connector. 2. Check continuity between headlamp battery saver control unit terminal 5, 13 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL049W</p> <p>Continuity: Condition of lighting switch: 1ST or 2ND Yes Condition of lighting switch: OFF No</p> <p style="text-align: center;">OK or NG</p>
OK	▶	Check headlamp battery saver control unit. Refer to EL-33.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Lighting switch ● Harness for open or short between headlamp battery saver control unit terminal 5, 13 and lighting switch terminal 11 ● Harness between lighting switch terminal 12 and ground

KEY SWITCH (INSERT) CHECK

=NAEL0055S04

1	CHECK KEY SWITCH INPUT SIGNAL	<p>Check voltage between control unit terminal 32 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL783VA</p> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> <p style="text-align: center;">OK or NG</p>	GI MA EM LC EC FE CL MT
OK	▶	Key switch is OK.	MT
NG	▶	GO TO 2.	AT

2	CHECK KEY SWITCH (INSERT)	<p>Check continuity between terminals 1 and 2.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL784VA</p> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> <p style="text-align: center;">OK or NG</p>	TF PD AX SU BR ST RS BT HA SC
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse [No. 24, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between control unit and key switch 	RS
NG	▶	Replace key switch.	BT

WARNING CHIME

Trouble Diagnoses (Cont'd)

SEAT BELT BUCKLE SWITCH CHECK

=NAEL0055S05

1	CHECK SEAT BELT BUCKLE SWITCH INPUT SIGNAL	<p>1. Turn ignition switch "ON". 2. Check voltage between control unit terminal 22 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL785VA</p> <p>Voltage [V]: Condition of seat belt buckle switch: Fastened Approx. 12 Condition of seat belt buckle switch: Unfastened 0</p> <p style="text-align: center;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td>Seat belt buckle switch is OK.</td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>GO TO 2.</td> </tr> </table>	OK	▶	Seat belt buckle switch is OK.	NG	▶	GO TO 2.
OK	▶	Seat belt buckle switch is OK.						
NG	▶	GO TO 2.						

2	CHECK SEAT BELT BUCKLE SWITCH	<p>Check continuity between terminals 1 and 2 when seat belt is fastened and unfastened.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL298V</p> <p>Continuity: Seat belt is fastened. No Seat belt is unfastened. Yes</p> <p style="text-align: center;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td> Check the following. <ul style="list-style-type: none"> ● Seat belt buckle switch ground circuit ● Harness for open or short between control unit and seat belt buckle switch </td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>Replace seat belt buckle switch.</td> </tr> </table>	OK	▶	Check the following. <ul style="list-style-type: none"> ● Seat belt buckle switch ground circuit ● Harness for open or short between control unit and seat belt buckle switch 	NG	▶	Replace seat belt buckle switch.
OK	▶	Check the following. <ul style="list-style-type: none"> ● Seat belt buckle switch ground circuit ● Harness for open or short between control unit and seat belt buckle switch 						
NG	▶	Replace seat belt buckle switch.						

WARNING CHIME

Trouble Diagnoses (Cont'd)

DRIVER SIDE DOOR SWITCH CHECK

NAEL0055S06

1	CHECK DOOR SWITCH INPUT SIGNAL	<p>Check voltage between control unit terminal 29 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL786VA</p> <p>Voltage [V]: Condition of driver's door: CLOSED Approx. 5 Condition of driver's door: OPENED 0</p> <p style="text-align: center;">OK or NG</p>	GI
OK	▶	Driver side door switch is OK.	MA
NG	▶	GO TO 2.	EM

2	CHECK DRIVER SIDE DOOR SWITCH	<p>Check continuity between terminals 1 and 2.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL050W</p> <p>Continuity: Door switch is pushed. No Door switch is released. Yes</p> <p style="text-align: center;">OK or NG</p>	LC
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door switch ground circuit ● Harness for open or short between control unit and door switch 	EC
NG	▶	Replace driver side door switch.	FE

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System Description

NAEL0057

NAEL0057S01

WIPER OPERATION

The wiper switch is controlled by a lever built into the combination switch. There are three wiper switch positions:

- LO speed
- HI speed
- INT (Intermittent)

With the ignition switch in the ACC or ON position, power is supplied

- through 20A fuse [No. 19, located in the fuse block (J/B)]
- to wiper motor terminal 6.

Low and High Speed Wiper Operation

NAEL0057S0101

Ground is supplied to wiper switch terminal 17 through body grounds E13 and E41.

When the wiper switch is placed in the LO position, ground is supplied

- through terminal 14 of the wiper switch
- to wiper motor terminal 2.

With power and ground supplied, the wiper motor operates at low speed.

When the wiper switch is placed in the HI position, ground is supplied

- through terminal 16 of the wiper switch
- to wiper motor terminal 1.

With power and ground supplied, the wiper motor operates at high speed.

Auto Stop Operation

NAEL0057S0102

With wiper switch turned OFF, wiper motor will continue to operate until wiper arms reach windshield base.

When wiper arms are not located at base of windshield with wiper switch OFF, ground is provided

- from terminal 14 of the wiper switch
- to wiper motor terminal 2, in order to continue wiper motor operation at low speed.

Ground is also supplied

- through terminal 13 of the wiper switch
- to wiper amplifier terminal 2
- through terminal 7 of the wiper amplifier
- to wiper motor terminal 5
- through terminal 4 of the wiper motor, and
- through body grounds M77 and M111.

When wiper arms reach base of windshield, wiper motor terminals 5 and 6 are connected instead of terminals 4 and 5. Wiper motor will then stop wiper arms at the PARK position.

Intermittent Operation

NAEL0057S0103

The wiper motor operates the wiper arms one time at low speed at a set interval of approximately 3 to 13 seconds. This feature is controlled by the wiper amplifier.

When the wiper switch is placed in the INT position, ground is supplied

- to wiper amplifier terminal 1
- from wiper switch terminal 15
- through body grounds E13 and E41.
- to wiper motor terminal 2
- through the wiper switch terminal 14
- to wiper switch terminal 13
- through wiper amplifier terminal 2
- to wiper amplifier terminal 3
- through body grounds M77 and M111.

The desired interval time is input

- to wiper amplifier terminal 8
- from wiper switch terminal 19.

The wiper motor operates at low speed at the desired time interval.

WASHER OPERATION

NAEL0057S02

With the ignition switch in the ACC or ON position, power is supplied

- through 20A fuse [No. 19, located in the fuse block (J/B)]
- to washer motor terminal 1.

When the lever is pulled to the WASH position, ground is supplied

- to washer motor terminal 2, and
- to wiper amplifier terminal 6
- from terminal 18 of the wiper switch
- through terminal 17 of the wiper switch, and
- through body grounds E13 and E41.

With power and ground supplied, the washer motor operates.

When the lever is pulled to the WASH position for one second or more, the wiper motor operates at low speed for approximately 3 seconds to clean windshield. This feature is controlled by the wiper amplifier in the same manner as the intermittent operation.

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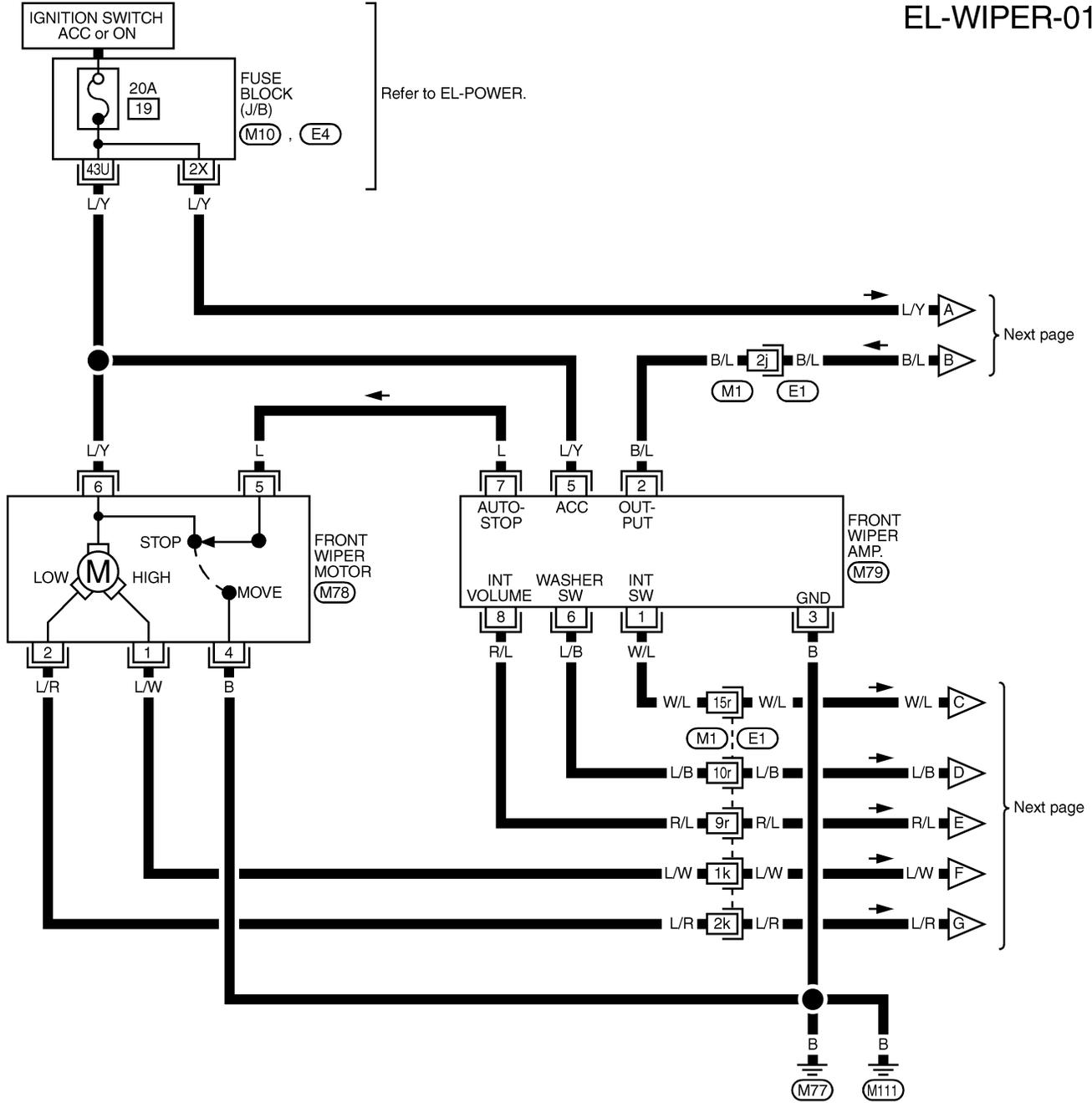
FRONT WIPER AND WASHER

Wiring Diagram — WIPER —

Wiring Diagram — WIPER —

NAEL0058

EL-WIPER-01



Refer to last page (Foldout page).

- (M1), (E1)
- (M10)
- (E4)

FRONT WIPER AND WASHER

Trouble Diagnoses

Trouble Diagnoses DIAGNOSTIC PROCEDURE 1

NAEL0059

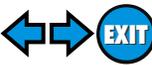
NAEL0059S01

SYMPTOM: Intermittent wiper does not operate.

1	CHECK WIPER OPERATION	
Check whether wiper operates with the wiper switch at Lo position.		
Does wiper operate at Lo speed?		
Yes	▶	GO TO 2.
No	▶	Check the following. <ul style="list-style-type: none"> ● 20A fuse [No. 19, located in fuse block (J/B)] ● Wiper motor ● Wiper switch ● Harness for open or short

2	CHECK WIPER AMP. OUTPUT	
1. Turn front wiper switch to OFF. 2. Disconnect wiper amp. connector. 3. Check voltage between wiper amp. terminal 2 and ground.		
SEL226V		
Does battery voltage exist?		
Yes	▶	GO TO 3.
No	▶	Check the following. <ul style="list-style-type: none"> ● Wiper switch ● Harness for open or short between wiper amp. terminal 2 and wiper switch terminal 13

FRONT WIPER AND WASHER



Trouble Diagnoses (Cont'd)

3	CHECK INTERMITTENT SWITCH INPUT SIGNAL	
Check harness continuity between wiper amp. terminal 1 and ground.		
SEL227V		
<p>Continuity: Condition of wiper switch: OFF No Condition of wiper switch: INT Yes</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 4.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Wiper switch ● Harness for open or short between wiper amp. terminal 1 and wiper switch terminal 15 ● Ground circuit for front wiper switch terminal 17

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4	CHECK WIPER AMP. POWER SUPPLY CIRCUIT	
Check voltage between wiper amp. terminal 5 and ground while ignition switch is "ACC".		
SEL228V		
Does battery voltage exist?		
Yes	▶	GO TO 5.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 20A fuse [No. 19, located in fuse block (J/B)] ● Harness for open or short between wiper amp. and fuse

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FRONT WIPER AND WASHER

Trouble Diagnoses (Cont'd)

5	CHECK WIPER AMP. GROUND CIRCUIT	<p>Check harness continuity between wiper amp. terminal 3 and body ground.</p> <div style="text-align: center;"> <p>Wiper amp. connector (M79)</p> </div> <p style="text-align: right;">SEL229V</p> <p style="text-align: center;">Does continuity exist?</p>
Yes	▶	Replace wiper amp.
No	▶	Repair harness or connector.

DIAGNOSTIC PROCEDURE 2

NAEL0059S02

SYMPTOM: Intermittent time of wiper cannot be adjusted.

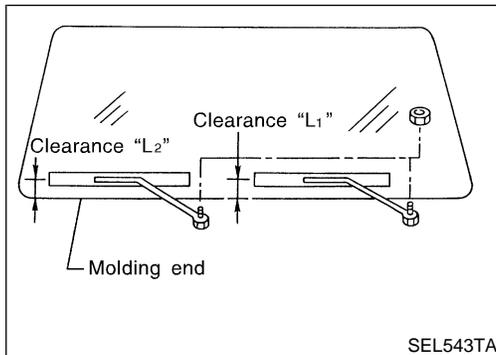
1	CHECK INTERMITTENT WIPER VOLUME INPUT SIGNAL	<p>1. Disconnect wiper amp. connector. 2. Measure resistance between wiper amp. terminals 8 and 3 while turning intermittent wiper volume.</p> <div style="text-align: center;"> <p>Wiper amp. connector (M79)</p> </div> <p style="text-align: right;">SEL230V</p> <p>Resistance [Ω]: Position of wiper knob: S 0 Position of wiper knob: L Approx. 1 k</p> <p style="text-align: center;">OK or NG</p>
OK	▶	Replace wiper amp.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Intermittent wiper volume ● Harness for open or short between wiper amp. terminal 8 and wiper switch terminal 19 ● Ground circuit for front wiper switch terminal 20

DIAGNOSTIC PROCEDURE 3

=NAEL0059S03

SYMPTOM: Wiper and washer activate individually but not in combination.

1	CHECK WASHER SWITCH INPUT SIGNAL
<p>1. Turn ignition switch to "OFF". 2. Disconnect wiper amp. connector. 3. Check harness continuity between wiper amp. terminal 6 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL231V</p> <p>Continuity: Condition of washer switch: OFF No Condition of washer switch: ON Yes</p> <p style="text-align: center;">OK or NG</p>	
OK	▶ Go to DIAGNOSTIC PROCEDURE 1.
NG	▶ Check harness for open or short between wiper amp. terminal 6 and wiper switch terminal 18.



Removal and Installation

WIPER ARMS

NAEL0060

NAEL0060S01

1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
 2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L₁" & "L₂" immediately before tightening nut.
 3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
 4. Ensure that wiper blades stop within clearance "L₁" & "L₂".
 - Clearance "L₁": 34 mm (1.34 in)**
 - Clearance "L₂": 37 mm (1.46 in)**
- Tighten wiper arm nuts to specified torque.
 - Front wiper: 21 - 26 N·m (2.1 - 2.7 kg·m, 15 - 20 ft·lb)**

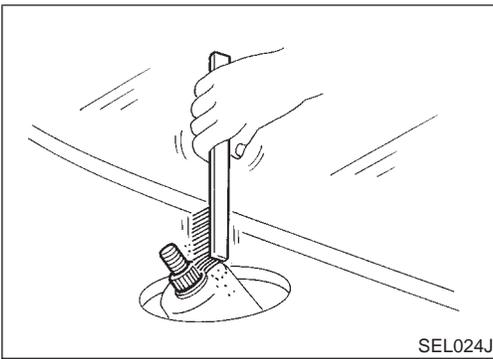
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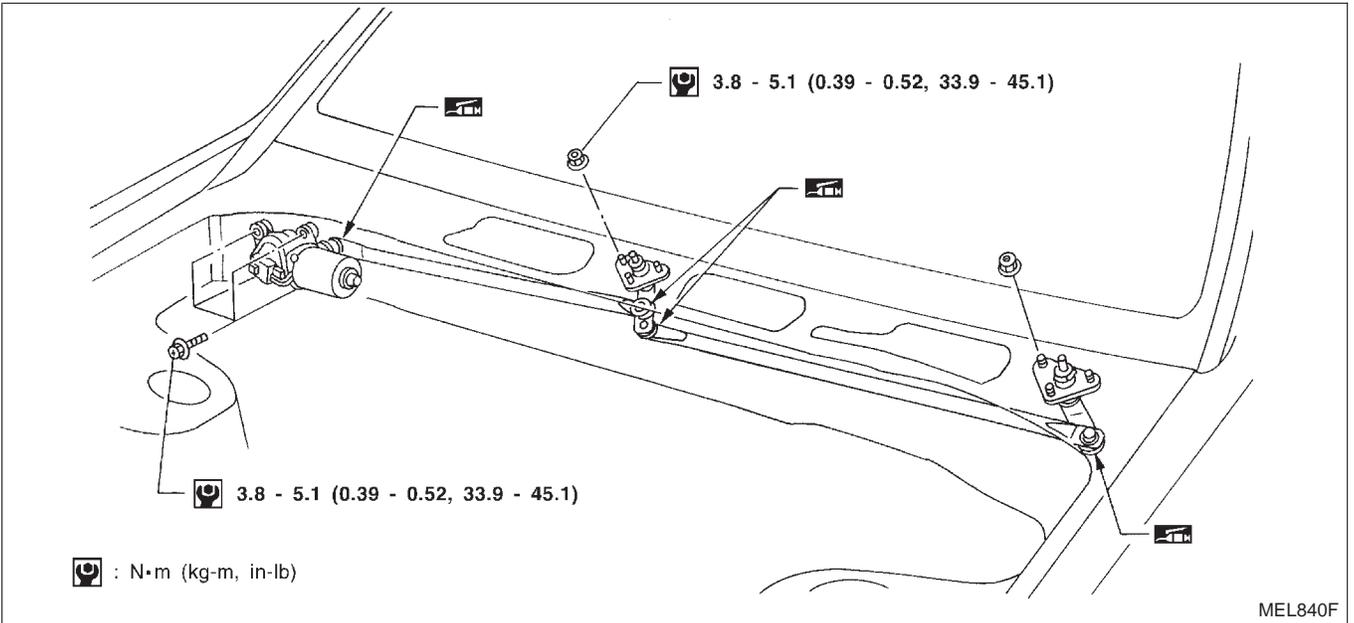
FRONT WIPER AND WASHER

Removal and Installation (Cont'd)



- Before reinstalling wiper arm, clean up the pivot area as illustrated. This will reduce possibility of wiper arm looseness.

WIPER LINKAGE



Removal

1. Remove 4 bolts that secure wiper motor.
2. Detach wiper motor from wiper linkage at ball joint.
3. Remove wiper linkage.

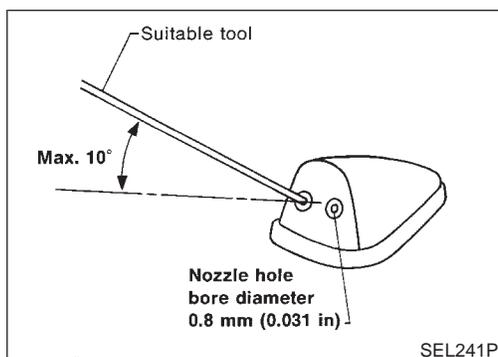
NAEL0060S0201

Be careful not to break ball joint rubber boot.

Installation

- Grease ball joint portion before installation.
1. Installation is the reverse order of removal.

NAEL0060S0202



Washer Nozzle Adjustment

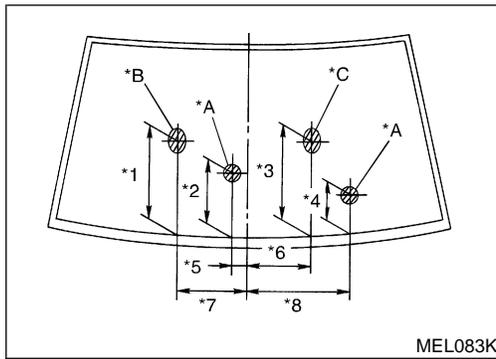
- Adjust washer nozzle with suitable tool as shown in the figure at left.

NAEL0061

Adjustable range: ±10°

FRONT WIPER AND WASHER

Washer Nozzle Adjustment (Cont'd)

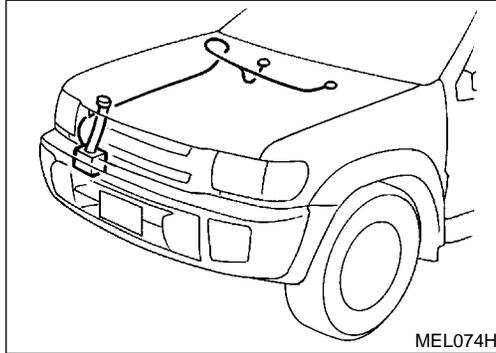


Unit: mm (in)			
*1	395 (15.55)	*5	122 (4.80)
*2	157 (6.18)	*6	160 (6.30)
*3	410 (16.14)	*7	259 (10.20)
*4	188 (7.40)	*8	344 (13.54)

*A: The diameters of these circles are less than 80 mm (3.15 in).

*B: The diameters of this circle is less than 127 × 80 mm (5.00 × 3.15 in).

*C: The diameters of this circle is less than 142 × 80 mm (5.59 × 3.15 in).



Washer Tube Layout

NAEL0062

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HA

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EL

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System Description

NAEL0063

NAEL0063S01

NAEL0063S0101

WIPER OPERATION

Power Supply and Ground

Power is supplied at all times

- through 10A fuse [No. 5, located in the fuse block (J/B)]
- to rear wiper amp. terminal 1.

With ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 29, located in the fuse block (J/B)]
- to rear wiper amp. terminal 2.

When the glass hatch switch is OPEN, ground is supplied

- to rear wiper amp. terminal 12
- from glass hatch switch terminal 1.

Then washer motor and wiper motor is interrupted.

(If the glass hatch is opened, no function of rear wiper motor will operate.)

Ground is supplied

- to rear wiper amplifier terminal 3
- through body grounds B11, B22 and D210.

Rising Up Operation

NAEL0063S0102

When the rear wiper switch is turned to the ON position, ground is supplied

- through terminal 22 of rear wiper switch
- to rear wiper amp. terminal 15.

When the rear wiper switch is turned to the INT position, ground is supplied

- through terminal 21 of rear wiper switch
- to rear wiper amp. terminal 14.

Then power is supplied

- through rear wiper amp. terminal 5
- to rear wiper motor terminal 4.

Ground is supplied

- through rear wiper motor terminal 3
- to rear wiper amp. terminal 8.

With power and ground supplied, rear wiper operates and rear wiper arm moves up.

Wiper does not return to resting position until wiper switch is turned to OFF position.

Low Speed Wiper Operation

NAEL0063S0103

When the rear wiper switch is placed in the ON position, ground is supplied

- to rear wiper amp. terminal 15
- from body grounds
- through rear wiper switch terminals 22 and 24.

With power and ground supplied, the wiper motor operates at low speed.

Auto Stop Operation

NAEL0063S0104

With rear wiper switch turned OFF, rear wiper motor will continue to operate until wiper arms reach rear wiper stopper.

When wiper arm is not located at rear wiper stopper with wiper switch OFF, ground is provided

- to rear wiper amp. terminal 7
- through wiper motor terminals 7 and 8
- from body grounds B11, B22 and D210.

Then, power continues to be supplied

- through rear wiper amp. terminal 5
- to rear wiper motor terminal 4.

Ground continues to be supplied

- through rear wiper motor terminal 3

REAR WIPER AND WASHER

System Description (Cont'd)

- to rear wiper amp. terminal 8.

With power and ground supplied, rear wiper continues to operate. When wiper arms reach rear wiper stopper, ground is interrupted

- to rear wiper amp. terminal 7
- from body grounds.

Rear wiper motor will then stop wiper arms at the PARK position.

Intermittent Operation

The rear wiper motor operates the wiper arms at low speed approximately every 7 seconds. This feature is controlled by the wiper amp. NAEL0063S0105

When the wiper switch is placed in the INT position, ground is supplied

- to wiper amp. terminal 14
- from rear wiper switch terminal 21
- through body grounds E13 and E41.

Then, power is supplied

- through rear wiper amp. terminal 5
- to rear wiper motor terminal 4.

Ground is supplied

- through rear wiper motor terminal 3
- to rear wiper amp. terminal 8.

The rear wiper motor operates at low speed intermittent.

WASHER OPERATION

When the rear wiper switch is turned to WASH position, ground is supplied NAEL0063S02

- to rear wiper amp. terminal 13
- through terminals 23 and 24 of rear wiper switch
- through body grounds E13 and E41.

Then, power is supplied

- through rear wiper amp. terminal 9
- to rear washer motor terminal 2.

Ground is supplied

- through body grounds E13 and E41
- to rear washer motor terminal 1.

With power and ground supplied, the rear washer motor operates.

When the rear wiper switch is turned to WASH position for one second or more, the rear wiper motor operates at low speed for approximately 3 seconds after the rear wiper switch is released. This feature is controlled by the rear wiper amp. in the same manner as the intermittent operation.

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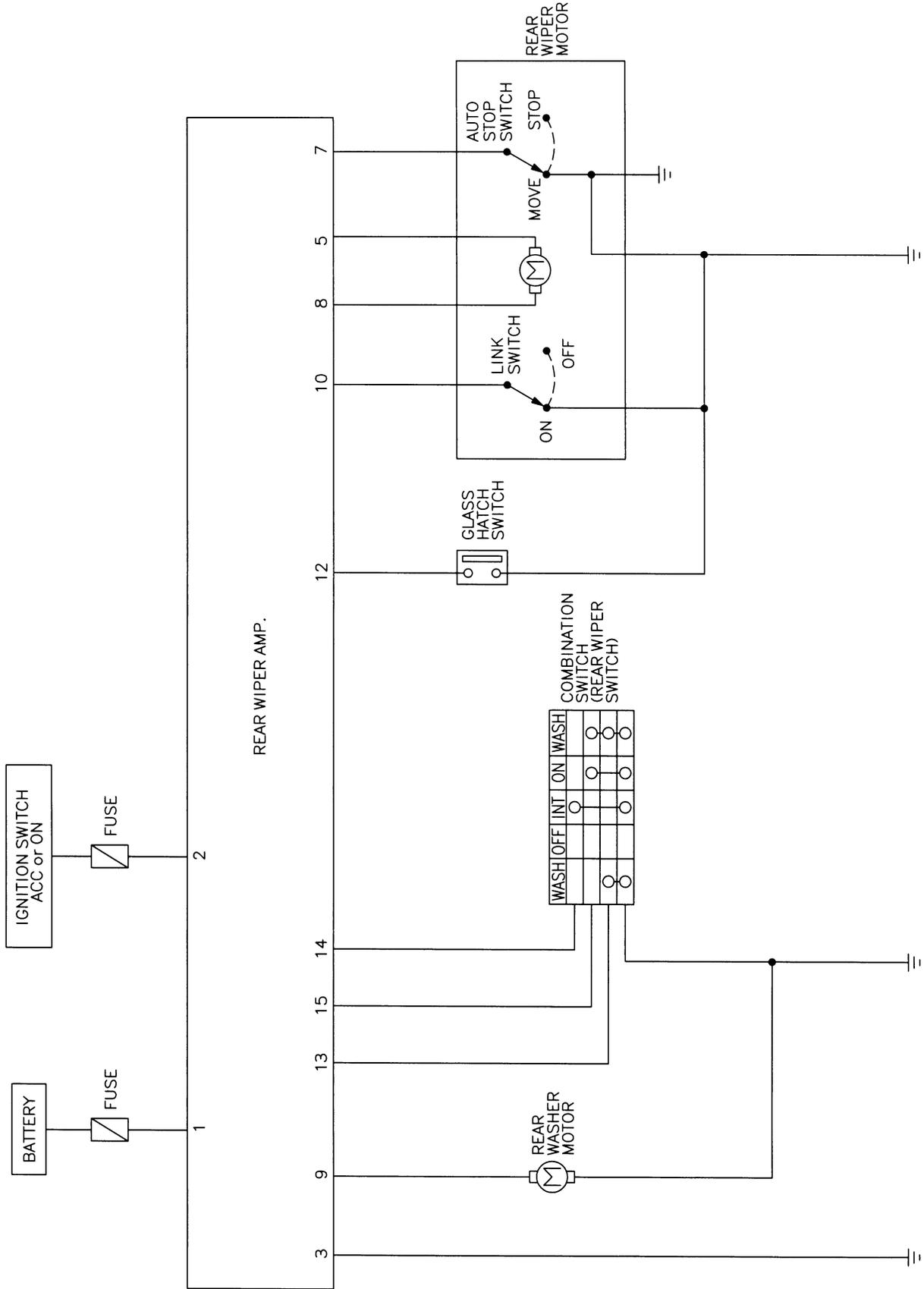
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REAR WIPER AND WASHER

Schematic

Schematic

NAEL0064



MEL953J

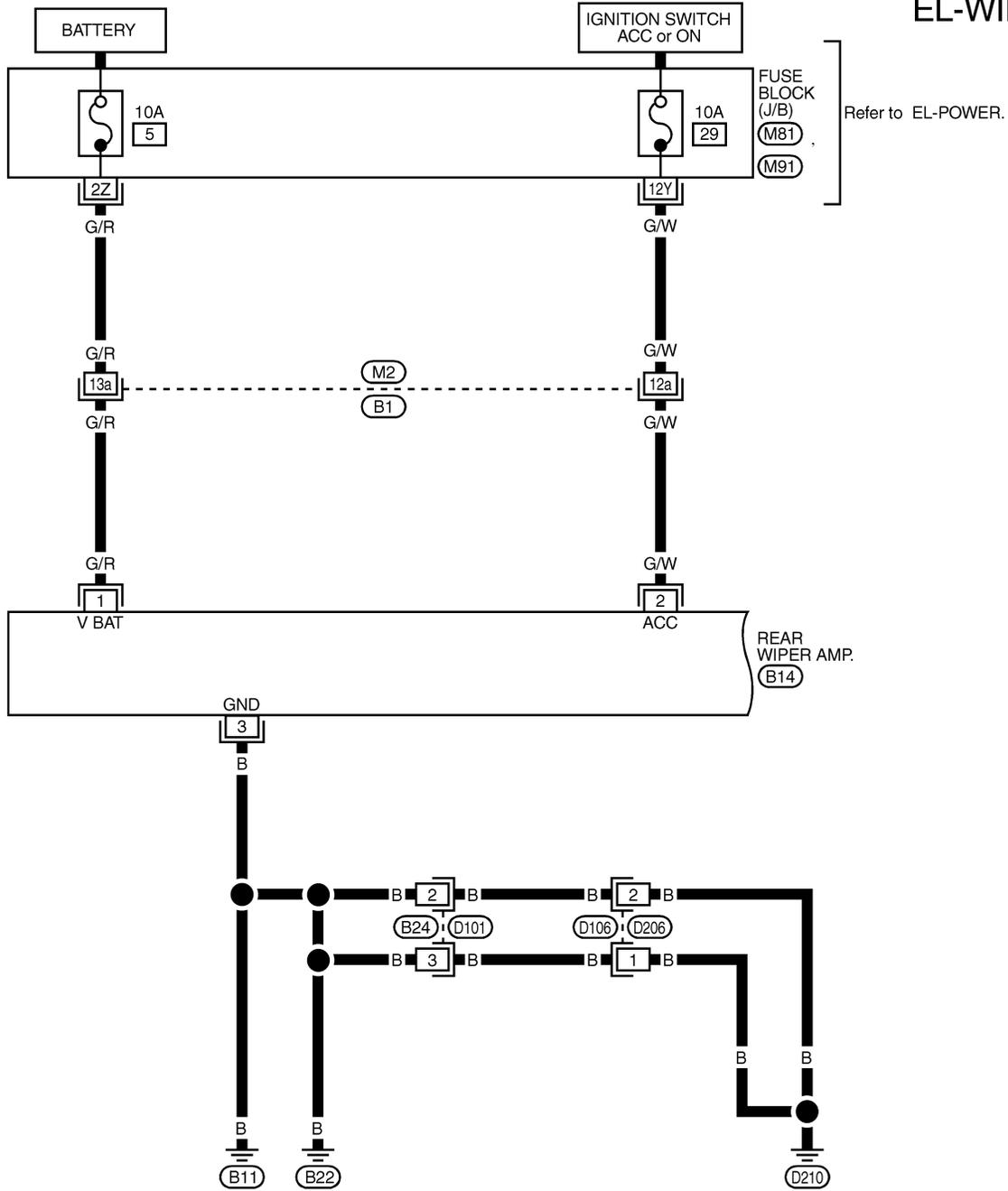
REAR WIPER AND WASHER

Wiring Diagram — WIP/R —

Wiring Diagram — WIP/R —

NAEL0065

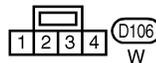
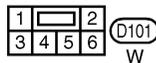
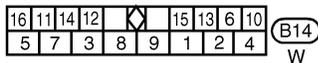
EL-WIP/R-01



Refer to EL-POWER.

REAR WIPER AMP. (B14)

Refer to last page (Foldout page).



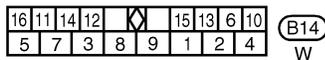
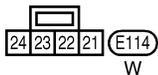
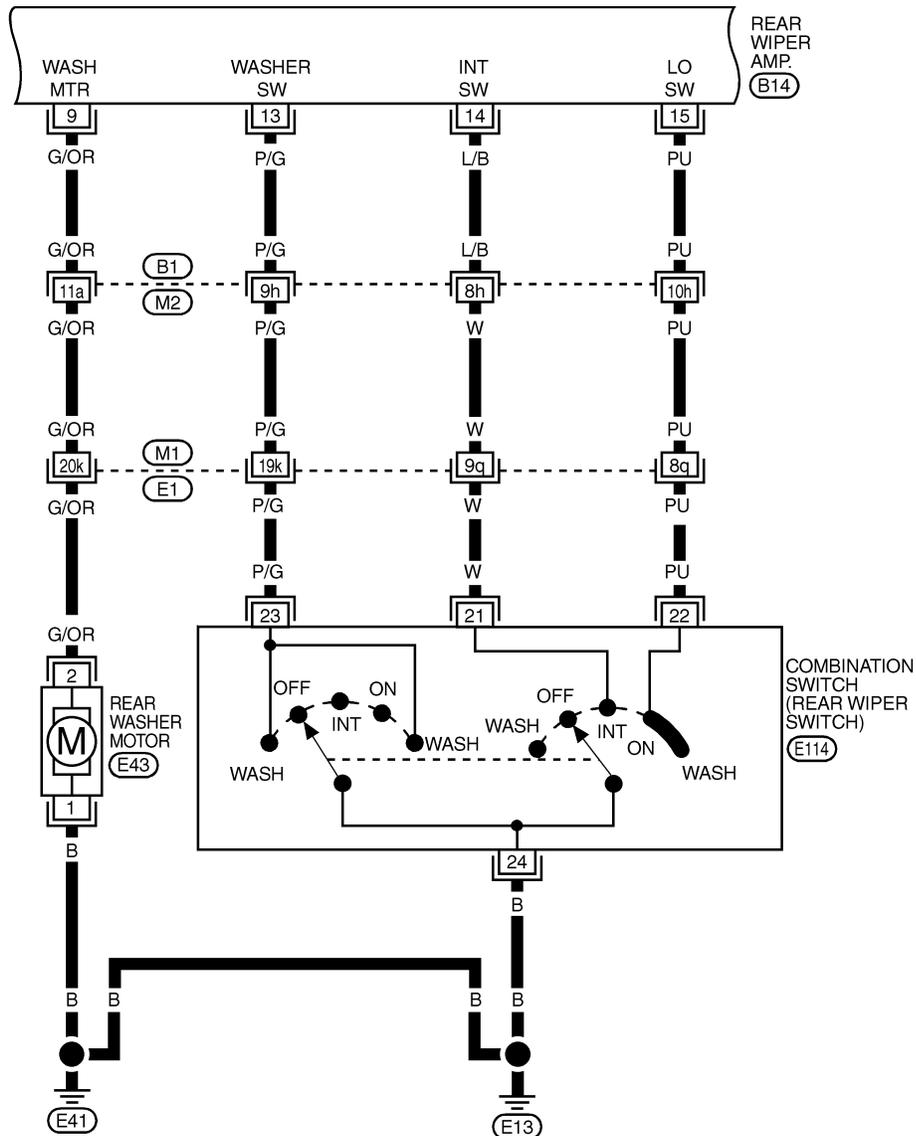
- (M2), (B1)
- (M81)
- (M91)

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REAR WIPER AND WASHER

Wiring Diagram — WIP/R — (Cont'd)

EL-WIP/R-02



Refer to last page (Foldout page).

M1 , E1

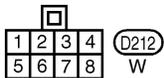
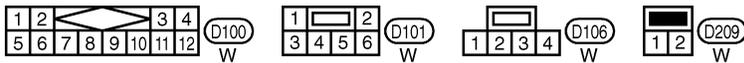
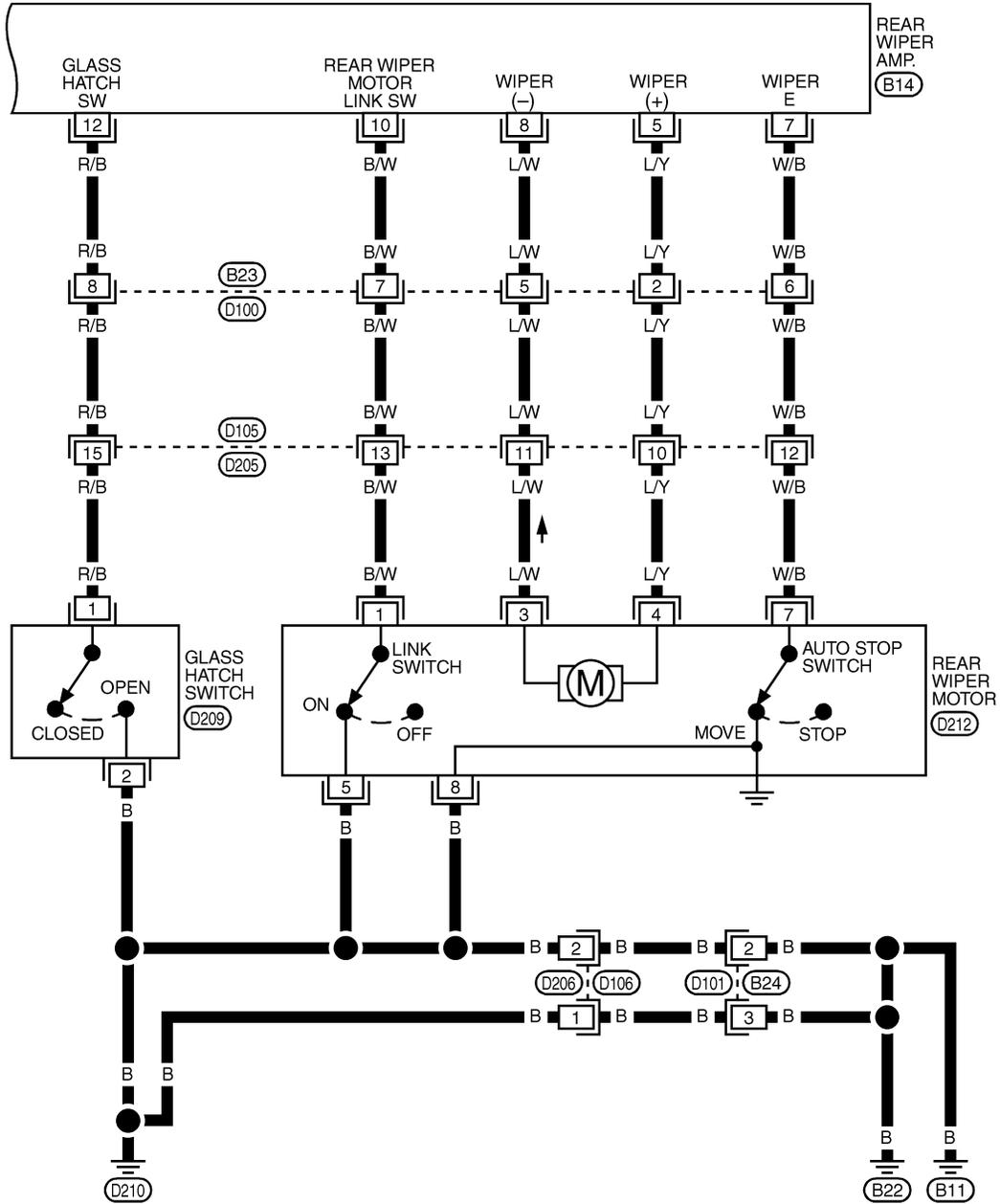
M2 , B1

MEL955J

REAR WIPER AND WASHER

Wiring Diagram — WIP/R — (Cont'd)

EL-WIP/R-03



MEL956J

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REAR WIPER AND WASHER

Trouble Diagnoses

Trouble Diagnoses

NAEL0066

NAEL0066S01

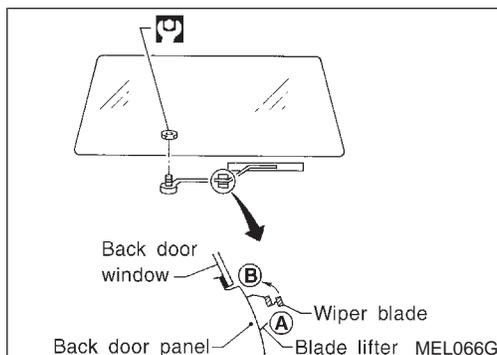
REAR WIPER AMP. INSPECTION TABLE

(Data are reference values.)

Terminal No.	Item	Condition		Voltage (Approximate value)	
1	Power supply (BAT)	—		Battery voltage	
2	Power supply (ACC)		—	Battery voltage	
3	Ground	—		—	
5	Rear wiper motor		Rear wiper switch	ON	Battery voltage
				OFF	Less than 1V
7	Auto stop		Rear wiper switch should be at "INT" to inspect the value for wiper movement.	Wiper is moving	Less than 1V
				Wiper stop	Battery voltage
10	Link switch		Rear wiper switch should be at "ON" to inspect the value.	Wiper is moving	Less than 1V
				Wiper stop	Battery voltage
12	Glass hatch switch	Glass hatch		Open	Less than 1V
				Closed	Battery voltage
13	Washer switch		Rear wiper switch	WASH	Less than 1V
				OFF, ON or INT	Battery voltage
14	Intermittent switch		Rear wiper switch	INT	Less than 1V
				OFF, ON or WASH	Battery voltage
15	Wiper on switch		Rear wiper switch	ON or WASH	Less than 1V
				OFF or INT	Battery voltage

NOTE:

Power to the rear wiper amp. will be interrupted when the rear glass hatch is opened. In that case, conduct the inspection of the rear wiper amp. with the rear glass hatch closed, unless otherwise indicated.



Removal and Installation

NAEL0067

WIPER ARMS

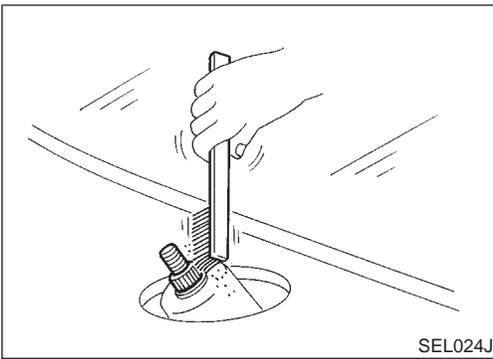
NAEL0067S01

1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Install wiper arm to portion A as in figure below and tighten wiper arm nut to specification.
3. Then, set wiper arm to portion B.

: 13 - 18 N·m (1.3 - 1.8 kg·m, 9 - 13 ft·lb)

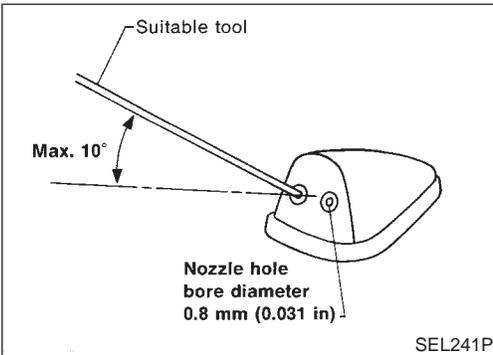
REAR WIPER AND WASHER

Removal and Installation (Cont'd)



- Before reinstalling wiper arm, clean up the pivot area as illustrated. This will reduce possibility of wiper arm looseness.

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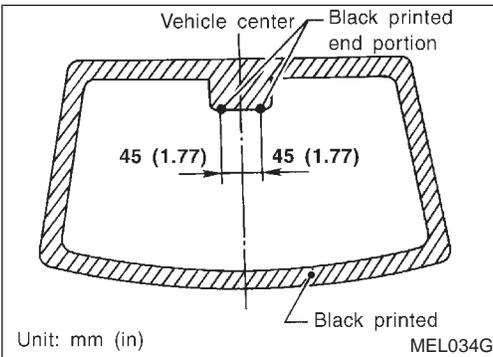


Washer Nozzle Adjustment

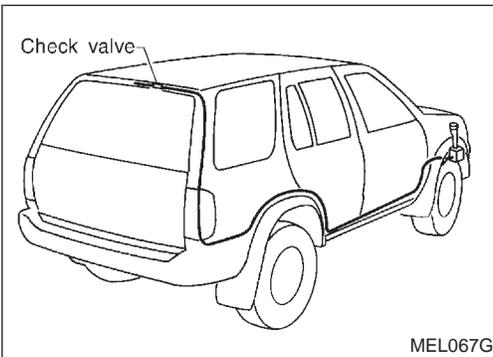
- Adjust washer nozzle with suitable tool as shown in the figure at left.

Adjustable range: ±10° (In any direction)

FE
CL



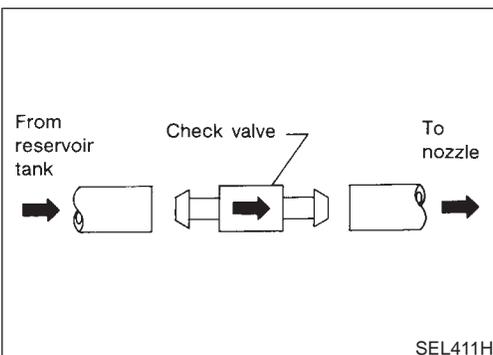
MT
AT



Washer Tube Layout

NAEL0069

TF
PD
AX
SU



Check Valve

- A check valve is provided in the washer fluid line. Be careful not to connect check valve to washer tube in the wrong direction.

NAEL0070

BR
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BT

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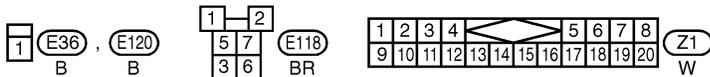
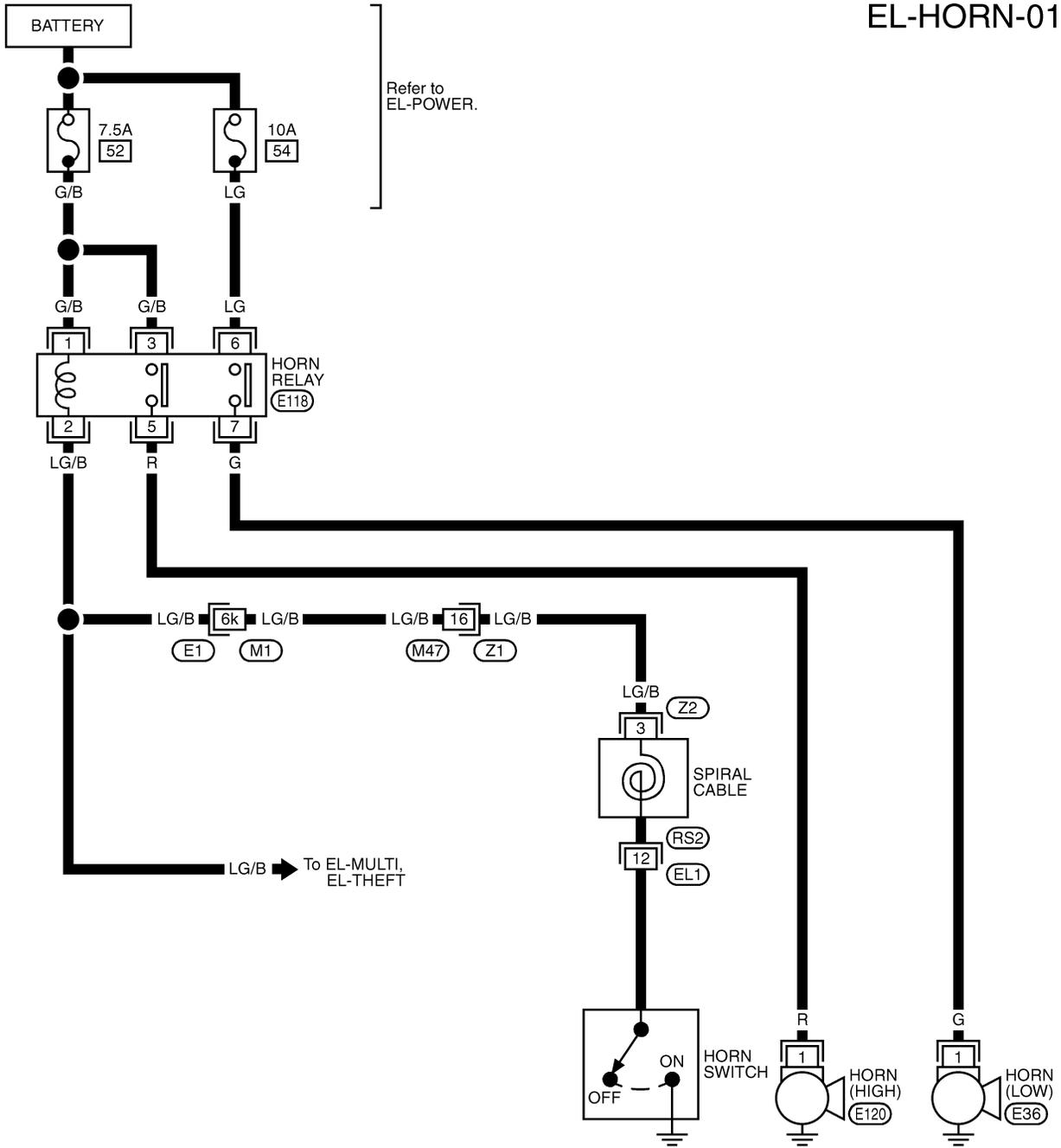
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Wiring Diagram — HORN —

NAEL0071

EL-HORN-01



* : This connector is not shown in "HARNES LAYOUT" of EL section.

Refer to last page (Foldout page).

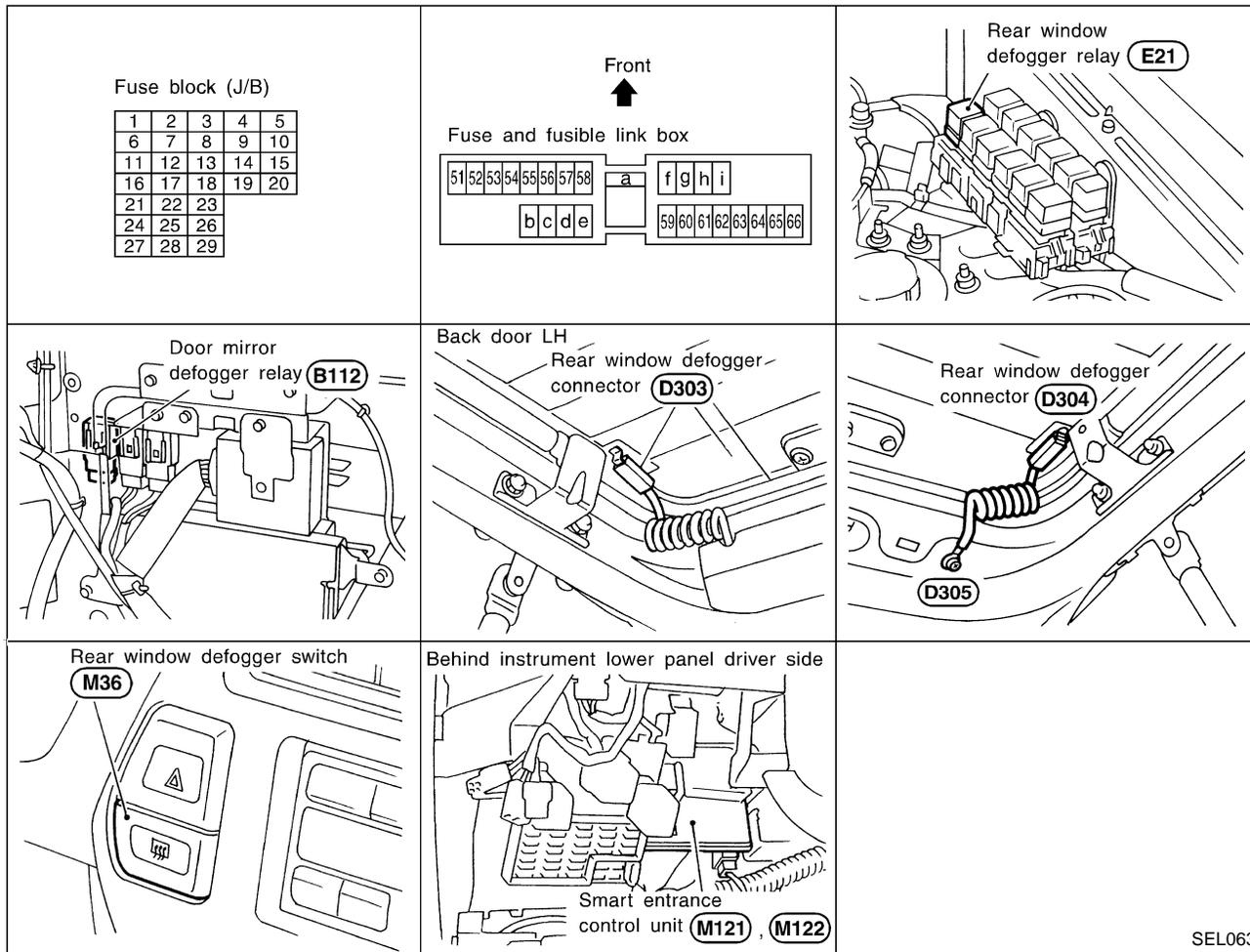
(M1) , (E1)

REAR WINDOW DEFOGGER

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0072



SEL063W

System Description

NAEL0073

The rear window defogger system is controlled by the smart entrance control unit. The rear window defogger operates only for approximately 15 minutes.

Power is supplied at all times

- to rear window defogger relay terminal 3
- through 20A fuse (No. 56, located in the fuse and fusible link box) and
- to rear window defogger relay terminal 6
- through 20A fuse (No. 57, located in the fuse and fusible link box).

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to the rear window defogger relay terminal 1 and
- through 7.5A fuse [No. 11, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

Ground is supplied to terminal 1 of the rear window defogger switch through body grounds M4 and M66.

When the rear window defogger switch is turned ON, ground is supplied

- through terminal 2 of the rear window defogger switch
- to smart entrance control unit terminal 39.

Terminal 2 of the smart entrance control unit then supplies ground to the rear window defogger relay terminal 2.

With power and ground supplied, the rear window defogger relay is energized.

Power is supplied

REAR WINDOW DEFOGGER

System Description (Cont'd)

- through terminals 5 and 7 of the rear window defogger relay
- to the rear window defogger.

The rear window defogger has an independent ground.

With power and ground supplied, the rear window defogger filaments heat and defog the rear window.

When the system is activated, the rear window defogger indicator illuminates in the rear window defogger switch.

Power is supplied

- to terminal 3 of the rear window defogger switch
- from terminal 7 of the rear window defogger relay.

Terminal 4 of the rear window defogger switch is grounded through body grounds M4 and M66.

GI

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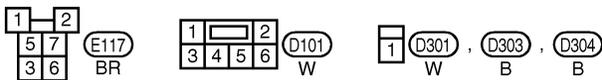
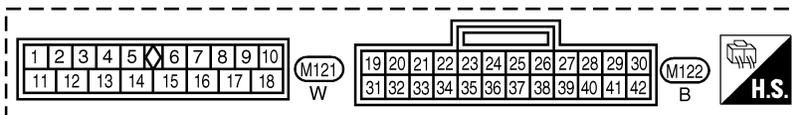
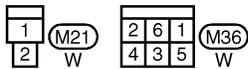
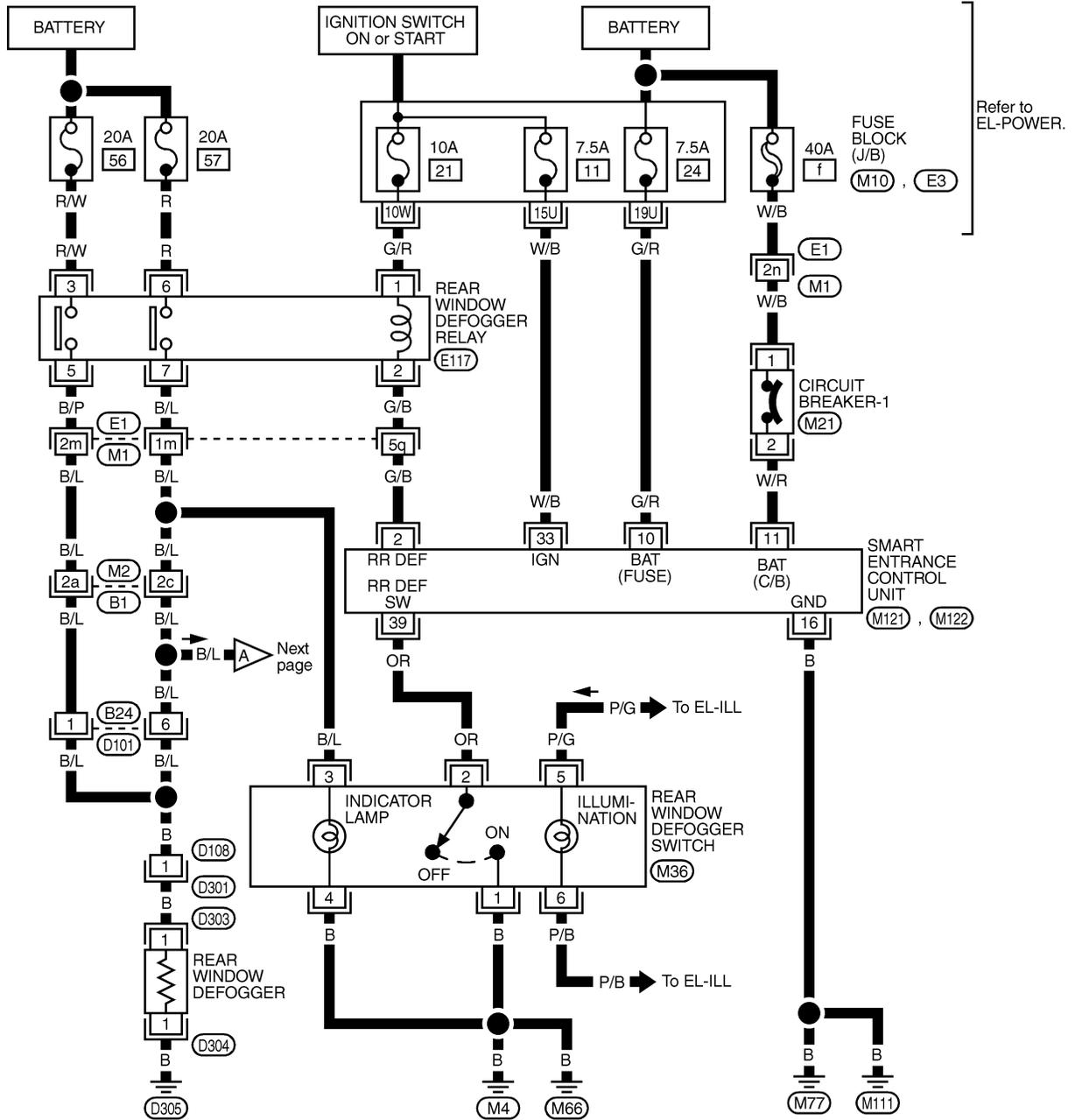
REAR WINDOW DEFOGGER

Wiring Diagram — DEF —

Wiring Diagram — DEF —

NAEL0074

EL-DEF-01



Refer to last page (Foldout page).

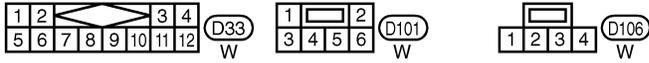
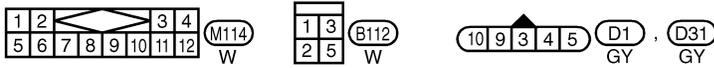
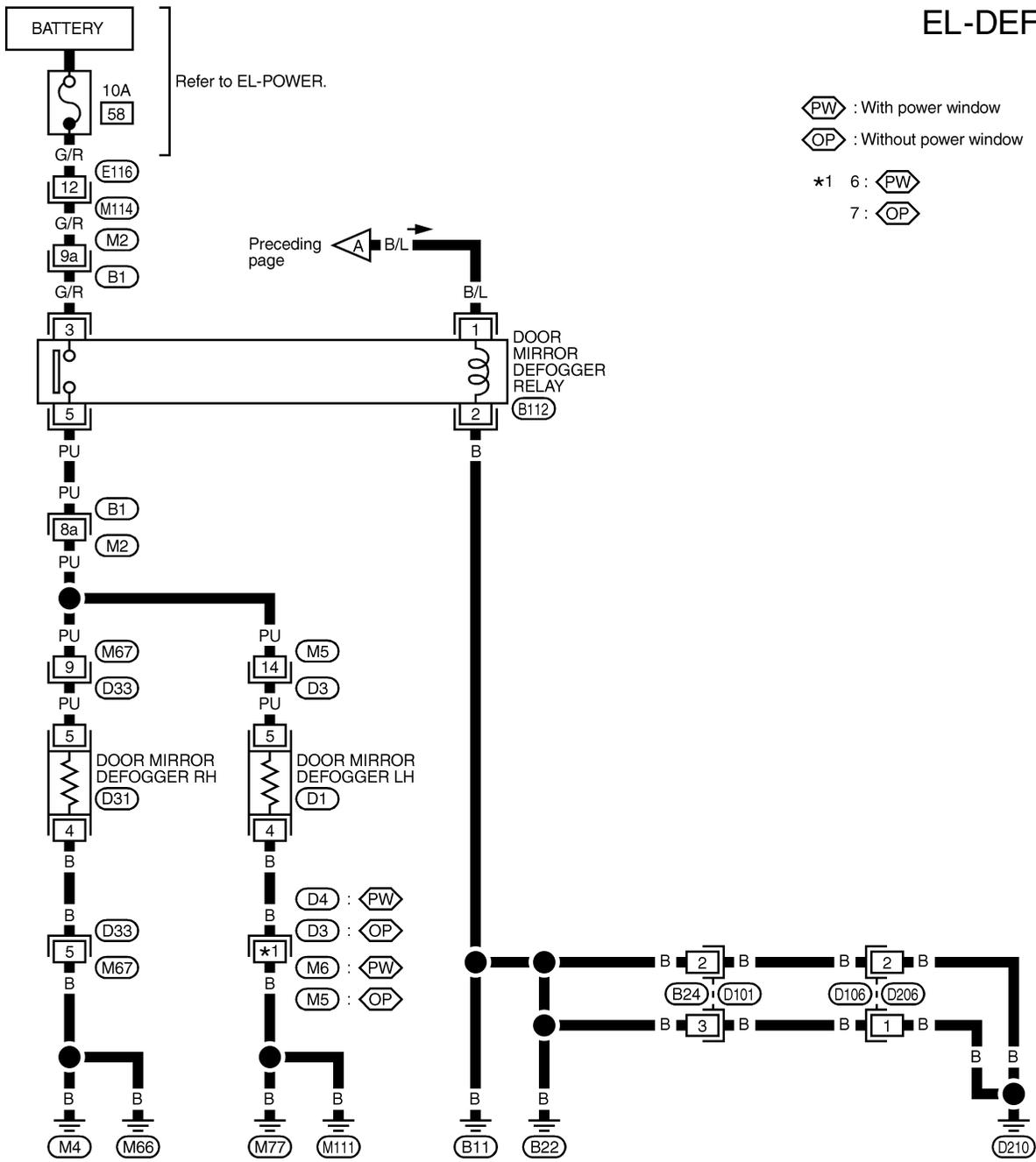
- (M1), (E1)
- (M2), (B1)
- (M10)
- (E3)

MEL959J

REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

EL-DEF-02



Refer to last page (Foldout page).

M2, B1

MEL960J

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REAR WINDOW DEFOGGER

Trouble Diagnoses

Trouble Diagnoses DIAGNOSTIC PROCEDURE

SYMPTOM: Rear window defogger does not activate, or does not go off after activating.

NAEL0075

NAEL0075S01

1	CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL
<p>1. Turn ignition switch to ON position. 2. Check voltage between control unit harness terminal 2 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M121)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL787VA</p> <p>Voltage [V]: Rear window defogger switch is "OFF". Approx. 12 Rear window defogger switch is "ON". 0</p> <p style="text-align: center;">OK or NG</p>	
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Rear window defogger relay (Refer to EL-146.) ● Rear window defogger circuit ● Rear window defogger filament (Refer to EL-146.)
NG	<p>▶ GO TO 2.</p>

2	CHECK DEFOGGER RELAY COIL SIDE CIRCUIT
<p>1. Disconnect control unit connector. 2. Turn ignition switch to ON position. 3. Check voltage between control unit terminal 2 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M121)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL788VA</p> <p style="text-align: center;">Does battery voltage exist?</p>	
Yes	<p>▶ GO TO 3.</p>
No	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 21, located in the fuse block (J/B)] ● Rear window defogger relay ● Harness for open or short between rear window defogger relay and control unit

REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

3	CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL	
<p>Check continuity between control unit terminal 39 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M122)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL789VA</p>		
<p>Continuity: Rear window defogger switch is pushed. Yes Rear window defogger switch is released. No</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 4.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> • Rear window defogger switch (Refer to EL-146.) • Harness for open or short between control unit and rear window defogger switch • Rear window defogger switch ground circuit

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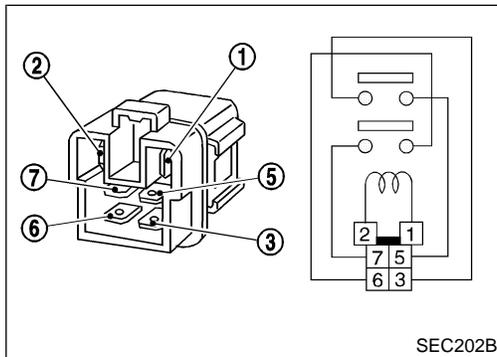
4	CHECK IGNITION INPUT SIGNAL	
<p>Check voltage between control unit terminal 33 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M122)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL790VA</p>		
<p>Voltage [V]: Ignition switch is "ON". Approx. 12 Ignition switch is "OFF". 0</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 5.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> • 7.5A fuse [No. 11, located in the fuse block (J/B)] • Harness for open or short between control unit and fuse

EL
IDX

REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

5	CHECK CONTROL UNIT GROUND CIRCUIT	
Check continuity between control unit terminal 16 and ground.		
SEL791VA		
Does continuity exist?		
Yes	▶	Replace control unit.
No	▶	Repair harness or connectors.



Electrical Components Inspection

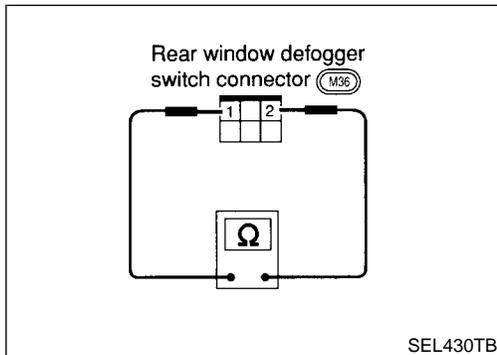
NAEL0076

REAR WINDOW DEFOGGER RELAY

NAEL0076S01

Check continuity between terminals 3 and 5, 6 and 7.

Condition	Continuity
12V direct current supply between terminals 1 and 2	Yes
No current supply	No

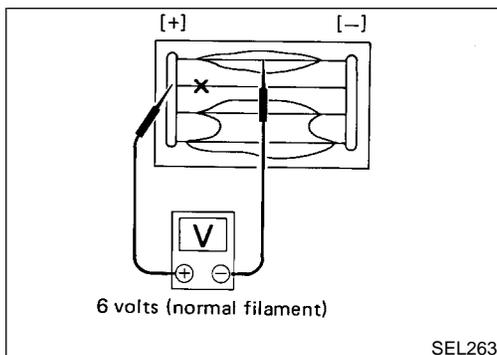


REAR WINDOW DEFOGGER SWITCH

NAEL0076S02

Check continuity between terminals when rear window defogger switch is pushed and released.

Terminals	Condition	Continuity
1 - 2	Rear window defogger switch is pushed	Yes
	Rear window defogger switch is released	No



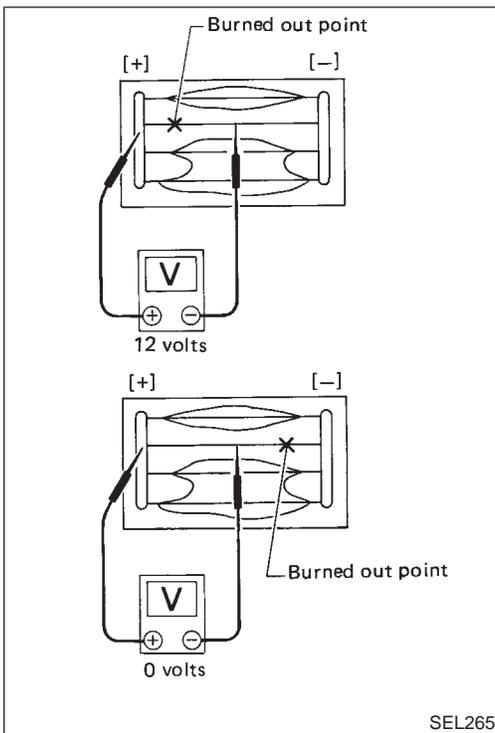
Filament Check

NAEL0077

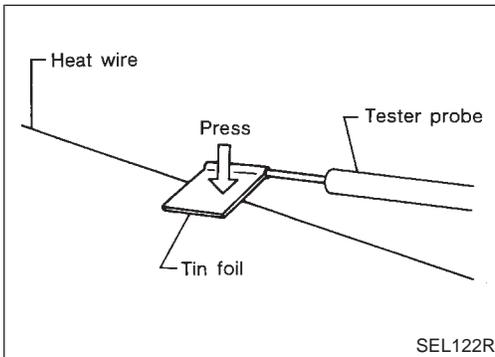
- Attach probe circuit tester (in volt range) to middle portion of each filament.

REAR WINDOW DEFOGGER

Filament Check (Cont'd)



SEL265



SEL122R

2. If a filament is burned out, circuit tester registers 0 or 12 volts.
3. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.

- When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.

Filament Repair

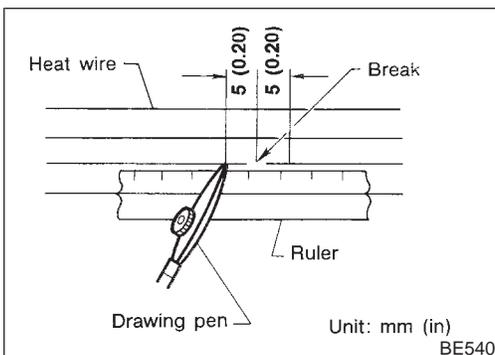
REPAIR EQUIPMENT

- 1) Conductive silver composition (Dupont No. 4817 or equivalent)
- 2) Ruler 30 cm (11.8 in) long
- 3) Drawing pen
- 4) Heat gun
- 5) Alcohol
- 6) Cloth

NAEL0078

NAEL0078S01

NAEL0078S02



BE540

REPAIRING PROCEDURE

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

Shake silver composition container before use.

3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

GI

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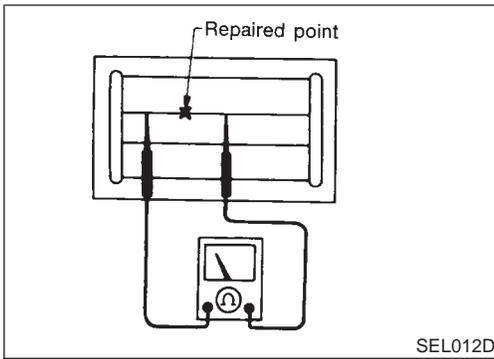
SC

EL

IDX

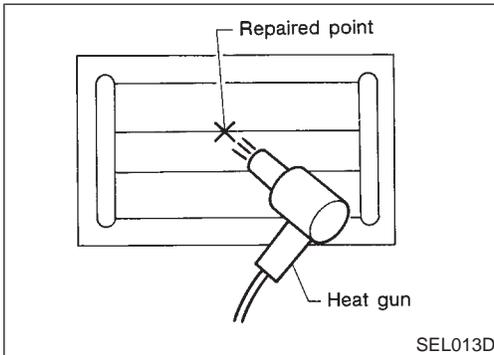
REAR WINDOW DEFOGGER

Filament Repair (Cont'd)



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.

System Description

Refer to Owner's Manual for audio system operating instructions.

GI
NAEL0079

BASE SYSTEM

Power is supplied at all times

- through 15A fuse [No. 4, located in the fuse block (J/B)]
- to audio unit terminal 6.

MA
NAEL0079S01

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to audio unit terminal 10.

EM

Ground is supplied through the case of the audio unit.

When the audio unit power knob is pushed to the ON position, audio signals are supplied

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to the front and rear speakers.

LC

EC

FE

BOSE SYSTEM

Power is supplied at all times

- through 15A fuse [No. 4, located in the fuse block (J/B)]
- to audio unit terminal 6,
- to audio amp. relay terminal 2 and
- to rear speaker amp. terminal 11.

CL
NAEL0079S02

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to audio unit terminal 10.

MT

AT

Ground is supplied through the case of the audio unit.

Ground is supplied

- to audio amp. relay terminal 3,
- to front door speaker LH terminal 5 and
- to front door speaker RH terminal 5
- through body grounds M77 and M111
- to rear speaker amp. terminal 24
- through body grounds B11, B22 and D210.

TF

PD

AX

SU

When the audio unit POWER button is pressed, power is supplied to rear speaker amp. terminal 9 and audio amp. relay terminal 1 from audio unit terminal 12. Then audio amp. relay is energized and power is supplied

- to front door speaker LH terminal 4 and
- to front door speaker RH terminal 4.

BR

Audio signals are supplied

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to terminals 2 and 6 of the LH and RH front speakers and terminals 5, 7, 18 and 20 of the rear speaker amp.
- to LH and RH tweeters through terminals 1 and 3 of the front speakers
- to rear LH and RH speakers through terminals 1, 2, 25 and 26 of the rear speaker amp.

ST

RS

BT

HA

SC

EL

IDX

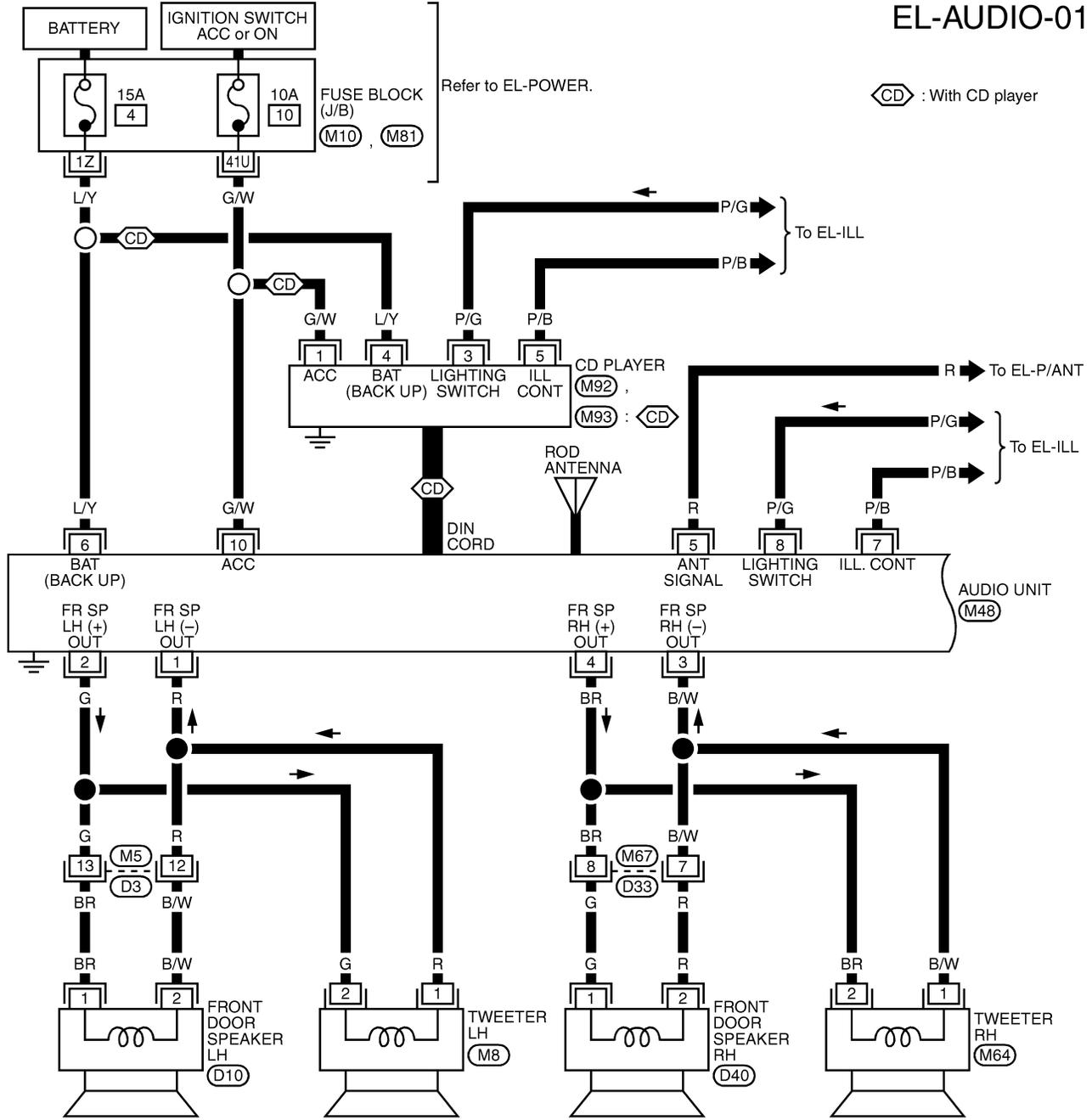
AUDIO

Wiring Diagram — AUDIO —/Base System

Wiring Diagram — AUDIO —/Base System

NAEL0188

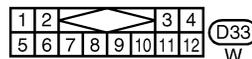
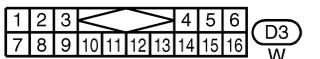
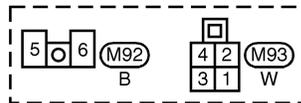
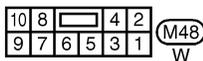
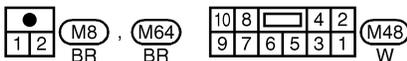
EL-AUDIO-01



Ⓢ : With CD player

Refer to EL-POWER.

Refer to last page (Foldout page).



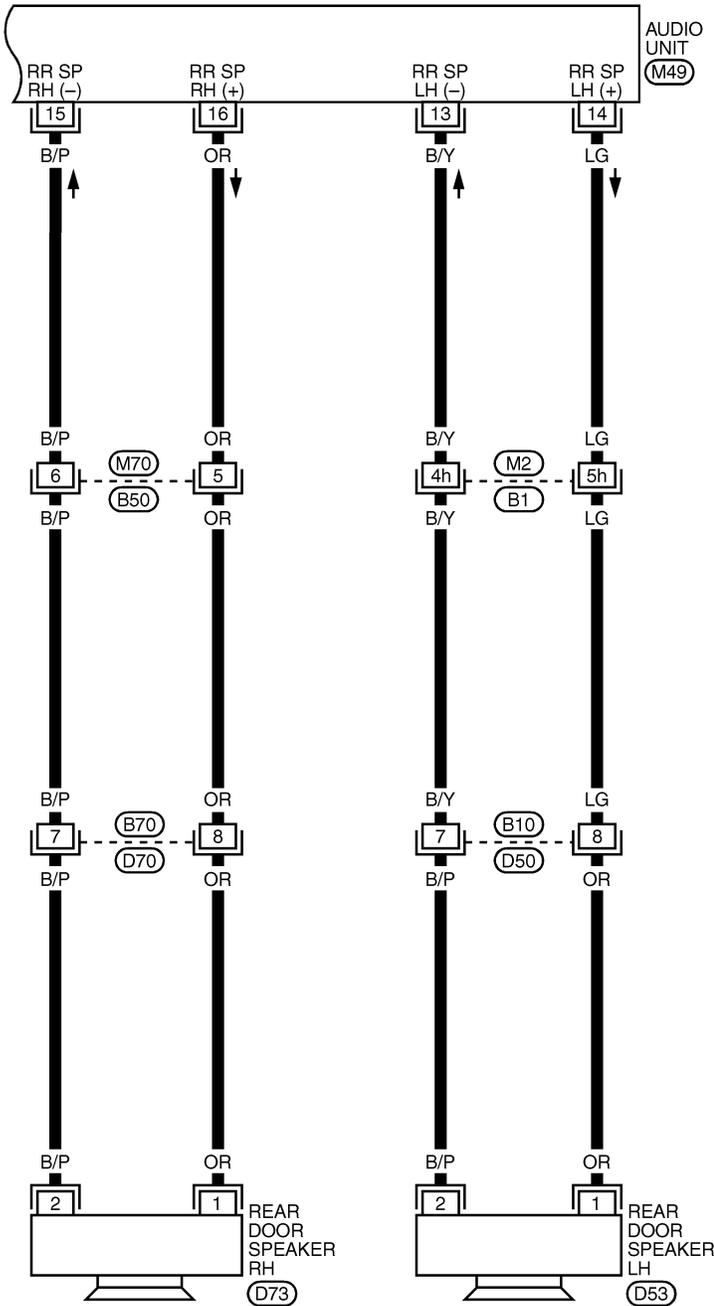
M10

M81

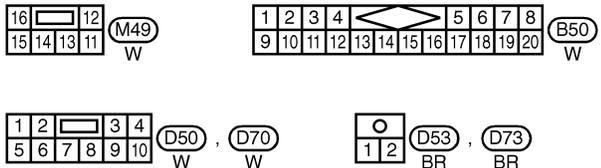
AUDIO

Wiring Diagram — AUDIO —/Base System (Cont'd)

EL-AUDIO-02



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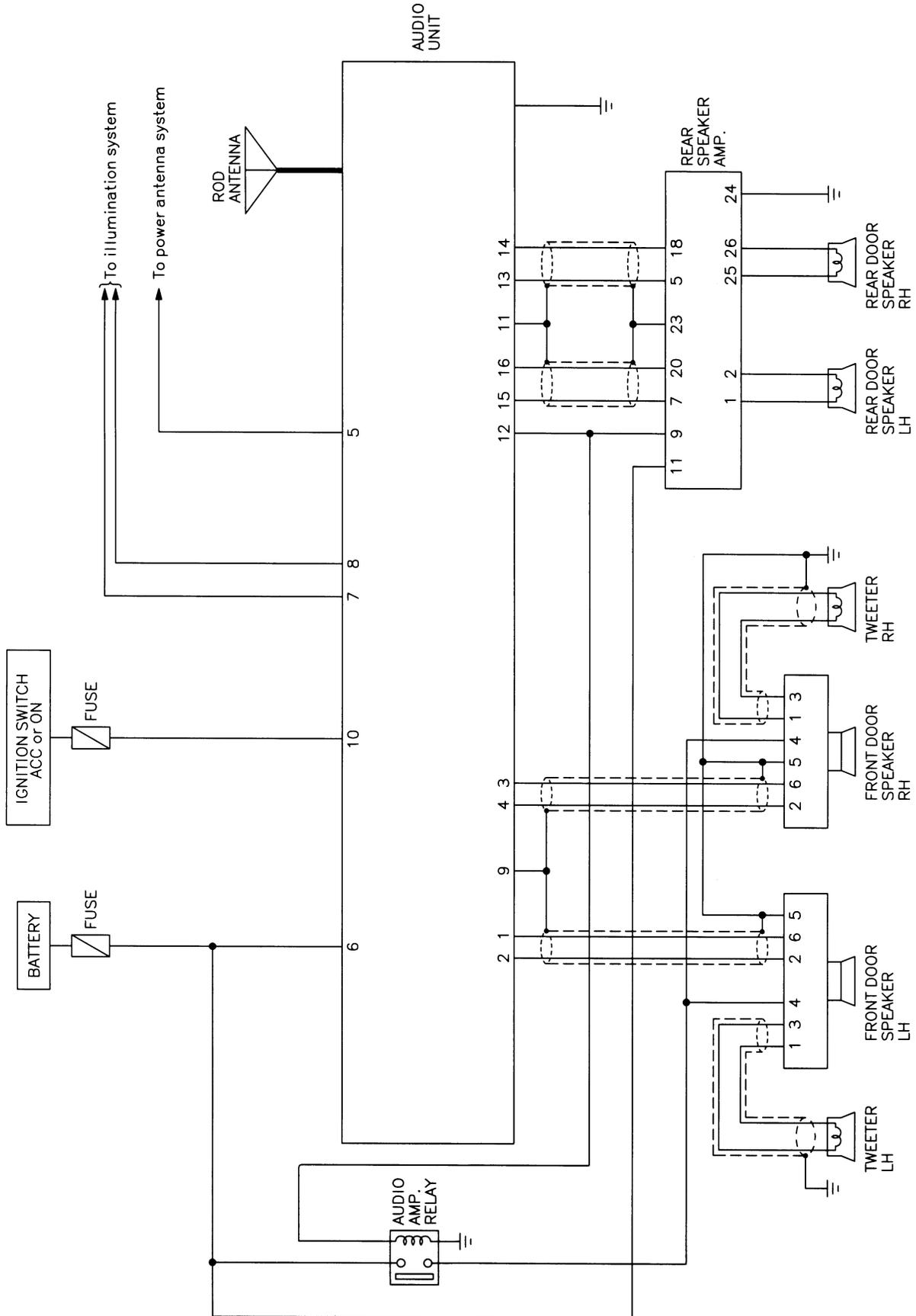
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M2, B1

MEL962J

Schematic/BOSE System

NAEL0080



MEL025L

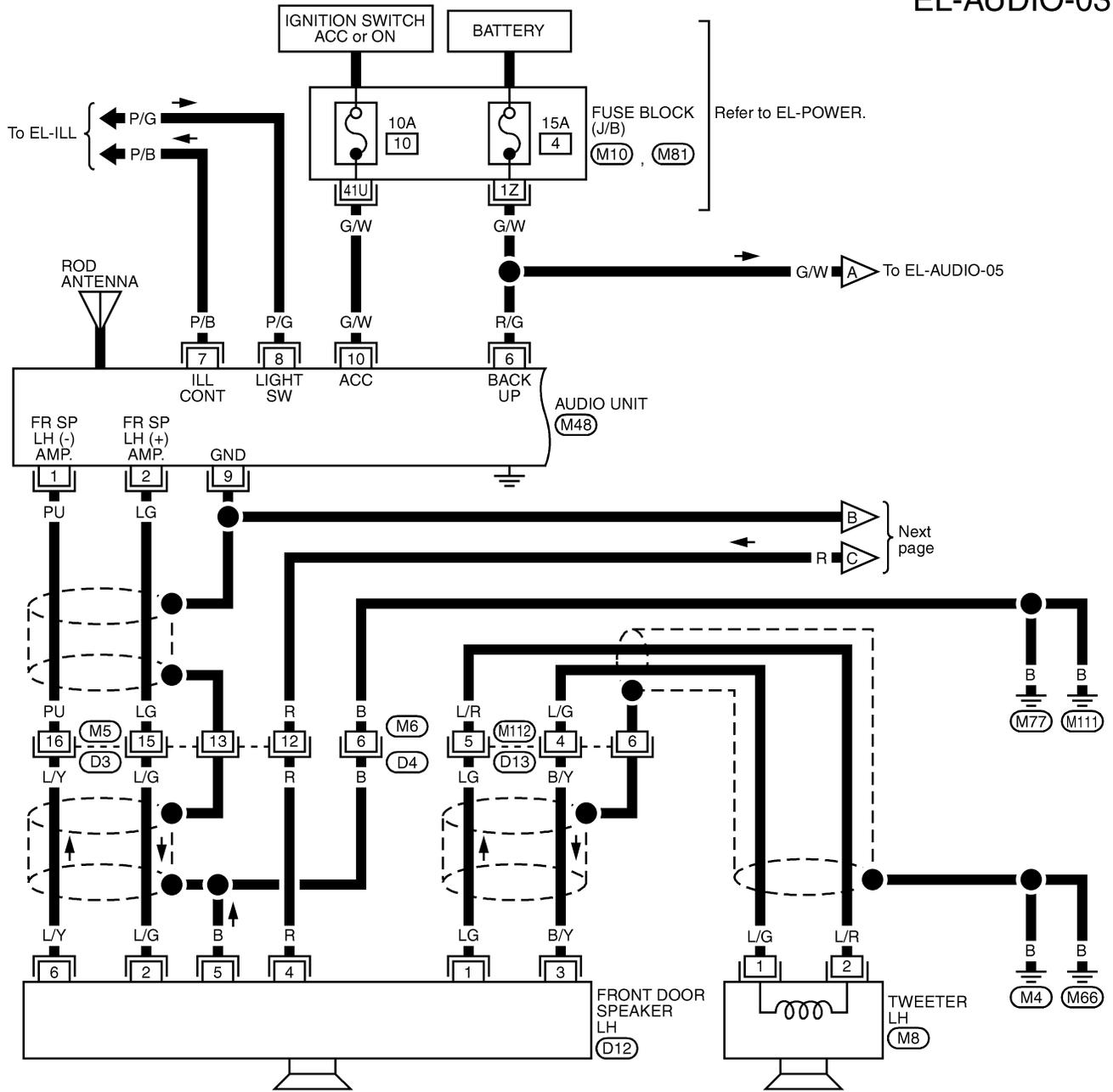
AUDIO

Wiring Diagram — AUDIO —/BOSE System

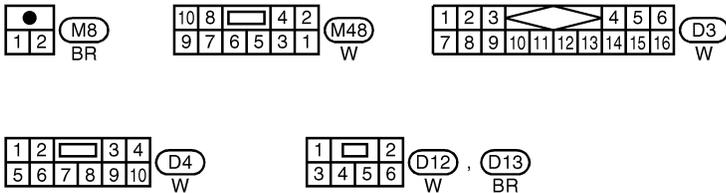
Wiring Diagram — AUDIO —/BOSE System

NAEL0081

EL-AUDIO-03



Refer to last page (Foldout page).



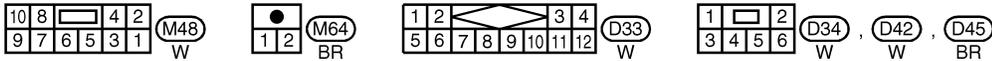
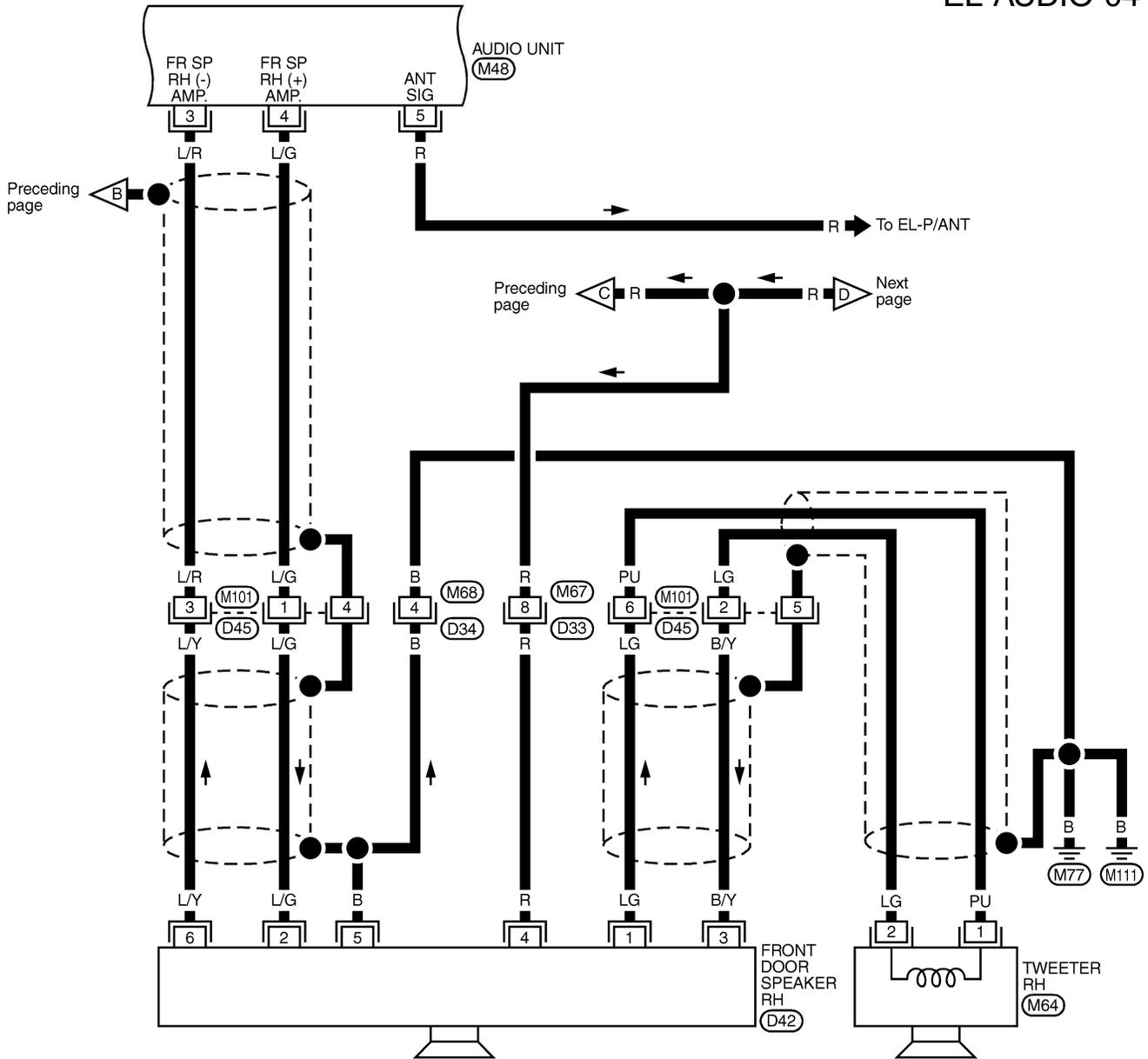
M10
M81

GI
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EL
IDX

AUDIO

Wiring Diagram — AUDIO —/BOSE System (Cont'd)

EL-AUDIO-04



MEL964J

AUDIO

Wiring Diagram — AUDIO —/BOSE System (Cont'd)

EL-AUDIO-05

GI

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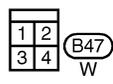
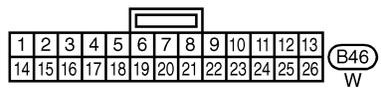
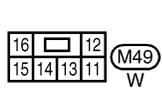
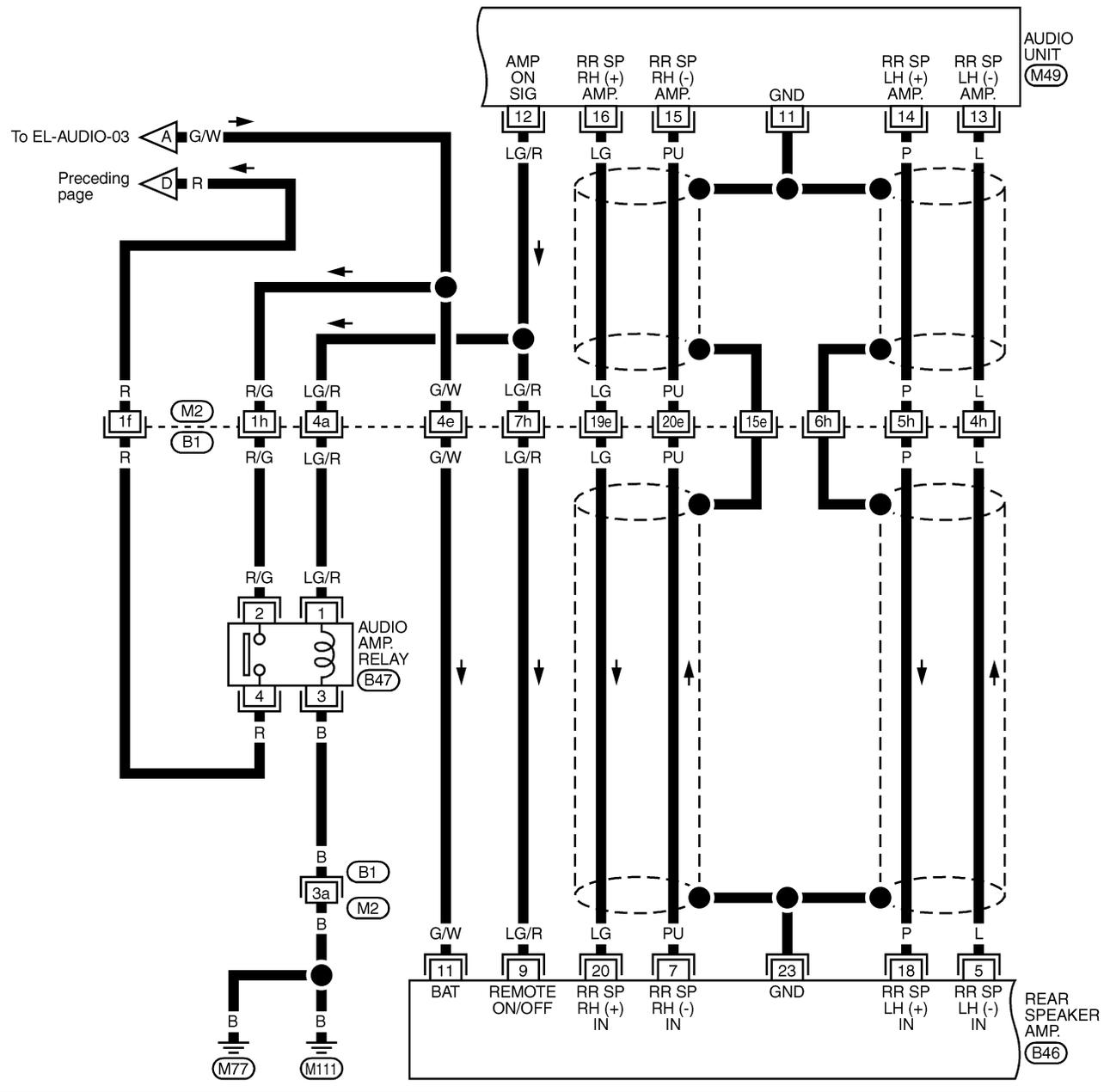
EL

BT

HA

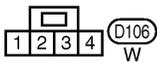
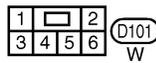
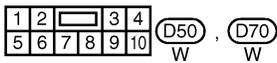
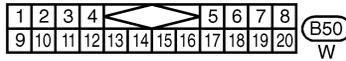
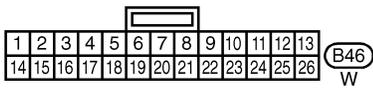
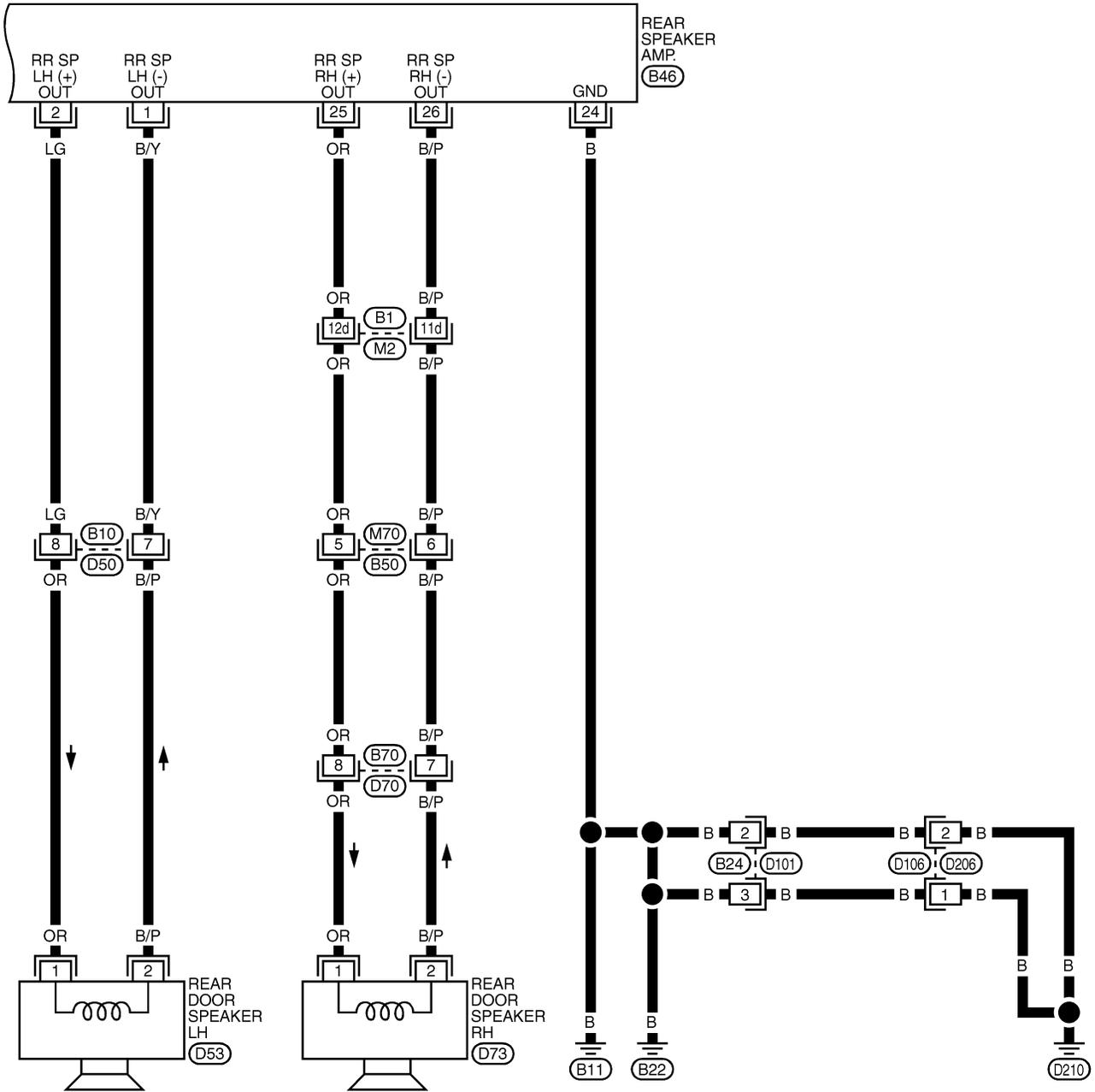
SC

EL



Refer to last page (Foldout page).
 (M2), (B1)

MEL965J



Refer to last page (Foldout page).

(M2), (B1)

Trouble Diagnoses

NAEL0082

NAEL0082S01

AUDIO UNIT

Symptom	Possible causes	Repair order
Audio unit inoperative (no digital display and no sound from speakers).	<ol style="list-style-type: none"> 10A fuse Poor audio unit case ground Audio unit 	<ol style="list-style-type: none"> Check 10A fuse [No. 10, located in fuse block (J/B)]. Turn ignition switch ON and verify that battery positive voltage is present at terminal 10 of audio unit. Check audio unit case ground. Remove audio unit for repair.
Audio unit presets are lost when ignition switch is turned OFF.	<ol style="list-style-type: none"> 15A fuse Audio unit 	<ol style="list-style-type: none"> Check 15A fuse [No. 4, located in fuse block (J/B)] and verify that battery positive voltage is present at terminal 6 of audio unit. Remove audio unit for repair.
AM stations are weak or noisy (FM stations OK).	<ol style="list-style-type: none"> Antenna Poor audio unit ground Audio unit 	<ol style="list-style-type: none"> Check antenna. Check audio unit ground. Remove audio unit for repair.
FM stations are weak or noisy (AM stations OK).	<ol style="list-style-type: none"> Window antenna Audio unit 	<ol style="list-style-type: none"> Check window antenna. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with engine running.	<ol style="list-style-type: none"> Poor audio unit ground Loose or missing ground bonding straps Ignition condenser or rear window defogger noise suppressor condenser Alternator Ignition coil or secondary wiring Audio unit 	<ol style="list-style-type: none"> Check audio unit ground. Check ground bonding straps. Replace ignition condenser or rear window defogger noise suppressor condenser. Check alternator. Check ignition coil and secondary wiring. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with accessories on (switch pops and motor noise).	<ol style="list-style-type: none"> Poor audio unit ground Antenna Accessory ground Faulty accessory 	<ol style="list-style-type: none"> Check audio unit ground. Check antenna. Check accessory ground. Replace accessory.

BASE SYSTEM

NAEL0082S02

Symptom	Possible causes	Repair order
Individual speaker is noisy or inoperative.	<ol style="list-style-type: none"> Speaker Audio unit output Speaker circuit Audio unit 	<ol style="list-style-type: none"> Check speaker. Check audio unit output voltages. Check wires for open or short between audio unit and speaker. Remove audio unit for repair.

BOSE SYSTEM

NAEL0082S03

Symptom	Possible causes	Repair order
Audio unit controls are operational, but no sound is heard from any speaker.	<ol style="list-style-type: none"> 15A fuse Audio unit output Audio unit 	<ol style="list-style-type: none"> Check 15A fuse [No. 4, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 2 of audio amp. relay. Check audio unit output voltage (Terminal 12). Remove audio unit for repair.
All front speakers are inoperative.	<ol style="list-style-type: none"> Audio amp. relay Audio amp. relay ground Amp. ON signal 	<ol style="list-style-type: none"> Check audio amp. relay. Check audio amp. relay ground (Terminal 3). Turn ignition switch ACC and audio unit ON. Verify battery positive voltage is present at terminal 1 of audio amp. relay.
Individual front speaker is noisy or inoperative.	<ol style="list-style-type: none"> Speaker ground Power supply Audio unit output Speaker 	<ol style="list-style-type: none"> Check speaker ground (Terminal 5). Check power supply for speaker (Terminal 4). Check audio unit output voltage for speaker. Replace speaker.

AUDIO

Trouble Diagnoses (Cont'd)

Symptom	Possible causes	Repair order
Both rear speakers are inoperative.	<ol style="list-style-type: none"> Poor rear speaker amp. ground Power supply Amp. ON signal Rear speaker amp. 	<ol style="list-style-type: none"> Check rear speaker amp. ground circuit. Check power supply for rear speaker amp. (Terminal 11). Turn ignition switch ACC and audio unit ON. Verify battery positive voltage is present at terminal 9 of rear speaker amp. Remove rear speaker amp. for repair.
Individual rear speaker is noisy or inoperative.	<ol style="list-style-type: none"> Speaker Audio unit/amp. output Speaker circuit Audio unit 	<ol style="list-style-type: none"> Check speaker. Check audio unit/amp. output. Check wires for open or short between audio unit/amp. and speakers. Remove audio unit for repair.

Inspection

NAEL0083

AUDIO UNIT AND AMP.

NAEL0083S01

All voltage inspections are made with:

- Ignition switch ON or ACC
- Audio unit ON
- Audio unit and amps. connected (If audio unit or amp. is removed for inspection, supply a ground to the case using a jumper wire.)

ANTENNA

NAEL0083S02

- Using a jumper wire, clip an auxiliary ground between antenna and body.
 - If reception improves, check antenna ground (at body surface).
 - If reception does not improve, check main feeder cable for short circuit or open circuit.

System Description

GI
NAEL0084

Power is supplied at all times

- through 7.5A fuse [No. 24, located in the fuse block (J/B)]
- to power antenna terminal 6.

Ground is supplied to the power antenna terminal 2 through body grounds M4 and M66.

When the audio unit is turned to the ON position, battery positive voltage is supplied

- through audio unit terminal 5
- to power antenna terminal 4.

The antenna raises and is held in the extended position.

When the audio unit is turned to the OFF position, battery positive voltage is interrupted

- from audio unit terminal 5
- to power antenna terminal 4.

The antenna retracts.

MA

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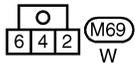
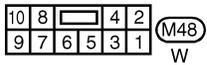
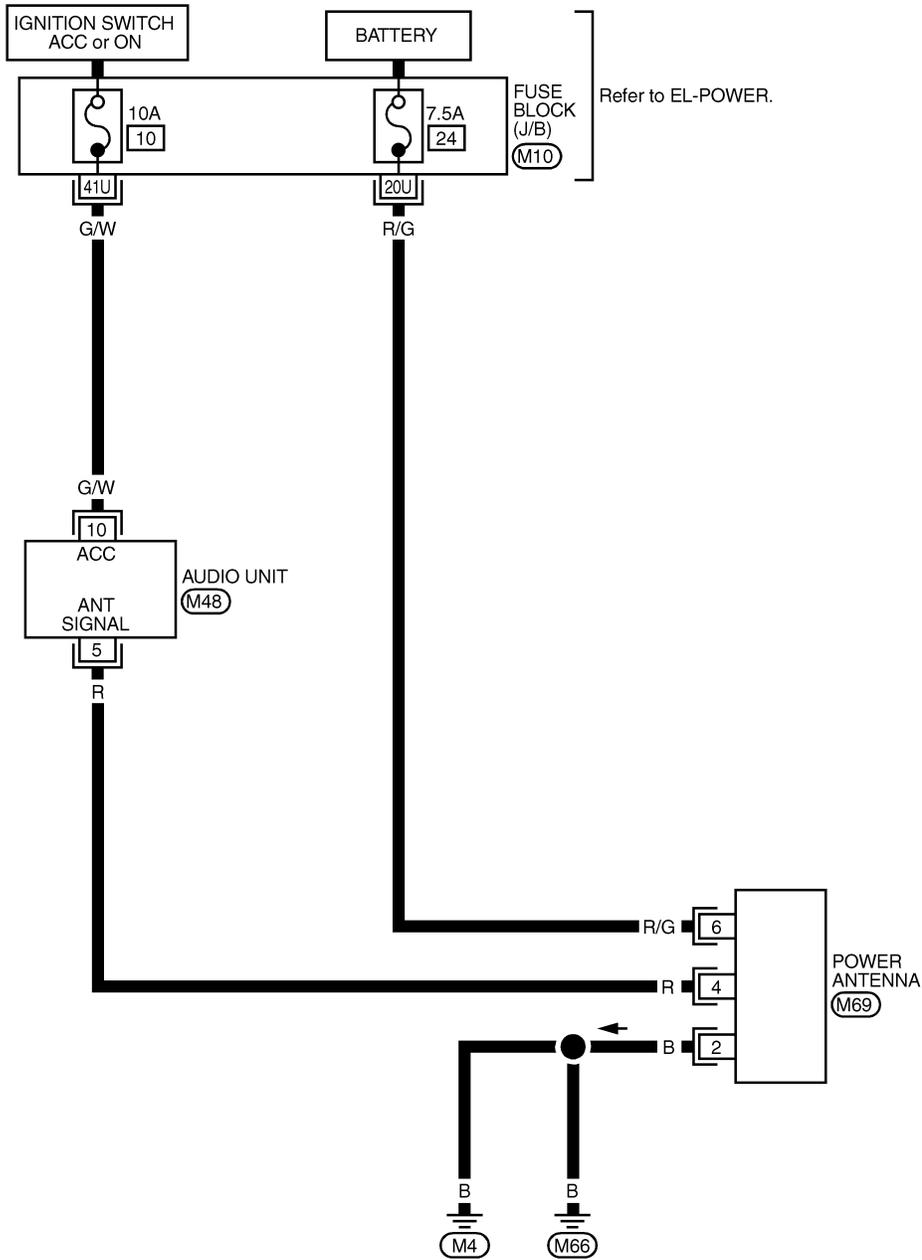
AUDIO ANTENNA

Wiring Diagram — P/ANT —

Wiring Diagram — P/ANT —

NAEL0085

EL-P/ANT-01



Refer to last page (Foldout page).

(M10)

Trouble Diagnoses

NAEL0086

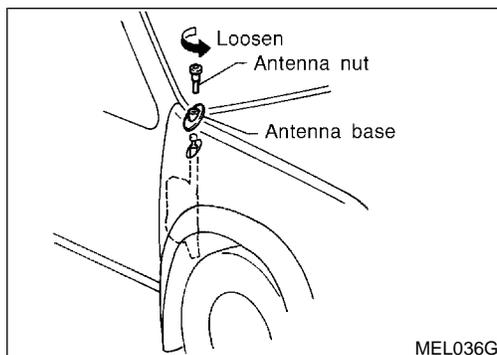
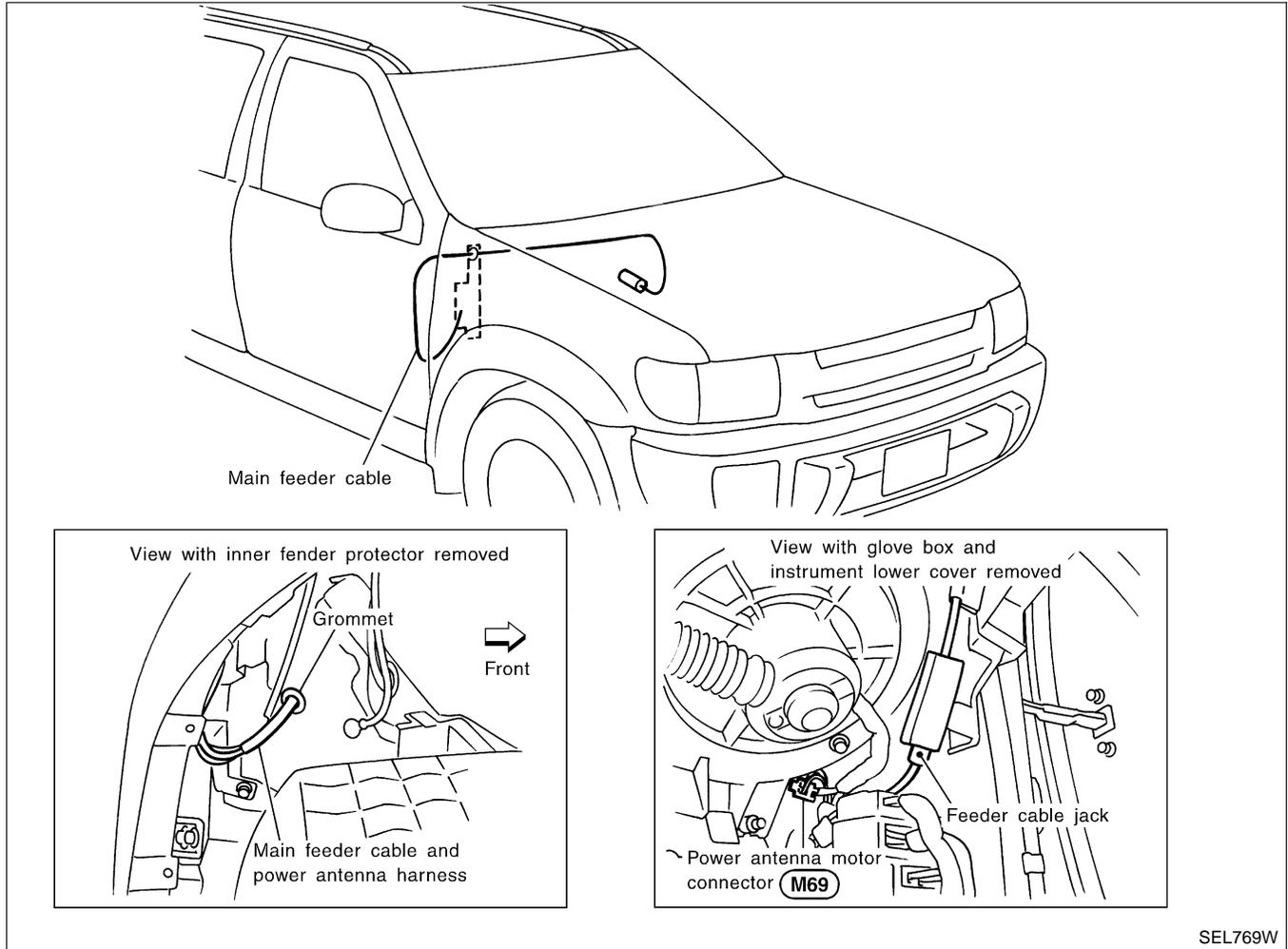
NAEL0086S01

POWER ANTENNA

Symptom	Possible causes	Repair order
Power antenna does not operate.	<ol style="list-style-type: none"> 7.5A fuse Audio unit signal Grounds M4 and M66 	<ol style="list-style-type: none"> Check 7.5A fuse [No. 24, located in fuse block (J/B)]. Verify that battery positive voltage is present at terminal 6 of power antenna. Turn ignition switch and audio unit ON. Verify that battery positive voltage is present at terminal 4 of power antenna. Check grounds M4 and M66.

Location of Antenna

NAEL0087



Antenna Rod Replacement REMOVAL

NAEL0088

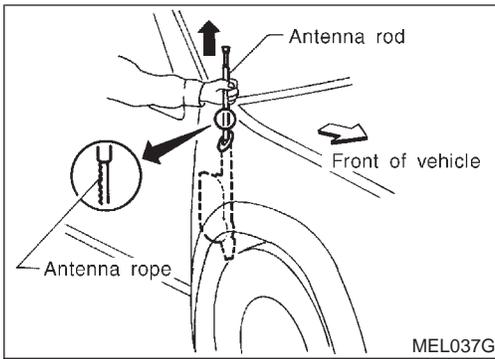
NAEL0088S01

- Remove antenna nut and antenna base.

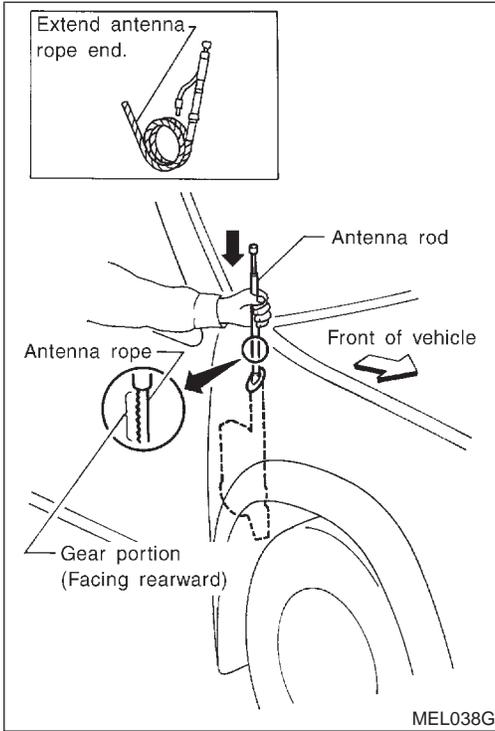
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AUDIO ANTENNA

Antenna Rod Replacement (Cont'd)



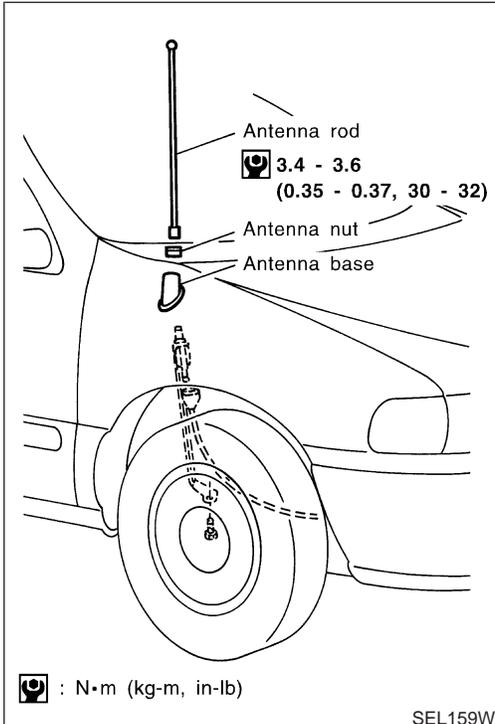
2. Withdraw antenna rod while raising it by operating antenna motor.



INSTALLATION

NAEL0088S02

1. Lower antenna rod by operating antenna motor.
2. Insert gear section of antenna rope into place with it facing toward antenna motor.
3. As soon as antenna rope is wound on antenna motor, stop antenna motor. Insert antenna rod lower end into antenna motor pipe.
4. Retract antenna rod completely by operating antenna motor.
5. Install antenna nut and base.



Fixed Antenna Rod Replacement REMOVAL AND INSTALLATION

NAEL0189

NAEL0189S01

1. Remove antenna rod.
2. Remove antenna nut and antenna base.
3. Remove inner splash shield.
4. Disconnect antenna cable from audio unit, refer to BT section.
5. Remove bolt and antenna.

To install, reverse removal procedure.

System Description

OUTLINE

Electric sunroof system consists of

- Sunroof switch
- Sunroof motor
- Power window relay
- Smart entrance control unit

Smart entrance control unit controls retained power operation.

RETAINED POWER OPERATION

When the ignition switch is turned to OFF position from ON or START position, power is supplied for 45 seconds

- to power window relay terminal 2
- from smart entrance control unit terminal 5.

Ground is always supplied

- to power window relay terminal 1
- through body grounds.

When power and ground is supplied, the power window relay continues to be energized, and the electrical sunroof can be operated.

The retained power operation is canceled when the driver or passenger side door is opened.

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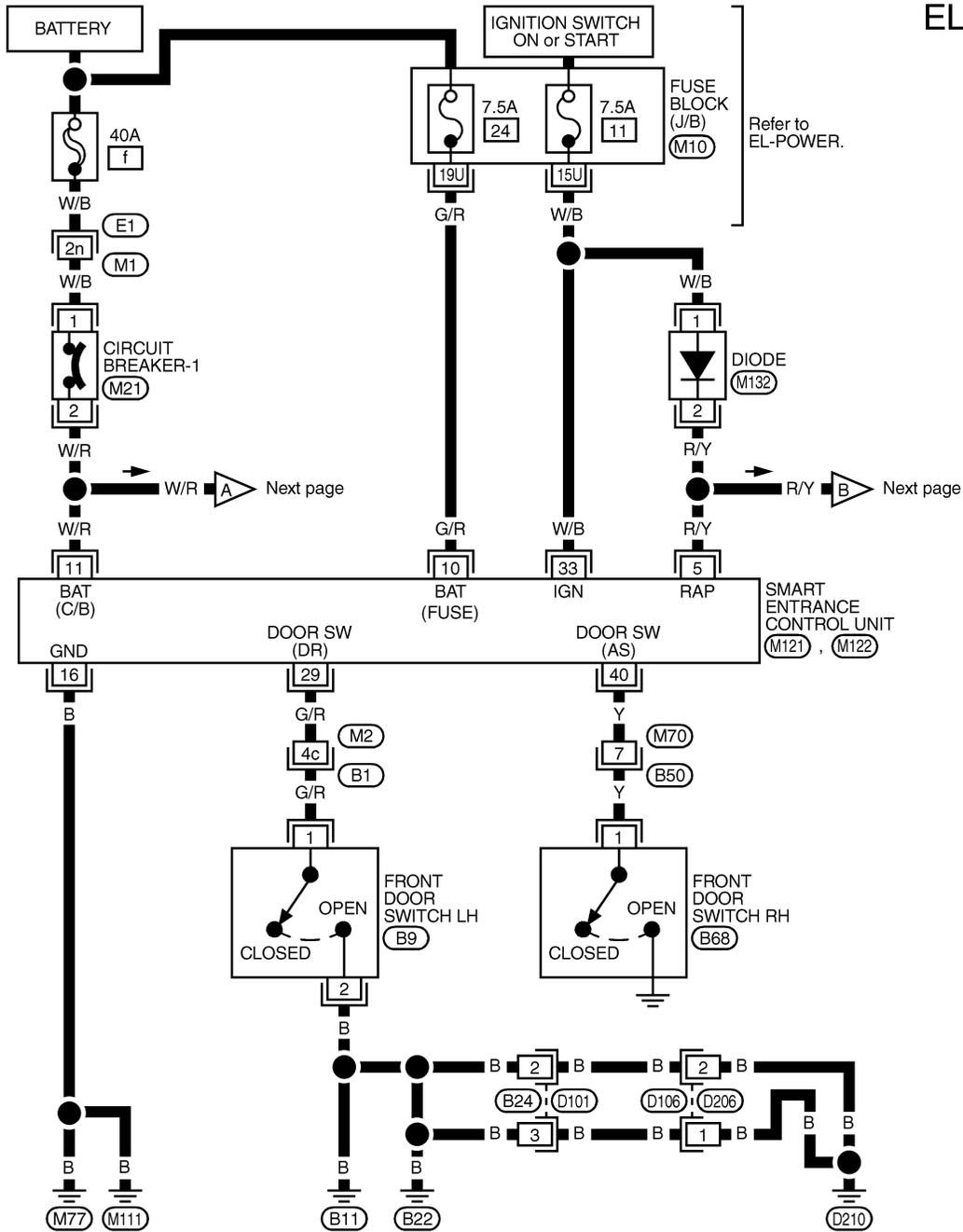
POWER SUNROOF

Wiring Diagram — SROOF —

Wiring Diagram — SROOF —

NAEL0089

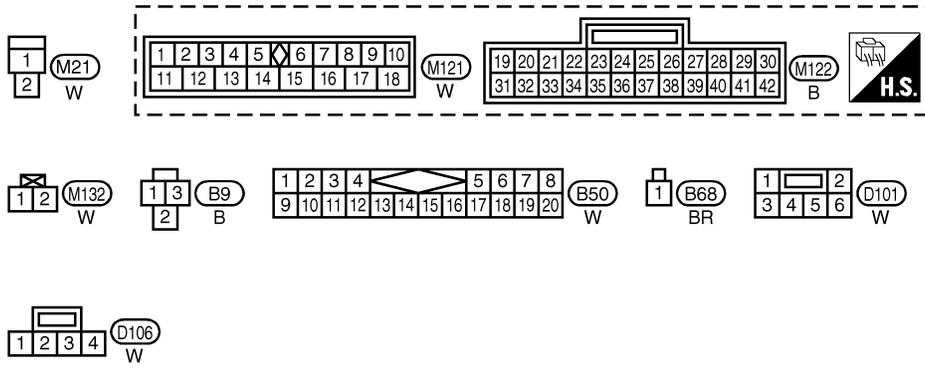
EL-SROOF-01



Refer to EL-POWER.

Next page

Next page

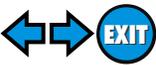


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- (M1), (E1)
- (M2), (B1)
- (M10)

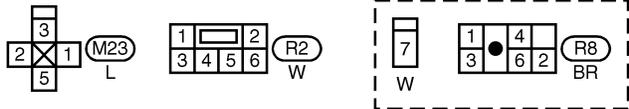
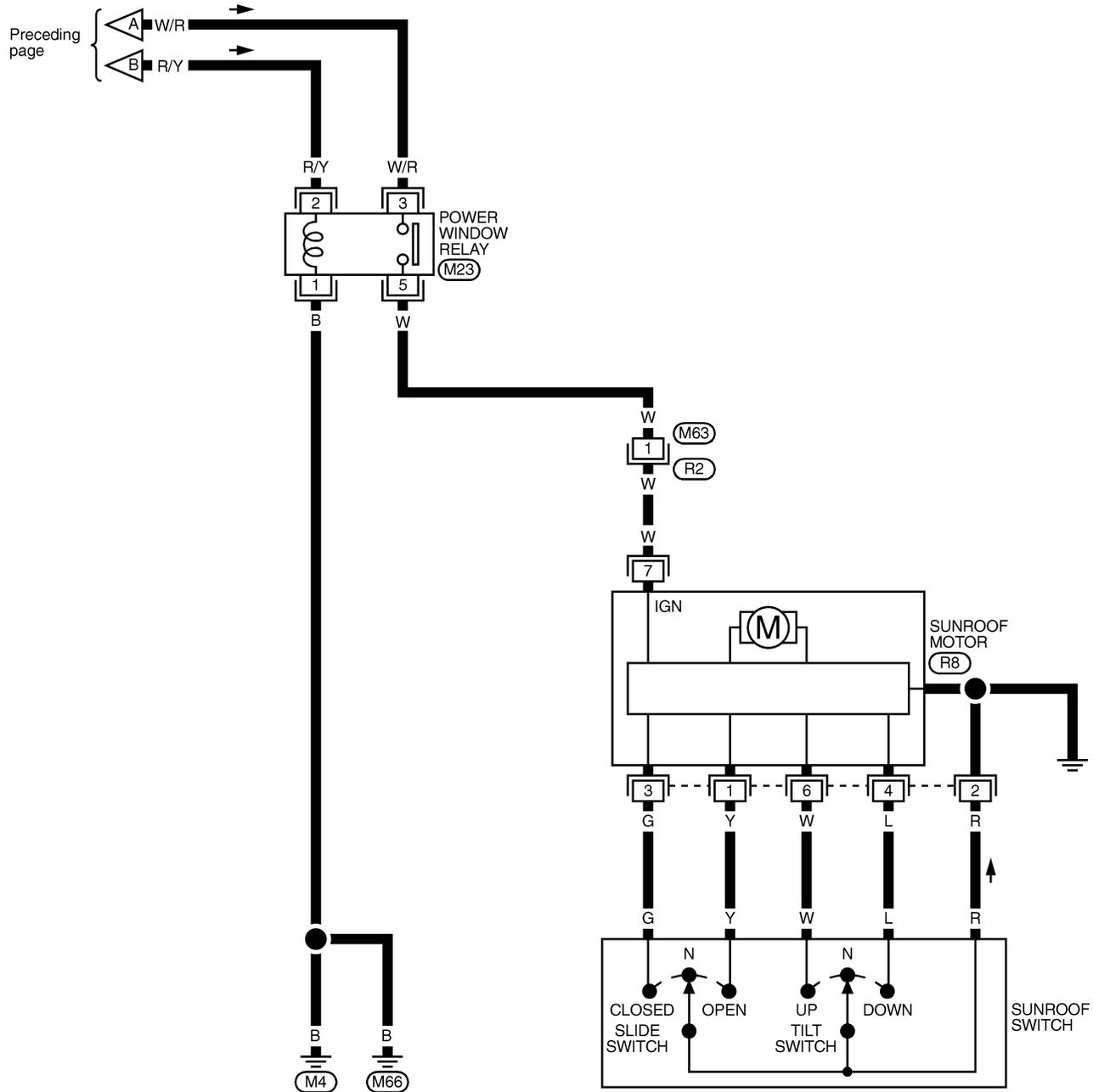
MEL081K

POWER SUNROOF



Wiring Diagram — SROOF — (Cont'd)

EL-SROOF-02



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MEL967J

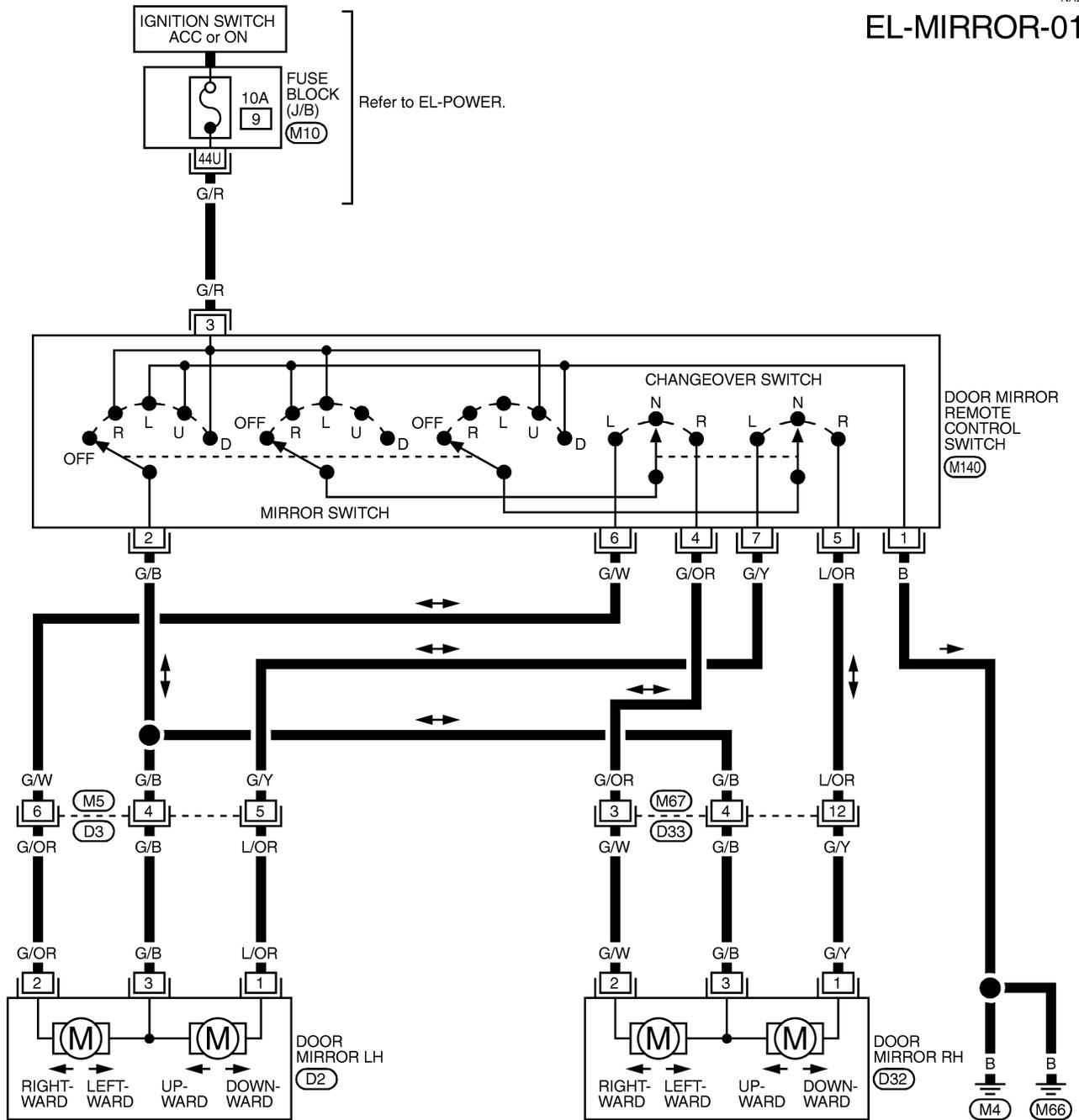
DOOR MIRROR

Wiring Diagram — MIRROR —

Wiring Diagram — MIRROR —

NAEL0090

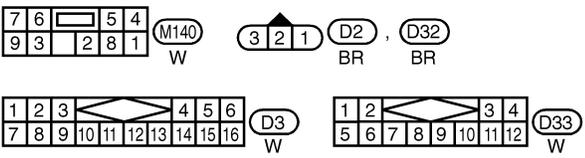
EL-MIRROR-01



DOOR MIRROR
REMOTE
CONTROL
SWITCH
(M140)

DOOR MIRROR LH
(D2)

DOOR MIRROR RH
(D32)



Refer to last page (Foldout page).
(M10)

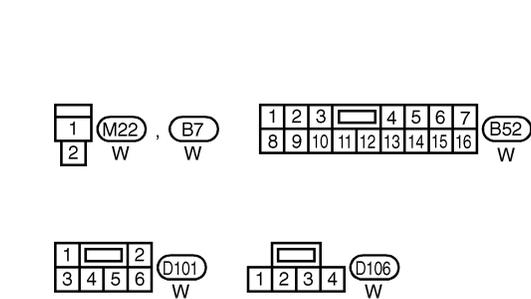
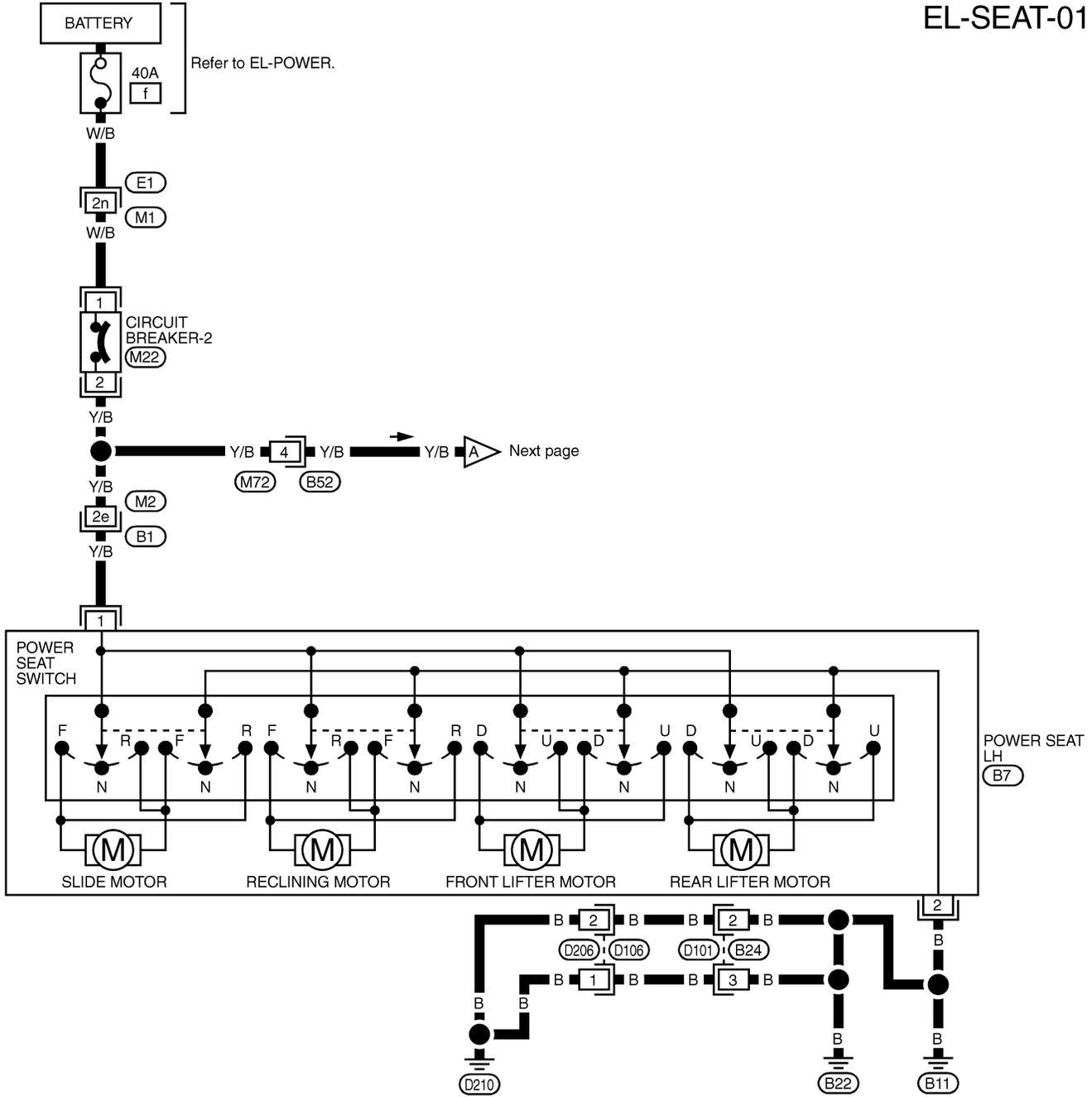
POWER SEAT

Wiring Diagram — SEAT —

Wiring Diagram — SEAT —

NAEL0092

EL-SEAT-01



Refer to last page (Foldout page).

- (M1), (E1)
- (M2), (B1)

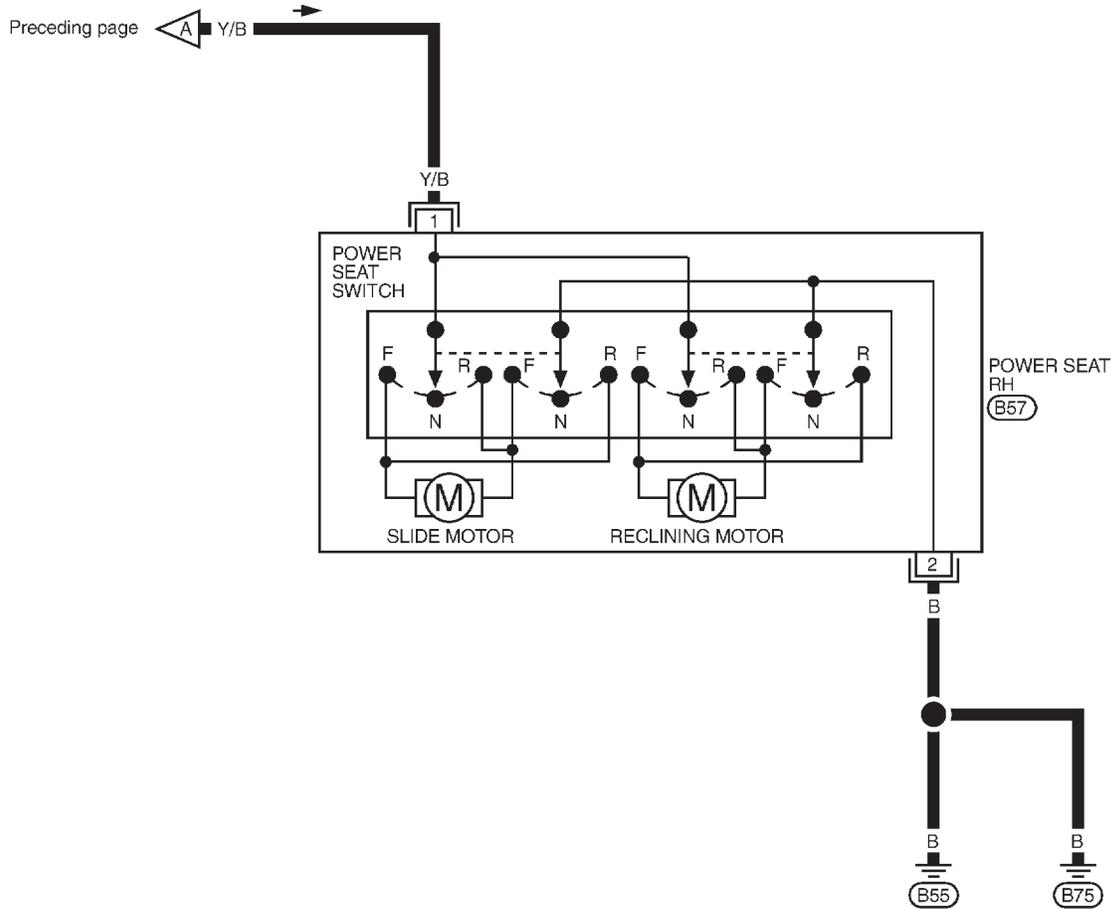
- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- TF
- PD
- AX
- SU
- BR
- ST
- RS
- BT
- HA
- SC
- EL
- IDX

MEL968J

POWER SEAT

Wiring Diagram — SEAT — (Cont'd)

EL-SEAT-02



MEL611H

HEATED SEAT

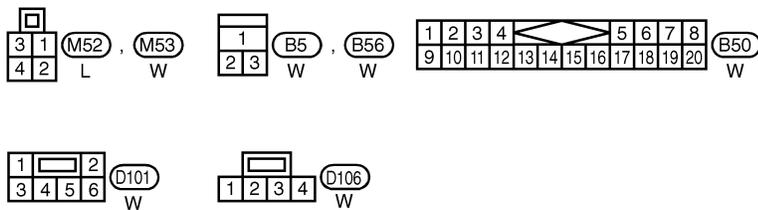
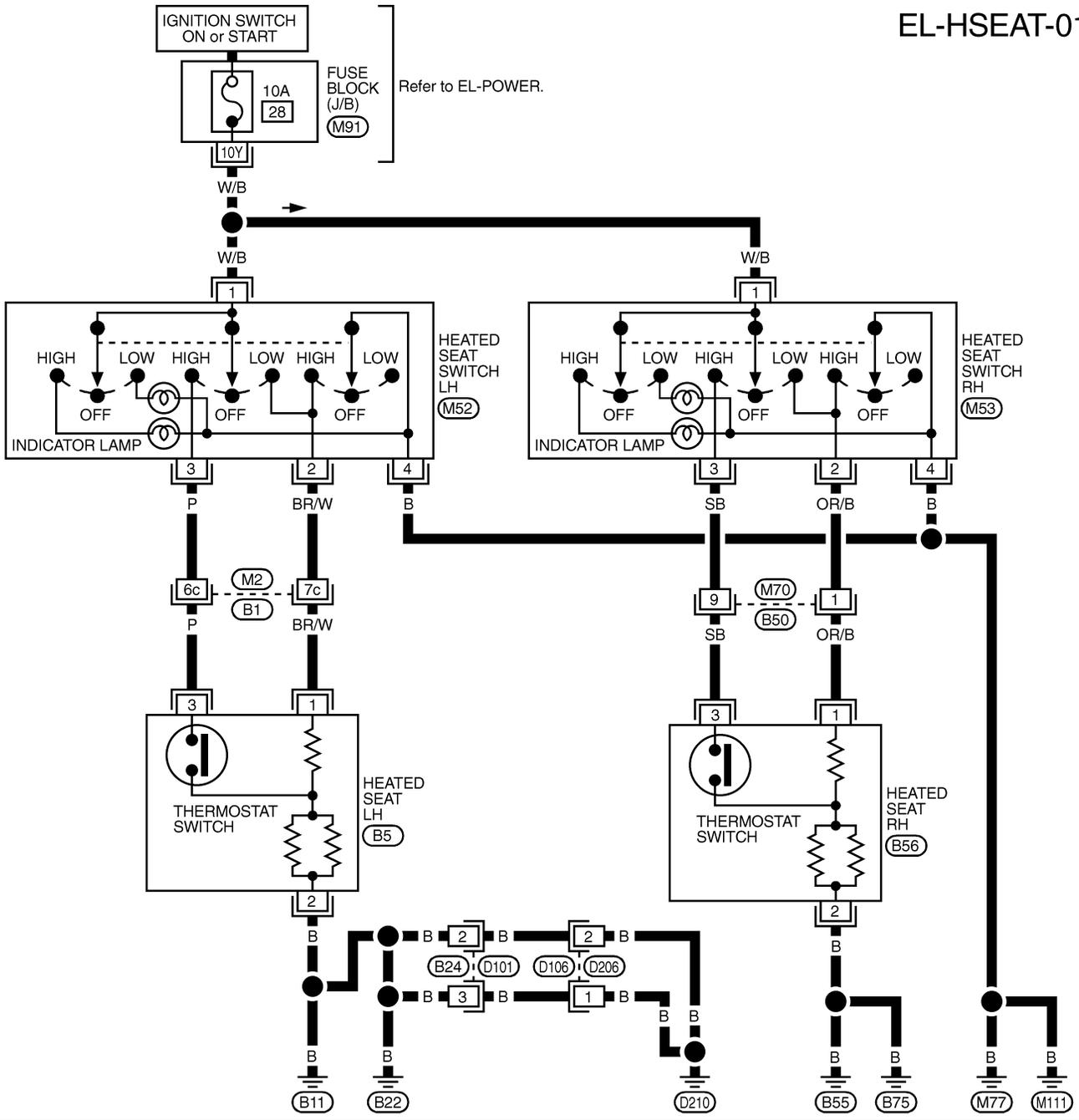
Wiring Diagram — HSEAT —

Wiring Diagram — HSEAT —

NAEL0093

EL-HSEAT-01

GI
MA
EM
LC
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SC
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IDX



Refer to last page (Foldout page).

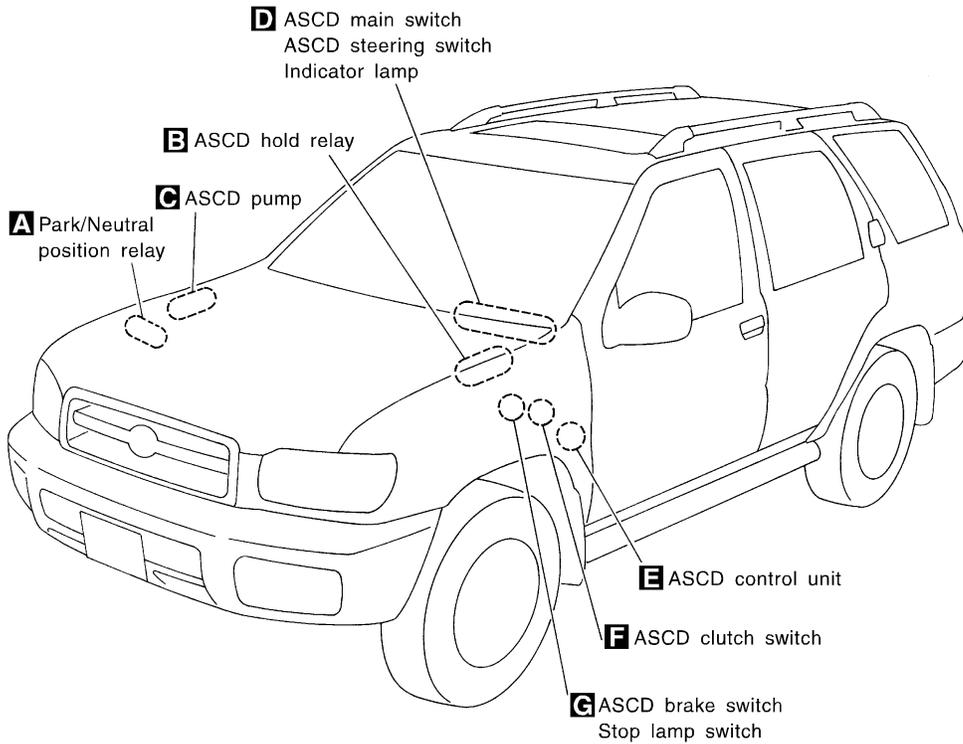
M2, B1
M91

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0094



<p>Fuse block (J/B)</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td></tr> <tr><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td></td><td></td></tr> <tr><td>24</td><td>25</td><td>26</td><td></td><td></td></tr> <tr><td>27</td><td>28</td><td>29</td><td></td><td></td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			24	25	26			27	28	29			<p>Front ↑</p> <p>Fuse and fusible link box</p> <table border="1"> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>a</td><td>f</td><td>g</td><td>h</td><td>i</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>b</td><td>c</td><td>d</td><td>e</td><td>59</td><td>60</td><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td></tr> </table>	51	52	53	54	55	56	57	58	a	f	g	h	i									b	c	d	e	59	60	61	62	63	64	65	66	<p>A</p> <p>Park/Neutral position relay</p> <p>E56 : A/T</p>
1	2	3	4	5																																																																		
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<p>B</p> <p>ASCD hold relay</p> <p>E22 : A/T</p> <p>E27 : M/T</p>	<p>C</p> <p>ASCD pump E59</p>	<p>D</p> <p>Indicator lamp M24 M25</p> <p>ASCD main switch M18</p> <p>ASCD steering switch EL2</p>																																																																				
<p>E</p> <p>ASCD control unit M3</p>	<p>F</p> <p>ASCD clutch switch M14</p> <p>Clutch pedal</p>	<p>G</p> <p>ASCD brake switch M29</p> <p>Stop lamp switch M31</p> <p>Brake pedal</p>																																																																				

System Description

Refer to Owner's Manual for ASCD operating instructions.

GI
NAEL0095

POWER SUPPLY AND GROUND

MA
NAEL0095S03

When ignition switch is in the ON or START position, power is supplied

- through 7.5A fuse [No. 11, located in the fuse block (J/B)]
- to ASCD hold relay terminal 3 (M/T models), 7 (A/T models) and
- to ASCD main switch terminal 1.

EM

When ASCD main switch is in the ON position, power is supplied

- from ASCD main switch terminal 3
- to ASCD hold relay terminal 2 (M/T models), 1 (A/T models).

LC

Ground is supplied

- to ASCD hold relay terminal 1 (M/T models), 2 (A/T models)
- through body grounds E13 and E41.

EC

With power and ground is supplied, ASCD hold relay is energized. And then power is supplied

- from ASCD hold relay terminal 5 (M/T models), 6 (A/T models)
- to ASCD control unit terminal 4 and
- to ASCD main switch terminal 2.

FE

CL

After the ASCD main switch is released, power remains supplied

- to the coil circuit of ASCD hold relay
- through ASCD main switch terminals 2 and 3.

MT

This power supply is kept until one of following conditions exists.

- Ignition switch is returned to the ACC or OFF position.
- ASCD main switch is turned to OFF position.

AT

TF

During ASCD hold relay is energized power is also supplied to ASCD control unit terminal 5

- through ASCD brake switch and ASCD clutch switch (M/T models) or
- through ASCD brake switch, ASCD hold relay and park/neutral position relay (A/T models).

PD

Ground is supplied

- to ASCD control unit terminal 3
- through body grounds M4 and M66.

AX

OPERATION

Set Operation

SU
NAEL0095S04

To activate the ASCD, all of following conditions must exist.

- Power supply to ASCD control unit terminal 4
- Power supply to ASCD control unit terminal 5 [Brake and clutch pedal is released (M/T models), and brake pedal is released and A/T selector lever is in other than P and N position. (A/T models)]
- Vehicle speed is greater than 48 km/h (30 MPH). (Signal from combination meter)

BR
NAEL0095S0401

ST

When the SET/COAST switch is depressed, power is supplied

- from ASCD steering switch terminal 2
- to ASCD control unit terminal 2.

RS

And then ASCD pump is activated to control throttle wire and ASCD control unit supply power

- to combination meter terminal 11 to illuminate CRUISE indicator.

BT

A/T Overdrive Control during Cruise Control Driving (A/T models)

HA
NAEL0095S0402

When the vehicle speed is approximately 8 km/h (5 MPH) below set speed, a signal is sent

- from ASCD control unit terminal 12
- to TCM (transmission control module) terminal 24.

SC

When this occurs, the TCM (transmission control module) cancels overdrive.

After vehicle speed is approximately 3 km/h (2 MPH) above set speed, overdrive is reactivated.

EL

Coast Operation

When the SET/COAST switch is depressed during cruise control driving, ASCD actuator returns the throttle cable to decrease vehicle set speed until the switch is released. And then ASCD will keep the new set speed.

IDX
NAEL0095S0403

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

System Description (Cont'd)

Accel Operation

NAEL0095S0404

When the RESUME/ACCEL switch is depressed, power is supplied

- from ASCD steering switch terminal 3
- to ASCD control unit terminal 1.

If the RESUME/ACCEL switch is depressed during cruise control driving, ASCD actuator pulls the throttle cable to increase the vehicle speed until the switch is released or vehicle speed is reached to maximum controlled speed by the system. And then ASCD will keep the new set speed.

Cancel Operation

NAEL0095S0405

When any of following condition exists, cruise operation will be canceled.

- CANCEL switch is depressed. (Power supply to ASCD control unit terminals 1 and 2)
- Brake pedal is depressed. (Power supply to ASCD control unit terminal 11 from stop lamp switch)
- Brake or clutch pedal is depressed (M/T models), brake pedal is depressed or A/T selector lever is shifted to P or N position (A/T models). (Power supply to ASCD control unit terminal 5 is interrupted.)

If MAIN switch is turned to OFF during ASCD is activated, all of ASCD operation will be canceled and vehicle speed memory will be erased.

Resume Operation

NAEL0095S0406

When the RESUME/ACCEL switch is depressed after cancel operation other than depressing MAIN switch is performed, vehicle speed will return to last set speed. To resume vehicle set speed, vehicle condition must meet following conditions.

- Brake pedal is released.
- Clutch pedal is released (M/T models).
- A/T selector lever is in other than P and N position (A/T models).
- Vehicle speed is greater than 48 km/h (30 MPH).

ASCD PUMP OPERATION

NAEL0095S05

The ASCD pump consists of a vacuum motor, an air valve and a release valve. When the ASCD activates, power is supplied

- from terminal 8 of ASCD control unit
- to ASCD pump terminal 1.

Ground is supplied to vacuum motor, air valve and release valve from ASCD control unit depending on the operated condition as shown in the below table.

The pump is connected to ASCD actuator by vacuum hose. When the ASCD pump is activated, the ASCD pump vacuum the diaphragm of ASCD actuator to control throttle cable.

		Air valve (*1)	Release valve (*1)	Vacuum motor	Actuator inner pressure
ASCD not operating		Open	Open	Stopped	Atmosphere
ASCD operating	Releasing throttle cable	Open	Closed	Stopped	Vacuum
	Holding throttle position	Closed	Closed	Stopped	Vacuum (*2)
	Pulling throttle cable	Closed	Closed	Operated	Vacuum

*1: When power and ground is supplied, valve is closed.

*2: Set position held.

Schematic/M/T Models

GI
NAEL0096

MA

EM

LC

EC

FE

CL

MT

AT

TF

PD

AX

SU

BR

ST

RS

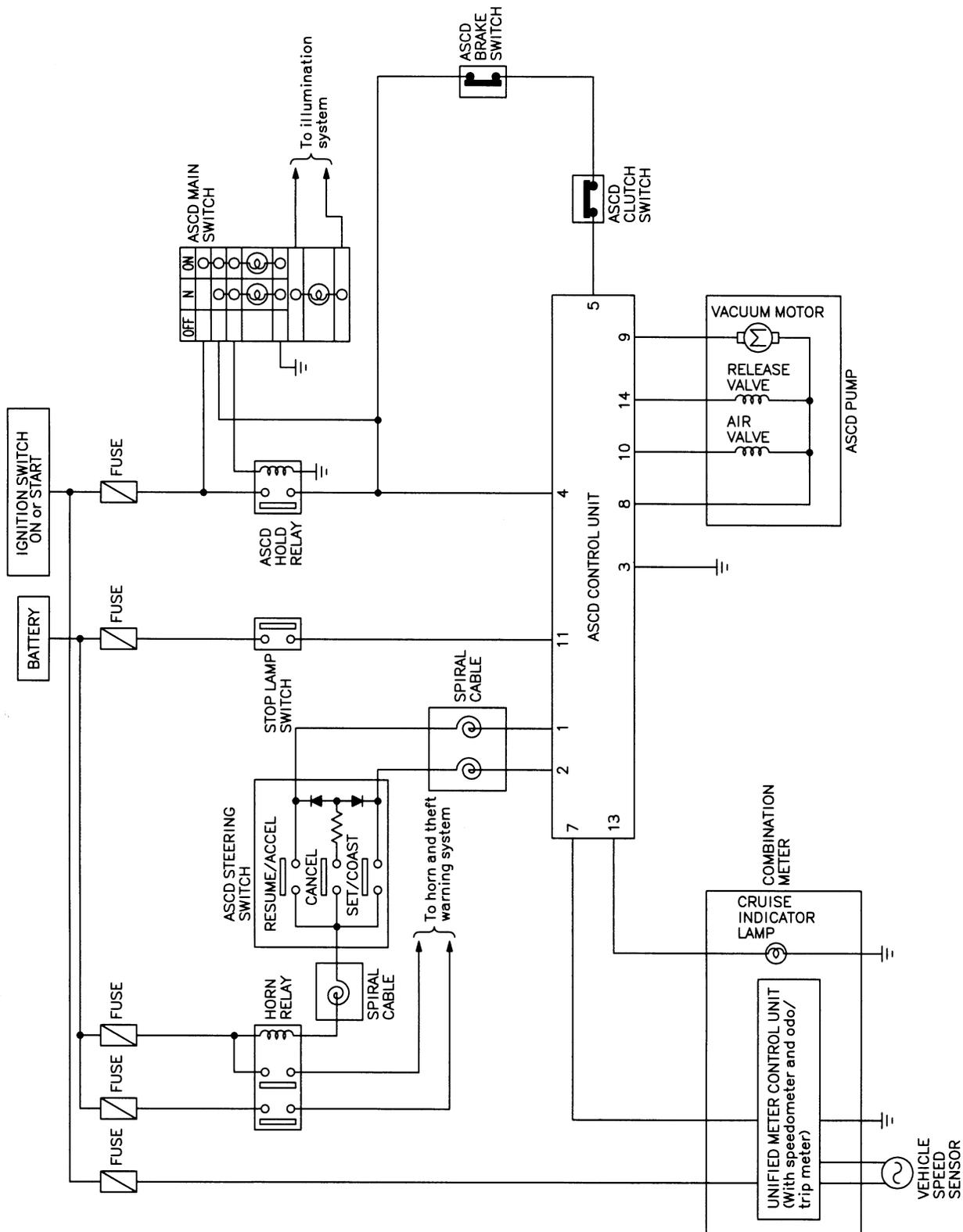
BT

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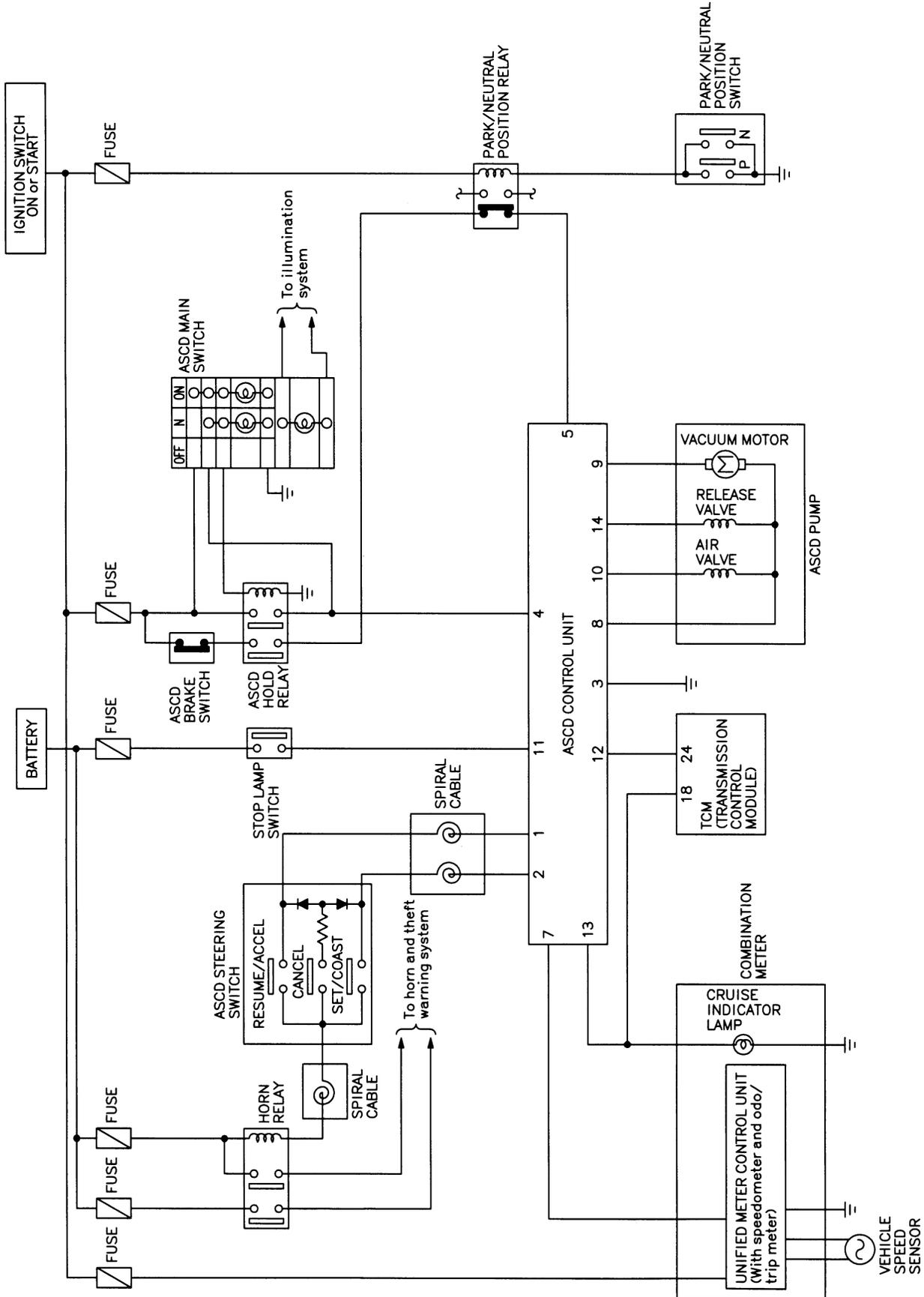
MEL931K

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Schematic/A/T Models

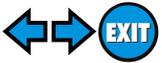
Schematic/A/T Models

NAEL0190



MEL932K

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

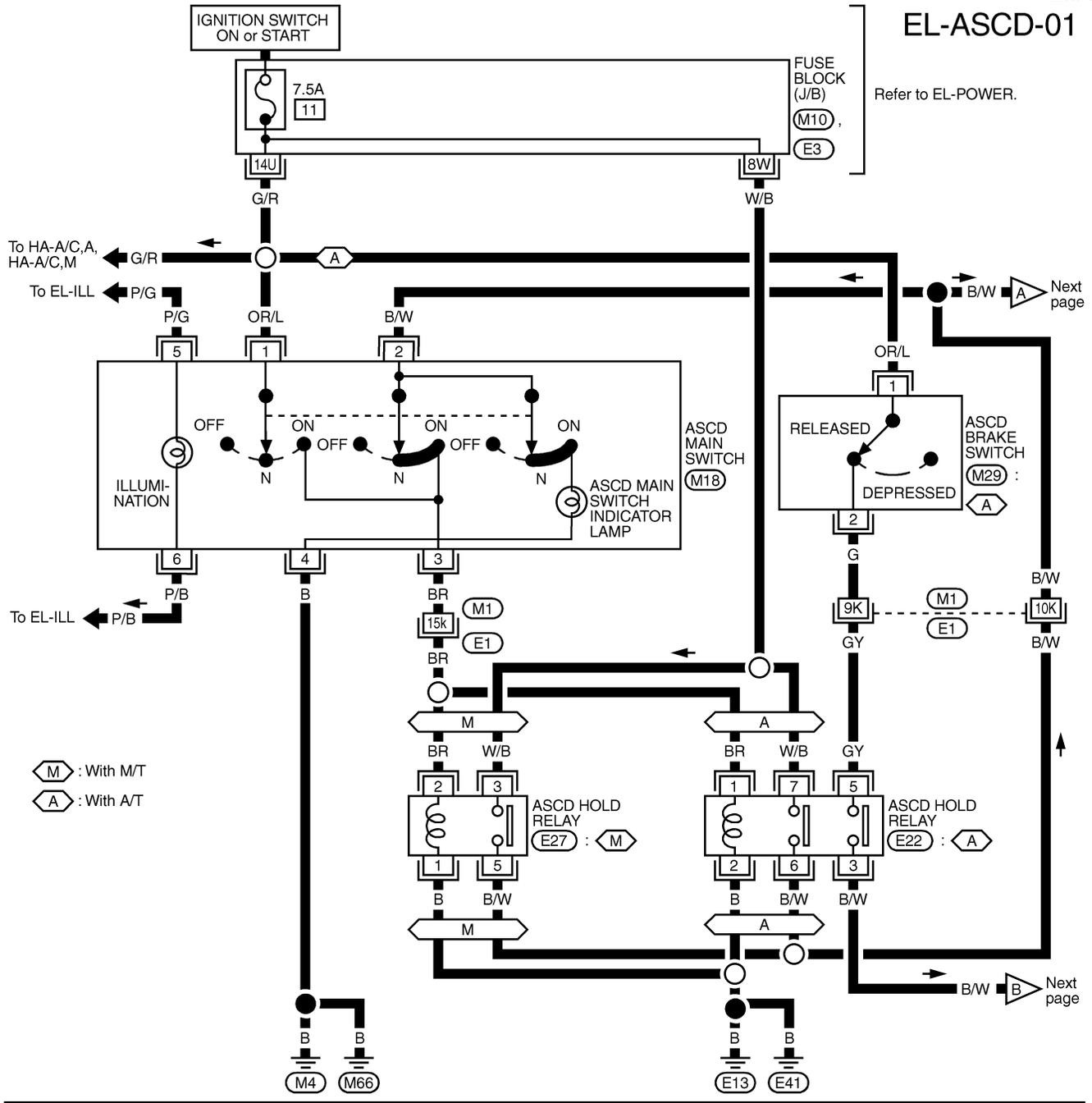


Wiring Diagram — ASCD —

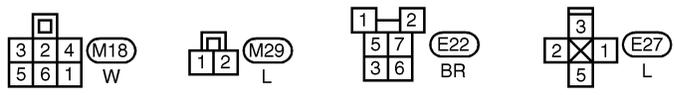
Wiring Diagram — ASCD —

FIG. 1

NAEL0097
NAEL0097S01



M : With M/T
A : With A/T



Refer to last page (Foldout page).

M1 , E1
M10
E3

GI
MA
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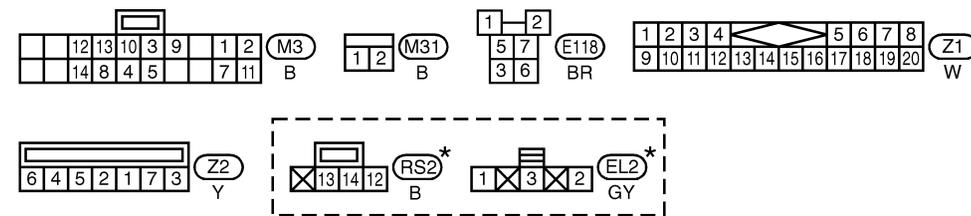
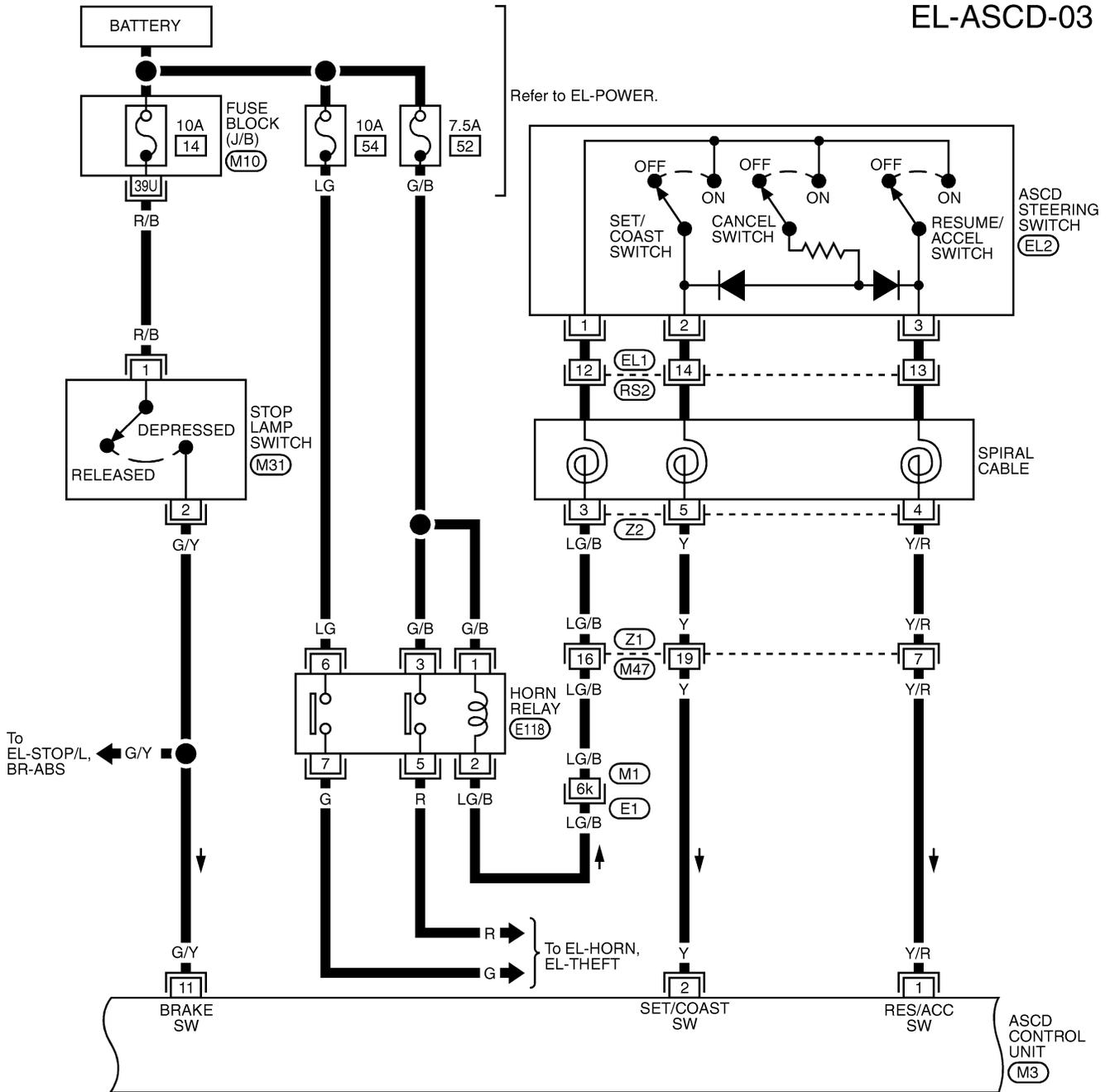
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

FIG. 3

NAEL0097S03

EL-ASCD-03



Refer to last page (Foldout page).

(M1), (E1)
(M10)

* : This connector is not shown in "HARNES LAYOUT" of EL section.

GI
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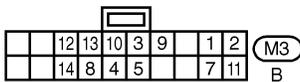
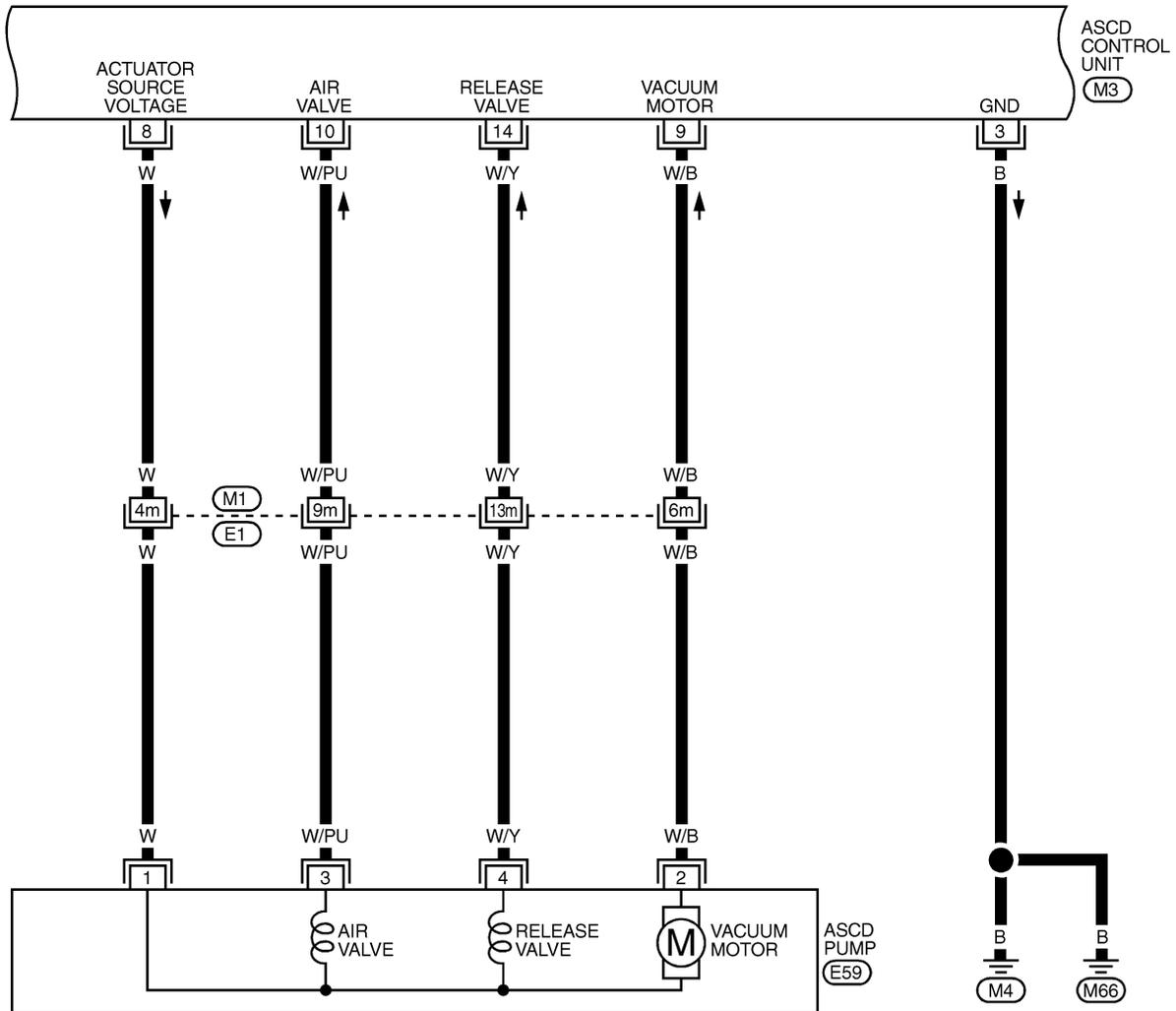
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

FIG. 4

NAEL0097S04

EL-ASCD-04

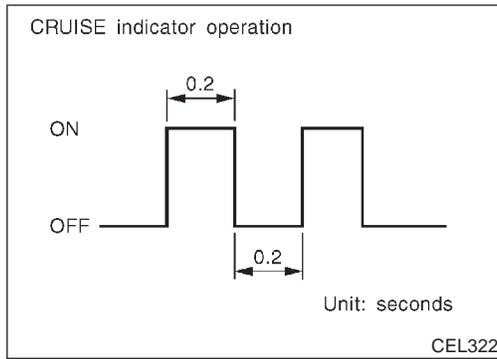


Refer to last page (Foldout page).

M1, E1

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Fail-safe System



Fail-safe System

NAEL0098

DESCRIPTION

NAEL0098S01

When the fail-safe system senses a malfunction, it deactivates ASCD operation. The CRUISE indicator in the combination meter will then flash.

MALFUNCTION DETECTION CONDITIONS

NAEL0098S02

Detection conditions	ASCD operation during malfunction detection
<ul style="list-style-type: none"> ● ASCD steering (RESUME/ACCEL, CANCEL, SET/COAST) switch is stuck. ● Vacuum motor ground circuit or power circuit is open or shorted. ● Air valve ground circuit or power circuit is open or shorted. ● Release valve ground circuit or power circuit is open or shorted. ● Vehicle speed sensor is faulty. ● ASCD control unit internal circuit is malfunctioning. 	<ul style="list-style-type: none"> ● ASCD is deactivated. ● Vehicle speed memory is canceled.
<ul style="list-style-type: none"> ● ASCD brake switch or stop lamp switch is faulty. 	<ul style="list-style-type: none"> ● ASCD is deactivated. ● Vehicle speed memory is not canceled.

Trouble Diagnoses SYMPTOM CHART

NAEL0099

NAEL0099S01

PROCEDURE	Diagnostic procedure								
REFERENCE PAGE (EL-)	182	183	184	185	187	188	190	190	191
SYMPTOM	FAIL-SAFE SYSTEM CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	ASCD MAIN SWITCH CHECK	ASCD HOLD RELAY CHECK	ASCD BRAKE/STOP LAMP SWITCH CHECK	ASCD STEERING SWITCH CHECK	VEHICLE SPEED SENSOR CHECK	ASCD PUMP CIRCUIT CHECK	ASCD ACTUATOR/PUMP CHECK
ASCD cannot be set. ("CRUISE" indicator lamp does not blink.)		X	X	X		X	X		
ASCD cannot be set. ("CRUISE" indicator lamp blinks.★1)	X				X	X	X	X	
Vehicle speed does not decrease after SET/COAST switch has been pressed.						X			X
Vehicle speed does not return to the set speed after RESUME/ACCEL switch has been pressed.★2						X			X
Vehicle speed does not increase after RESUME/ACCEL switch has been pressed.						X			X
System is not released after CANCEL switch (steering) has been pressed.						X			X
Large difference between set speed and actual vehicle speed.									X
Deceleration is greatest immediately after ASCD has been set.									X

★1: It indicates that system is in fail-safe. After completing diagnostic procedures, perform "FAIL-SAFE SYSTEM CHECK" (EL-182) to verify repairs.

★2: If vehicle speed is greater than 48 km/h (30 MPH) after system has been released, pressing RESUME/ACCEL switch returns vehicle speed to the set speed previously achieved. However, doing so when the ASCD main switch is turned to "OFF", vehicle speed will not return to the set speed since the memory is canceled.

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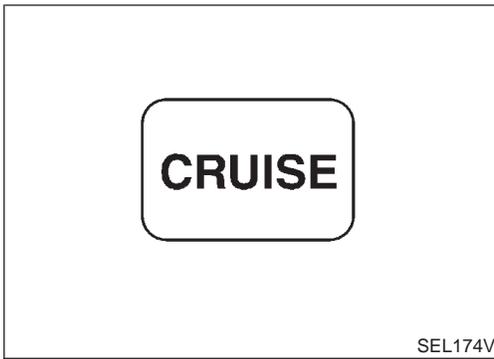
SC

EL

IDX

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

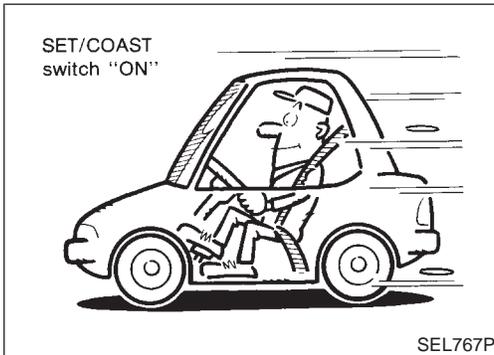
Trouble Diagnoses (Cont'd)



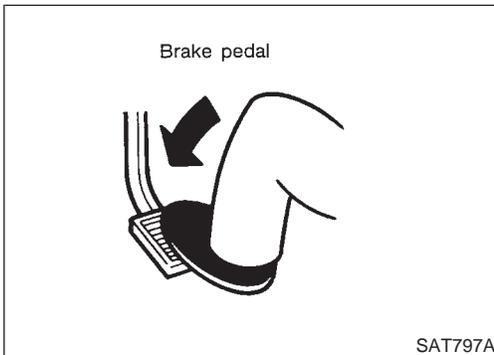
FAIL-SAFE SYSTEM CHECK

=NAEL0099S02

1. Turn ignition switch to ON position.
2. Turn ASCD main switch to ON and check if the "cruise indicator" blinks.
 - If the indicator lamp blinks, check the following.**
 - ASCD steering switch. Refer to EL-188.



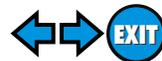
3. Drive the vehicle at more than 48 km/h (30 MPH) and push SET/COAST switch.
 - If the indicator lamp blinks, check the following.**
 - Vehicle speed sensor. Refer to EL-190.
 - ASCD pump circuit. Refer to EL-190.
 - Replace control unit.



4. Depress brake pedal slowly (brake pedal should be depressed more than 5 seconds).
 - If the indicator lamp blinks, check the following.**
 - ASCD brake/stop lamp switch. Refer to EL-187.

5. END. (System is OK.)

AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Trouble Diagnoses (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

=NAEL0099S03

1	OPERATION CHECK	
1. Turn ignition switch ON. 2. Turn ASCD main switch "ON".		
Does ASCD indicator illuminate?		
Yes	▶	GO TO 2.
No	▶	Go to ASCD MAIN SWITCH CHECK. Refer to EL-184.

GI
MA
EM
LC

2	CHECK POWER SUPPLY CIRCUIT FOR ASCD CONTROL UNIT	
1. Disconnect ASCD control unit connector. 2. Turn ignition switch ON. 3. Turn ASCD main switch "ON". 4. Check voltage between control unit connector terminal 4 and ground.		
<p style="text-align: right;">SEL289UD</p>		
Refer to wiring diagram in EL-176.		
Does battery voltage exist?		
Yes	▶	GO TO 3.
No	▶	Check the following. <ul style="list-style-type: none"> ● ASCD hold relay Refer to "ASCDC HOLD RELAY CHECK", EL-185. ● Harness for open or short

EC
FE
CL
MT
AT
TF
PD
AX
SU

3	CHECK GROUND CIRCUIT FOR ASCD CONTROL UNIT	
Check continuity between ASCD control unit harness terminal 3 and body ground.		
<p style="text-align: right;">SEL764U</p>		
Refer to wiring diagram in EL-178.		
Does continuity exist?		
Yes	▶	Power supply and ground circuit is OK.
No	▶	Repair harness.

BR
ST
RS
BT
HA
SC

EL

IDX

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

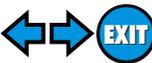
ASCD MAIN SWITCH CHECK

=NAEL0099S04

1	CHECK POWER SUPPLY FOR ASCD MAIN SWITCH	
<p>1. Disconnect main switch connector. 2. Check voltage between main switch terminals 1 and 4.</p> <div style="text-align: center;"> <p>ASCD main switch connector (M18)</p> </div> <p style="text-align: right;">MEL842F</p>		
<p>Refer to wiring diagram in EL-175.</p> <p>Does battery voltage exist?</p>		
Yes	▶	GO TO 2.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse (No. 11, located in the fuse block) ● Harness for open or short between fuse and ASCD main switch ● Ground circuit for ASCD main switch

2	CHECK ASCD MAIN SWITCH	
Refer to "Electrical Component Inspection" (EL-192).		
OK or NG		
OK	▶	Go to ASCD HOLD RELAY CHECK. Refer to EL-185.
NG	▶	Replace ASCD main switch.

AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Trouble Diagnoses (Cont'd)

ASCD HOLD RELAY CHECK

=NAEL0099S05

1	CHECK POWER SUPPLY CIRCUIT FOR ASCD HOLD RELAY	
<p>1. Disconnect ASCD hold relay. 2. Check voltage between ASCD hold relay terminal 3 (M/T), 7 (A/T) and body ground.</p>		
<p>ASCD hold relay connector</p>		
<p>Refer to wiring diagram in EL-175.</p> <p style="text-align: right;">SEL830W</p>		
Does battery voltage exist?		
Yes	▶	GO TO 2.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse (No. 11, located in the fuse block) ● Harness for open or short between fuse and ASCD hold relay

2	CHECK GROUND CIRCUIT FOR ASCD HOLD RELAY	
<p>Check continuity between ASCD hold relay terminal 1 (M/T), 2 (A/T) and ground.</p>		
<p>ASCD hold relay connector</p>		
<p style="text-align: right;">SEL349V</p>		
Does continuity exist?		
Yes	▶	GO TO 3.
No	▶	Repair harness.

3	CHECK ASCD HOLD RELAY	
<p>Check ASCD hold relay.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 4.
NG	▶	Replace ASCD hold relay.

4	CHECK ASCD MAIN SWITCH	
<p>Refer to "Electrical Component Inspection" (EL-192).</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 5.
NG	▶	Replace ASCD main switch.

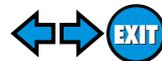
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SU
BR
ST
RS
BT
HA
SC
EL
IDX

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

5	CHECK ASCD HOLD RELAY OPEN OR SHORT CIRCUIT
<p>1. Connect ASCD main switch. 2. Check ASCD hold relay terminals 2 and 5 (M/T), 1 and 6 (A/T).</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>ASCD hold relay connector</p> <p>M/T models (E27)</p> </div> <div style="text-align: center;"> <p>A/T models (E22)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL350V</p> <p>Continuity should exist.</p> <p>3. Check continuity between ASCD hold relay terminal 2 (M/T), 1 (A/T) and ground.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>ASCD hold relay connector</p> <p>M/T models (E27)</p> </div> <div style="text-align: center;"> <p>A/T models (E22)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL351V</p> <p>Continuity should not exist.</p> <p style="text-align: center;">OK or NG</p>	
OK	▶ ASCD hold relay is OK.
NG	▶ Repair harness.

AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Trouble Diagnoses (Cont'd)

ASCD BRAKE/STOP LAMP SWITCH CHECK

=NAEL0099S06

1	CHECK ASCD BRAKE SWITCH CIRCUIT	<p>1. Disconnect control unit connector. 2. Turn ignition switch ON. 3. Turn ASCD main switch "ON". 4. Check voltage between control unit connector terminal 5 and ground.</p> <div style="text-align: center;"> <p>ASCD control unit connector (M3)</p> </div> <p style="text-align: right;">SEL765U</p> <p>When brake or clutch pedal is depressed (M/T), or when brake pedal is depressed or A/T selector lever is in "N" or "P" range (A/T): Approx. 0V When brake and clutch pedal are released (M/T), or when both brake pedal is released and A/T selector lever is not in "N" or "P" range (A/T): Battery voltage should exist. Refer to wiring diagram in EL-176.</p> <p style="text-align: center;">OK or NG</p>
OK	▶	GO TO 2.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● ASCD brake switch Refer to "Electrical Component Inspection" (EL-193). ● Park/neutral position switch (A/T models) Refer to "Electrical Component Inspection" (EL-193). ● ASCD clutch switch Refer to "Electrical Component Inspection" (EL-193). ● ASCD hold relay ● Park/neutral position relay (A/T models) ● Harness for open or short

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

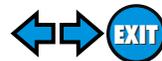
2	CHECK STOP LAMP SWITCH CIRCUIT	<p>1. Disconnect control unit connector. 2. Check voltage between control unit terminal 11 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL154W</p> <p>Voltage [V]: Stop lamp switch: Depressed Approx. 12 Stop lamp switch: Released 0</p> <p>Refer to wiring diagram in EL-177.</p> <p style="text-align: center;">OK or NG</p>
OK	▶	ASCD brake/stop lamp switch is OK.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 14, located in the fuse block (J/B)] ● Harness for open or short between ASCD control unit and stop lamp switch ● Harness for open or short between fuse and stop lamp switch ● Stop lamp switch <p>Refer to "Electrical Component Inspection" (EL-193).</p>

ASCD STEERING SWITCH CHECK

NAEL0099S07

1	CHECK ASCD STEERING SWITCH CIRCUIT FOR ASCD CONTROL UNIT	<p>1. Disconnect control unit connector. 2. Check voltage between control unit harness terminals and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL760U</p> <table border="1" style="margin: 20px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminal No.</th> <th colspan="2">Switch condition</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>Pressed</th> <th>Released</th> </tr> </thead> <tbody> <tr> <td>SET/COAST SW</td> <td>2</td> <td>ground</td> <td>12V</td> <td>0V</td> </tr> <tr> <td>RESUME/ACC SW</td> <td>1</td> <td>ground</td> <td>12V</td> <td>0V</td> </tr> <tr> <td rowspan="2">CANCEL SW</td> <td>2</td> <td>ground</td> <td>12V</td> <td>0V</td> </tr> <tr> <td>1</td> <td>ground</td> <td>12V</td> <td>0V</td> </tr> </tbody> </table> <p style="text-align: right;">MTBL0002</p> <p>Refer to wiring diagram in EL-177.</p> <p style="text-align: center;">OK or NG</p>		Terminal No.		Switch condition		(+)	(-)	Pressed	Released	SET/COAST SW	2	ground	12V	0V	RESUME/ACC SW	1	ground	12V	0V	CANCEL SW	2	ground	12V	0V	1	ground	12V	0V
	Terminal No.			Switch condition																										
	(+)	(-)	Pressed	Released																										
SET/COAST SW	2	ground	12V	0V																										
RESUME/ACC SW	1	ground	12V	0V																										
CANCEL SW	2	ground	12V	0V																										
	1	ground	12V	0V																										
OK	▶	ASCD steering switch is OK.																												
NG	▶	GO TO 2.																												

AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Trouble Diagnoses (Cont'd)

2	CHECK POWER SUPPLY FOR ASCD STEERING SWITCH	
Does horn work?		
Yes	▶	GO TO 3.
No	▶	Check the following. <ul style="list-style-type: none"> ● 7.5A fuse (No. 52, located in the relay box) ● Horn relay ● Harness for open or short between horn and fuse

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3	CHECK ASCD STEERING SWITCH																							
<p>1. Disconnect ASCD steering switch.</p> <p>2. Check continuity between terminals by pushing each switch.</p>																								
<p style="text-align: center;">ASCD steering switch (EL2)</p>																								
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Switch</th> <th colspan="3">Terminal</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>RESUME/ACCEL</td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> </tr> <tr> <td>SET/COAST</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td></td> </tr> <tr> <td rowspan="2">CANCEL</td> <td style="text-align: center;">○</td> <td style="text-align: center;">▶</td> <td style="text-align: center;">○</td> </tr> <tr> <td style="text-align: center;">○</td> <td style="text-align: center;">▶</td> <td style="text-align: center;">○</td> </tr> </tbody> </table>			Switch	Terminal			1	2	3	RESUME/ACCEL	○		○	SET/COAST	○	○		CANCEL	○	▶	○	○	▶	○
Switch	Terminal																							
	1	2	3																					
RESUME/ACCEL	○		○																					
SET/COAST	○	○																						
CANCEL	○	▶	○																					
	○	▶	○																					
OK or NG																								
OK	▶	Check harness for open or short between ASCD steering switch and ASCD control unit.																						
NG	▶	Replace ASCD steering switch.																						

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

VEHICLE SPEED SENSOR CHECK

=NAEL0099S08

1	CHECK SPEEDOMETER OPERATION	
Refer to wiring diagram in EL-179.		
Does speedometer operate normally?		
Yes	▶	GO TO 2.
No	▶	Check speedometer and vehicle speed sensor circuit. Refer to EL-88.

2	CHECK VEHICLE SPEED INPUT	
1. Apply wheel chocks and jack up drive wheel. 2. Disconnect control unit connector. 3. Check voltage between control unit terminal 7 and ground with turning drive wheel slowly.		
SEL347V		
Does voltage pointer deflect?		
Yes	▶	Vehicle speed sensor is OK.
No	▶	Check harness for open or short between ASCD control unit terminal 7 and combination meter terminal 36.

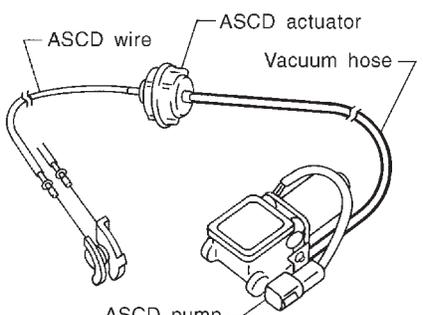
ASCD PUMP CIRCUIT CHECK

NAEL0099S09

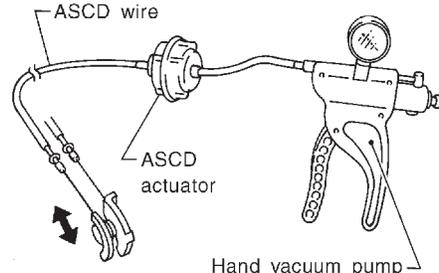
1	CHECK ASCD PUMP											
1. Disconnect ASCD pump connector. 2. Measure resistance between ASCD pump terminals 1 and 2, 3, 4.												
MEL243H												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 15%;">Terminals</th> <th style="width: 75%;">Resistance [Ω]</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="text-align: center; vertical-align: middle;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">Approx. 3</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Approx. 65</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Approx. 65</td> </tr> </tbody> </table>				Terminals	Resistance [Ω]	1	2	Approx. 3	3	Approx. 65	4	Approx. 65
	Terminals	Resistance [Ω]										
1	2	Approx. 3										
	3	Approx. 65										
	4	Approx. 65										
MTBL0048												
Refer to wiring diagram in EL-178.												
OK or NG												
OK	▶	Check harness for open or short between ASCD pump and ASCD control unit.										
NG	▶	Replace ASCD pump.										

ASCD ACTUATOR/PUMP CHECK

=NAEL0099S10

1	CHECK VACUUM HOSE	
<p>Check vacuum hose (between ASCD actuator and ASCD pump) for breakage, cracks or fracture.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">MEL402G</p>		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Repair or replace hose.

2	CHECK ASCD WIRE	
<p>Check wire for improper installation, rust formation or breaks.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 3.
NG	▶	Repair or replace wire. Refer to "ASCD Wire Adjustment" (EL-193).

3	CHECK ASCD ACTUATOR	
<p>1. Disconnect vacuum hose from ASCD actuator. 2. Apply -40 kPa (-0.41 kg/cm^2, -5.8 psi) vacuum to ASCD actuator with hand vacuum pump. ASCD wire should move to pull throttle drum. 3. Wait 10 seconds and check for decrease in vacuum pressure. Vacuum pressure decrease: Less than 2.7 kPa (0.028 kg/cm^2, 0.39 psi)</p> <div style="text-align: center;">  </div> <p style="text-align: right;">MEL403G</p>		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Replace ASCD actuator.

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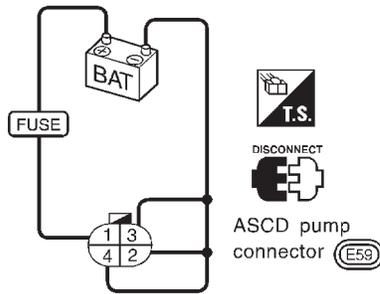
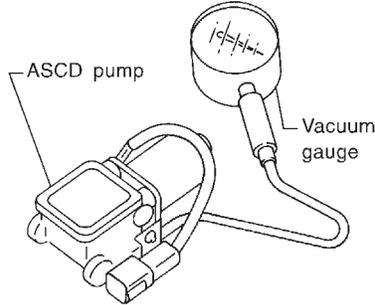
IDX

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

4 CHECK ASCD PUMP

1. Disconnect vacuum hose from ASCD pump and ASCD pump connector.
2. If necessary remove ASCD pump.
3. Connect vacuum gauge to ASCD pump.
4. Apply 12V direct current to ASCD pump and check operation.



MEL844G

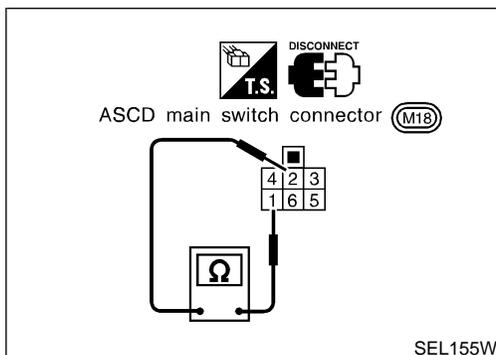
	12V direct current supply terminals		Operation
	(+)	(-)	
Air valve	1	3	Close
Release valve		4	Close
Vacuum motor		2	Operate

MTBL0004

A vacuum pressure of at least -40 kPa (-0.41 kg/cm^2 , -5.8 psi) should be generated.

OK or NG

OK	▶	INSPECTION END
NG	▶	Replace ASCD pump.



SEL155W

Electrical Component Inspection

ASCDC MAIN SWITCH

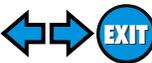
NAEL0100

NAEL0100S01

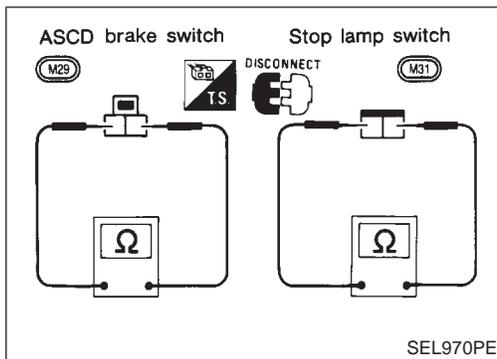
Check continuity between terminals by pushing switch to each position.

Switch position	Terminals	Illumination
ON	1 - 2 - 3 - 4	5 - 6
N	2 - 3 - 4	
OFF		

AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Electrical Component Inspection (Cont'd)

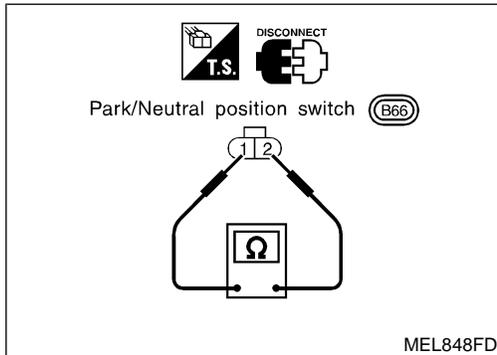


ASCD BRAKE SWITCH AND STOP LAMP SWITCH

NAEL0100S02

Condition	Continuity	
	ASCD brake switch	Stop lamp switch
When brake pedal is depressed	No	Yes
When brake pedal is released	Yes	No

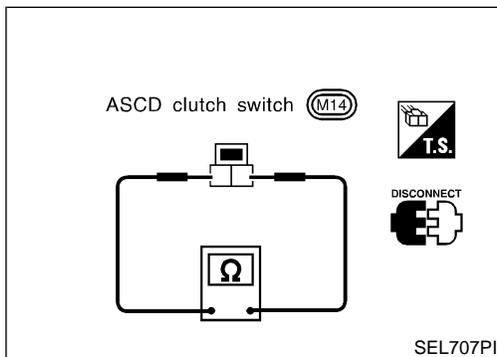
Check each switch after adjusting brake pedal — refer to BR section.



PARK/NEUTRAL POSITION SWITCH (FOR A/T MODELS)

NAEL0100S03

Selector lever position	Continuity
	Between terminals 1 and 2
"P"	Yes
"N"	Yes
Except "P" and "N"	No



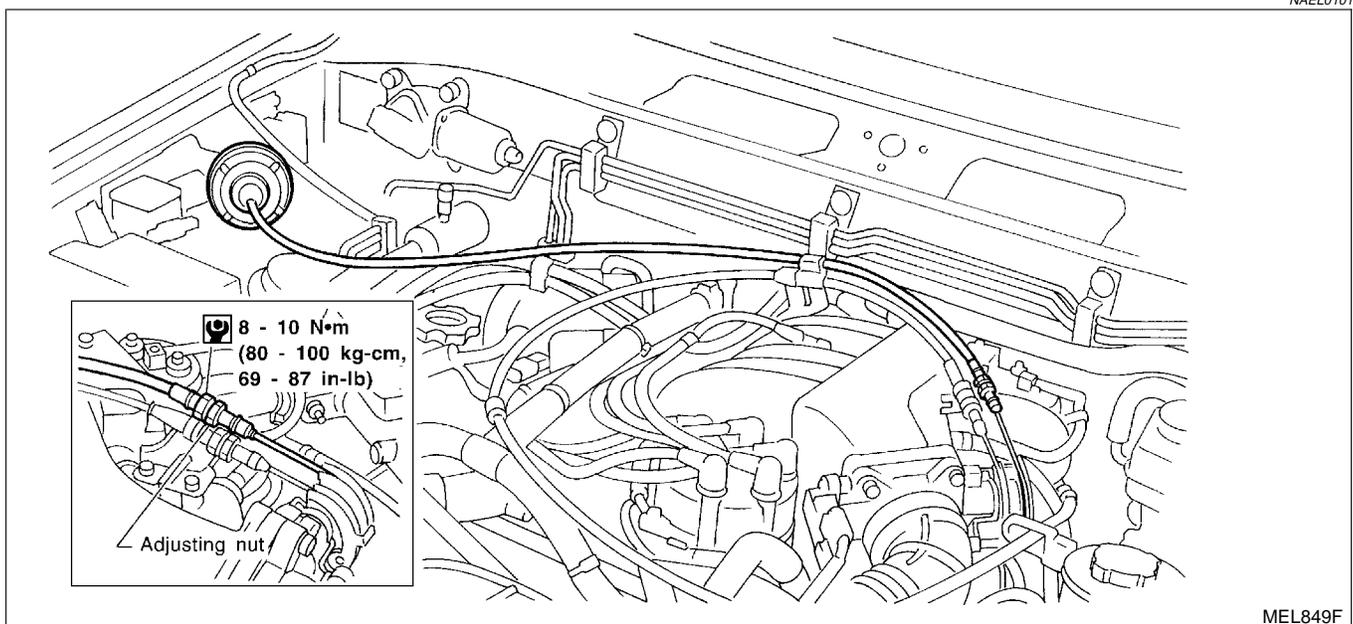
ASCD CLUTCH SWITCH (FOR M/T MODELS)

NAEL0100S04

Condition	Continuity
When clutch pedal is depressed	No
When clutch pedal is released	Yes

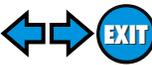
ASCD Wire Adjustment

NAEL0101



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AUTOMATIC SPEED CONTROL DEVICE (ASCD)



ASCD Wire Adjustment (Cont'd)

CAUTION:

- **Be careful not to twist ASCD wire when removing it.**
- **Do not tense ASCD wire excessively during adjustment.**

Adjust the tension of ASCD wire in the following manner.

1. Loosen lock nut and adjusting nut.
2. Make sure that accelerator wire is properly adjusted. Refer to FE-3, "ACCELERATOR CONTROL SYSTEM".
3. Tighten adjusting nut just until throttle drum starts to move.
4. Loosen adjusting nut again 1/2 to 1 turn.
5. Tighten lock nut.

System Description

GI
NAEL0102

Power is supplied at all times

- from 40A fusible link (letter **f**, located in the fuse and fusible link box)
- to circuit breaker terminal 1
- through circuit breaker terminal 2
- to power window relay terminal 3.

With ignition switch in ON or START position, power is supplied

- through 7.5A fuse [No. 11, located in the fuse block (J/B)]
- to power window relay terminal 2, and
- to smart entrance control unit terminal 33.

Ground is supplied to power window relay terminal 1

- through body grounds M4 and M66.

The power window relay is energized and power is supplied

- through power window relay terminal 5
- to power window main switch terminal 1,
- to each power window sub switch terminal 5.

MANUAL OPERATION

Front Door LH

Ground is supplied

- to power window main switch terminal 3
- through body grounds M77 and M111.

WINDOW UP

When the front LH switch in the power window main switch is pressed in the up position, power is supplied

- to front power window regulator LH terminal 2
- through power window main switch terminal 9.

Ground is supplied

- to front power window regulator LH terminal 1
- through power window main switch terminal 8.

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the LH switch in the power window main switch is pressed in the down position, power is supplied

- to front power window regulator LH terminal 1
- through power window main switch terminal 8.

Ground is supplied

- to front power window regulator LH terminal 2
- through power window main switch terminal 9.

Then, the motor lowers the window until the switch is released.

Front Door RH

Ground is supplied

- to power window main switch terminal 3
- through body grounds M77 and M111.

NOTE:

Numbers in parentheses are terminal numbers, when power window switch is pressed in the UP and DOWN positions respectively.

MAIN SWITCH OPERATION

Power is supplied

- through power window main switch (5, 6)
- to front power window sub-switch (3, 4).

The subsequent operation is the same as the sub-switch operation.

SUB-SWITCH OPERATION

Power is supplied

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POWER WINDOW

System Description (Cont'd)

- through front power window sub-switch (1, 2)
- to front power window regulator RH (2, 1).

Ground is supplied

- to front power window regulator RH (1, 2)
- through front power window sub-switch (2, 1)
- to front power window sub-switch (4, 3)
- through power window main switch (6, 5).

Then, the motor raises or lowers the window until the switch is released.

Rear Door

Rear door windows will raise and lower in the same manner as front door RH window.

NAEL0102S0103

AUTO OPERATION

The power window AUTO feature enables the driver to lower the driver's window without holding the window switch in the down position.

NAEL0102S02

The AUTO feature only operates on the driver's window downward movement.

POWER WINDOW LOCK

The power window lock is designed to lock operation of all windows except for driver's door window.

NAEL0102S03

When the lock switch is pressed to lock position, ground of the sub-switches in the power window main switch is disconnected. This prevents the power window motors from operating.

RETAINED POWER OPERATION

When the ignition switch is turned to OFF position from ON or START position, power is supplied for 45 seconds

NAEL0102S04

- to power window relay terminal 2
- from smart entrance control unit terminal 5.

Ground is always supplied

- to power window relay terminal 1
- through body grounds.

When power and ground are supplied, the power window relay continues to be energized, and the power window can be operated.

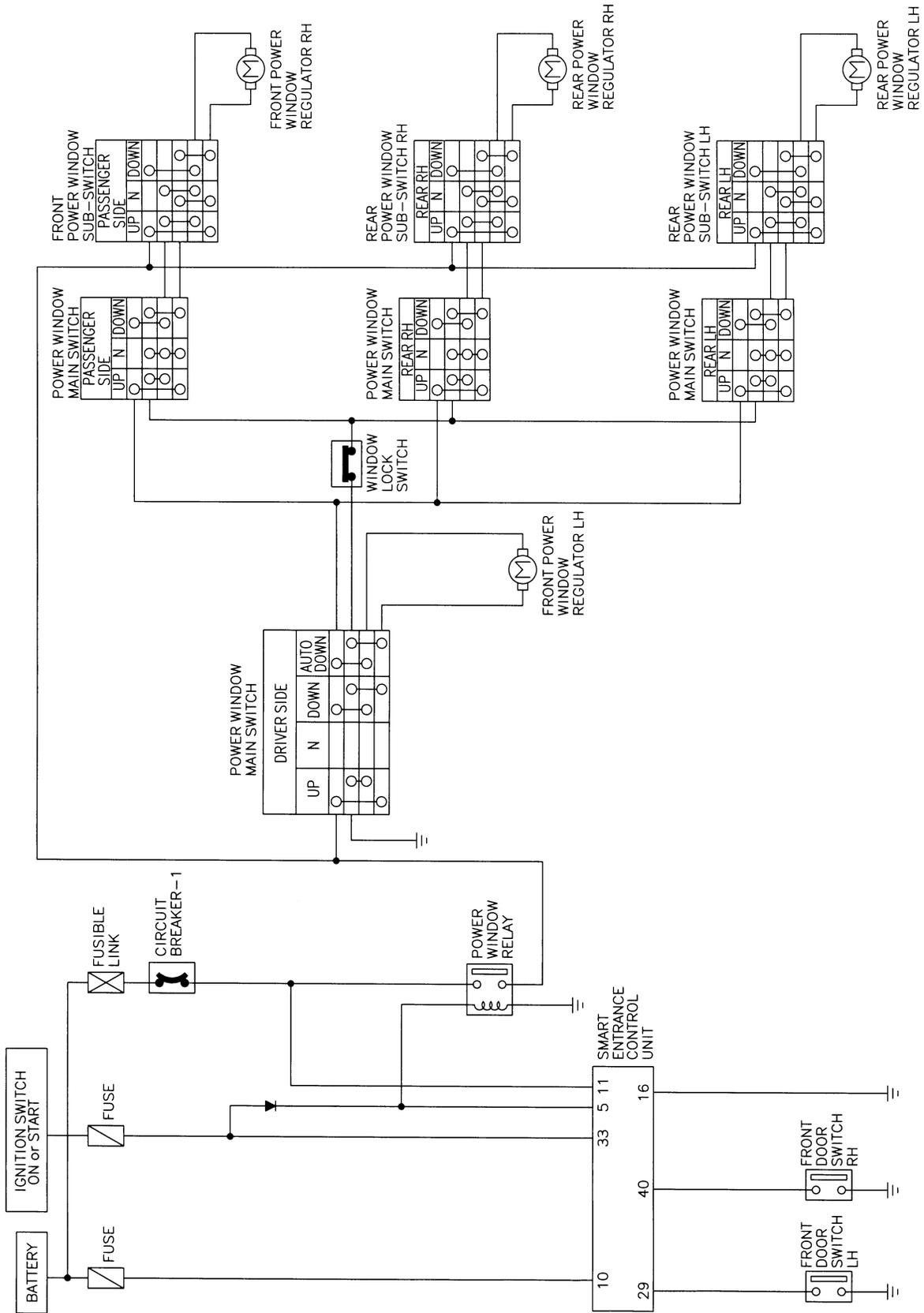
The retained power operation is canceled when the driver or passenger side door is opened.

POWER WINDOW

Schematic

Schematic

NAEL0103



- GI
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MEL977J

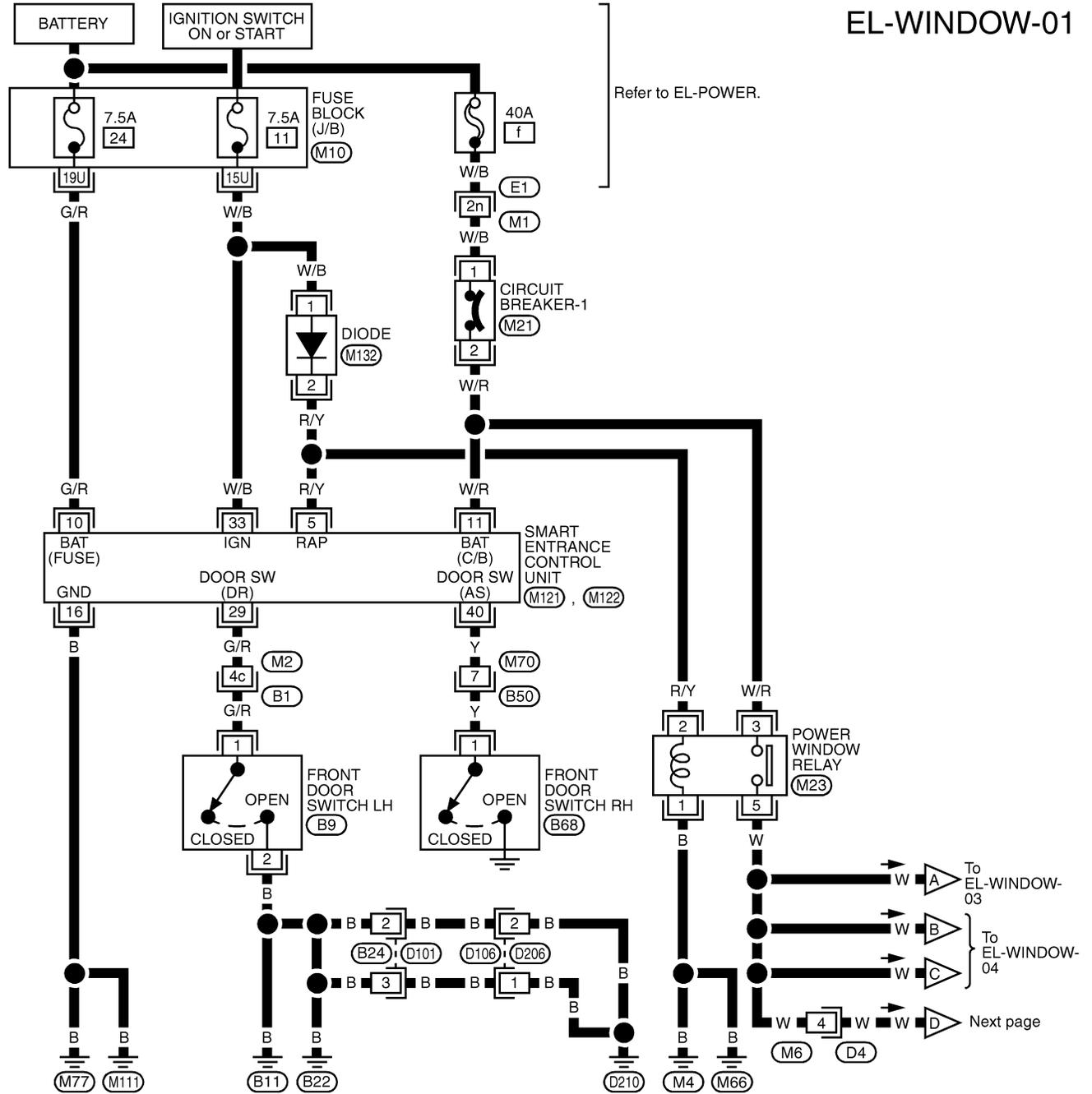
POWER WINDOW

Wiring Diagram — WINDOW —

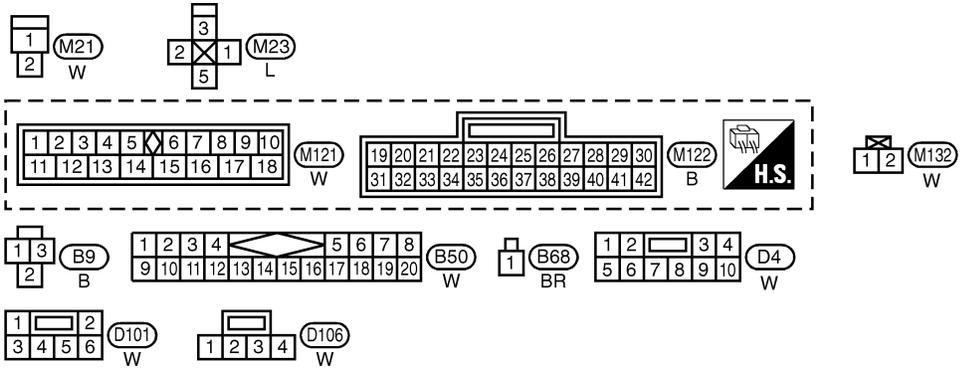
Wiring Diagram — WINDOW —

NAEL0104

EL-WINDOW-01



Refer to EL-POWER.



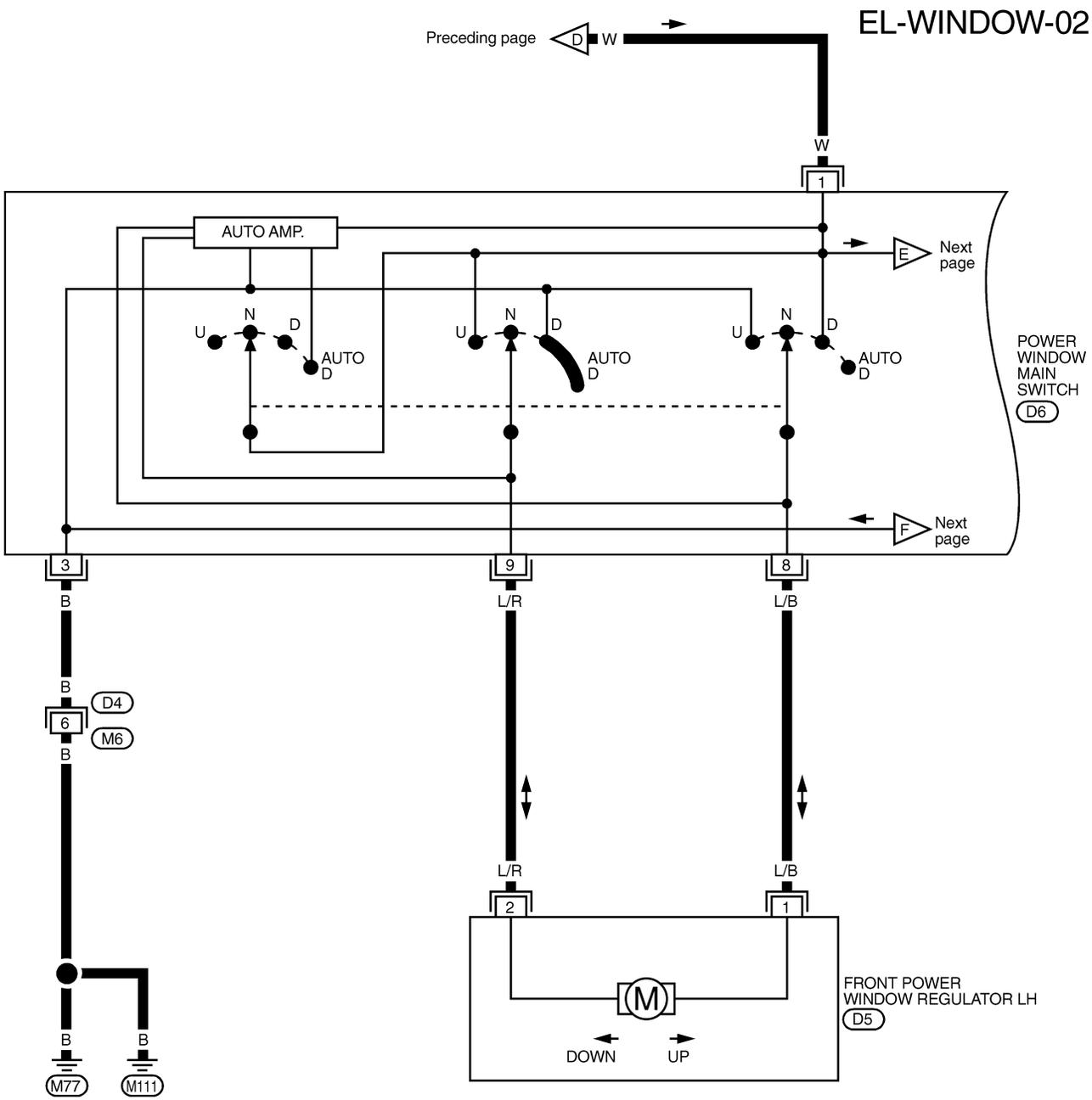
Refer to last page (Foldout page).

- (M1) , (E1)
- (M2) , (B1)
- (M10)

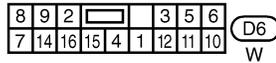
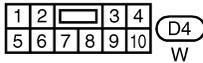
MEL978J

POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)



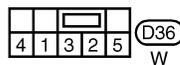
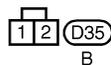
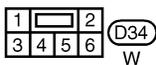
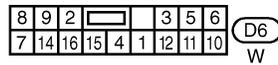
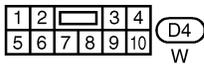
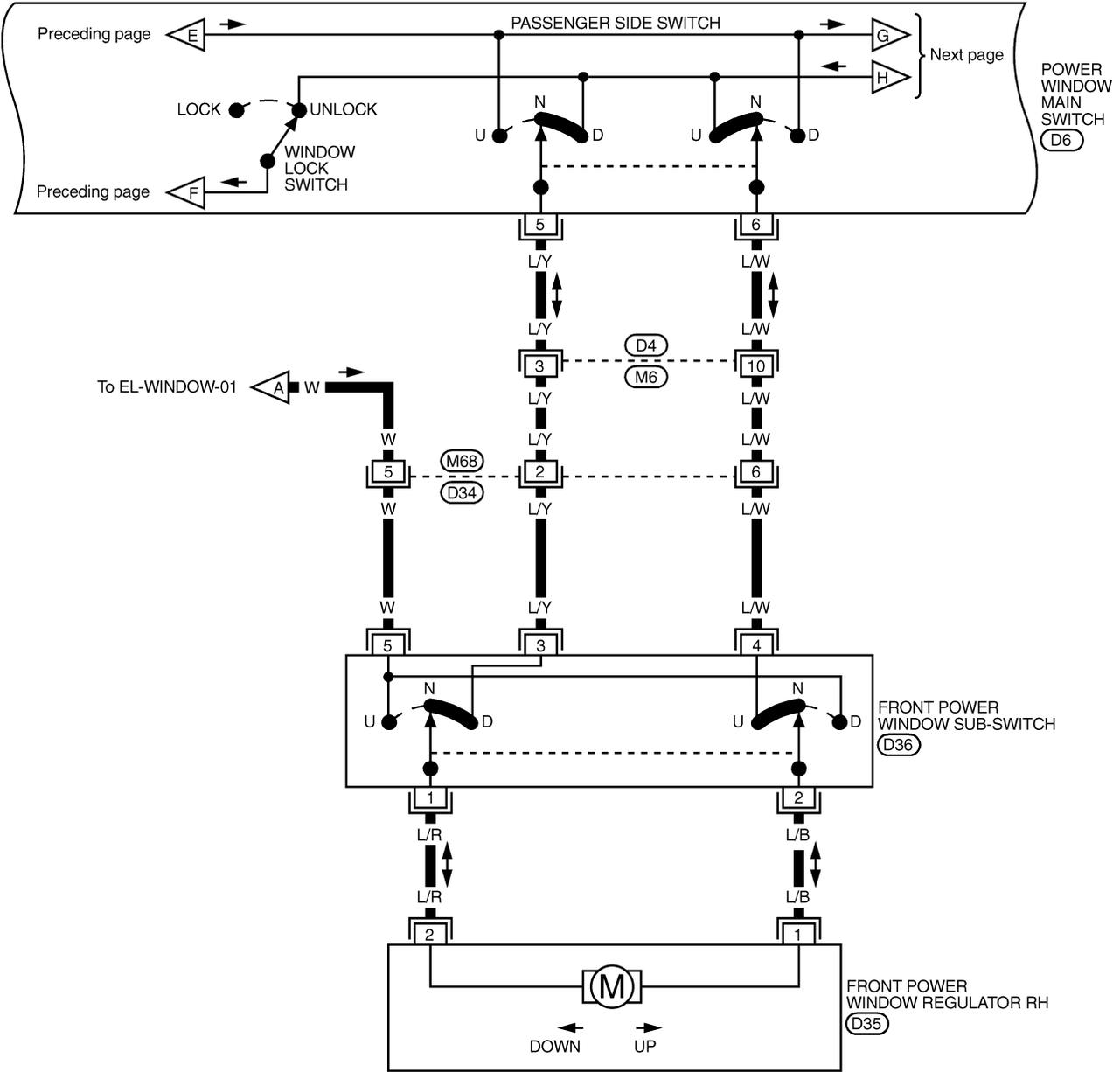
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POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

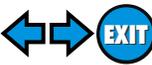
EL-WINDOW-03



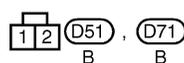
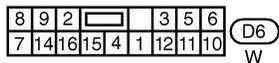
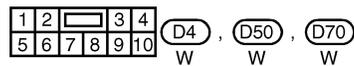
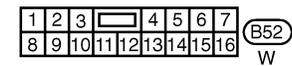
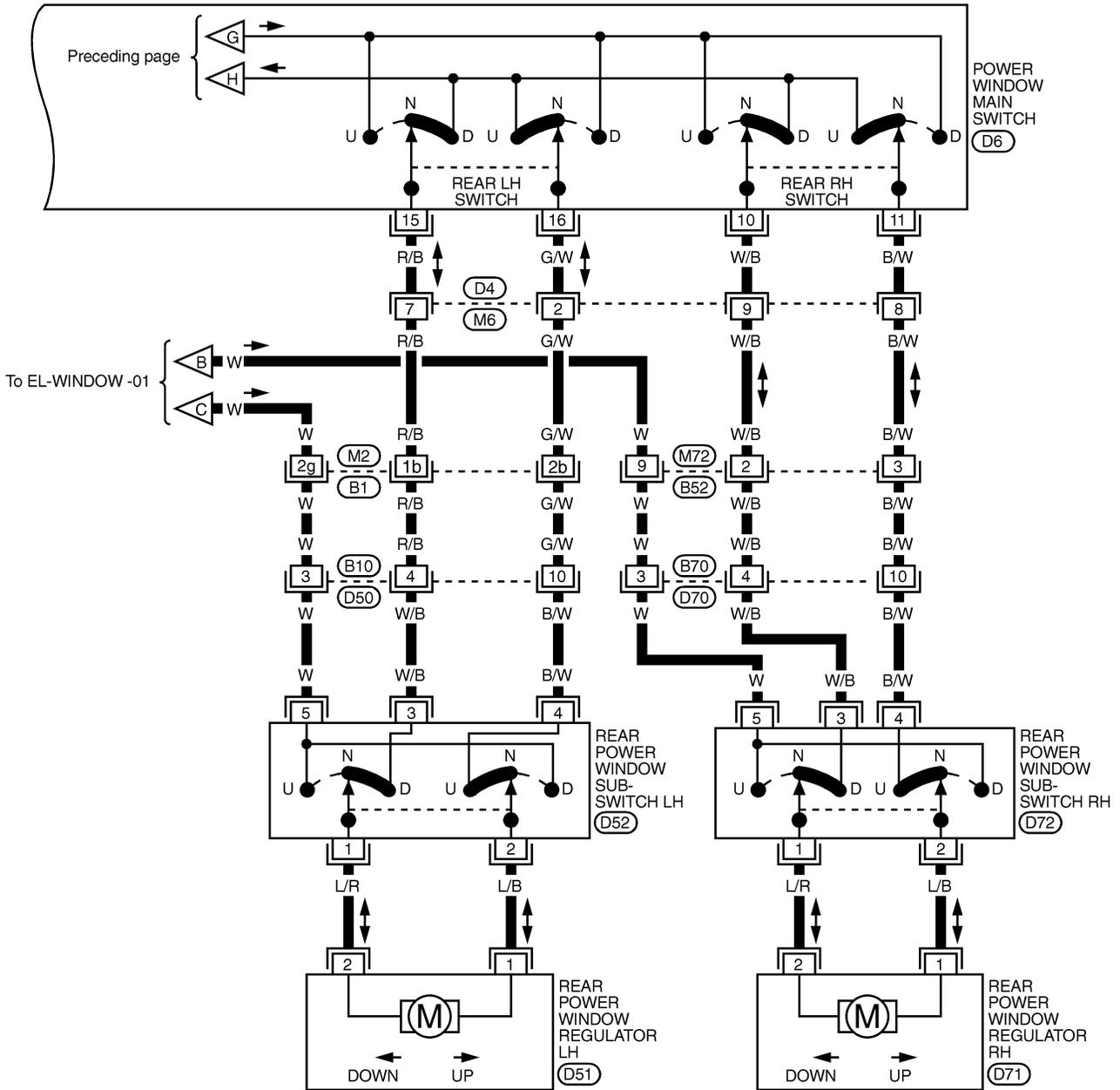
MEL980J

POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)



EL-WINDOW-04



Refer to last page (Foldout page).
M2, B1

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POWER WINDOW

Trouble Diagnoses

Trouble Diagnoses

NAEL0105

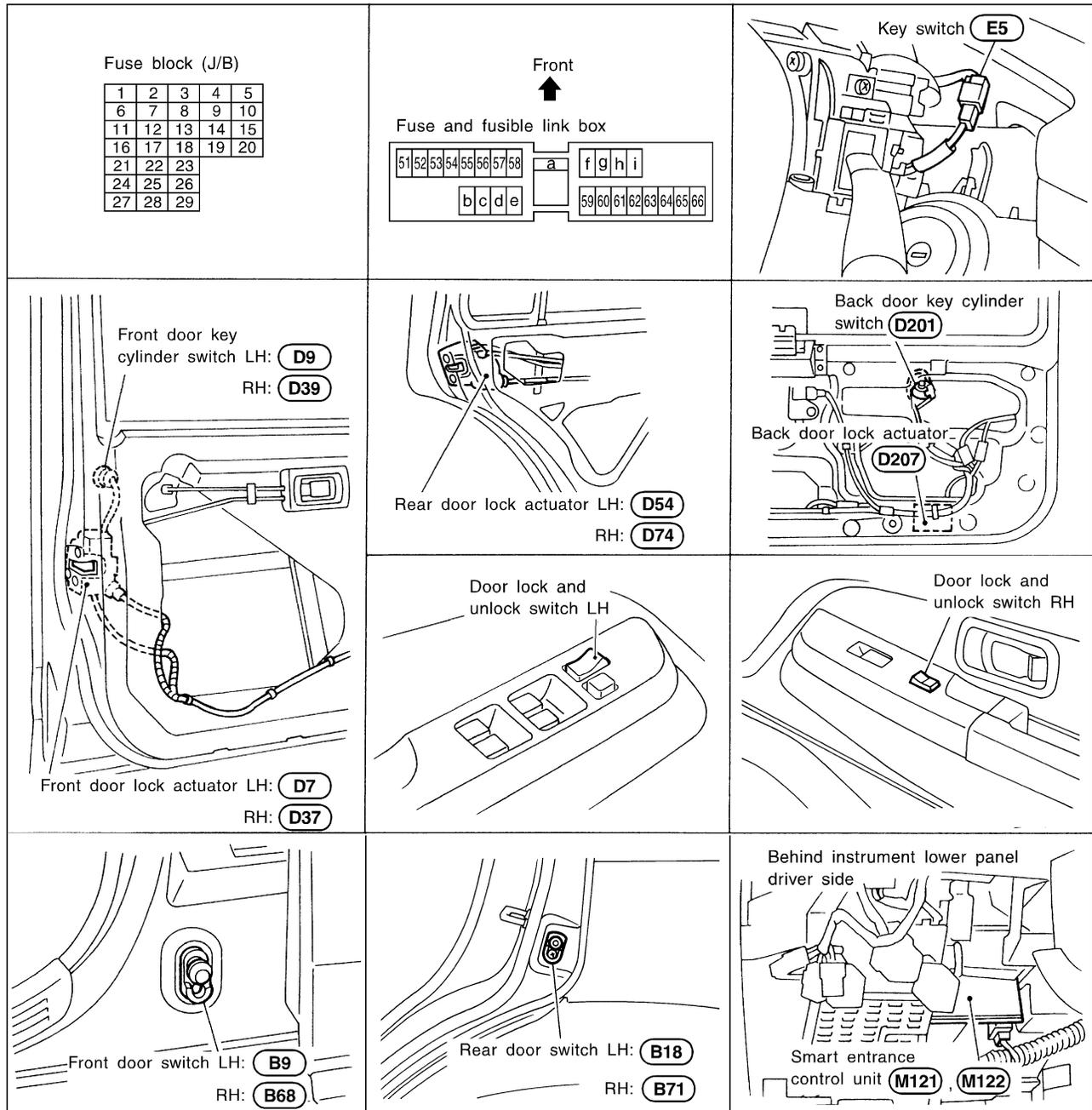
Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	<ol style="list-style-type: none"> 7.5A fuse, 40A fusible link and M21 circuit breaker Grounds M4 and M66 Power window relay Open/short in power window main switch circuit 	<ol style="list-style-type: none"> Check 7.5A fuse [No. 11, located in fuse block (J/B)] 40A fusible link (letter f, located in fuse and fusible link box) and M21 circuit breaker. Turn ignition switch "ON" and verify battery positive voltage is present at terminal 1 of power window main switch and terminal 5 of sub-switch. Check grounds M4 and M66. Check power window relay. Check W wire between power window relay and power window main switch for open/short circuit.
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> Driver side power window regulator circuit Driver side power window regulator Power window main switch Open/short in power window main switch circuit 	<ol style="list-style-type: none"> Check harness between power window main switch and power window regulator for open or short circuit. Check driver side power window regulator. Check power window main switch. Check W wire between power window relay and power window main switch for open/short circuit.
Passenger power window cannot be operated.	<ol style="list-style-type: none"> Power window sub-switches Passenger side power window regulators Power window main switch Power window circuit 	<ol style="list-style-type: none"> Check power window sub-switch. Check passenger side power window regulator. Check power window main switch. Check the following. <ol style="list-style-type: none"> Check harnesses between power window main switch and power window sub-switch for open/short circuit. Check harnesses between power window sub-switch and power window regulator for open/short circuit. Check harness between power window sub-switch and power window relay for open/short circuit.
Passenger power window cannot be operated using power window main switch but can be operated by power window sub-switch.	<ol style="list-style-type: none"> Power window main switch 	<ol style="list-style-type: none"> Check power window main switch.
Driver side power window auto function cannot be operated using power window main switch.	<ol style="list-style-type: none"> Power window main switch 	<ol style="list-style-type: none"> Check power window main switch.
Retained power operation does not operate properly.	<ol style="list-style-type: none"> RAP signal circuit Driver or passenger side door switch circuit Smart entrance control unit 	<ol style="list-style-type: none"> Check harness between power window relay terminal 2 and smart entrance control unit terminal 5 for open or short circuit. Check harness between smart entrance control unit and driver or passenger side door switch for open or short circuit. Check driver or passenger side door switch ground circuit. Check driver or passenger side door switch. Check smart entrance control unit. (EL-278)

POWER DOOR LOCK

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0106



SEL065W

System Description

NAEL0107

OPERATION

- The lock/unlock switch (LH and RH) on door trim can lock and unlock all doors.
- With the door key inserted in the key cylinder on front LH, RH or back door, turning it to "LOCK", will lock all doors; turning it to "UNLOCK" once unlocks the corresponding door; turning it to "UNLOCK" again within 5 seconds after the first unlock operation unlocks all of the other doors. (Signals from door key cylinder switch)
- If the ignition key is in the ignition key cylinder and one or more of doors are open, setting the lock/unlock switch to "LOCK" locks the doors once but then immediately unlock them. (Combination signals from key switch and door switches) - (KEY REMINDER DOOR SYSTEM)

NAEL0107S04

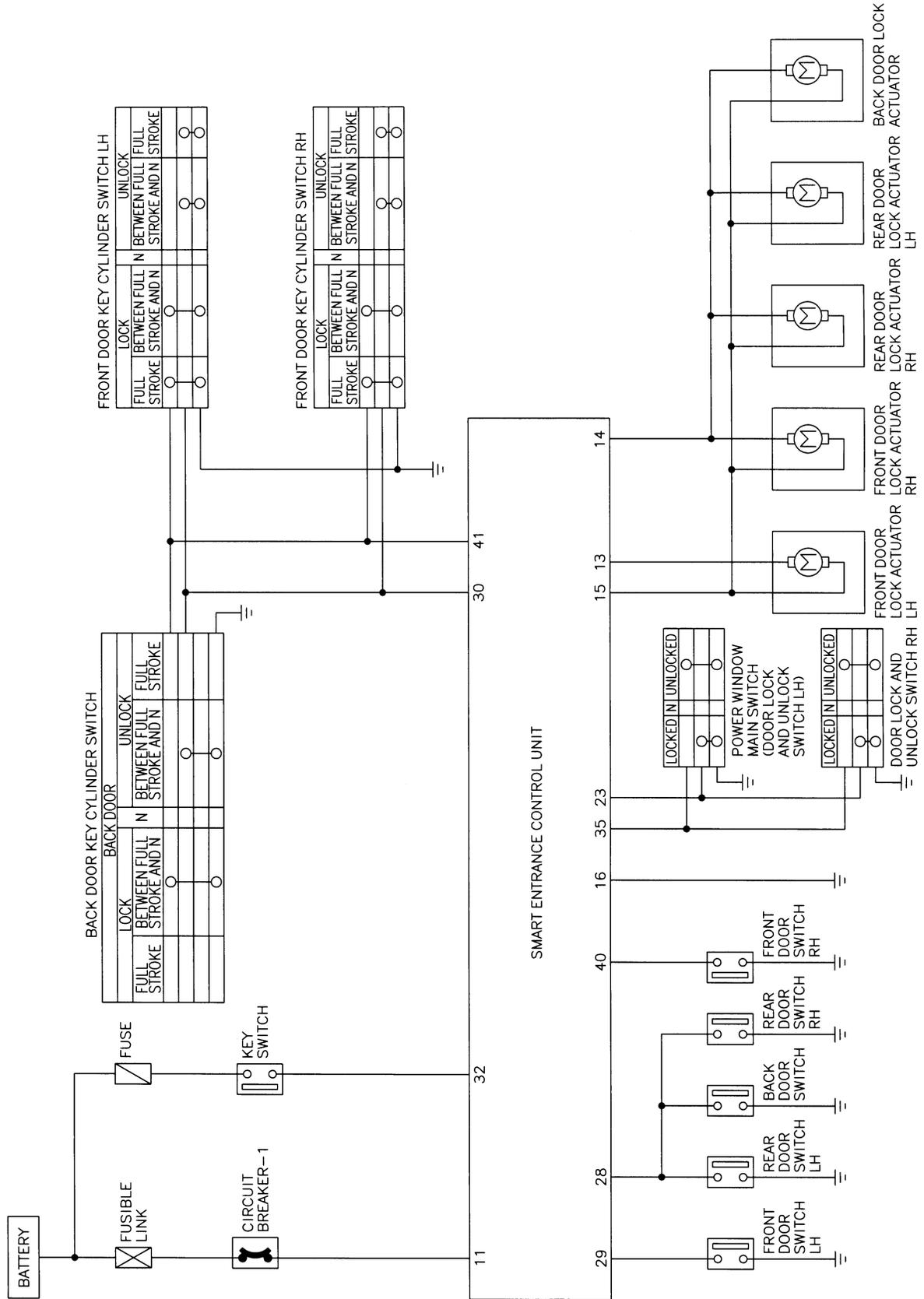
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POWER DOOR LOCK

Schematic

Schematic

NAEL0108



MEL982J

POWER DOOR LOCK

Wiring Diagram — D/LOCK —

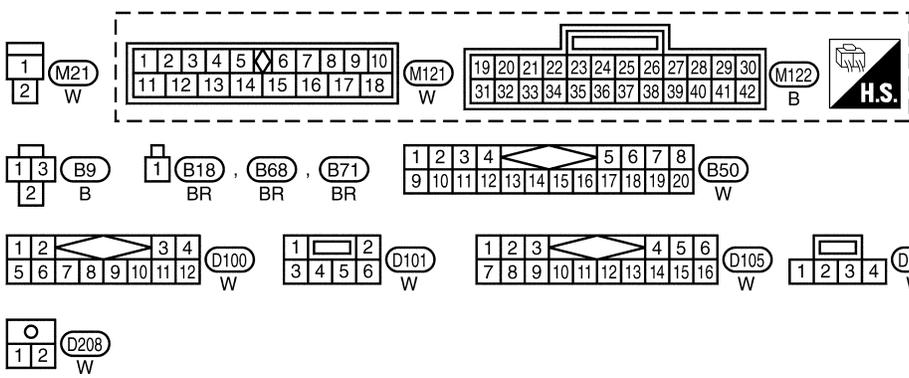
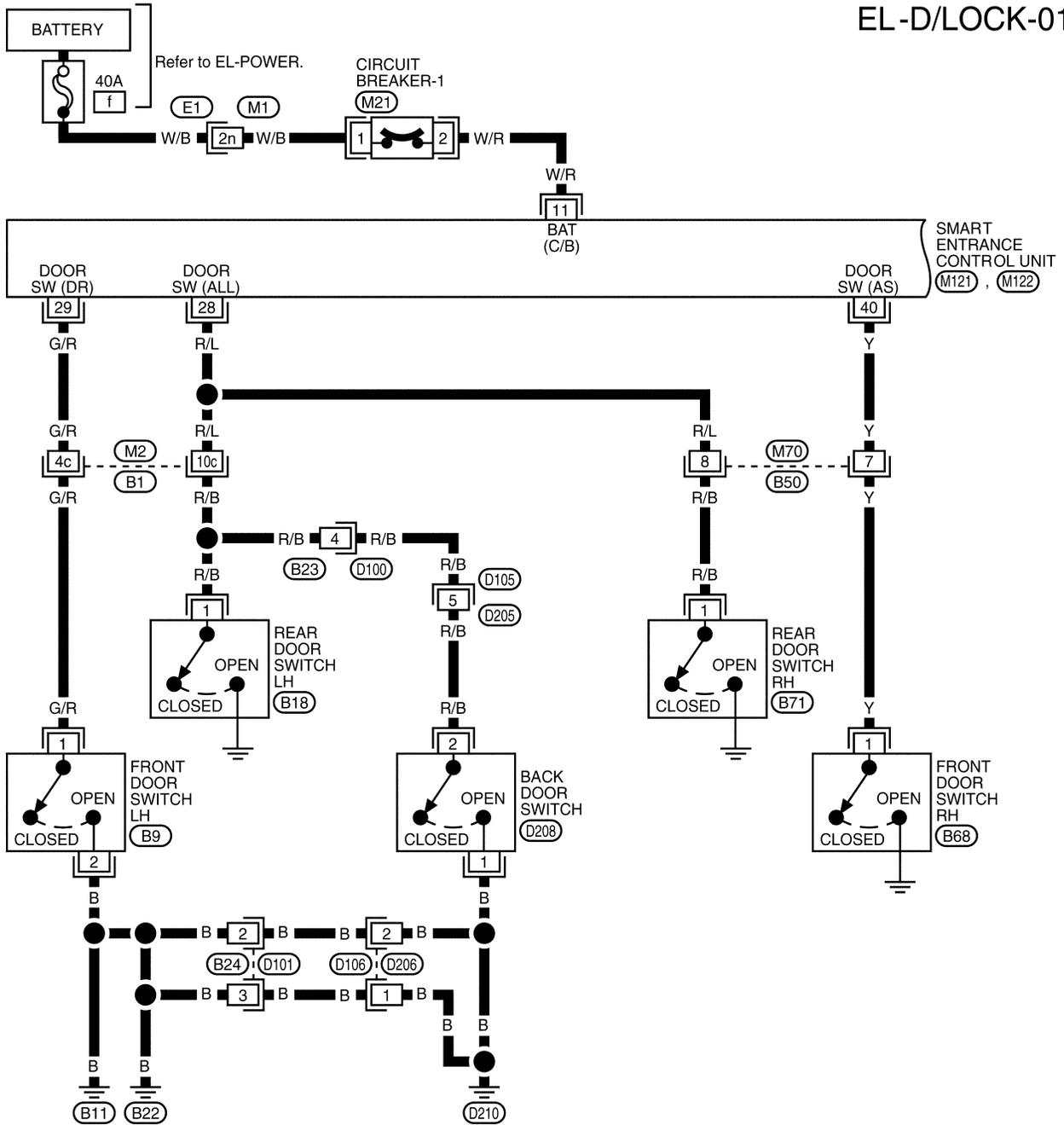
Wiring Diagram — D/LOCK —

NAEL0109

NAEL0109S01

FIG. 1

EL-D/LOCK-01



Refer to last page (Foldout page).

- M1, E1
- M2, B1

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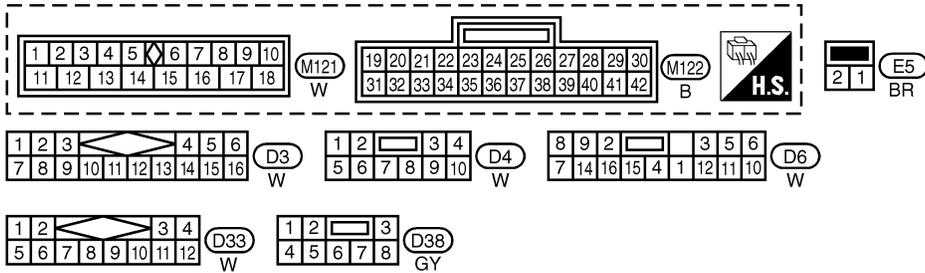
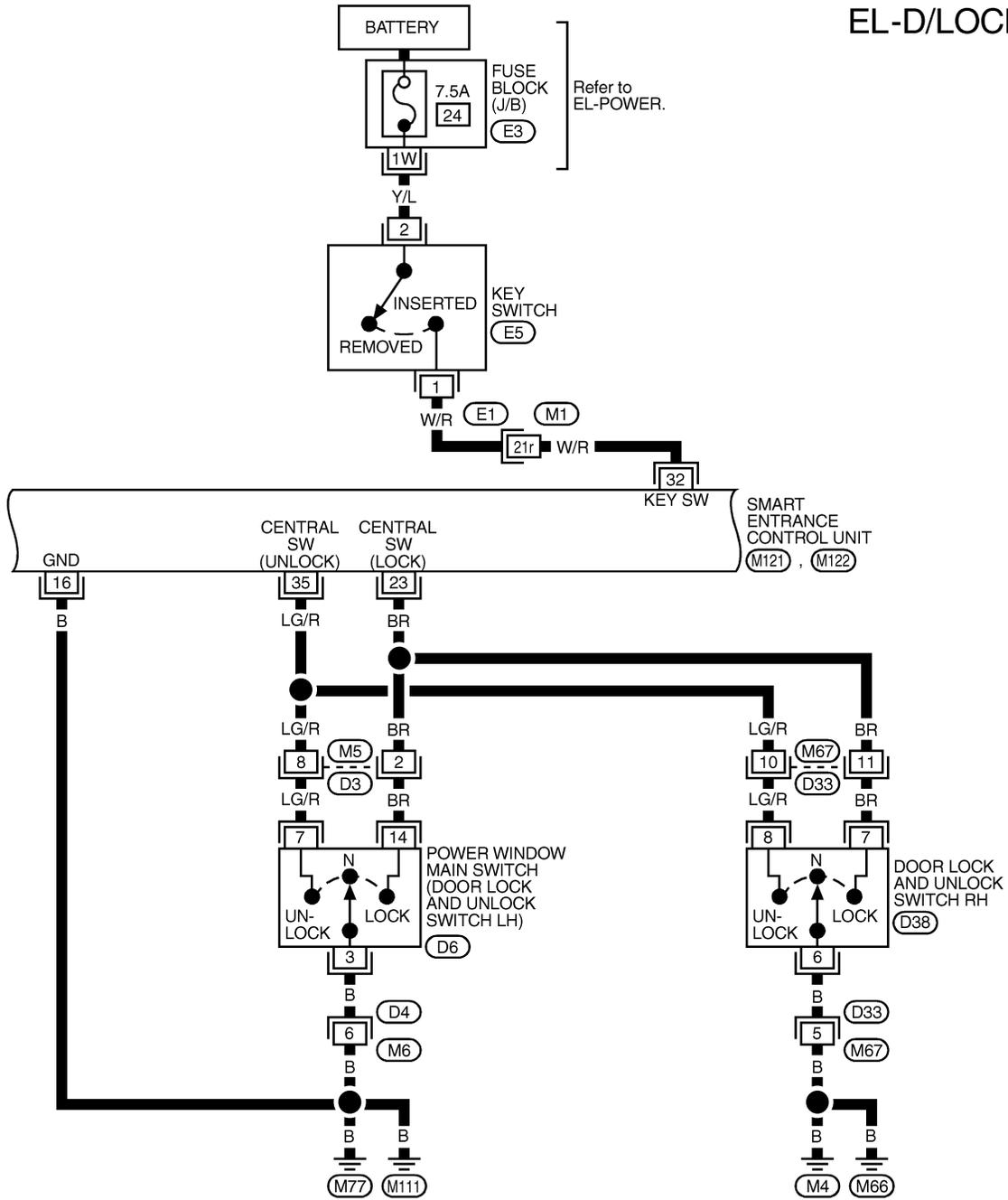
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 2

NAEL0109S02

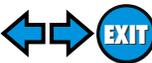
EL-D/LOCK-02



Refer to last page (Foldout page).

M1, E1
E3

POWER DOOR LOCK

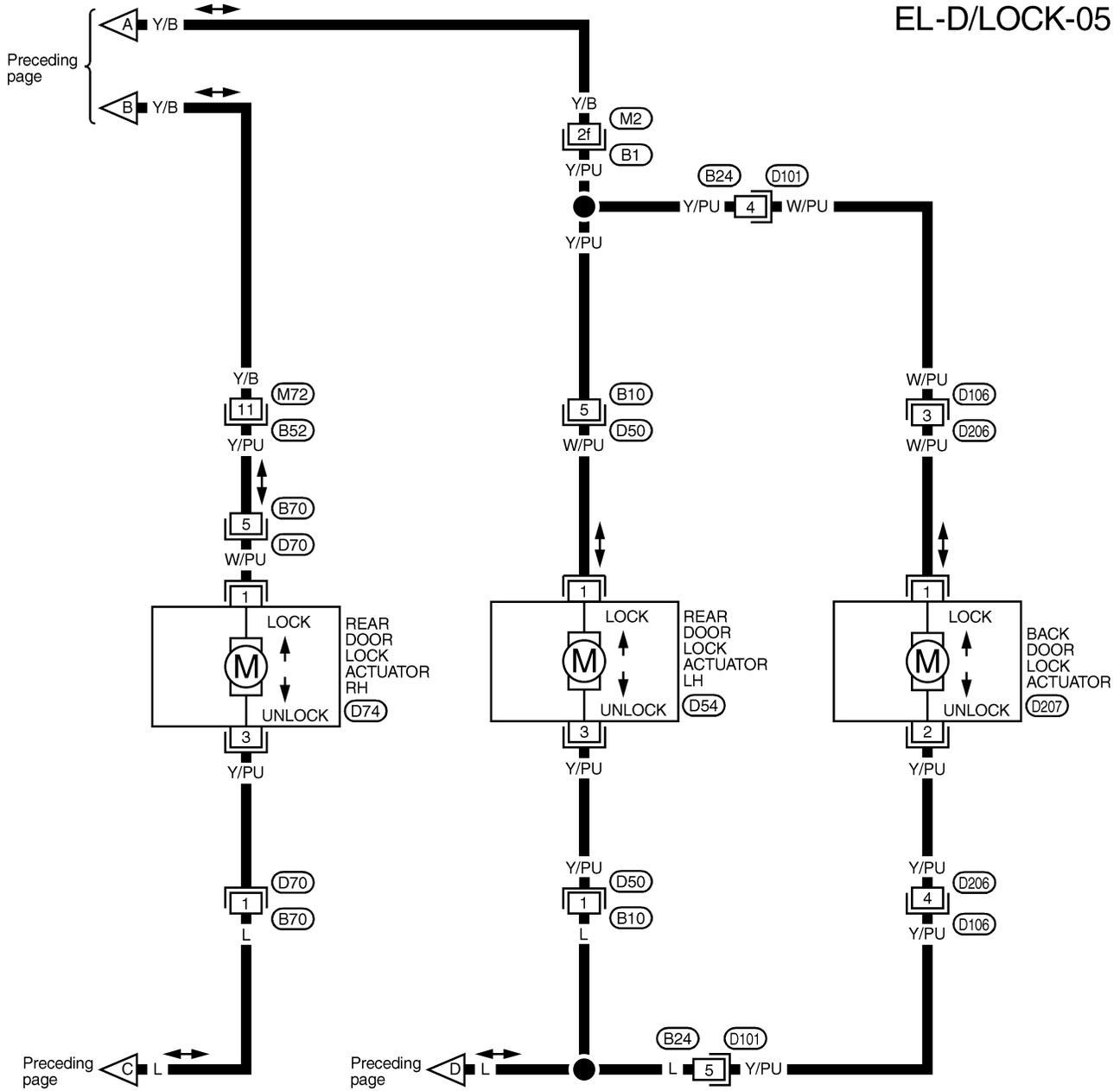


Wiring Diagram — D/LOCK — (Cont'd)

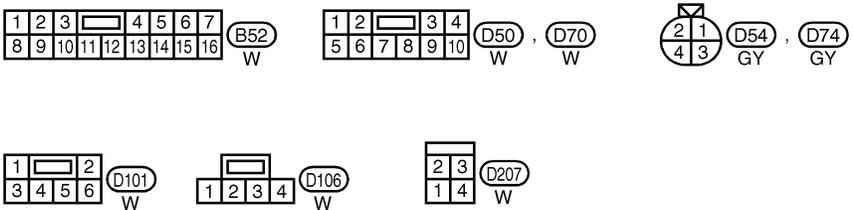
FIG. 5

NAEL0109S05

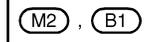
EL-D/LOCK-05

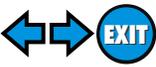


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Refer to last page (Foldout page).





POWER DOOR LOCK

Trouble Diagnoses

Trouble Diagnoses SYMPTOM CHART

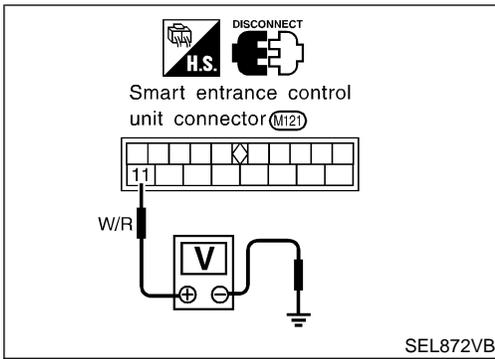
NAEL0110

NAEL0110S01

REFERENCE PAGE (EL-)	211	211	213	214	216	218	220
SYMPTOM	MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR SWITCH CHECK	KEY SWITCH (INSERT) CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	FRONT DOOR KEY CYLINDER SWITCH CHECK	BACK DOOR KEY CYLINDER SWITCH CHECK	DOOR LOCK ACTUATOR CHECK
Key reminder door system does not operate properly.	X	X	X				X
Specific door lock actuator does not operate.	X						X
Power door lock does not operate with door lock and unlock switch (LH and RH) on door trim.	X			X			
Power door lock does not operate with front door key cylinder operation.	X				X		
Power door lock does not operate with back door key cylinder operation.	X					X	

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

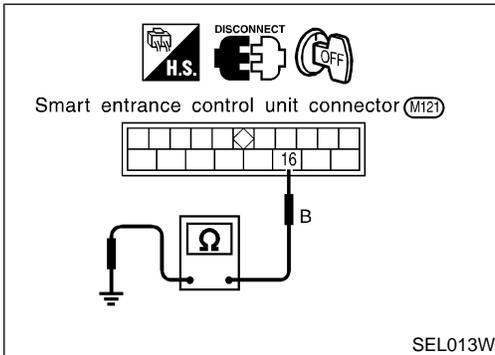


MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

Main Power Supply Circuit Check

NAEL0110S0201

Terminal		Ignition switch		
(+)	(-)	OFF	ACC	ON
11	Ground	Battery voltage	Battery voltage	Battery voltage



Ground Circuit Check

NAEL0110S0202

Terminals	Continuity
16 - Ground	Yes

DOOR SWITCH CHECK

NAEL0110S05

1 CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between control unit terminals 28, 29 or 40 and ground.

Smart entrance control unit connector (M122)

SEL886VA

	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door switch	29	ground	Open	0
			Closed	Approx. 5
Front RH door switch	40	ground	Open	0
			Closed	Approx. 5
Rear and back door switches	28	ground	Open	0
			Closed	Approx. 5

MTBL0262

Refer to wiring diagram in EL-205.

OK or NG

OK	▶	Door switch is OK.
NG	▶	GO TO 2.

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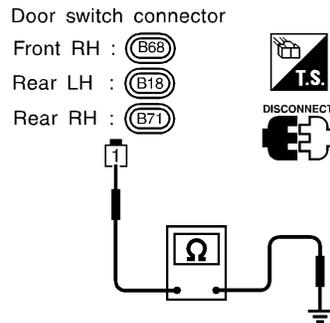
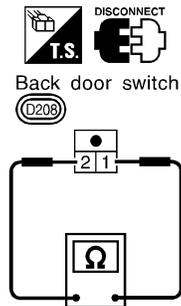
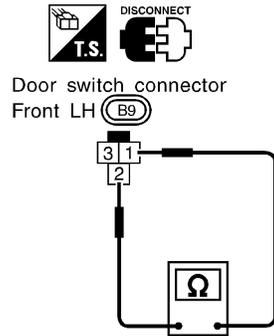
IDX

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2 CHECK DOOR SWITCH

1. Disconnect door switch connector.
2. Check continuity between door switch terminals.



SEL066W

	Terminals	Condition	Continuity
Front LH door switch	1 - 2	Closed	No
		Open	Yes
Back door switch	1 - 2	Closed	No
		Open	Yes
Front RH and rear door switches	1 - ground	Closed	No
		Open	Yes

MTBL0263

OK or NG

OK



Check the following.

- Door switch ground circuit (Front LH, back door) or door switch ground condition
- Harness for open or short between control unit and door switch

NG



Replace door switch.

KEY SWITCH (INSERT) CHECK

=NAEL0110S06

1	CHECK KEY SWITCH INPUT SIGNAL	<p>Check voltage between control unit terminal 32 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL783VA</p> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> <p>Refer to wiring diagram in EL-206.</p> <p style="text-align: center;">OK or NG</p>	GI MA EM LC EC FE CL MT
OK	▶	Key switch is OK.	
NG	▶	GO TO 2.	

2	CHECK KEY SWITCH (INSERT)	<p>Check continuity between terminals 1 and 2.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL784VA</p> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> <p style="text-align: center;">OK or NG</p>	TF PD AX SU BR ST RS
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse [No. 24, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between control unit and key switch 	BT HA SC
NG	▶	Replace key switch.	

POWER DOOR LOCK

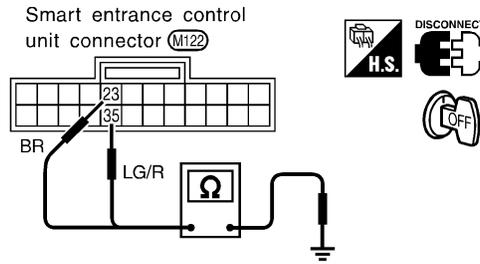
Trouble Diagnoses (Cont'd)

DOOR LOCK/UNLOCK SWITCH CHECK

=NAEL0110S03

1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

1. Disconnect control unit connector.
2. Check continuity between control unit terminal 23 or 35 and ground.



SEL875VC

Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
23 - ground	Lock	Yes
	N and Unlock	No
35 - ground	Unlock	Yes
	N and Lock	No

MTBL0264

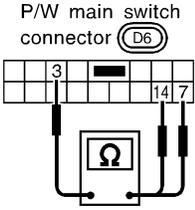
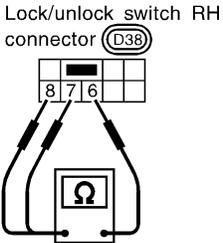
Refer to wiring diagram in EL-206.

OK or NG

OK	▶	Door lock/unlock switch is OK.
NG	▶	GO TO 2.

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2	CHECK DOOR LOCK/UNLOCK SWITCH																																							
	<p>1. Disconnect door lock/unlock switch connector. 2. Check continuity between each door lock/unlock switch terminals.</p> <ul style="list-style-type: none"> ● Power window main switch (Door lock/unlock switch LH) <div style="text-align: center;">   </div> <div style="text-align: right; margin-top: 10px;">SEL067W</div> <table border="1" style="margin: 10px auto; width: 60%;"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>3</th> <th>7</th> <th>14</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ● Door lock/unlock switch RH <div style="text-align: center;">   </div> <div style="text-align: right; margin-top: 10px;">SEL068W</div> <table border="1" style="margin: 10px auto; width: 60%;"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> </tbody> </table> <div style="text-align: right; margin-top: 10px;">MTBL0265</div> <div style="text-align: right; margin-top: 10px;">MTBL0266</div> <p style="text-align: center; margin-top: 10px;">OK or NG</p>	Condition	Terminals			3	7	14	Lock	○	○	○	N	No continuity			Unlock	○	○	○	Condition	Terminals			6	7	8	Lock	○	○	○	N	No continuity			Unlock	○	○	○	<p>GI</p> <p>MA</p> <p>EM</p> <p>LC</p> <p>EC</p> <p>FE</p> <p>CL</p> <p>MT</p> <p>AT</p> <p>TF</p> <p>PD</p> <p>AX</p> <p>SU</p> <p>BR</p>
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N	No continuity																																							
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OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and control unit connector 	<p>ST</p> <p>RS</p>																																					
NG	▶	Replace door lock/unlock switch.	<p>BT</p> <p>HA</p> <p>SC</p>																																					

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POWER DOOR LOCK

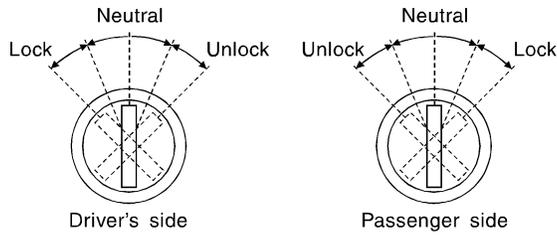
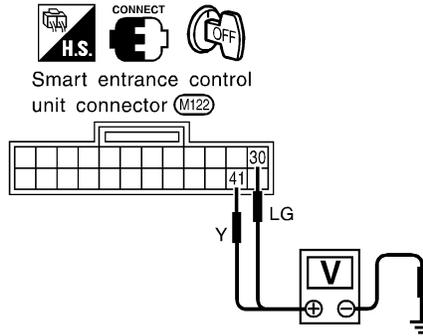
Trouble Diagnoses (Cont'd)

FRONT DOOR KEY CYLINDER SWITCH CHECK

=NAEL0110S07

1 CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

Check voltage between control unit terminals 30 or 41 and ground.



SEL069W

Terminals		Key position	Voltage [V]
(+)	(-)		
41	Ground	Neutral/Unlock	Approx. 5
		Lock	0
30	Ground	Neutral/Lock	Approx. 5
		Unlock	0

MTBL0268

Refer to wiring diagram in EL-207.

OK or NG

OK	▶	Door key cylinder switch is OK.
NG	▶	GO TO 2.

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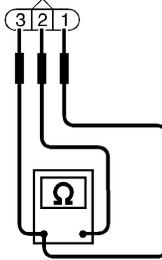
2 CHECK DOOR KEY CYLINDER SWITCH

1. Disconnect door key cylinder switch connector.
2. Check continuity between door key cylinder switch terminals.



Door key cylinder switch connector

LH : (D9) RH : (D39)



- ① : Door unlock switch terminal (LH)
Door lock switch terminal (RH)
- ② : Ground terminal
- ③ : Door lock switch terminal (LH)
Door unlock switch terminal (RH)

SEL070W

Terminals	Key position	Continuity
LH: 3 - 2	Neutral/Unlock	No
RH: 1 - 2	Lock	Yes
LH: 1 - 2	Neutral/Lock	No
RH: 3 - 2	Unlock	Yes

MTBL0269

OK or NG

OK



Check the following.

- Door key cylinder switch ground circuit
- Harness for open or short between control unit and door key cylinder switch

NG



Replace door key cylinder switch.

POWER DOOR LOCK

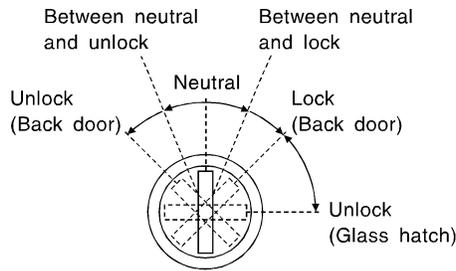
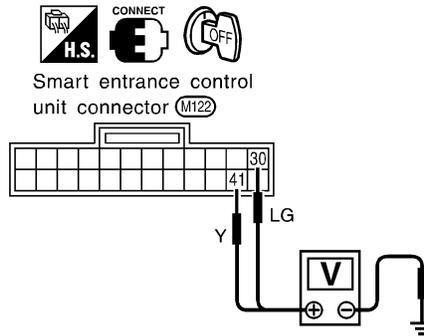
Trouble Diagnoses (Cont'd)

BACK DOOR KEY CYLINDER SWITCH CHECK

=NAEL0110S08

1 CHECK BACK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

Check voltage between control unit terminals 30 or 41 and ground.



SEL071W

	Terminals		Key position	Voltage [V]
	(+)	(-)		
Back door	41	Ground	Between neutral and lock	0
			Other positions	Approx. 5
	30	Ground	Between neutral and unlock	0
			Other positions	Approx. 5

MTBL0270

Refer to wiring diagram in EL-207.

OK or NG

OK	▶	Back door key cylinder switch is OK.
NG	▶	GO TO 2.

2	CHECK BACK DOOR KEY CYLINDER SWITCH															
	<p>1. Disconnect back door key cylinder switch connector. 2. Check continuity between back door key cylinder switch terminals.</p> <div style="text-align: center;"> <p>Back door key cylinder switch (D201)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Key position</th> <th colspan="3">Terminals</th> </tr> <tr> <th>1</th> <th>2</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Between neutral and lock (Back door)</td> <td style="text-align: center;">○</td> <td style="text-align: center;">—</td> <td style="text-align: center;">○</td> </tr> <tr> <td>Between neutral and unlock (Back door)</td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL616U</p> <p style="text-align: right;">MTBL0052</p> <p style="text-align: center;">OK or NG</p>	Key position	Terminals			1	2	4	Between neutral and lock (Back door)	○	—	○	Between neutral and unlock (Back door)		○	○
Key position	Terminals															
	1	2	4													
Between neutral and lock (Back door)	○	—	○													
Between neutral and unlock (Back door)		○	○													
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Back door key cylinder switch ground circuit ● Harness for open or short between control unit and back door key cylinder switch 															
NG	<p>▶ Replace back door key cylinder switch.</p>															

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POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

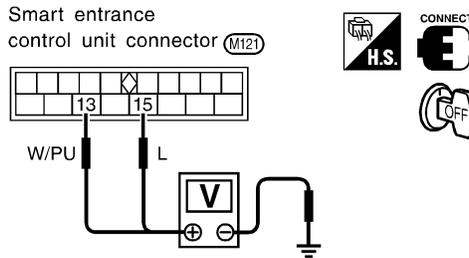
DOOR LOCK ACTUATOR CHECK

=NAEL0110S04

1 CHECK DOOR LOCK ACTUATOR CIRCUIT

Check voltage for door lock actuator.

- Door lock actuator front LH

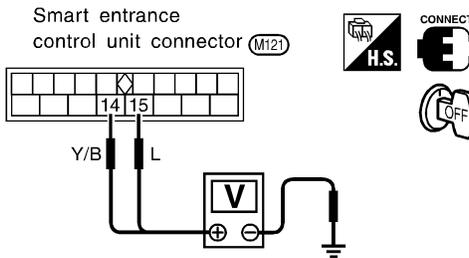


SEL879VA

Door lock/unlock switch condition	Terminal No.		Voltage (V)
	(+)	(-)	
Lock	15	ground	Approx. 12
Unlock	13	ground	

MTBL0271

- Door lock actuator front RH, rear and back



SEL880VA

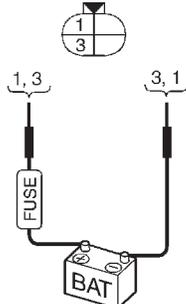
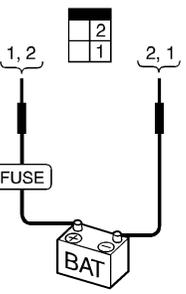
Door lock/unlock switch condition	Terminal No.		Voltage (V)
	(+)	(-)	
Lock	15	ground	Approx. 12
Unlock	14	ground	

MTBL0272

Refer to wiring diagram in EL-208.

OK or NG

OK	▶	GO TO 2.
NG	▶	Replace smart entrance control unit. (Before replacing control unit, perform "DOOR LOCK/UNLOCK SWITCH CHECK".)

2	CHECK DOOR LOCK ACTUATOR
	<p>1. Disconnect door lock actuator connector. 2. Apply 12V direct current to door lock actuator and check operation.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">   </div> <div style="text-align: center;">  </div> <div style="text-align: left;"> <p>Door lock actuator connector</p> <p>Front LH: (D7) Front RH: (D37) Rear LH: (D54) Rear RH: (D74)</p> </div> </div> <p style="text-align: right;">SEL736U</p> <p>● Door lock actuator operation: Terminals between (+): 3 and (-): 1 Unlocked → Locked Terminals between (+): 1 and (-): 3 Locked → Unlocked</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">   </div> <div style="text-align: center;">  </div> <div style="text-align: left;"> <p>Back door lock actuator connector (D207)</p> </div> </div> <p style="text-align: right;">SEL072W</p> <p>● Back door lock actuator operation: Terminals between (+): 2 and (-): 1 Unlocked → Locked Terminals between (+): 1 and (-): 2 Locked → Unlocked</p> <p style="text-align: center;">OK or NG</p>
OK	▶ Check harness for open or short between control unit connector and door lock actuator.
NG	▶ Replace door lock actuator.

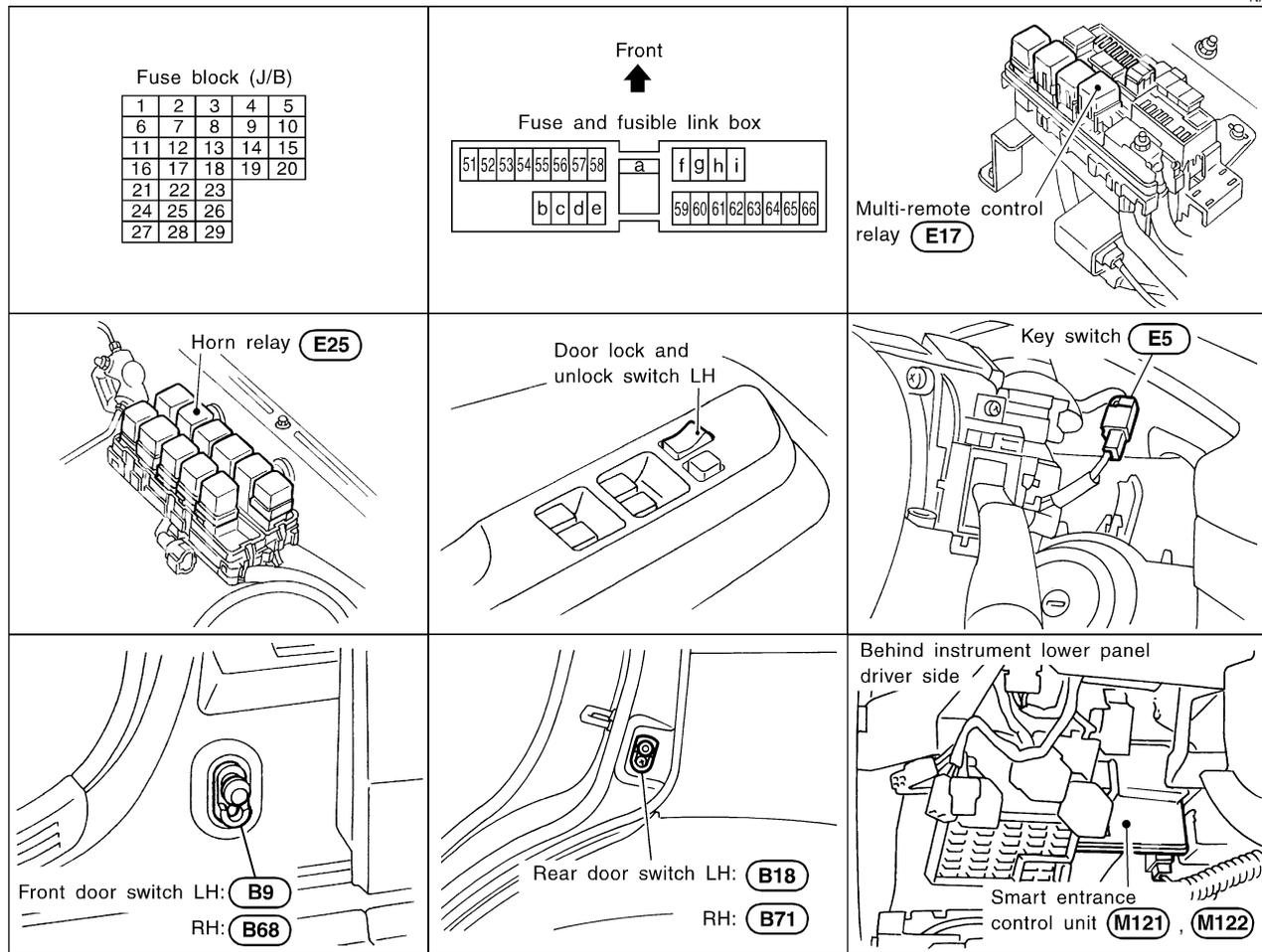
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MULTI-REMOTE CONTROL SYSTEM

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0111



SEL073W

System Description

NAEL0112

NAEL0112S01

INPUTS

Power is supplied at all times

- to key switch terminal 2
- through 7.5A fuse [No. 24, located in the fuse block (J/B)].

When the key switch is ON (ignition key is inserted in key cylinder), power is supplied

- through key switch terminal 1
- to smart entrance control unit terminal 32.

When the front door switch LH is OPEN, ground is supplied

- to smart entrance control unit terminal 29
- through front door switch LH terminal 1
- to front door switch LH terminal 2
- through body grounds B11, B22 and D210.

When the front door switch RH is OPEN, ground is supplied

- to smart entrance control unit terminal 40
- through front door switch RH body ground.

When the other door switches are OPEN, ground is supplied

- to smart entrance control unit terminal 28
- through other door switches body grounds.

Remote controller signal is inputted to smart entrance control unit (The antenna of the system is combined with smart entrance control unit).

The multi-remote control system controls operation of the

- power door lock
- interior lamp
- panic alarm
- hazard and horn reminder

OPERATED PROCEDURE

Power Door Lock Operation

Smart entrance control unit receives a LOCK signal from remote controller. Smart entrance control unit locks all doors with input of LOCK signal from remote controller.

When an UNLOCK signal is sent from remote controller once, driver's door will be unlocked.

Then, if an UNLOCK signal is sent from remote controller again within 5 seconds, all other door will be unlocked.

Hazard and Horn Reminder

Power is supplied at all times

- to multi-remote control relay terminals 1, 3 and 6
- through 15A fuse [No. 20, located in the fuse block (J/B)], and
- to horn relay terminals 1 and 3
- through 7.5A fuse (No. 52, located in the fusible link and fuse box), and
- to horn relay terminal 6
- through 10A fuse (No. 54, located in the fusible link and fuse box)

When smart entrance control unit receives LOCK or UNLOCK signal from remote controller with all doors closed, ground is supplied

- to multi-remote control relay terminal 2
- through smart entrance control unit terminal 7, and
- to horn relay terminal 2
- through smart entrance control unit terminal 19

Multi-remote control relay and horn relay are now energized, and hazard warning lamp flashes and horn sounds as a reminder.

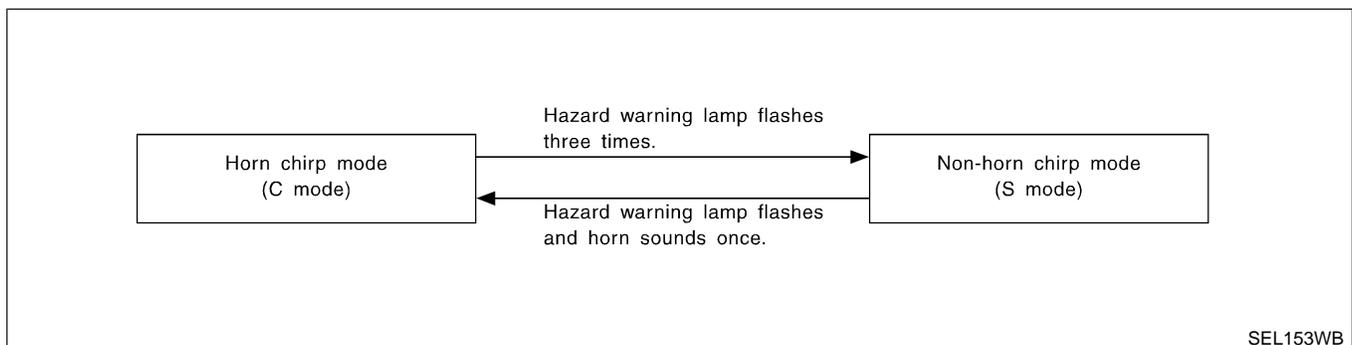
The hazard and horn reminder has a horn chirp mode (C mode) and a non-horn chirp mode (S mode).

Operating function of hazard and horn reminder

	Horn chirp mode (C mode)		Non-horn chirp mode (S mode)	
	Hazard warning lamp flash	Horn sound	Hazard warning lamp flash	Horn sound
Lock	Twice	Once	Twice	—
Unlock	Once	—	—	—

How to change hazard and horn reminder mode

When LOCK and UNLOCK signals are sent from the remote controller for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp flashes and horn sounds as follows:



SEL153WB

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System Description (Cont'd)

Interior Lamp Operation

NAEL0112S0202

When the following input signals are both supplied:

- door switch CLOSED (when all the doors are closed);
- driver's door LOCKED;

multi-remote control system turns on interior lamp (for 30 seconds) with input of UNLOCK signal from remote controller.

For detailed description, refer to "INTERIOR, SPOT, VANITY MIRROR AND LUGGAGE ROOM LAMPS" (EL-74).

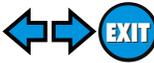
Panic Alarm Operation

NAEL0112S0203

When key switch is OFF (when ignition key is not inserted in key cylinder), multi-remote control system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from remote controller.

For detailed description, refer to "THEFT WARNING SYSTEM" (EL-245).

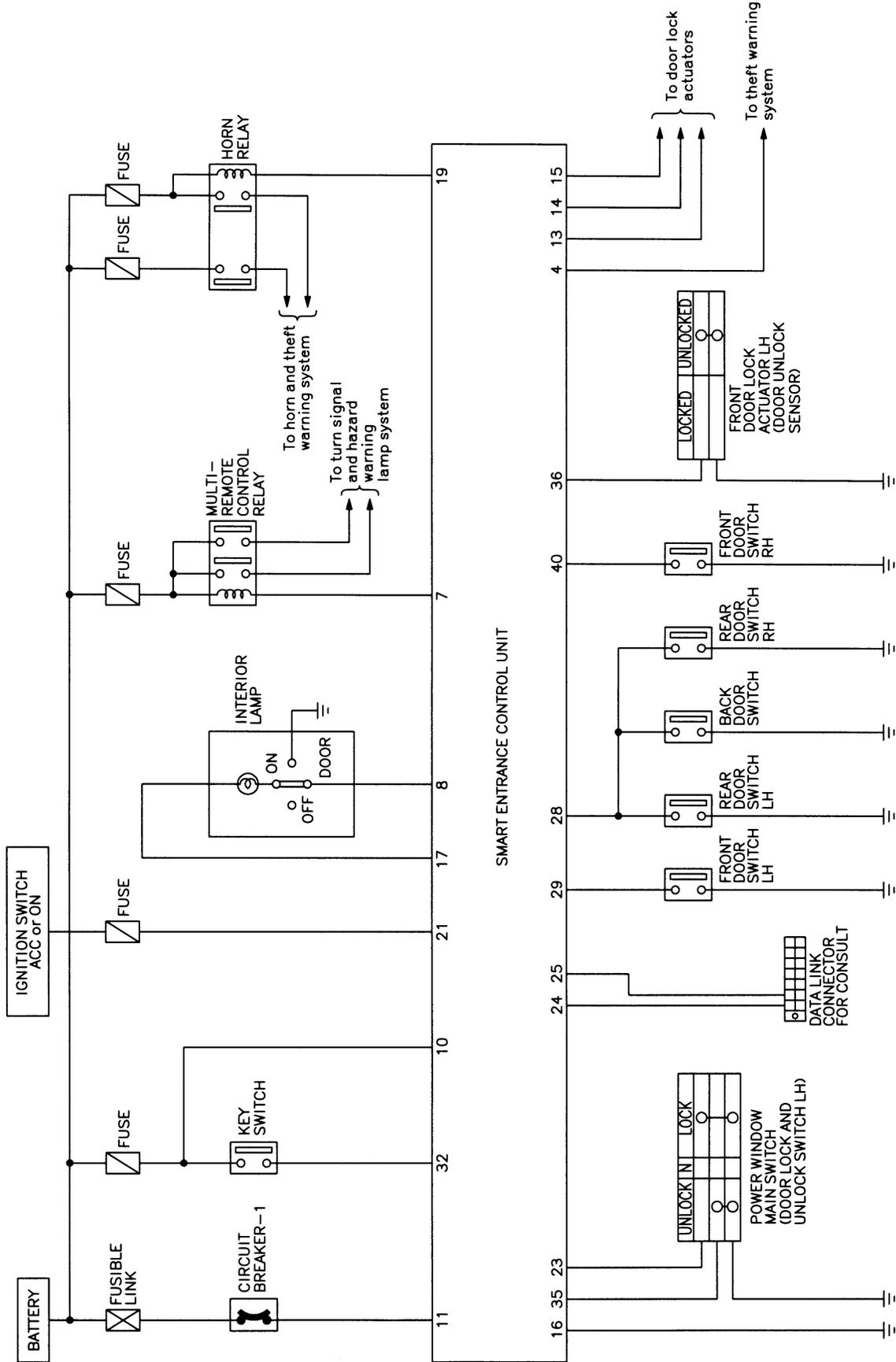
MULTI-REMOTE CONTROL SYSTEM



Schematic

Schematic

NAEL0113



- GI
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MEL934K

MULTI-REMOTE CONTROL SYSTEM

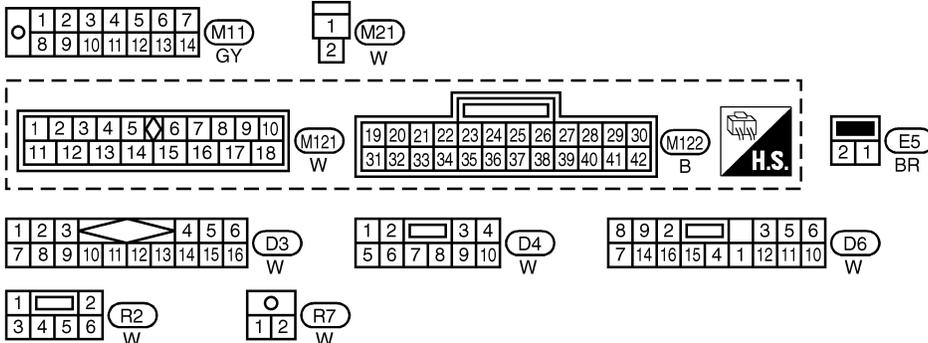
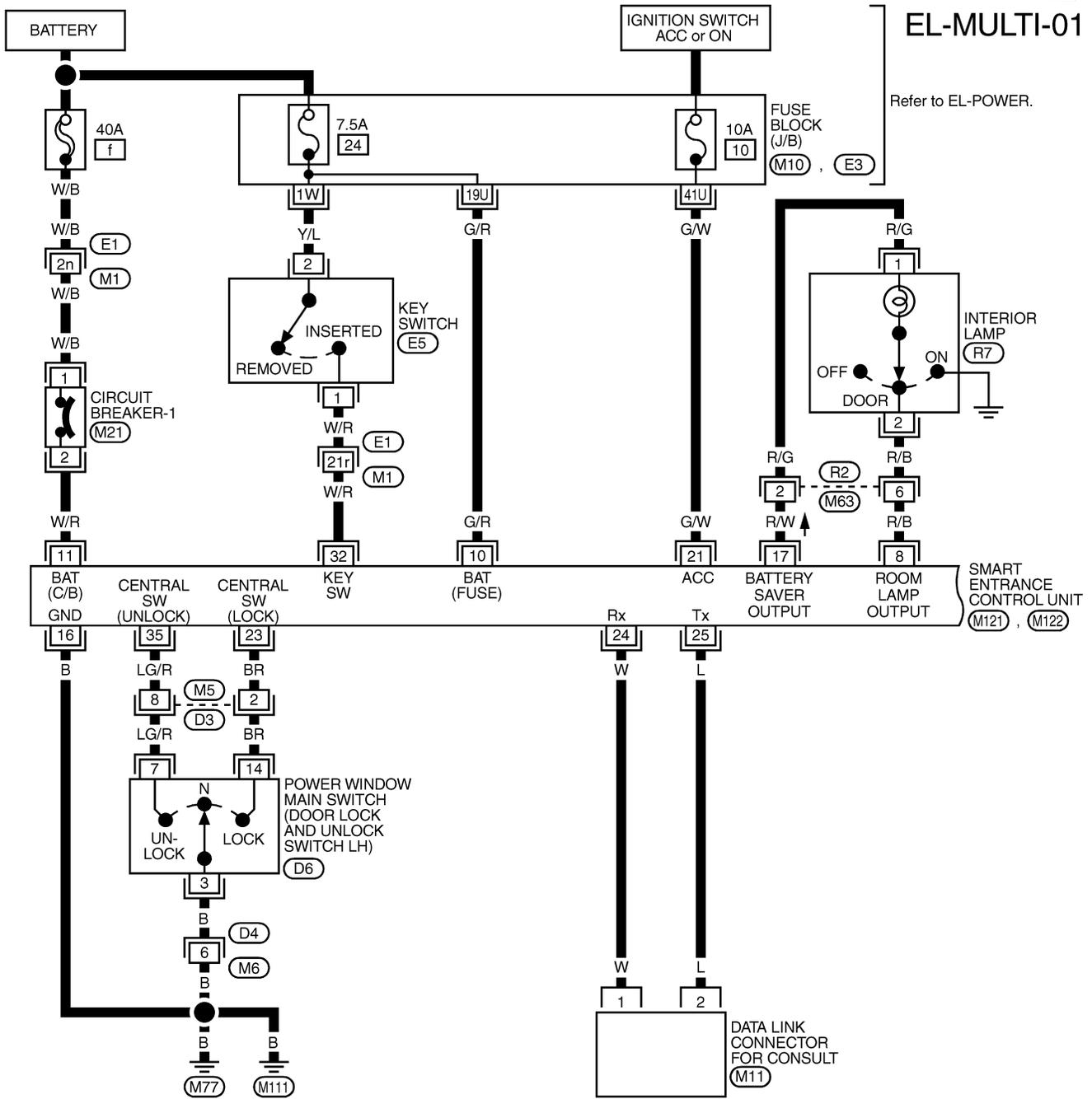
Wiring Diagram — MULTI —

Wiring Diagram — MULTI —

NAEL0114

NAEL0114S01

FIG. 1



Refer to last page (Foldout page).

- M1, E1
- M10
- E3

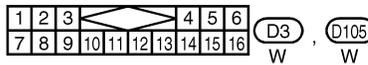
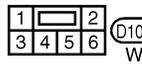
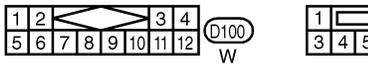
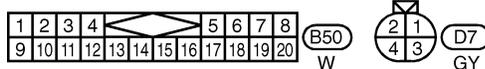
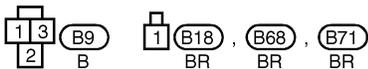
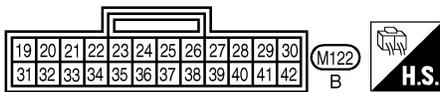
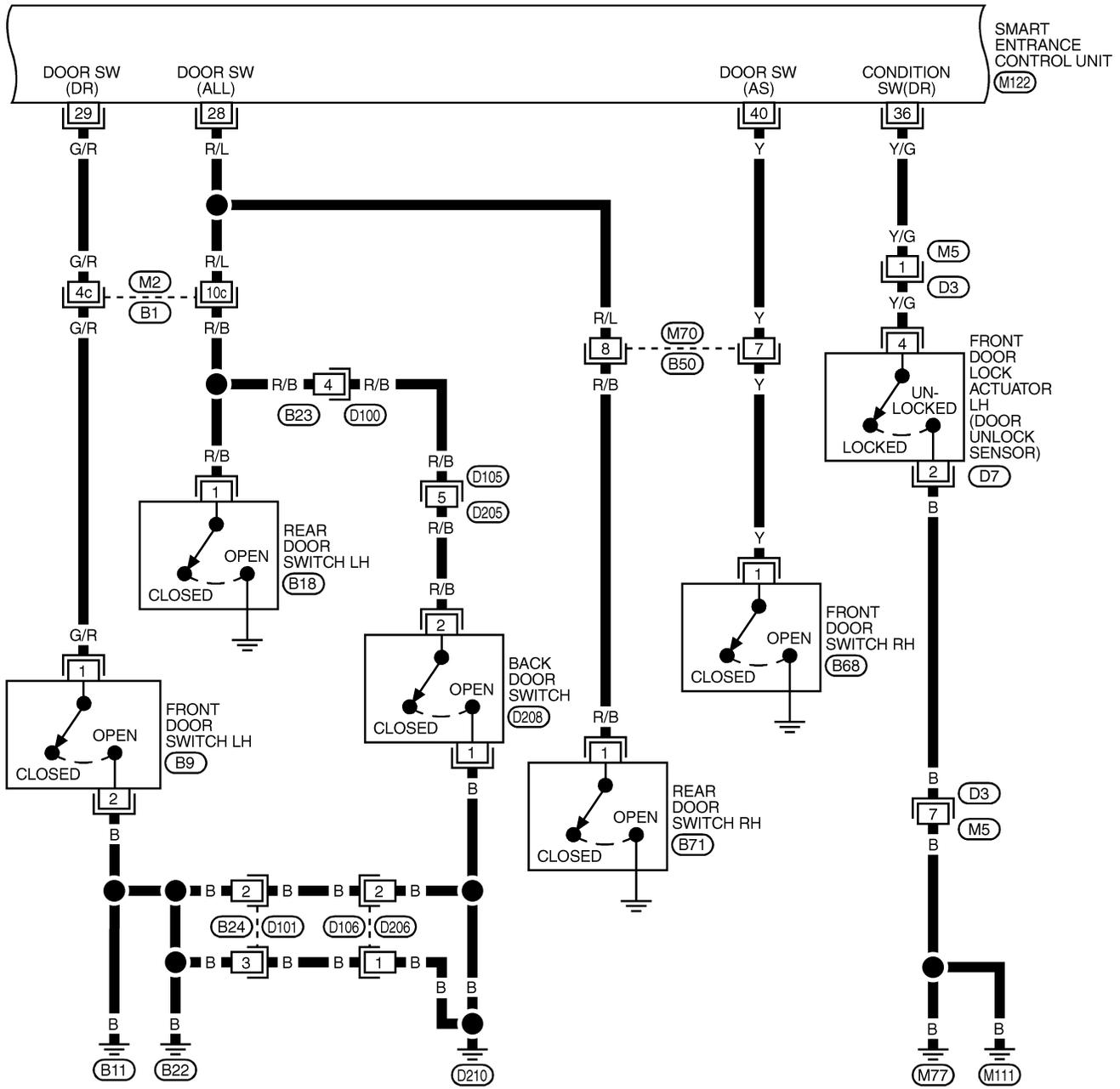
MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 2

NAEL0114S02

EL-MULTI-02



Refer to last page (Foldout page).

M2, B1

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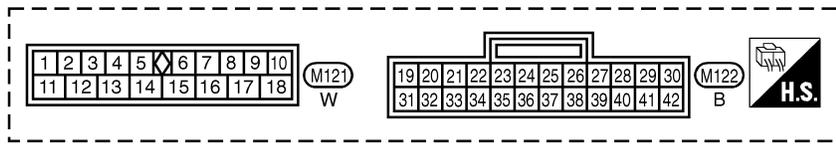
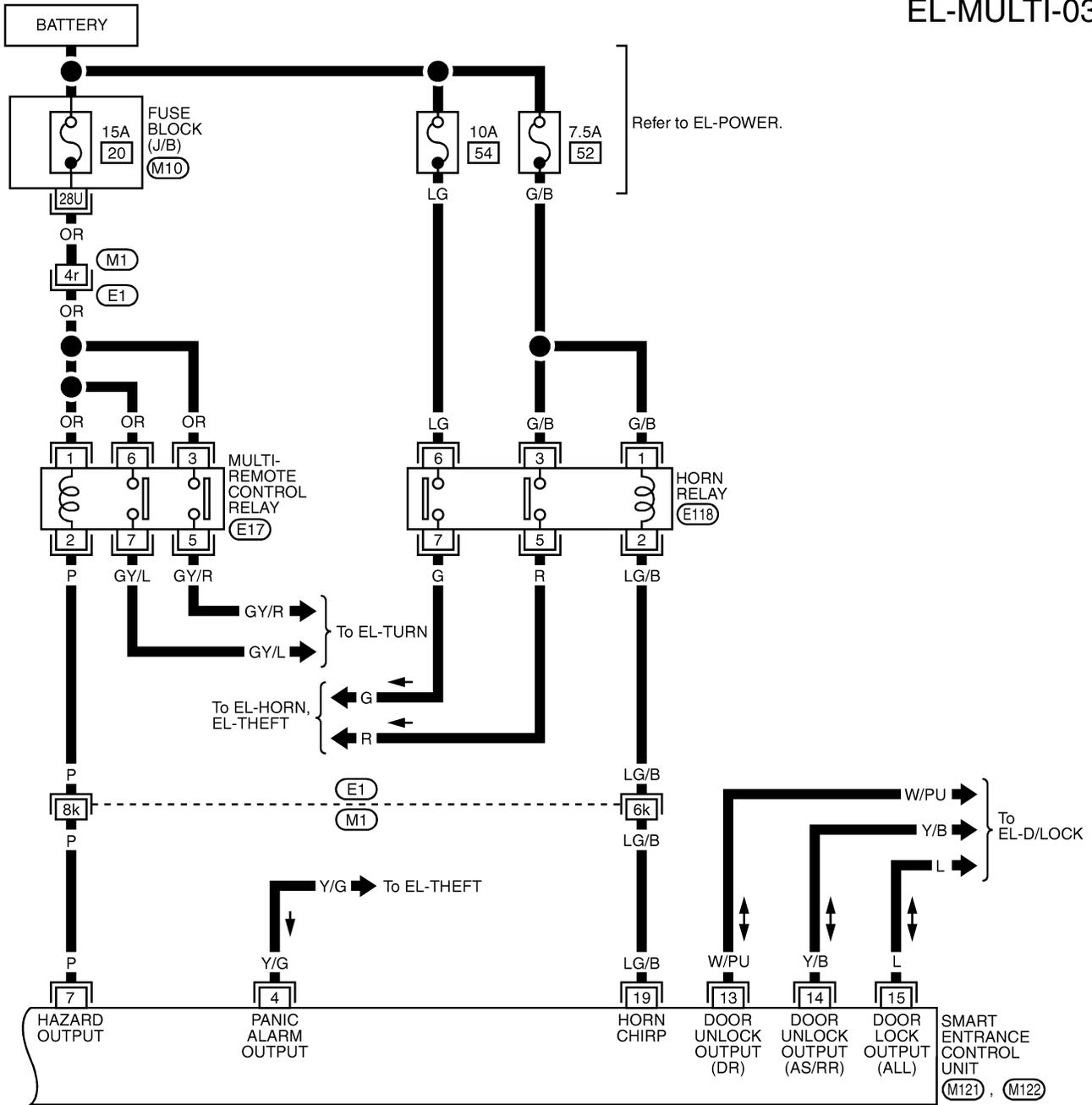
MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

NAEL0114S03

FIG. 3

EL-MULTI-03



Refer to last page (Foldout page).

(M1), (E1)
(M10)

Trouble Diagnoses

SYMPTOM CHART

NAEL0115

NAEL0115S01

NOTE:

- Always check remote controller battery before replacing remote controller.
- The panic alarm operation of multi-remote control system does not activate with the ignition key inserted in the ignition key cylinder.

Symptom	Diagnoses/service procedure	Reference page (EL-)
All function of multi-remote control system do not operate.	1. Remote controller battery check	230
	2. Power supply and ground circuit for control unit check	230
	3. Replace remote controller. Refer to CONSULT REMOTE CONTROLLER ID SET UP PROCEDURE or ID Code Entry Procedure (Without CONSULT).	240 or 242
The new ID of remote controller cannot be entered.	1. Remote controller battery check	230
	2. Key switch (insert) check	234
	3. Door switch check	232
	4. Door lock/unlock switch LH check	235
	5. Power supply and ground circuit for control unit check	230
	6. Replace remote controller. Refer to CONSULT REMOTE CONTROLLER ID SET UP PROCEDURE or ID Code Entry Procedure (Without CONSULT).	240 or 242
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system. Refer to EL-210.)	1. Replace remote controller. Refer to CONSULT REMOTE CONTROLLER ID SET UP PROCEDURE or ID Code Entry Procedure (Without CONSULT).	240 or 242
Hazard and horn reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Hazard reminder check	237
	2. Horn reminder check* *: Horn chirp can be activated or deactivated. First check the horn chirp setting. Refer to "System Description", EL-222.	238
	3. Door switch check	232
	4. Replace remote controller. Refer to CONSULT REMOTE CONTROLLER ID SET UP PROCEDURE or ID Code Entry Procedure (Without CONSULT).	240 or 242
Interior lamp operation does not activate properly.	1. Interior room lamp operation check	239
	2. Door switch check	232
	3. Front LH door unlock sensor check	236
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Theft warning operation check. Refer to "PRELIMINARY CHECK" in "THEFT WARNING SYSTEM".	256
	2. Key switch (insert) check	234
	3. Replace remote controller. Refer to CONSULT REMOTE CONTROLLER ID SET UP PROCEDURE or ID Code Entry Procedure (Without CONSULT).	240 or 242

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MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

REMOTE CONTROLLER BATTERY CHECK

=NAEL0115S02

1	CHECK REMOTE CONTROLLER BATTERY	
<p>Remove battery (refer to EL-243) and measure voltage across battery positive and negative terminals, (+) and (-).</p> <p>Voltage [V]: 2.5 - 3.0</p> <p>NOTE: Remote controller does not function if battery is not set correctly.</p>		
SEL277V		
OK or NG		
OK	▶	Check remote controller battery terminals for corrosion or damage.
NG	▶	Replace battery.

POWER SUPPLY AND GROUND CIRCUIT CHECK

NAEL0115S04

1	CHECK MAIN POWER SUPPLY CIRCUIT FOR CONTROL UNIT	
<p>1. Disconnect connector from control unit. 2. Check voltage between control unit terminal 10 or 11 and ground.</p>		
SEL156W		
Does battery voltage exist?		
Yes	▶	GO TO 2.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 40A fusible link (letter f, located in fuse and fusible link box) ● 7.5A fuse [No. 24, located in fuse block (J/B)] ● M21 circuit breaker ● Harness for open or short between control unit and fuse

2	CHECK IGNITION SWITCH "ACC" CIRCUIT	<p>1. Disconnect control unit connector. 2. Check voltage between control unit terminal 21 and ground while ignition switch is "ACC".</p> <div style="text-align: center; margin: 10px 0;"> </div> <p style="text-align: right; margin-right: 20px;">SEL885VA</p> <p style="text-align: center; margin-top: 10px;">Does battery voltage exist?</p>	GI MA EM LC EC FE CL MT
Yes	▶	GO TO 3.	
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between control unit and fuse 	

3	CHECK GROUND CIRCUIT FOR CONTROL UNIT	<p>Check continuity between terminal 16 and ground.</p> <div style="text-align: center; margin: 10px 0;"> </div> <p style="text-align: right; margin-right: 20px;">SEL791VA</p> <p style="text-align: center; margin-top: 10px;">Does continuity exist?</p>	AT TF PD AX SU BR ST RS BT HA SC
Yes	▶	Power supply and ground circuits are OK.	
No	▶	Check ground harness.	

MULTI-REMOTE CONTROL SYSTEM

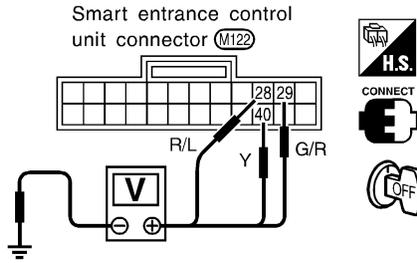
Trouble Diagnoses (Cont'd)

DOOR SWITCH CHECK

=NAEL0115S05

1 CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between control unit terminals 28, 29 or 40 and ground.



SEL886VA

	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door switch	29	ground	Open	0
			Closed	Approx. 5
Front RH door switch	40	ground	Open	0
			Closed	Approx. 5
Rear and back door switches	28	ground	Open	0
			Closed	Approx. 5

MTBL0273

Refer to wiring diagram in EL-227.

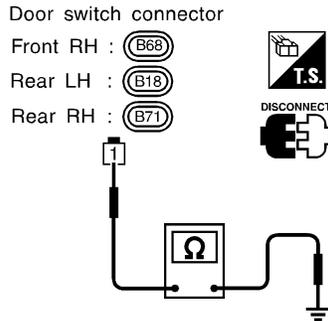
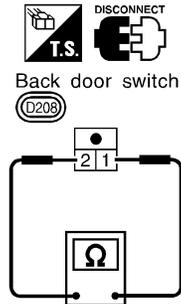
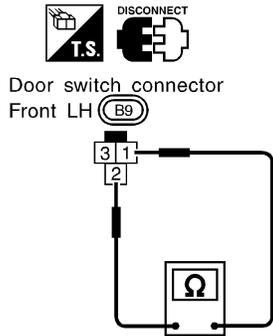
OK or NG

OK	▶	Door switch is OK.
NG	▶	GO TO 2.

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2 CHECK DOOR SWITCH

1. Disconnect door switch connector.
2. Check continuity between door switch terminals.



SEL066W

	Terminals	Condition	Continuity
Front LH door switch	1 - 2	Closed	No
		Open	Yes
Back door switch	2 - 1	Closed	No
		Open	Yes
Front RH and rear door switches	1 - ground	Closed	No
		Open	Yes

MTBL0274

OK or NG

OK



Check the following.

- Door switch ground circuit (Front, back door) or door switch ground condition
- Harness for open or short between control unit and door switch

NG



Replace door switch.

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

KEY SWITCH (INSERT) CHECK

=NAEL0115S07

1	CHECK KEY SWITCH INPUT SIGNAL	<p>Check voltage between control unit terminal 32 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL783VA</p> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> <p>Refer to wiring diagram in EL-226.</p> <p style="text-align: center;">OK or NG</p>
OK	▶	Key switch is OK.
NG	▶	GO TO 2.

2	CHECK KEY SWITCH (INSERT)	<p>Check continuity between terminals 1 and 2.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL784VA</p> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> <p style="text-align: center;">OK or NG</p>
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse [No. 24, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between control unit and key switch
NG	▶	Replace key switch.

DOOR LOCK/UNLOCK SWITCH LH CHECK

=NAEL0115S10

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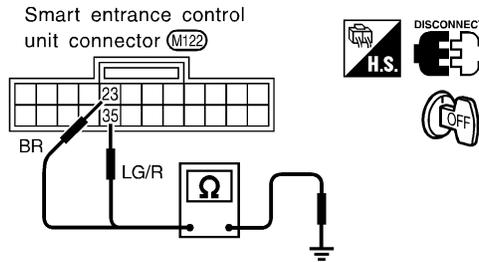
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1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

1. Disconnect control unit connector.
2. Check continuity between control unit terminal 23 or 35 and ground.



SEL875VC

Terminals	Door lock/unlock switch LH condition	Continuity
23 - ground	Lock	Yes
	N and Unlock	No
35 - ground	Unlock	Yes
	N and Lock	No

MTBL0278

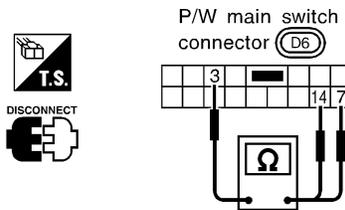
Refer to wiring diagram in EL-226.

OK or NG

- | | | |
|----|---|--------------------------------|
| OK | ▶ | Door lock/unlock switch is OK. |
| NG | ▶ | GO TO 2. |

2 CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch connector.
2. Check continuity between each door lock/unlock switch terminals.
 - Power window main switch (Door lock/unlock switch LH)



SEL067W

Condition	Terminals		
	3	7	14
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

MTBL0265

OK or NG

- | | | |
|----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OK | ▶ | Check the following. <ul style="list-style-type: none"> ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and control unit connector |
| NG | ▶ | Replace door lock/unlock switch. |

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

FRONT LH DOOR UNLOCK SENSOR CHECK

=NAEL0115S06

1	CHECK FRONT LH DOOR UNLOCK SENSOR INPUT SIGNAL																
<p>Check voltage between control unit terminal 36 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M122)</p> </div> <div style="text-align: center;"> <p>CONNECT</p> </div> </div> <div style="text-align: right; margin-top: 10px;">SEL074W</div> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front LH door</td> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table> <div style="text-align: right; margin-top: 10px;">MTBL0275</div> <p>Refer to wiring diagram in EL-227.</p> <p style="text-align: center;">OK or NG</p>					Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door	36	Ground	Locked	Approx. 5	Unlocked	0
	Terminals		Condition		Voltage [V]												
	(+)	(-)															
Front LH door	36	Ground	Locked	Approx. 5													
			Unlocked	0													
OK	▶	Door unlock sensor is OK.															
NG	▶	GO TO 2.															

2	CHECK FRONT LH DOOR UNLOCK SENSOR		
<p>1. Disconnect front LH door unlock sensor connector. 2. Check continuity between door unlock sensor terminals.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Front LH door lock actuator connector</p> </div> <div style="text-align: center;"> <p>T.S.</p> <p>DISCONNECT</p> </div> </div> <div style="margin-top: 20px;"> <p>Continuity:</p> <p>Condition: Locked</p> <p style="padding-left: 20px;">No</p> <p>Condition: Unlocked</p> <p style="padding-left: 20px;">Yes</p> </div> <div style="text-align: right; margin-top: 10px;">SEL247VD</div> <p style="text-align: center;">OK or NG</p>			
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door unlock sensor ground circuit ● Harness for open or short between control unit and door unlock sensor 	
NG	▶	Replace door unlock sensor.	

HAZARD REMINDER CHECK

=NAEL0115S08

1	CHECK HAZARD INDICATOR	
Check if hazard indicator flashes with hazard switch.		
Does hazard indicator operate?		
Yes	▶	GO TO 2.
No	▶	Check "hazard indicator" circuit.

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2	CHECK HAZARD REMINDER OPERATION	
1. Disconnect control unit connector. 2. Apply ground to control unit terminal 7.		
Refer to wiring diagram in EL-228.		
SEL890VA		
Does hazard indicator illuminate?		
Yes	▶	Replace smart entrance control unit.
No	▶	GO TO 3.

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3	CHECK MULTI-REMOTE CONTROL RELAY	
Check multi-remote control relay.		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Replace multi-remote control relay.

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4	CHECK POWER SUPPLY FOR MULTI-REMOTE CONTROL RELAY	
1. Disconnect multi-remote control relay connector. 2. Check voltage between terminal 1 and ground.		
SEL244V		
Does battery voltage exist?		
Yes	▶	GO TO 5.
No	▶	Check the following. <ul style="list-style-type: none"> ● 15A fuse [No. 20, located in fuse block (J/B)] ● Harness for open or short between multi-remote control relay and fuse

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MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

5	CHECK MULTI-REMOTE CONTROL RELAY CIRCUIT	
<ol style="list-style-type: none"> 1. Disconnect multi-remote control relay connector. 2. Check voltage between terminals 3 and 5. 3. Check voltage between terminals 6 and 7. 		
<p>Battery voltage should exist.</p> <p>OK or NG</p>		
OK	▶	Check harness for open or short between control unit and multi-remote control relay.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> • Harness for open or short between multi-remote control relay and fuse • Harness for open or short between multi-remote control relay and turn signal lamps

SEL245V

HORN REMINDER CHECK

NAEL0115S11

1	CHECK HORN	
Check if horn sounds with horn switch.		
Does horn operate?		
Yes	▶	GO TO 2.
No	▶	Check horn circuit.

2	CHECK HORN REMINDER OPERATION	
<ol style="list-style-type: none"> 1. Disconnect control unit connector. 2. Apply ground to control unit terminal 19. 		
<p>Refer to wiring diagram in EL-228.</p> <p>Does horn sound?</p>		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between control unit and horn relay.

SEL075W

INTERIOR ROOM LAMP OPERATION CHECK

NAEL0115S09

1	CHECK INTERIOR ROOM LAMP	
Check if the interior room lamp switch is in the "ON" position and the lamp illuminates.		
Does interior room lamp illuminate?		
Yes	▶	GO TO 2.
No	▶	Check the following. <ul style="list-style-type: none"> ● Harness for open or short between control unit and interior room lamp ● Interior room lamp

GI
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2	CHECK INTERIOR ROOM LAMP CIRCUIT	
When interior room lamp switch is "DOOR" position, check voltage across control unit terminal 8 and ground.		
Refer to wiring diagram in EL-226.		
SEL891VA		
Does battery voltage exist?		
Yes	▶	GO TO 3.
No	▶	Repair harness between control unit and interior room lamp.

EC
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3	CHECK CONTROL UNIT OUTPUT	
Push unlock button of remote controller with all doors closed, and check voltage across control unit terminal 8 and ground.		
Voltage (V): Unlock button is pushed. 0 (For approx. 30 seconds.) Unlock button is not pushed. Battery voltage		
OK or NG		
OK	▶	Check system again.
NG	▶	Replace smart entrance control unit.

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IDX

MULTI-REMOTE CONTROL SYSTEM

CONSULT

CONSULT

CONSULT REMOTE CONTROLLER ID SET UP PROCEDURE

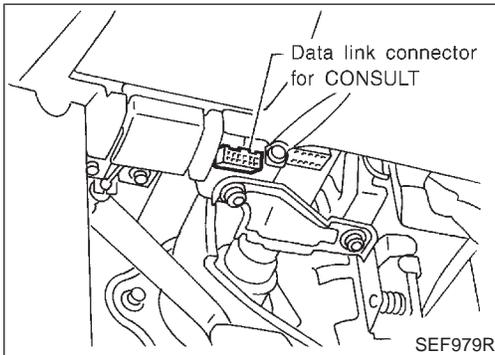
NAEL0169

NAEL0169S01

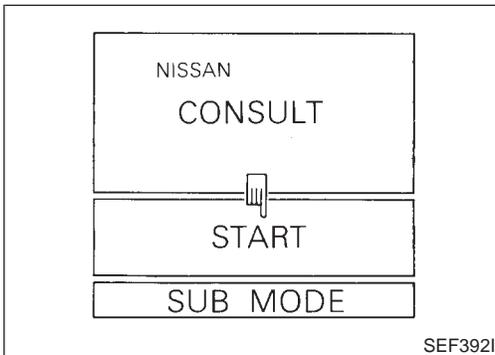
NOTE:

If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. When the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.

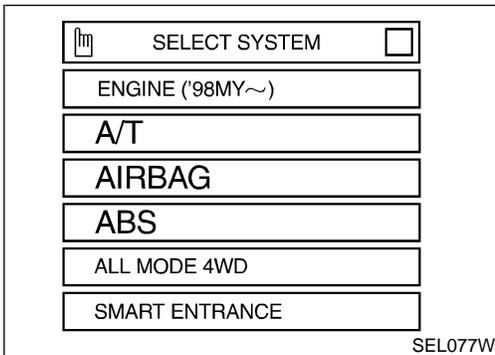
1. Turn ignition switch "OFF".
2. Connect "CONSULT" to the data link connector.



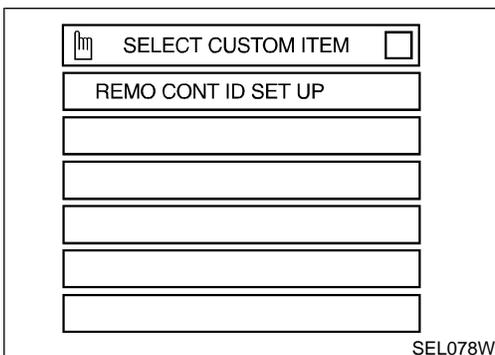
3. Turn ignition switch "ON".
4. Touch "START".

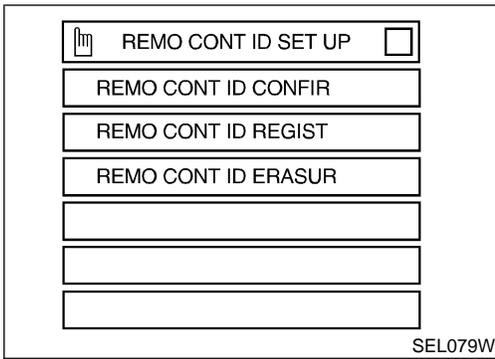


5. Touch "SMART ENTRANCE".



6. Touch "REMO CONT ID SET UP".





7. The items shown on the figure at left can be set up.
- “REMO CONT ID CONFIR”
Use this mode to confirm if remote controller ID code is registered or not.
 - “REMO CONT ID REGIST”
Use this mode to register a remote controller ID code.

NOTE:

Register the ID code when remote controller or smart entrance control unit is replaced, or when additional remote controller is required.

- “REMO CONT ID ERASUR”
Use this mode to erase a remote controller ID code.

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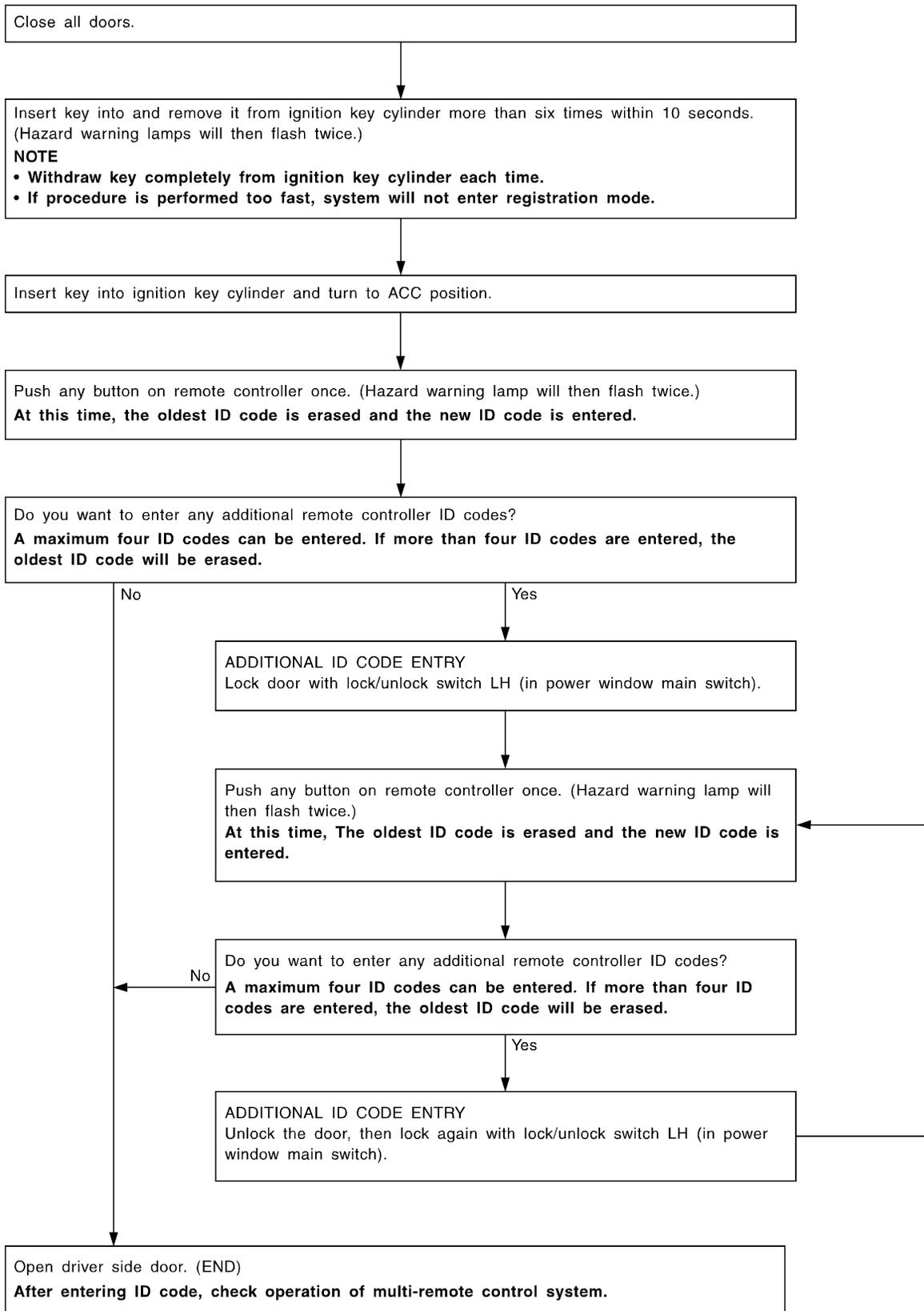
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MULTI-REMOTE CONTROL SYSTEM

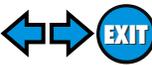
ID Code Entry Procedure (Without CONSULT)

ID Code Entry Procedure (Without CONSULT)

NAEL0117



MULTI-REMOTE CONTROL SYSTEM



ID Code Entry Procedure (Without CONSULT) (Cont'd)

NOTE:

- If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT. However, when the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered. To erase all ID codes in memory, register one ID code (remote controller) four times. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.
- When registering an additional remote controller, the existing ID codes in memory may or may not be erased. If four ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than four ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- If you need to activate more than two additional new remote controllers, repeat the procedure "Additional ID code entry" for each new remote controller.
- Entry of maximum four ID codes is allowed. When more than four ID codes are entered, the oldest ID code will be erased.
- Even if the same ID code that is already in the memory is input, the same ID code can be entered. The code is counted as an additional one code.

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Remote Controller Battery Replacement

NAEL0118

1. Open the lid using a coin.

2. Battery (Negative side)
Remove the battery.

3. Battery negative side facing upward
Insert the new battery.

4. Push
Close the lid securely. Push the remote controller button two or three times to check its operation.

NOTE:

- Be careful not to touch the circuit board or battery terminal.
- The remote controller is water-resistant. However, if it does get wet, immediately wipe it dry.

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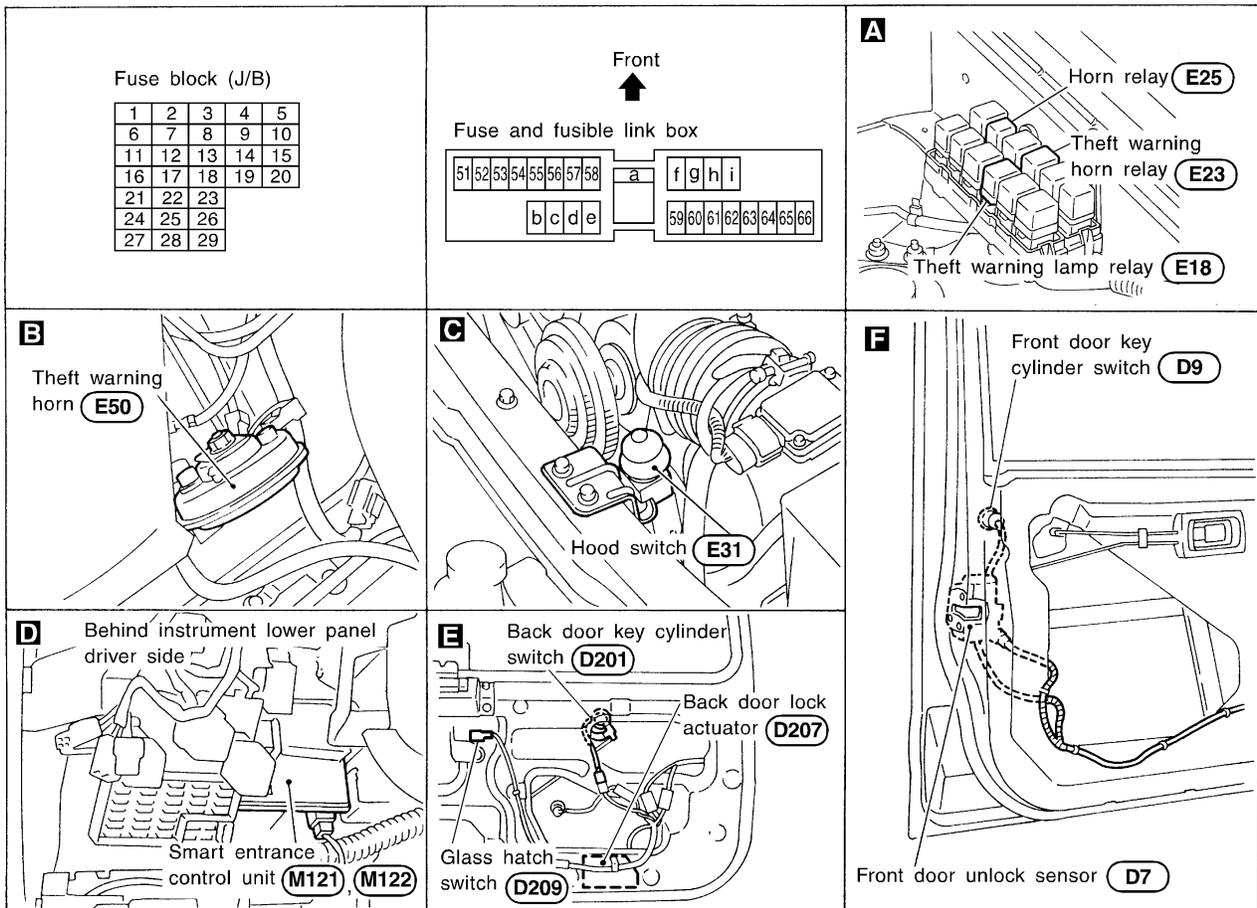
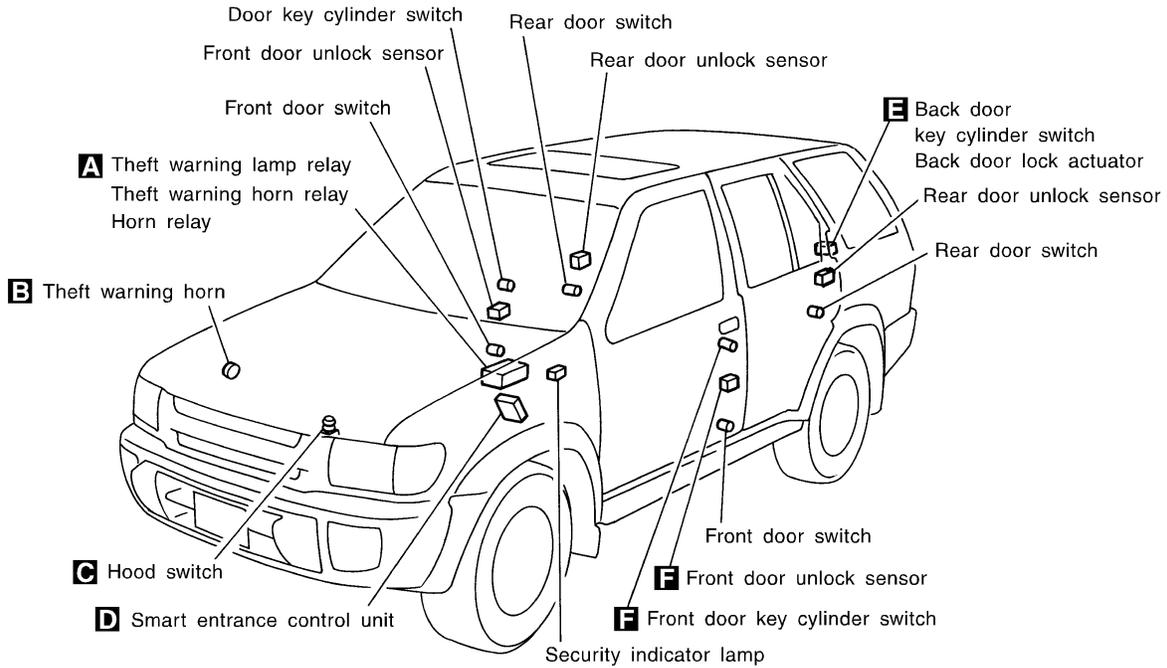
IDX

THEFT WARNING SYSTEM

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0119

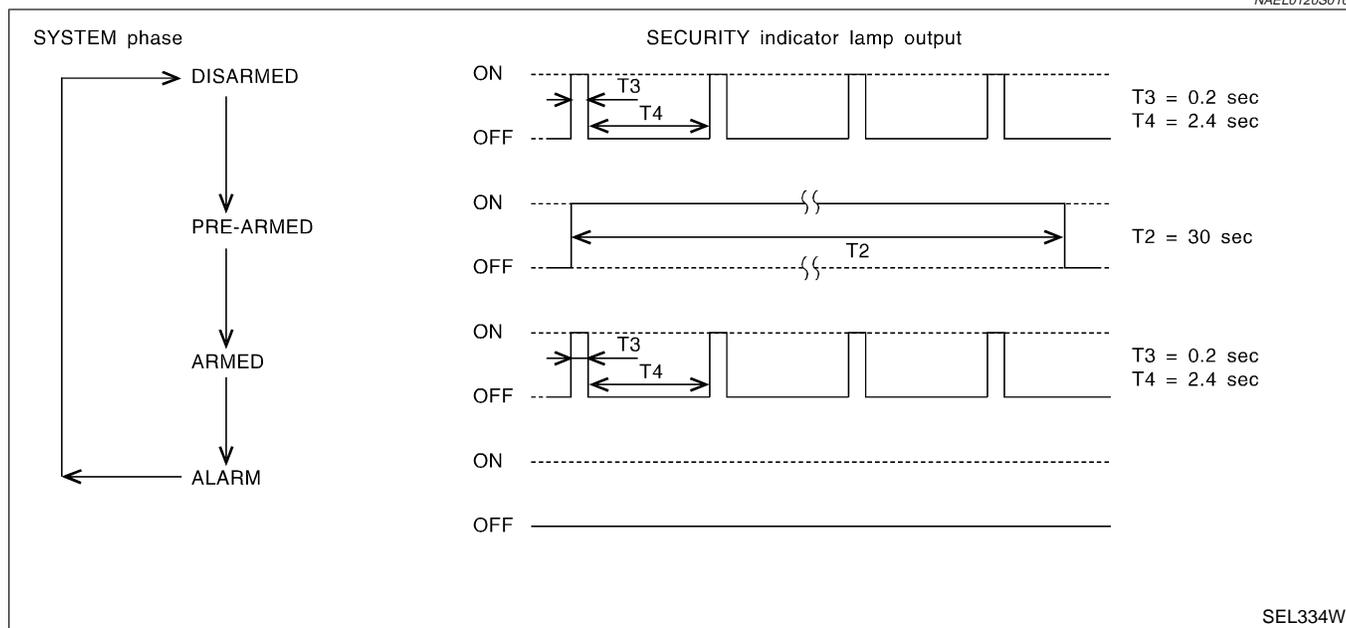


SEL080W

System Description

DESCRIPTION

1. Operation Flow



2. Setting The Theft Warning System

Initial condition

- 1) Close all doors.
- 2) Close hood and glass hatch.

Disarmed phase

When the theft warning system is in the disarmed phase, the security indicator lamp blinks every 2.6 seconds.

Pre-armed phase and armed phase

The theft warning system turns into the “pre-armed” phase when hood, glass hatch and all doors are closed and the doors are locked by key or multi-remote controller. (The security indicator lamp illuminates.)

After about 30 seconds, the system automatically shifts into the “armed” phase (the system is set). (The security indicator lamp blinks every 2.6 seconds.)

3. Canceling The Set Theft Warning System

When the following 1) or 2) operation is performed, the armed phase is canceled.

- 1) Unlock the doors with the key or multi-remote controller.
- 2) Open the glass hatch with the key.

4. Activating The Alarm Operation of The Theft Warning System

Make sure the system is in the armed phase. (The security indicator lamp blinks every 2.6 seconds.)

When any of the following operations are performed, the system sounds the horns and flashes the headlamps for about 2.5 minutes.

- 1) Engine hood, glass hatch or any door is opened before unlocking door with key or multi-remote controller.
- 2) Door is unlocked without using key or multi-remote controller.
- 3) Disconnecting and connecting the battery connector before canceling armed phase.

POWER SUPPLY AND GROUND

Power is supplied at all times

- through 7.5A fuse [No. 24, located in the fuse block (J/B)]
- to security indicator lamp terminal 1.

Power is supplied at all times

- through 40A fusible link (letter f, located in the fuse and fusible link box)
- to smart entrance control unit terminal 11.

THEFT WARNING SYSTEM

System Description (Cont'd)

With the ignition switch in the ON or START position, power is supplied

- through 7.5A fuse [No. 11, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to smart entrance control unit terminal 21.

Ground is supplied

- to smart entrance control unit terminal 16
- through body grounds M77 and M111.

INITIAL CONDITION TO ACTIVATE THE SYSTEM

NAEL0120S02

The operation of the theft warning system is controlled by the doors, hood and glass hatch.

To activate the theft warning system, the smart entrance control unit must receive signals indicating the doors, hood and glass hatch are closed and the doors are locked.

When a door is open, smart entrance control unit terminal 28, 29 or 40 receives a ground signal from each door switch.

When a door is unlocked, smart entrance control unit terminal 26, 36 or 37 receives a ground signal from terminal 4 of each door unlock sensor or terminal 3 of back door unlock sensor.

When the hood is open, smart entrance control unit terminal 27 receives a ground signal

- from terminal 1 of the hood switch
- through body grounds E13 and E41.

When the glass hatch is open, smart entrance control unit terminal 38 receives a ground signal

- from terminal 1 of the glass hatch switch
- through body grounds D210, B11 and B22.

When the doors are locked with key or multi-remote controller and none of the described conditions exist, the theft warning system will automatically shift to armed mode.

THEFT WARNING SYSTEM ACTIVATION (WITH KEY OR REMOTE CONTROLLER USED TO LOCK DOORS)

NAEL0120S03

If the key is used to lock doors, terminal 41 receives a ground signal

- from terminal 3 of the key cylinder switch LH
- from terminal 1 of the door key cylinder switch RH
- through body grounds M77 and M111 or M4 and M66
- from terminal 1 of the back door key cylinder switch
- through body grounds B11, B22 and D210.

If this signal or lock signal from remote controller is received by the smart entrance control unit, the theft warning system will activate automatically.

Once the theft warning system has been activated, smart entrance control unit terminal 31 supplies ground to terminal 2 of the security indicator lamp.

The security lamp will illuminate for approximately 30 seconds and then blink.

Now the theft warning system is in armed phase.

THEFT WARNING SYSTEM ALARM OPERATION

NAEL0120S04

The theft warning system is triggered by

- opening a door
- opening the hood or the glass hatch
- unlocking door without using the key or multi-remote controller.

Once the theft warning system is in armed phase, if the smart entrance control unit receives a ground signal at terminal 26, 36, 37 (door unlock sensor), 28, 29, 40 (door switch), 38 (glass hatch switch) or 27 (hood switch), the theft warning system will be triggered. The headlamps flash and the horn sounds intermittently.

Power is supplied at all times

- through 7.5A fuse (No. 52, located in fuse and fusible link box)
- to theft warning lamp relay terminal 1 and
- to horn relay terminal 1.

When the theft warning system is triggered, ground is supplied intermittently

- from terminal 4 of the smart entrance control unit

- to theft warning lamp relay terminal 2 and
- to horn relay terminal 2.

The headlamps flash and the horn sounds intermittently.

The alarm automatically turns off after 2 or 3 minutes but will reactivate if the vehicle is tampered with again.

THEFT WARNING SYSTEM DEACTIVATION

To deactivate the theft warning system, a door, the back door or the glass hatch must be unlocked with the key or remote controller. NAELO120S05

When the key is used to unlock the door, smart entrance control unit terminal 30 receives a ground signal

- from terminal 1 of the LH key cylinder switch
- from terminal 3 of the RH key cylinder switch
- from terminal 2 of the back door key cylinder switch.

When the key is used to open the glass hatch, smart entrance control unit terminal 42 receives a ground signal from terminal 3 of the back door key cylinder switch.

When the smart entrance control unit receives either one of these signals or unlock signal from remote controller, the theft warning system is deactivated. (Disarmed phase)

PANIC ALARM OPERATION

Multi-remote control system may or may not operate theft warning system (horn and headlamps) as required. When the multi-remote control system is triggered, ground is supplied intermittently. NAELO120S06

- from smart entrance control unit terminal 4
- to theft warning lamp relay terminal 2 and
- to horn relay terminal 2.

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 30 seconds or when smart entrance control unit receives any signal from multi-remote controller.

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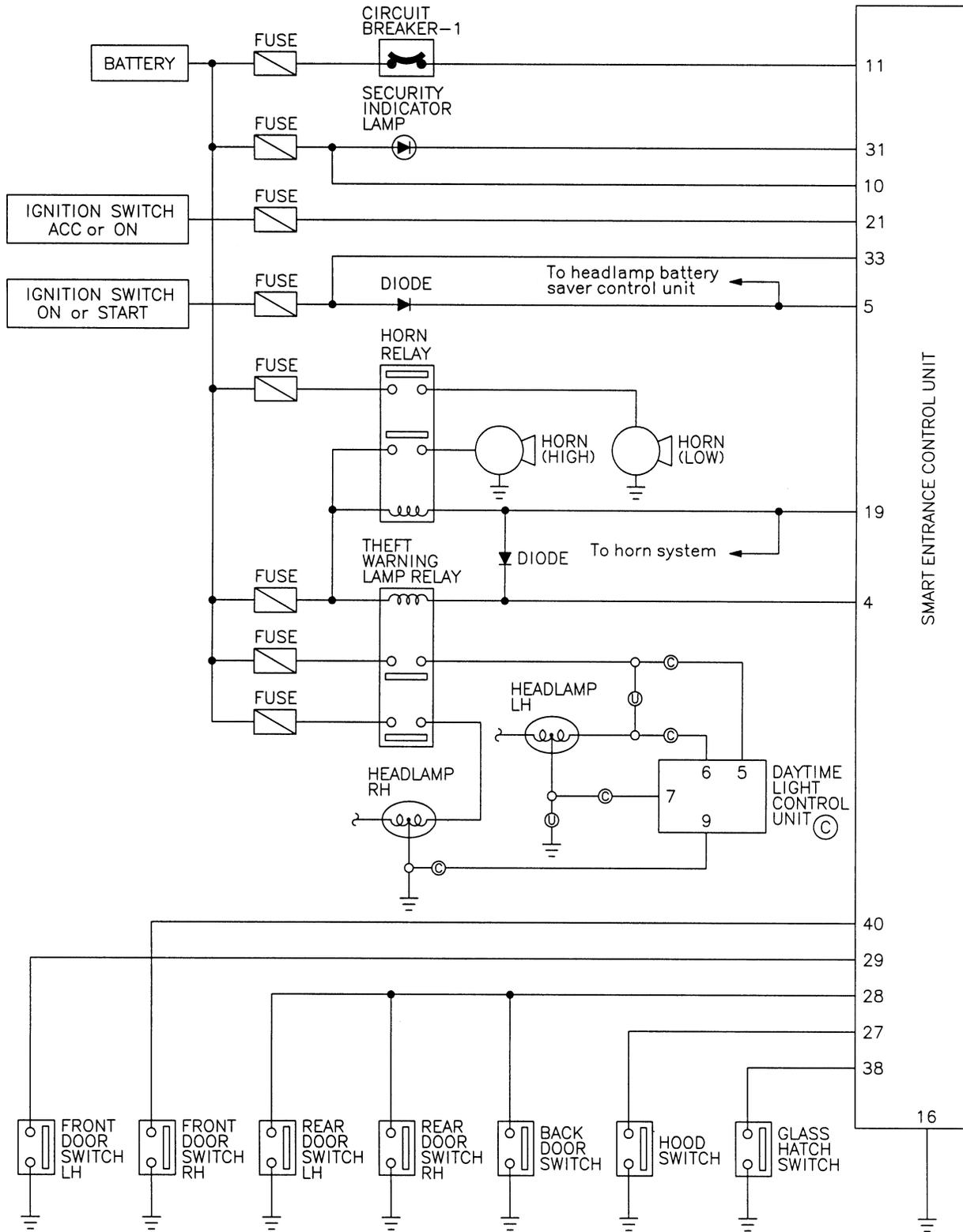
IDX

THEFT WARNING SYSTEM

Schematic

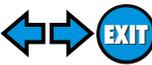
Schematic

NAEL0121



MEL936K

THEFT WARNING SYSTEM



Schematic (Cont'd)

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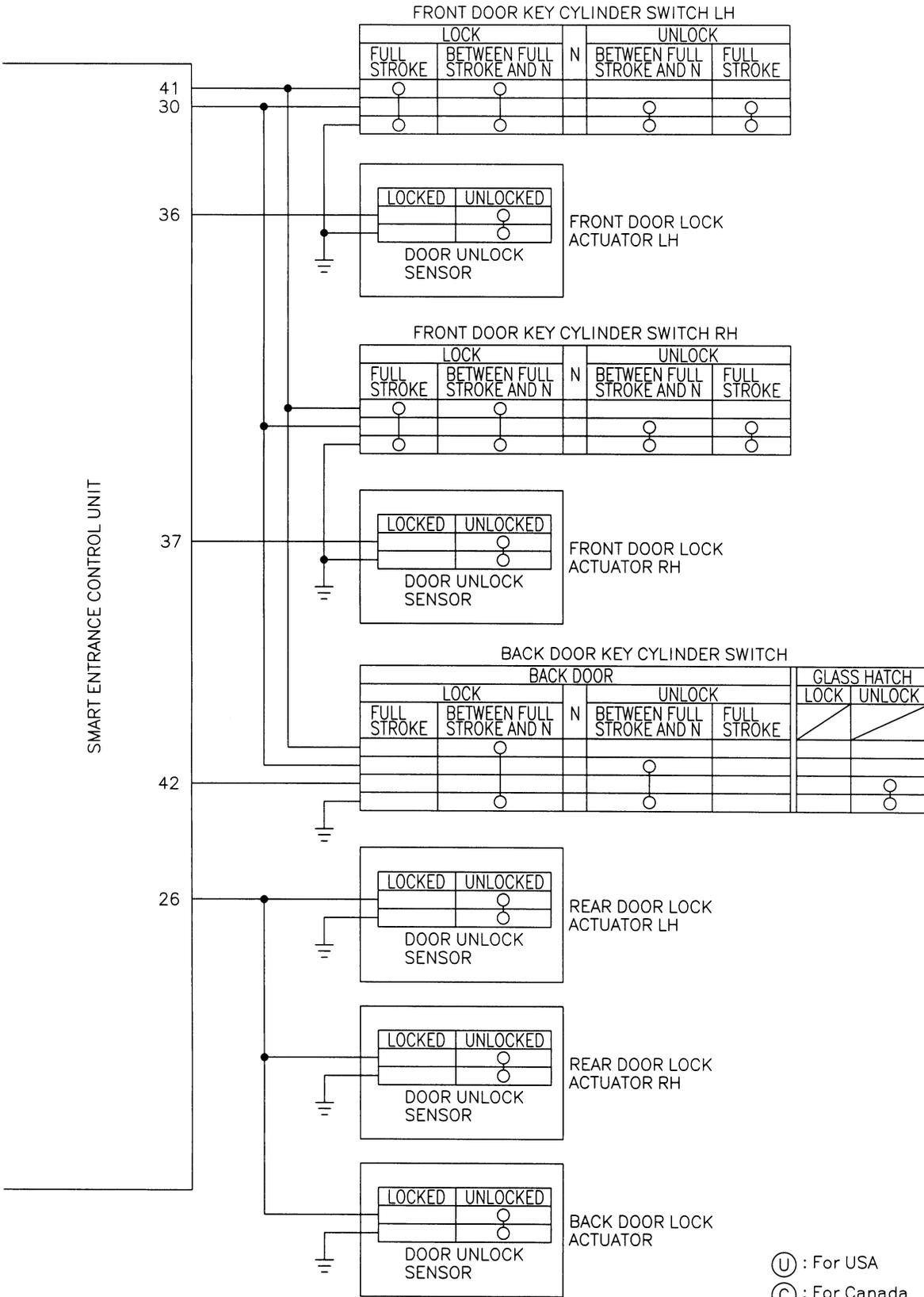
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THEFT WARNING SYSTEM

Wiring Diagram — THEFT —

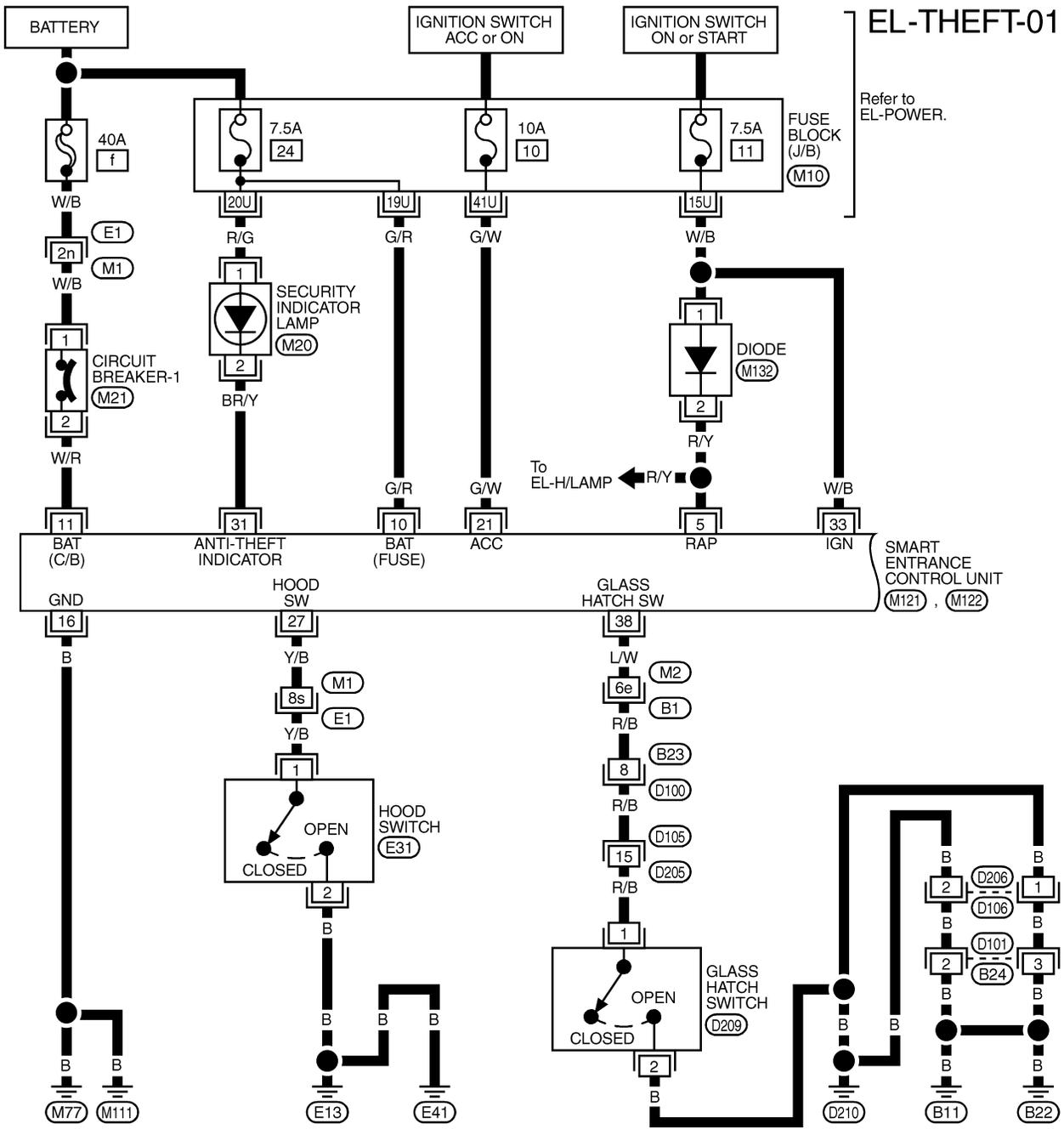
Wiring Diagram — THEFT —

NAEL0122

NAEL0122S01

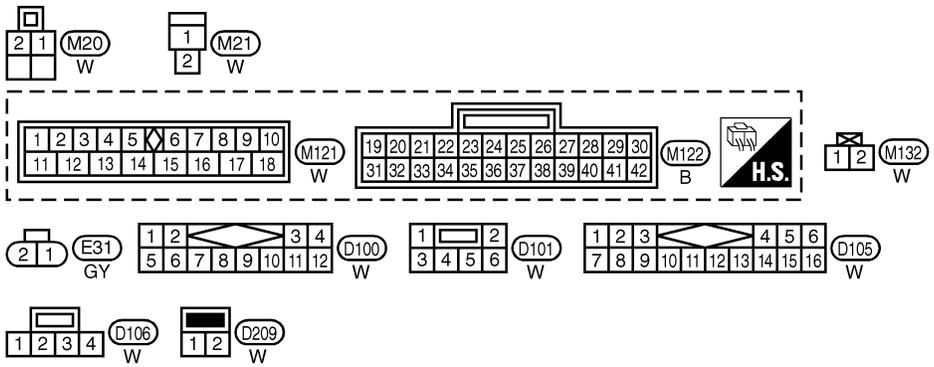
FIG. 1

EL-THEFT-01



Refer to EL-POWER.

SMART ENTRANCE CONTROL UNIT (M121), (M122)



Refer to last page (Foldout page).

- (M1), (E1)
- (M2), (B1)
- (M10)

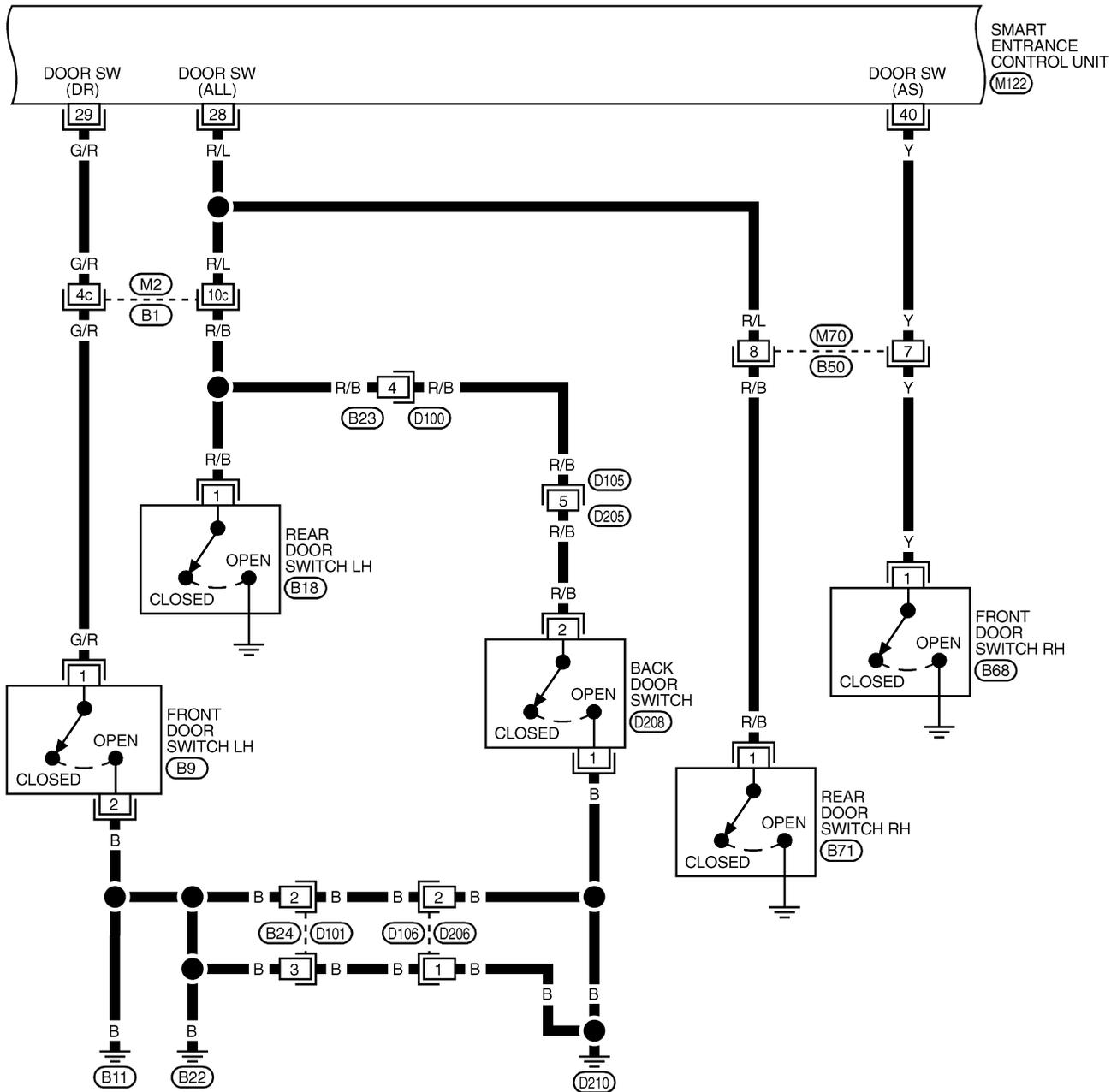
THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

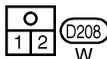
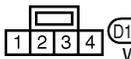
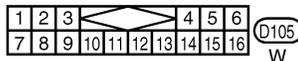
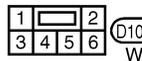
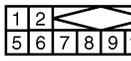
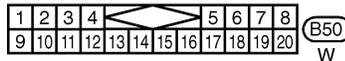
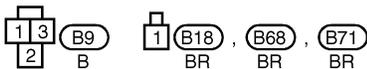
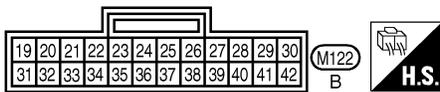
FIG. 2

NAEL0122S02

EL-THEFT-02



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Refer to last page (Foldout page).

M2, B1

MEL995J

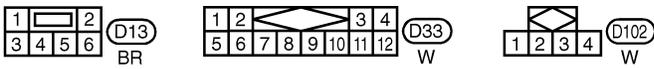
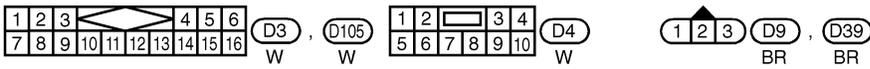
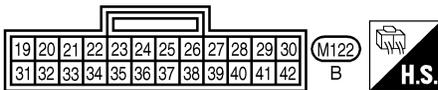
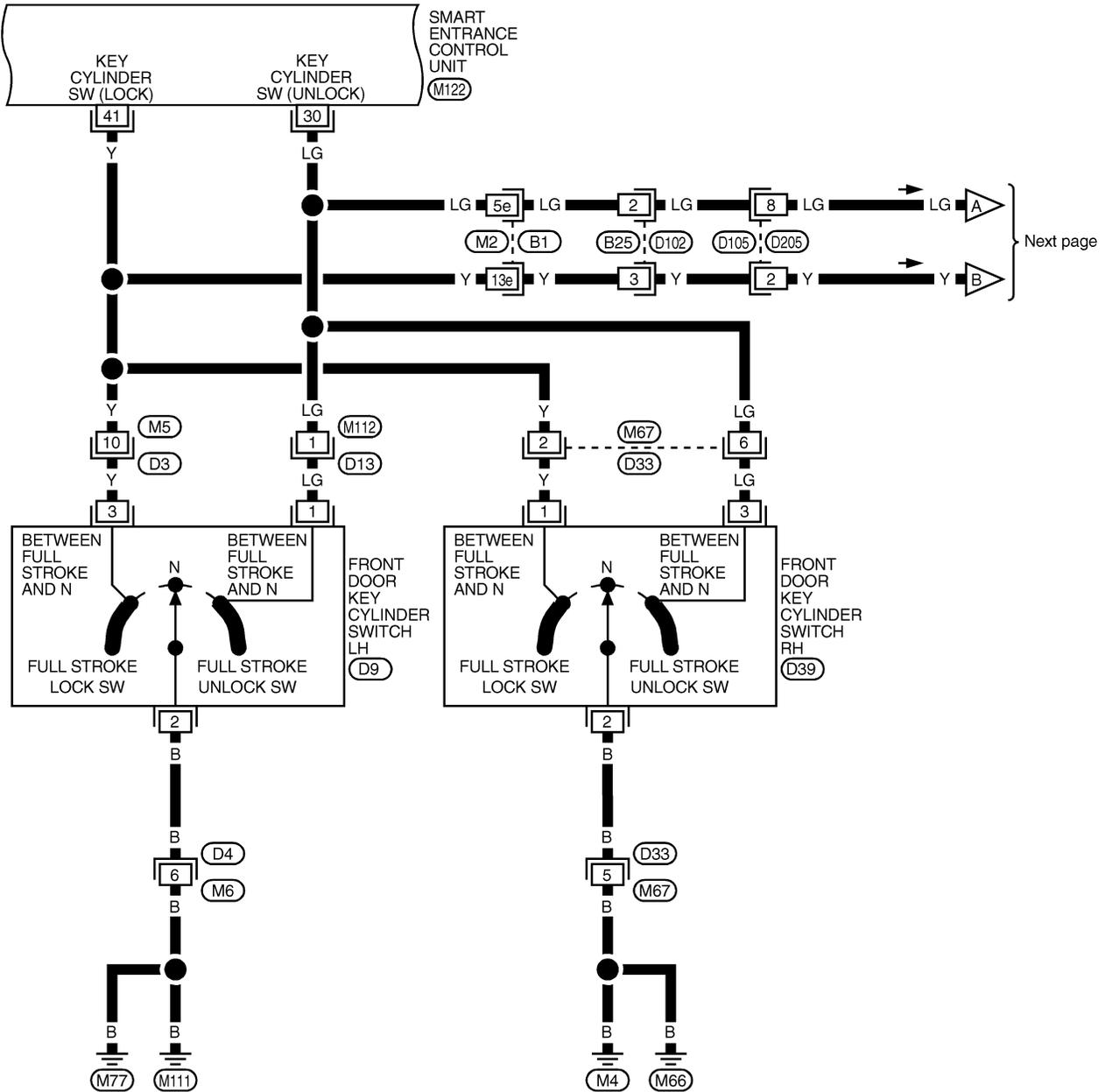
THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 4

NAEL0122S04

EL-THEFT-04



Refer to last page (Foldout page).

M2, B1

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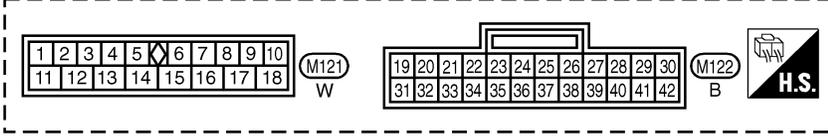
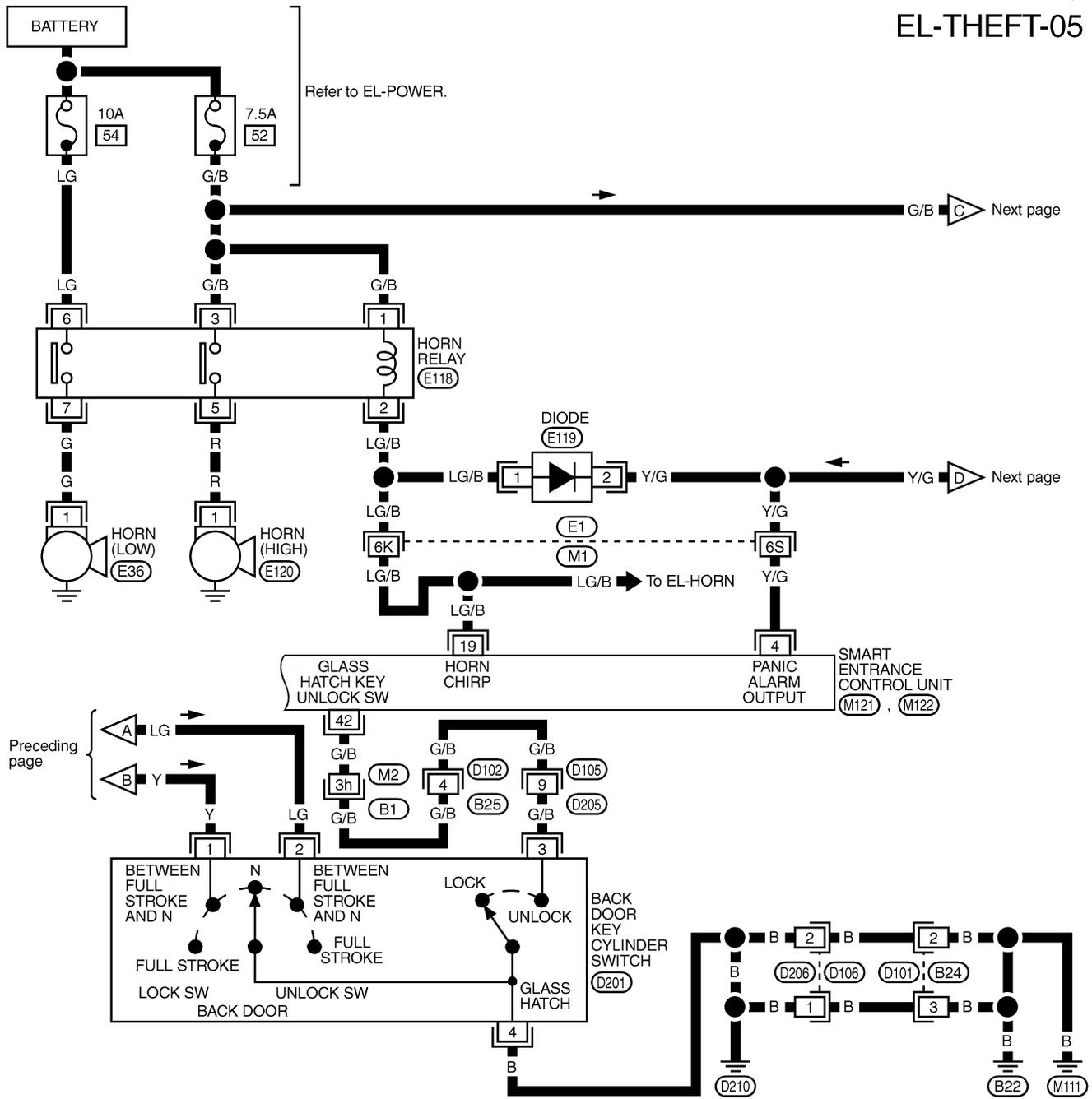
THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 5

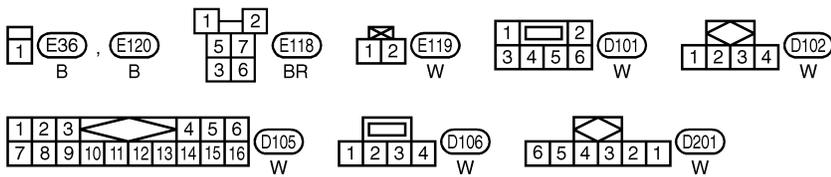
NAEL0122S05

EL-THEFT-05



Refer to last page (Foldout page).

- (M1), (E1)
- (M2), (B1)



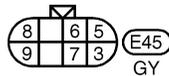
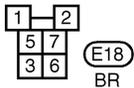
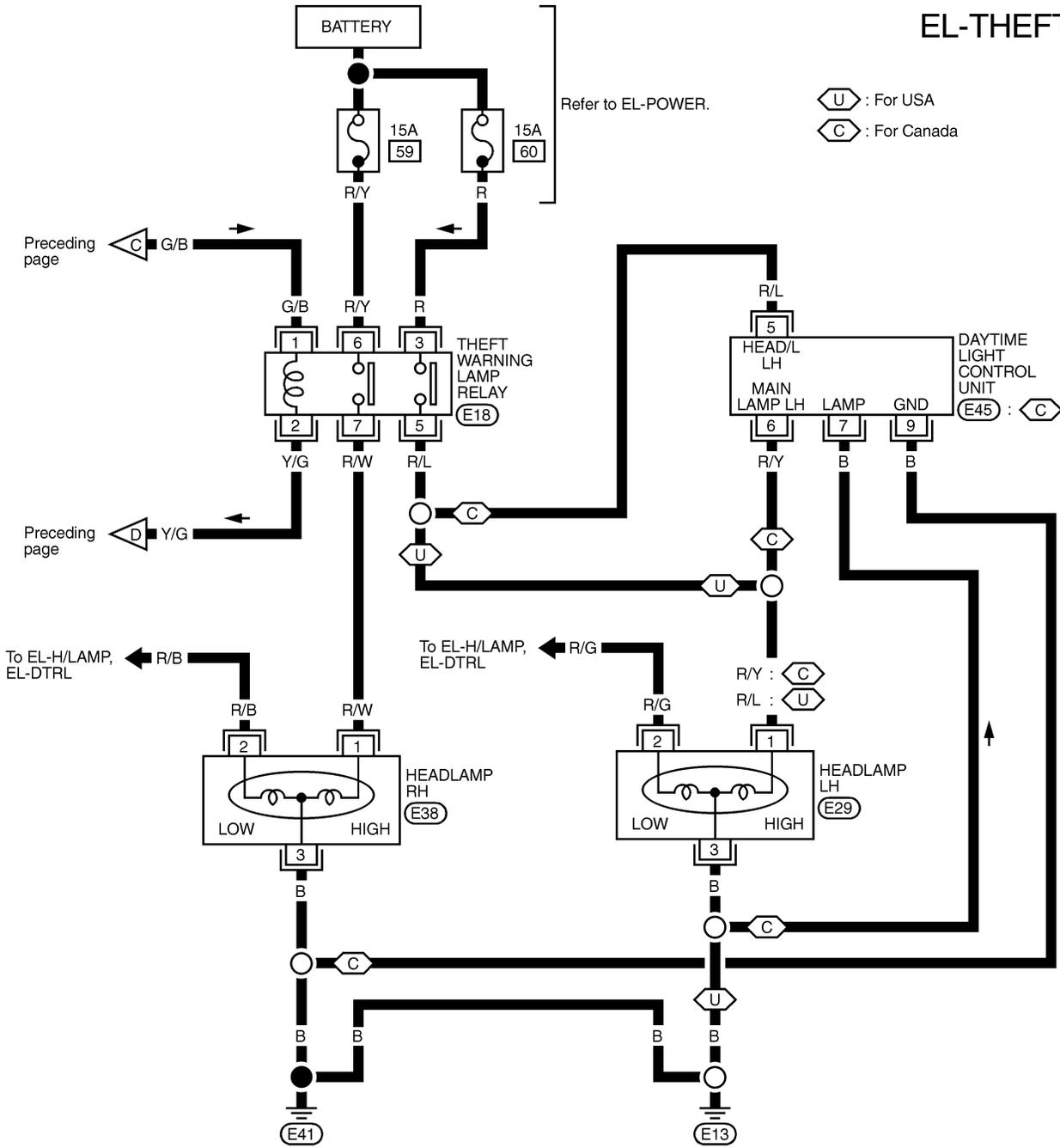
THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 6

NAEL0122S06

EL-THEFT-06



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THEFT WARNING SYSTEM

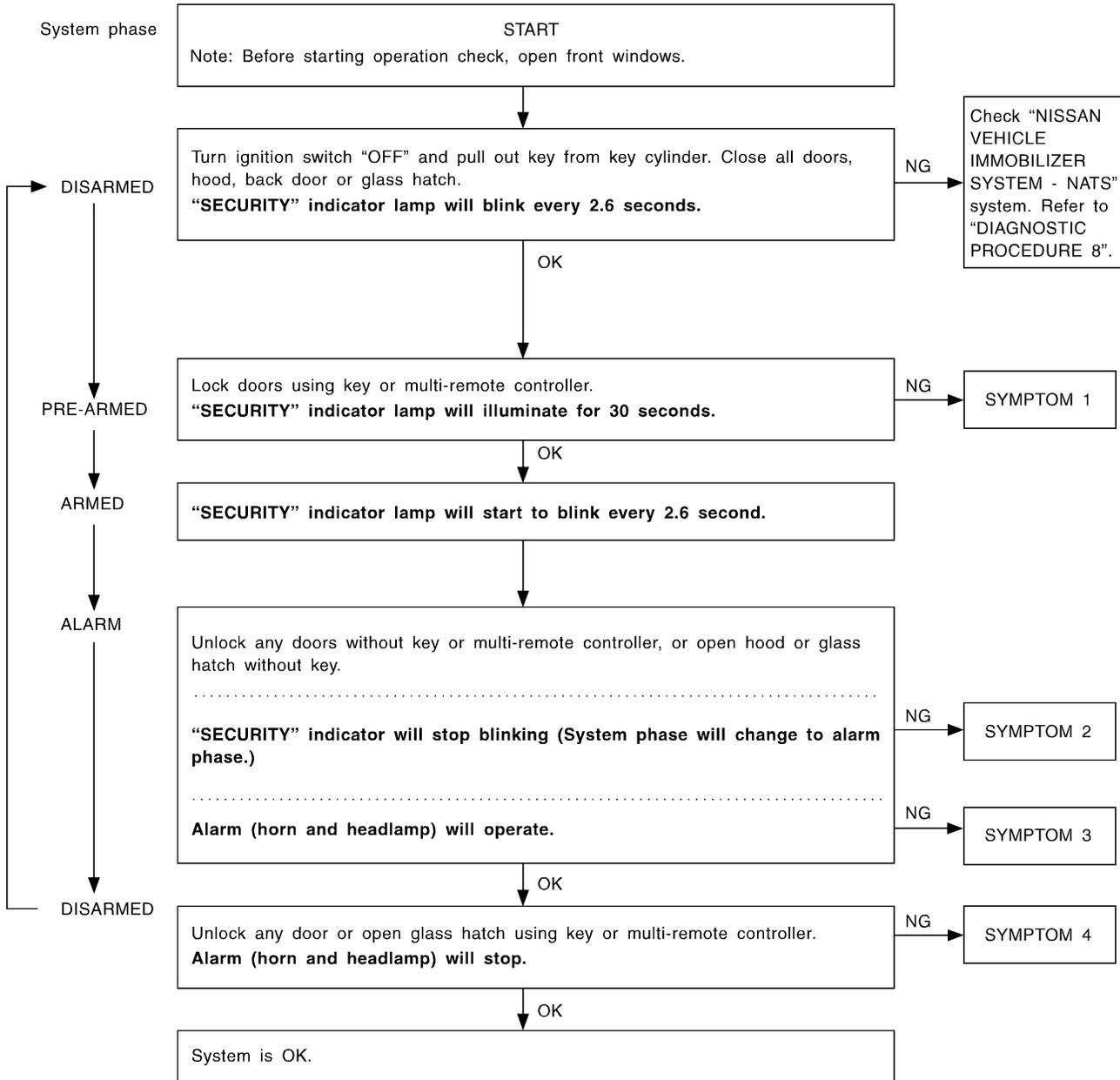
Trouble Diagnoses

Trouble Diagnoses PRELIMINARY CHECK

NAEL0123

NAEL0123S01

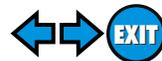
The system operation is canceled by turning ignition switch to "ACC" at any step between START and ARMED in the following flow chart.



SEL733WA

After performing preliminary check, go to symptom chart in next page.

THEFT WARNING SYSTEM



Trouble Diagnoses (Cont'd)

SYMPTOM CHART

NAEL0123S02

REFERENCE PAGE (EL-)	256	258	259	263	264	266	268	270	271	229
SYMPTOM	PRELIMINARY CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR, HOOD AND GLASS HATCH SWITCH CHECK	SECURITY INDICATOR LAMP CHECK	DOOR UNLOCK SENSOR CHECK	DOOR KEY CYLINDER SWITCH CHECK	BACK DOOR KEY CYLINDER SWITCH CHECK	THEFT WARNING HORN ALARM CHECK	THEFT WARNING HEADLAMP ALARM CHECK	Check "MULTI-REMOTE CONTROL" system.
1	Theft warning indicator does not illuminate for 30 seconds.	X	X	X	X					
	Theft warning system cannot be set by ...									
	All items	X	X	X		X				
	Door outside key	X					X			
2	Back door key	X					X			
	Multi-remote control	X								X
	*1 Theft warning system does not alarm when ...									
Any door is opened.	X		X							
Any door is unlocked without using key or multi-remote controller	X				X					
3	Theft warning alarm does not activate.									
	All function	X		X		X				
	Horn alarm	X						X		
Headlamp alarm	X							X		
4	Theft warning system cannot be canceled by ...									
	Door outside key	X				X				
	Back door key	X					X			
Multi-remote control	X								X	

X : Applicable

*1: Make sure the system is in the armed phase.

Before starting trouble diagnoses above, perform preliminary check, EL-256.

Symptom numbers in the symptom chart correspond with those of preliminary check.

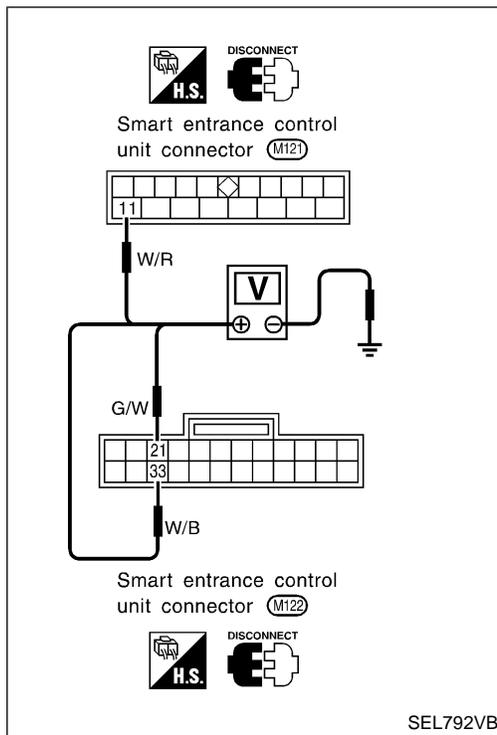
GI
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THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)



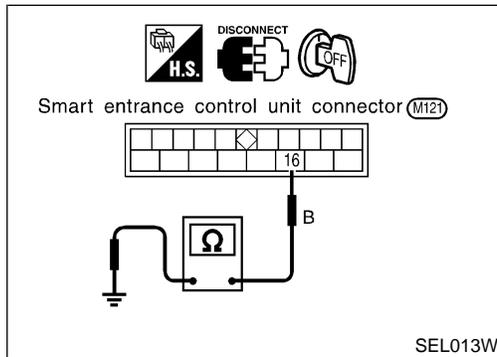
POWER SUPPLY AND GROUND CIRCUIT CHECK

NAEL0123S03

Power Supply Circuit Check

NAEL0123S0301

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
11	Ground	Battery voltage	Battery voltage	Battery voltage
21	Ground	0V	Battery voltage	Battery voltage
33	Ground	0V	0V	Battery voltage

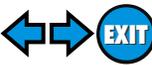


Ground Circuit Check

NAEL0123S0302

Terminals	Continuity
16 - Ground	Yes

THEFT WARNING SYSTEM



Trouble Diagnoses (Cont'd)

DOOR, HOOD AND GLASS HATCH SWITCH CHECK

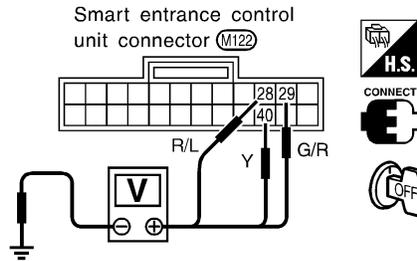
=NAEL0123S04

Door Switch Check

NAEL0123S0401

1 CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between control unit terminals 28, 29 or 40 and ground.



SEL886VA

	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door switch	29	ground	Open	0
			Closed	Approx. 5
Front RH door switch	40	ground	Open	0
			Closed	Approx. 5
Rear and back door switches	28	ground	Open	0
			Closed	Approx. 5

MTBL0273

Refer to wiring diagram in EL-251.

OK or NG

OK	▶	Door switch is OK, and go to hood switch check.
NG	▶	GO TO 2.

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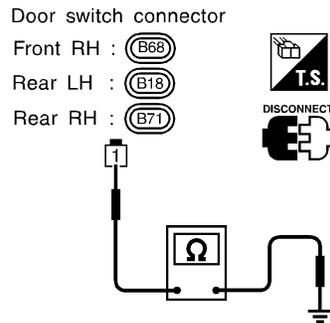
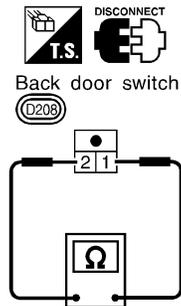
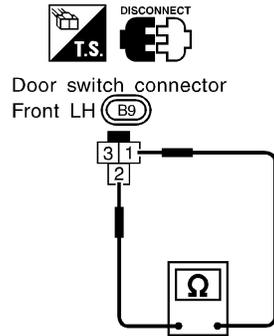
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THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

2 CHECK DOOR SWITCH

1. Disconnect door switch connector.
2. Check continuity between door switch terminals.



SEL066W

	Terminals	Condition	Continuity
Front LH door switch	1 - 2	Closed	No
		Open	Yes
Back door switch	2 - 1	Closed	No
		Open	Yes
Front RH and rear door switches	1 - ground	Closed	No
		Open	Yes

MTBL0274

OK or NG

OK



Check the following.

- Door switch ground circuit (Front LH, back door) or door switch ground condition
- Harness for open or short between control unit and door switch

NG



Replace door switch.

Hood Switch Check

=NAEL0123S0402

1	CHECK HOOD SWITCH FITTING CONDITION	
OK or NG		
OK	▶	GO TO 2.
NG	▶	Adjust installation of hood switch or hood.

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2	CHECK HOOD SWITCH INPUT SIGNAL	
Check voltage between control unit terminal 27 and ground.		
<p>Voltage [V]: Hood is open. 0 Hood is closed. Approx. 5</p> <p>Refer to wiring diagram in EL-250.</p>		
OK or NG		
OK	▶	Hood switch is OK, and go to glass hatch switch check.
NG	▶	GO TO 3.

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3	CHECK HOOD SWITCH	
1. Disconnect hood switch connector. 2. Check continuity between hood switch terminals 1 and 2.		
<p>Continuity: Condition: Pushed No Condition: Released Yes</p>		
OK or NG		
OK	▶	Check the following. <ul style="list-style-type: none"> ● Hood switch ground circuit ● Harness for open or short between control unit and hood switch
NG	▶	Replace hood switch.

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THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

Glass Hatch Switch Check

NAEL0123S0403

1	CHECK GLASS HATCH SWITCH INPUT SIGNAL	
<p>Check voltage between control unit terminal 38 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M122)</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL081W</p>		
<p>Voltage [V]: Glass hatch is open. Approx. 0 Glass hatch is closed. Approx. 12</p> <p>Refer to wiring diagram in EL-250.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Glass hatch switch is OK.
NG	▶	GO TO 2.

2	CHECK GLASS HATCH SWITCH	
<p>1. Disconnect glass hatch switch connector. 2. Check continuity between glass hatch switch terminals 1 and 2.</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center;"> </div> <div style="text-align: center; margin-left: 20px;"> <p>Glass hatch switch connector (C209)</p> </div> </div> <p style="text-align: right;">SEL609U</p>		
<p>Continuity: Condition: Closed No Condition: Open Yes</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Glass hatch switch ground circuit ● Harness for open or short between control unit and glass hatch switch
NG	▶	Replace glass hatch switch.

SECURITY INDICATOR LAMP CHECK

=NAEL0123S05

1	CHECK INDICATOR LAMP OUTPUT SIGNAL	
<p>1. Disconnect control unit connector. 2. Check voltage between control unit terminal 31 and ground.</p>		
SEL935VA		
Does battery voltage exist?		
Yes	▶	Security indicator lamp is OK.
No	▶	GO TO 2.

2	CHECK INDICATOR LAMP	
OK or NG		
OK	▶	GO TO 3.
NG	▶	Replace indicator lamp.

3	CHECK POWER SUPPLY CIRCUIT FOR INDICATOR LAMP	
<p>1. Disconnect security lamp connector. 2. Check voltage between indicator lamp terminal 1 and ground.</p>		
SEL082W		
Does battery voltage exist?		
Yes	▶	Check harness for open or short between security indicator lamp and control unit.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse [No. 24, located in fuse block (J/B)] ● Harness for open or short between security indicator lamp and fuse

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THEFT WARNING SYSTEM

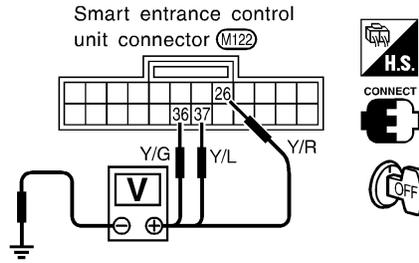
Trouble Diagnoses (Cont'd)

DOOR UNLOCK SENSOR CHECK

=NAEL0123S06

1 CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

Check voltage between control unit terminals 26, 36 or 37 and ground.



SEL937VA

	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door	36	Ground	Locked	Approx. 5
			Unlocked	0
Front RH door	37	Ground	Locked	Approx. 5
			Unlocked	0
Rear and back door	26	Ground	Locked	Approx. 5
			Unlocked	0

MTBL0276

Refer to wiring diagram in EL-252.

OK or NG

OK	▶	Door unlock sensor is OK.
NG	▶	GO TO 2.

2	CHECK DOOR UNLOCK SENSOR	<p>1. Disconnect door unlock sensor connector. 2. Check continuity between door unlock sensor terminals.</p> <p>Door lock actuator connectors Front LH : (D7) Rear LH : (D54) Front RH : (D37) Rear RH : (D74)</p> <p style="text-align: right;">SEL247V</p> <p>Back door lock actuator connector (D207)</p> <p style="text-align: right;">SEL352V</p> <p>Continuity: Condition: Locked No Condition: Unlocked Yes</p> <p style="text-align: center;">OK or NG</p>	GI MA EM LC EC FE CL MT AT TF PD AX SU BR ST RS BT HA SC
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> • Door unlock sensor ground circuit • Harness for open or short between control unit and door unlock sensor 	
NG	▶	Replace door unlock sensor.	

THEFT WARNING SYSTEM

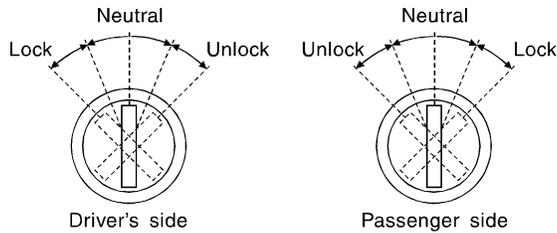
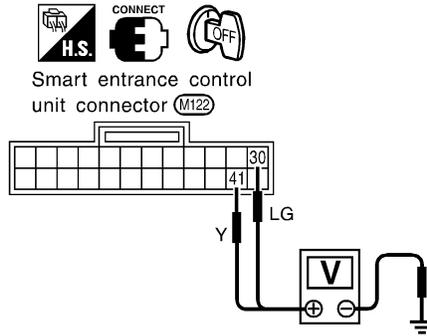
Trouble Diagnoses (Cont'd)

FRONT DOOR KEY CYLINDER SWITCH CHECK

=NAEL0123S07

1 CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

Check voltage between control unit terminals 30 or 41 and ground.



SEL069W

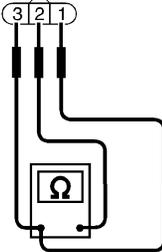
Terminals		Key position	Voltage [V]
(+)	(-)		
41	Ground	Neutral/Unlock	Approx. 5
		Lock	0
30	Ground	Neutral/Lock	Approx. 5
		Unlock	0

MTBL0268

Refer to wiring diagram in EL-253.

OK or NG

OK	▶	Door key cylinder switch is OK.
NG	▶	GO TO 2.

2	CHECK DOOR KEY CYLINDER SWITCH	<p>1. Disconnect door key cylinder switch connector. 2. Check continuity between door key cylinder switch terminals.</p> <div style="text-align: center;">  <p>Door key cylinder switch connector</p> <p>LH : (D9) RH : (D39)</p>  </div> <p>① : Door unlock switch terminal (LH) Door lock switch terminal (RH)</p> <p>② : Ground terminal</p> <p>③ : Door lock switch terminal (LH) Door unlock switch terminal (RH)</p> <div style="text-align: right; margin-top: 20px;">SEL070W</div> <table border="1" style="margin: 20px auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Terminals</th> <th style="text-align: center;">Key position</th> <th style="text-align: center;">Continuity</th> </tr> </thead> <tbody> <tr> <td>LH: 3 - 2</td> <td style="text-align: center;">Neutral/Unlock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>RH: 1 - 2</td> <td style="text-align: center;">Lock</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>LH: 1 - 2</td> <td style="text-align: center;">Neutral/Lock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>RH: 3 - 2</td> <td style="text-align: center;">Unlock</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table> <div style="text-align: right; margin-top: 20px;">MTBL0269</div> <p style="text-align: center; margin-top: 20px;">OK or NG</p>	Terminals	Key position	Continuity	LH: 3 - 2	Neutral/Unlock	No	RH: 1 - 2	Lock	Yes	LH: 1 - 2	Neutral/Lock	No	RH: 3 - 2	Unlock	Yes	GI MA EM LC EC FE CL MT AT TF PD AX SU BR ST RS BT HA SC EL IDX
Terminals	Key position	Continuity																
LH: 3 - 2	Neutral/Unlock	No																
RH: 1 - 2	Lock	Yes																
LH: 1 - 2	Neutral/Lock	No																
RH: 3 - 2	Unlock	Yes																
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door key cylinder switch ground circuit ● Harness for open or short between control unit and door key cylinder switch 																
NG	▶	Replace door key cylinder switch.																

THEFT WARNING SYSTEM

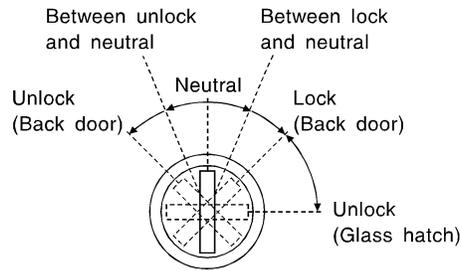
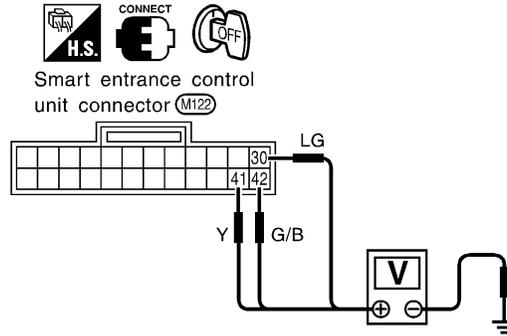
Trouble Diagnoses (Cont'd)

BACK DOOR KEY CYLINDER SWITCH CHECK

=NAEL0123S08

1 CHECK BACK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

Check voltage between control unit terminals 30, 41 or 42 and ground.



SEL083W

	Terminals		Key position	Voltage [V]
	(+)	(-)		
Back door	41	Ground	Between neutral and lock	0
			Other positions	Approx. 5
	30	Ground	Between neutral and unlock	0
			Other positions	Approx. 5
Glass hatch	42	Ground	Unlock (Glass hatch)	0
			Other positions	Approx. 5

MTBL0277

Refer to wiring diagram in EL-253.

OK or NG

OK	▶	Back door key cylinder switch is OK.
NG	▶	GO TO 2.

2	CHECK BACK DOOR KEY CYLINDER SWITCH																										
	<p>1. Disconnect back door key cylinder switch connector.</p> <p>2. Check continuity between back door key cylinder switch terminals.</p> <div style="text-align: center;"> <p>Back door key cylinder switch (D201)</p> </div> <div style="text-align: center;"> <p>Back door key cylinder switch (D201)</p> </div> <table border="1" style="margin: 20px auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Key position</th> <th colspan="4" style="text-align: center;">Terminals</th> </tr> <tr> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Between neutral and lock (Back door)</td> <td style="text-align: center;">○</td> <td></td> <td></td> <td style="text-align: center;">○</td> </tr> <tr> <td style="text-align: center;">Between neutral and unlock (Back door)</td> <td></td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> </tr> <tr> <td style="text-align: center;">Between lock (Back door) and unlock (glass hatch)</td> <td></td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> </tbody> </table>	Key position	Terminals				1	2	3	4	Between neutral and lock (Back door)	○			○	Between neutral and unlock (Back door)		○		○	Between lock (Back door) and unlock (glass hatch)			○	○	SEL616U	
Key position	Terminals																										
	1	2	3	4																							
Between neutral and lock (Back door)	○			○																							
Between neutral and unlock (Back door)		○		○																							
Between lock (Back door) and unlock (glass hatch)			○	○																							
	OK or NG																										
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Back door key cylinder switch ground circuit ● Harness for open or short between control unit and back door key cylinder switch 																									
NG	▶	Replace back door key cylinder switch.																									

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THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

THEFT WARNING HORN ALARM CHECK

=NAEL0123S09

1	CHECK THEFT WARNING HORN ALARM OPERATION	
<p>1. Disconnect control unit connector. 2. Apply ground to control unit terminal 4.</p> <div style="text-align: center;"> <p>Smart entrance control unit connector (M121)</p> </div> <p>Refer to wiring diagram in EL-254.</p> <p style="text-align: right;">SEL943VA</p>		
Does horn alarm activate?		
Yes	▶	Horn alarm is OK.
No	▶	GO TO 2.

2	CHECK HORN	
Check if horn sounds with horn switch.		
Does horn operate?		
Yes	▶	Check harness for open or short between horn relay and smart entrance control unit.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse (No. 52, located in the fuse and fusible link box) ● 10A fuse (No. 54, located in the fuse and fusible link box) ● Horn relay ● Horn relay circuit

THEFT WARNING HEADLAMP ALARM CHECK

=NAEL0123S10

1	CHECK THEFT WARNING HEADLAMP ALARM OPERATION	
<p>1. Disconnect control unit connector. 2. Apply ground to control unit terminal 4.</p> <div style="text-align: center;"> <p>Smart entrance control unit connector (M121)</p> </div> <p>Refer to wiring diagram in EL-254.</p> <p style="text-align: right;">SEL943VA</p>		
Does headlamp alarm activate?		
Yes	▶	Headlamp alarm is OK.
No	▶	GO TO 2.

2	CHECK HEADLAMP OPERATION	
Does headlamp come on when turning lighting switch "ON"?		
Yes	▶	GO TO 3.
No	▶	Check headlamp system. Refer to "HEADLAMP".

3	CHECK THEFT WARNING LAMP RELAY	
Check theft warning lamp relay.		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Replace theft warning lamp relay.

4	CHECK POWER SUPPLY FOR THEFT WARNING LAMP RELAY	
<p>1. Disconnect theft warning lamp relay connector. 2. Check voltage between terminal 1 and ground.</p> <div style="text-align: center;"> <p>Theft warning lamp relay connector (E18)</p> </div> <p>Refer to wiring diagram in EL-255.</p> <p style="text-align: right;">SEL757U</p>		
Does battery voltage exist?		
Yes	▶	GO TO 5.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 7.5A fuse (No. 52, located in the fuse and fusible link box) ● Harness for open or short between theft warning lamp relay and fuse

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THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

5	CHECK THEFT WARNING LAMP RELAY CIRCUIT	
	<p>1. Disconnect theft warning lamp relay connector. 2. Check voltage between terminals 3 and 5. 3. Check voltage between terminals 6 and 7.</p> <div style="text-align: center;"> <p>Thrift warning lamp relay connector (E18)</p> </div> <p style="text-align: right;">SEL758U</p>	
	Battery voltage should exist.	
	OK or NG	
OK	▶	Check harness for open or short between theft warning lamp relay and control unit.
NG	▶	Check the following. <ul style="list-style-type: none"> ● Harness for open or short between fuse and theft warning lamp relay ● Harness for open or short between theft warning lamp relay and headlamps

Description

NAEL0124

The following systems are controlled by the smart entrance control unit.

- Warning chime
- Rear window defogger and door mirror defogger timer
- Power door lock
- Multi-remote control system
- Theft warning system
- Interior lamp timer
- Electric sunroof and power window timer
- Headlamp battery saver
- Battery saver

For detailed description and wiring diagrams, refer to the relevant pages for the each system. The control unit receives data from the switches and sensors to control their corresponding system relays and actuators.

INPUT/OUTPUT

NAEL0124S01

System	Input	Output
Power door lock	Door lock and unlock switch LH and RH Key switch (Insert) Door switches Door key cylinder switches	Door lock actuator
Multi-remote control	Key switch (Insert) Ignition switch (ACC) Door switches Front door unlock sensor LH Door lock and unlock switch LH Remote controller signal	Horn relay Theft warning lamp relay Interior lamp Multi-remote control relay Door lock actuator
Warning chime	Key switch (Insert) Ignition switch (ON) Lighting switch (1st) Seat belt switch Front door switch LH	Warning chime (located in smart entrance control unit)
Rear window defogger and door mirror defogger timer	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay
Theft warning	Ignition switch (ACC, ON) Door switches Hood switch Glass hatch switch Door key cylinder switches (lock/unlock) Door unlock sensors	Horn relay Theft warning lamp relay Security indicator
Interior lamp timer	Door switches Front door unlock sensor LH Ignition switch (ON) Key switch (Insert)	Interior lamp
Electric sunroof and power window timer	Front door switches Ignition switch (ON)	Power window relay
Headlamp battery saver timer	Front door switches Ignition switch (ON)	Headlamp battery saver control unit
Battery saver	Ignition switch (ON) Door switches Driver's door unlock sensor Key switch (Insert)	Interior lamp Luggage room lamp Spot lamp Vanity mirror illumination lamp

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Description (Cont'd)

BATTERY SAVER

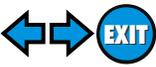
NAEL0124S02

The lamp turns off automatically when the interior lamp, luggage room lamp, spot lamp or/and vanity mirror illumination is illuminated with the ignition key in the OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in the ON position for more than 10 minutes.

After lamps turn off by the battery saver system, the lamps illuminate again when:

- driver's door is locked or unlocked,
- door is opened or closed,
- key is inserted in ignition key cylinder.

SMART ENTRANCE CONTROL UNIT



Description (Cont'd)

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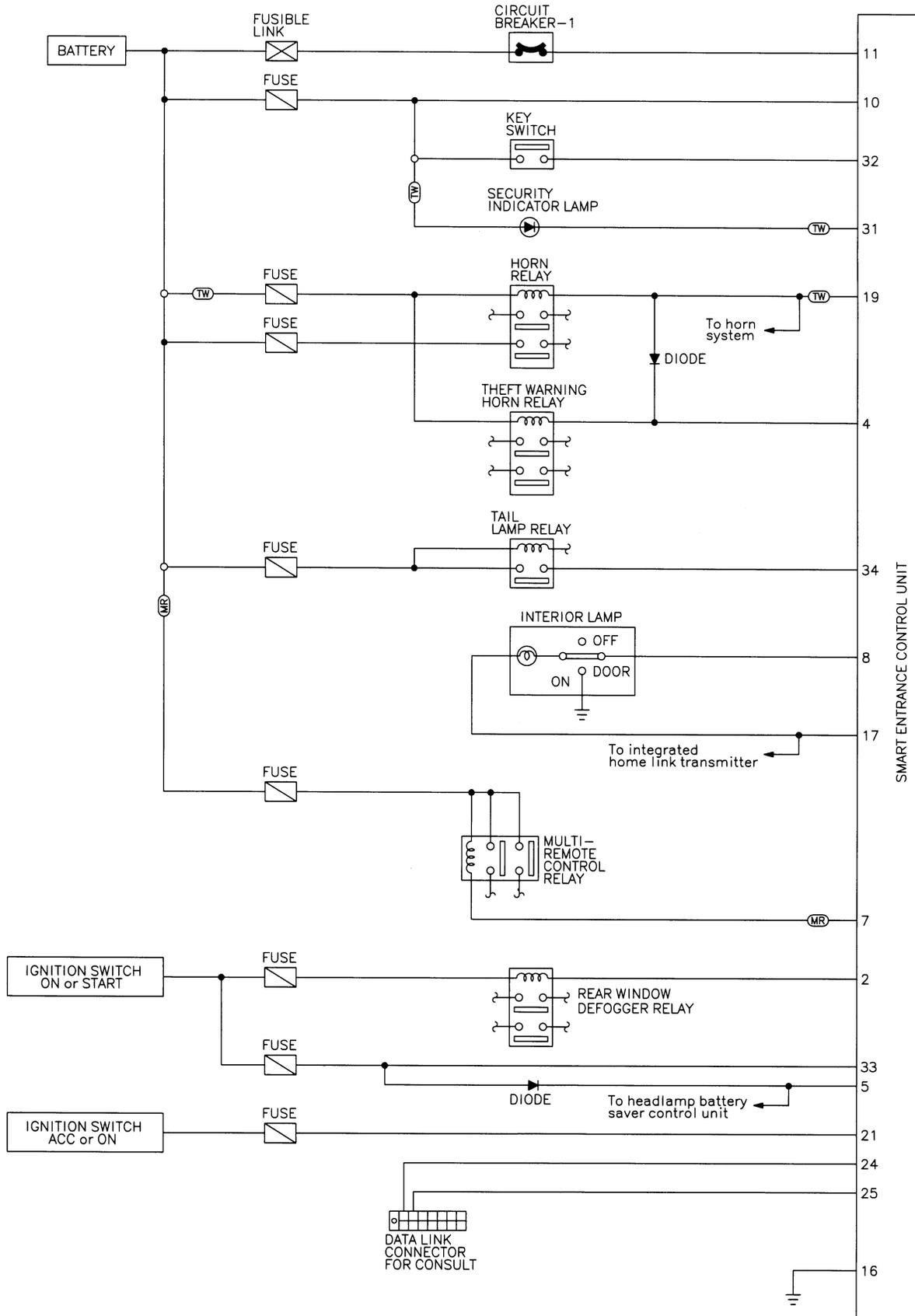
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SMART ENTRANCE CONTROL UNIT

Schematic

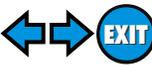
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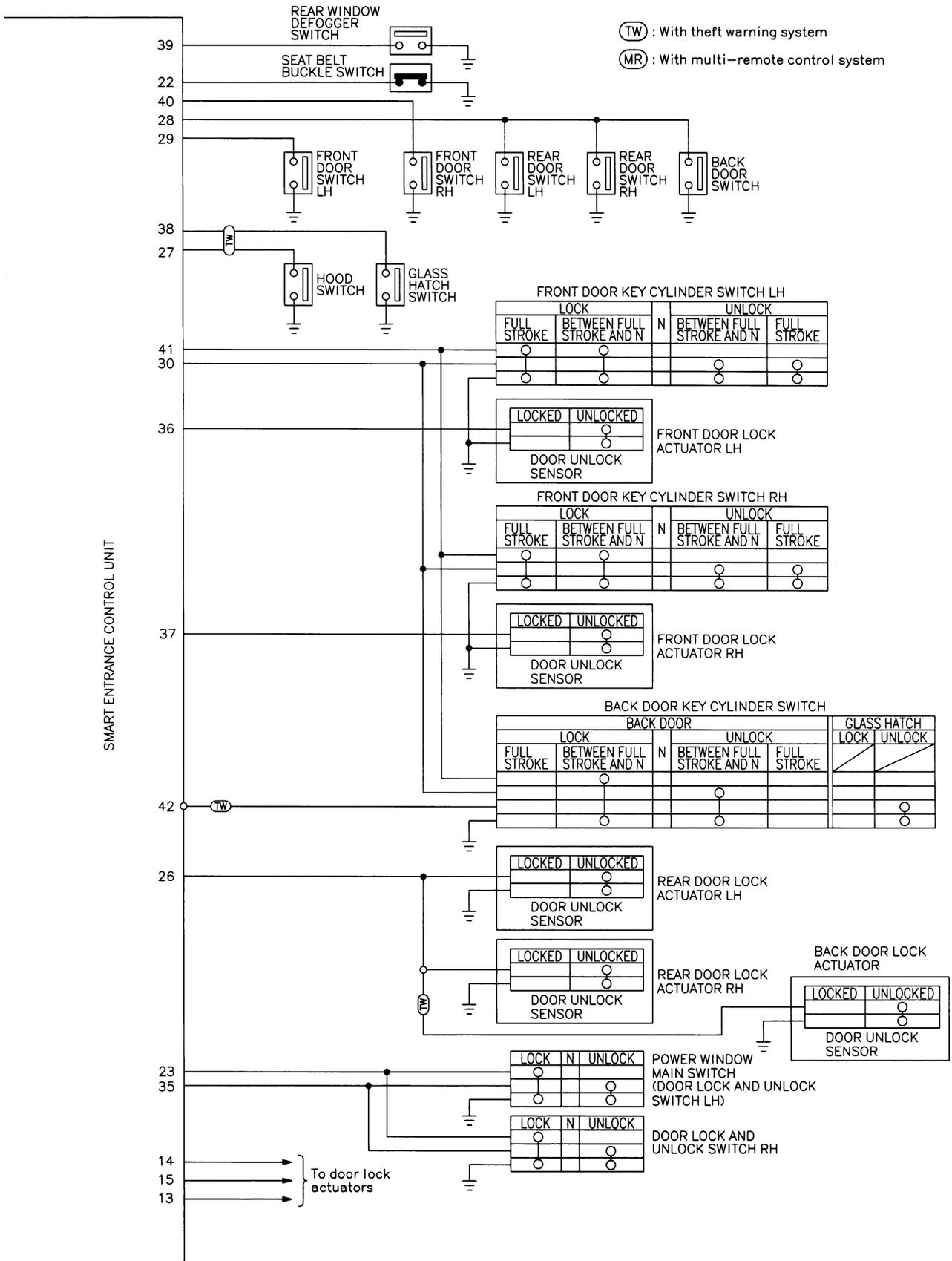


MEL938K

SMART ENTRANCE CONTROL UNIT



Schematic (Cont'd)



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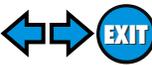
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SMART ENTRANCE CONTROL UNIT

Smart Entrance Control Unit Inspection Table

Smart Entrance Control Unit Inspection Table

NAEL0126

Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)	
2	G/B	Rear window defogger relay	OFF → ON (Ignition key is in "ON" position)	0V → 12V	
4	Y/G	Theft warning horn/lamp relay	When panic alarm is operated using remote controller	12V → 0V	
5	R/Y	Headlamp battery saver control unit	When headlamp battery saver timer is operated	12V	
7	P	Multi-remote control relay	When doors are locked using remote controller	12V → 0V	
8	R/B	Interior lamp	When interior lamp is operated using remote controller. (Lamp switch in "DOOR" position)	0V → 12V	
10	G/R	Power source (Fuse)	—	12V	
11	W/R	Power source (C/B)	—	12V	
13	W/PU	Driver door lock actuator	Door lock & unlock switch	Free	0V
14	Y/B	Passenger door lock actuator		Unlocked	12V
15	L	Door lock actuators	Door lock & unlock switch	Free	0V
				Locked	12V
16	B	Ground	—	—	
17	R/W	Battery saver (Interior lamp)	Battery saver is not operate → Operate	12V → 0V	
19	LG/B	Horn relay	When doors are locked using remote controller with horn chirp mode.	12V → 0V	
21	G/W	Ignition switch (ACC)	"ACC" position	12V	
22	B/P	Seat belt buckle switch	Unfasten → Fasten (Ignition key is in "ON" position)	0V → 12V	
23	BR	Door lock & unlock switches	Neutral → Locks	5V → 0V	
26	Y/R	Rear door unlock sensors	All doors are locked → One or more doors are unlocked	5V → 0V	
27	Y/B	Hood open signal	ON (Open) → OFF (Closed)	0V → 5V	
28	R/L	Rear and back door switches	OFF (Closed) → ON (Open)	5V → 0V	
29	G/R	Driver door switch	OFF (Closed) → ON (Open)	5V → 0V	
30	LG	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)	5V → 0V	
31	BR/Y	Theft warning indicator	Goes off → Illuminates	12V → 0V	
32	W/R	Ignition key switch (Insert)	key inserted → key removed from IGN key cylinder	12V → 0V	
33	W/B	Ignition switch (ON)	Ignition key is in "ON" position	12V	
34	P/L	Tail lamp relay	1ST, 2ND positions: ON → OFF	12V → 0V	
35	LG/R	Door lock & unlock switches	Neutral → Unlocks	5V → 0V	
36	Y/G	Driver door unlock sensor	Driver door: Locked → Unlocked	5V → 0V	
37	Y/L	Passenger door unlock sensor	Passenger door: Locked → Unlocked	5V → 0V	
38	L/W	Glass hatch switch	ON (Open) → OFF (Closed)	0V → 12V	
39	OR	Rear window defogger switch	OFF → ON	5V → 0V	
40	Y	Passenger door switch	OFF (Closed) → ON (Open)	5V → 0V	
41	Y	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)	5V → 0V	
42	G/B	Back door key unlock switch	OFF (Neutral) → ON (Unlock)	5V → 0V	

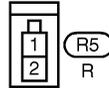
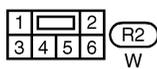
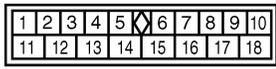
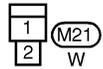
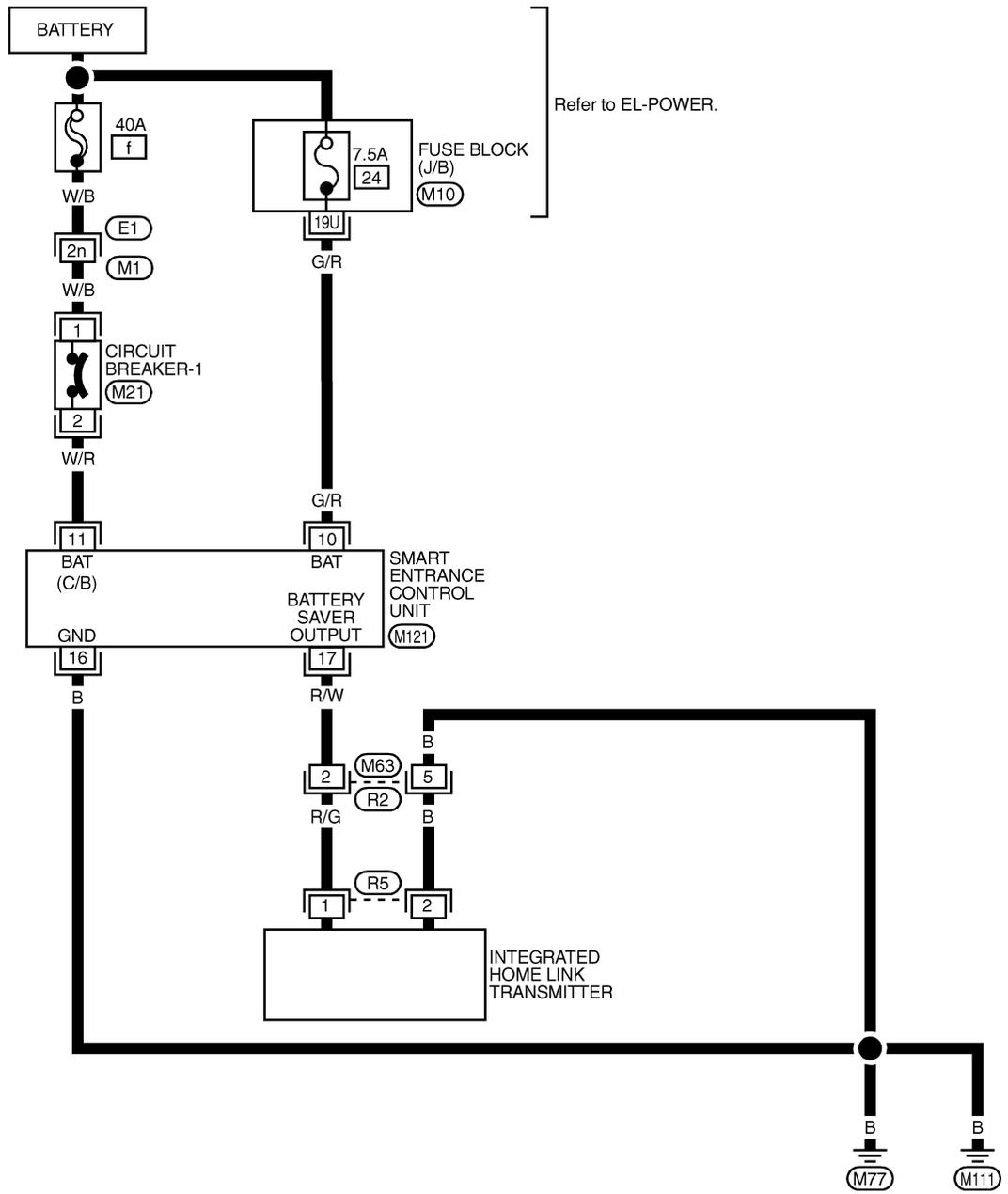
INTEGRATED HOMELINK TRANSMITTER

Wiring Diagram — TRNSMT —

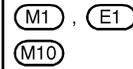
Wiring Diagram — TRNSMT —

NAEL0127

EL-TRNSMT-01



Refer to last page (Foldout page).



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INTEGRATED HOMELINK TRANSMITTER

Trouble Diagnoses

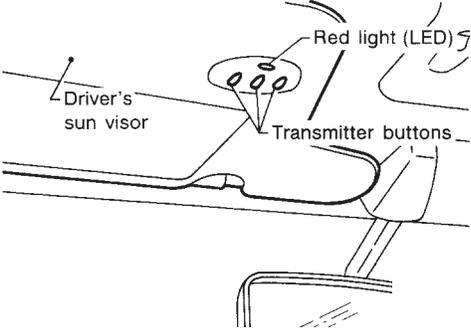
Trouble Diagnoses DIAGNOSTIC PROCEDURE

NAEL0128

NAEL0128S01

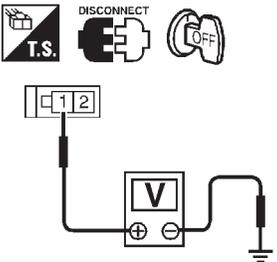
SYMPTOM: Transmitter does not activate receiver.

Before conducting the procedure given below, make sure that system receiver (garage door opener, etc.) operates with original, hand-held transmitter. If NG, receiver or hand-held transmitter is at fault, not vehicle related.

1	PRELIMINARY CHECK
<p>1. Turn ignition switch "OFF". 2. Does red light (LED) of transmitter illuminate when any button is pressed?</p>	
	
Yes or No	
Yes	▶ GO TO 2.
No	▶ GO TO 3.

SEL442U

2	CHECK TRANSMITTER FUNCTION
<p>Check transmitter with Tool. For details, refer to Technical Service Bulletin.</p>	
OK or NG	
OK	▶ Receiver or handheld transmitter fault, not vehicle related.
NG	▶ Replace transmitter with sun visor assembly.

3	CHECK POWER SUPPLY
<p>1. Disconnect transmitter connector. 2. Turn ignition switch "OFF". 3. Check voltage between terminal 1 and body ground.</p>	
	
Does battery voltage exist?	
Yes	▶ GO TO 4.
No	▶ GO TO 5.

SEL635U

4	CHECK GROUND CIRCUIT	<p>Check continuity between terminal 2 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL636U</p> <p style="text-align: center;">Does continuity exist?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Yes</td> <td style="width: 5%; text-align: center;">▶</td> <td>Replace transmitter with sun visor assembly.</td> </tr> <tr> <td>No</td> <td style="text-align: center;">▶</td> <td>Repair harness.</td> </tr> </table>	Yes	▶	Replace transmitter with sun visor assembly.	No	▶	Repair harness.	GI MA EM LC EC FE CL
Yes	▶	Replace transmitter with sun visor assembly.							
No	▶	Repair harness.							

5	CHECK MAIN POWER SUPPLY FOR SMART ENTRANCE CONTROL UNIT	<p>1. Disconnect smart entrance control unit. 2. Check voltage between control unit terminals 10 or 11 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL156W</p> <p style="text-align: center;">Does battery voltage exist?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Yes</td> <td style="width: 5%; text-align: center;">▶</td> <td>GO TO 6.</td> </tr> <tr> <td>No</td> <td style="text-align: center;">▶</td> <td> Check the following. <ul style="list-style-type: none"> ● 7.5A fuse No. 24, located in fuse block (J/B) ● 40A fusible link (letter f, located in fuse and fusible link box) </td> </tr> </table>	Yes	▶	GO TO 6.	No	▶	Check the following. <ul style="list-style-type: none"> ● 7.5A fuse No. 24, located in fuse block (J/B) ● 40A fusible link (letter f, located in fuse and fusible link box) 	MT AT TF PD AX SU BR
Yes	▶	GO TO 6.							
No	▶	Check the following. <ul style="list-style-type: none"> ● 7.5A fuse No. 24, located in fuse block (J/B) ● 40A fusible link (letter f, located in fuse and fusible link box) 							

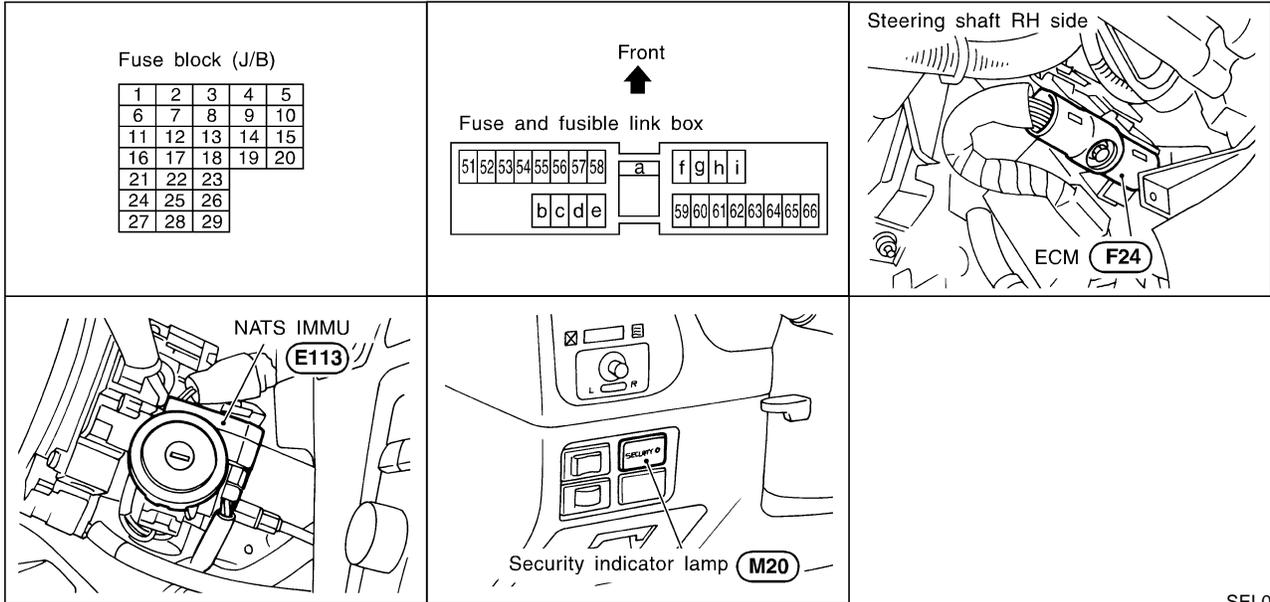
6	CHECK GROUND CIRCUIT FOR SMART ENTRANCE CONTROL UNIT	<p>Check continuity between terminal 16 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL791VA</p> <p style="text-align: center;">Does continuity exist?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Yes</td> <td style="width: 5%; text-align: center;">▶</td> <td>Power supply and ground circuits are OK.</td> </tr> <tr> <td>No</td> <td style="text-align: center;">▶</td> <td>Check ground harness.</td> </tr> </table>	Yes	▶	Power supply and ground circuits are OK.	No	▶	Check ground harness.	ST RS BT HA SC EL
Yes	▶	Power supply and ground circuits are OK.							
No	▶	Check ground harness.							

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NAEL0170



SEL084W

System Description

=NAEL0171

NATS (Nissan Anti-Theft System) has the following immobilizer functions:

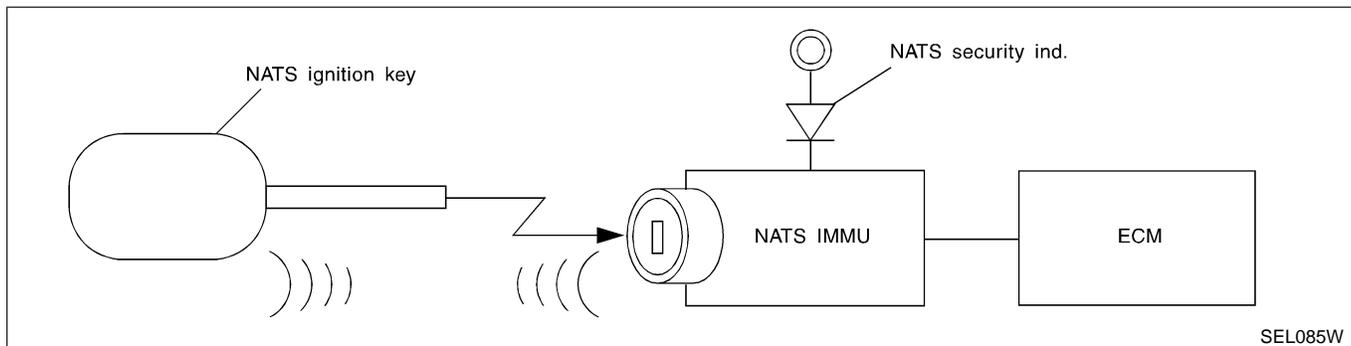
- Since only NATS ignition keys, whose ID nos. have been registered into the ECM and IMMU of NATS, allow the engine to run, operation of a stolen vehicle without a NATS registered key is prevented by NATS. That is to say, NATS will immobilize the engine if someone tries to start it without the registered key of NATS.
- All of the originally supplied ignition key IDs (except for card plate key) have been NATS registered. If requested by the vehicle owner, a maximum of five key IDs can be registered into the NATS components.
- The security indicator blinks when the ignition switch is in “OFF” or “ACC” position. Therefore, NATS warns outsiders that the vehicle is equipped with the anti-theft system.
- When NATS detects trouble, the security indicator lamp lights up while ignition key is in the “ON” position.
- NATS trouble diagnoses, system initialization and additional registration of other NATS ignition key IDs must be carried out using CONSULT hardware and CONSULT NATS software. When NATS initialization has been completed, the ID of the inserted ignition key is automatically NATS registered. Then, if necessary, additional registration of other NATS ignition key IDs can be carried out. Regarding the procedures of NATS initialization and NATS ignition key ID registration, refer to CONSULT operation manual, NATS.
- **When servicing a malfunction of the NATS (indicated by lighting up of Security Indicator Lamp) or registering another NATS ignition key ID no., it may be necessary to re-register original key identification. Therefore, be sure to receive all keys from vehicle owner.**

System Composition

NAEL0172

The immobilizer function of the NATS consists of the following:

- NATS ignition key
- NATS immobilizer control unit (NATS IMMU) located in the ignition key cylinder
- Engine control module (ECM)
- Security indicator



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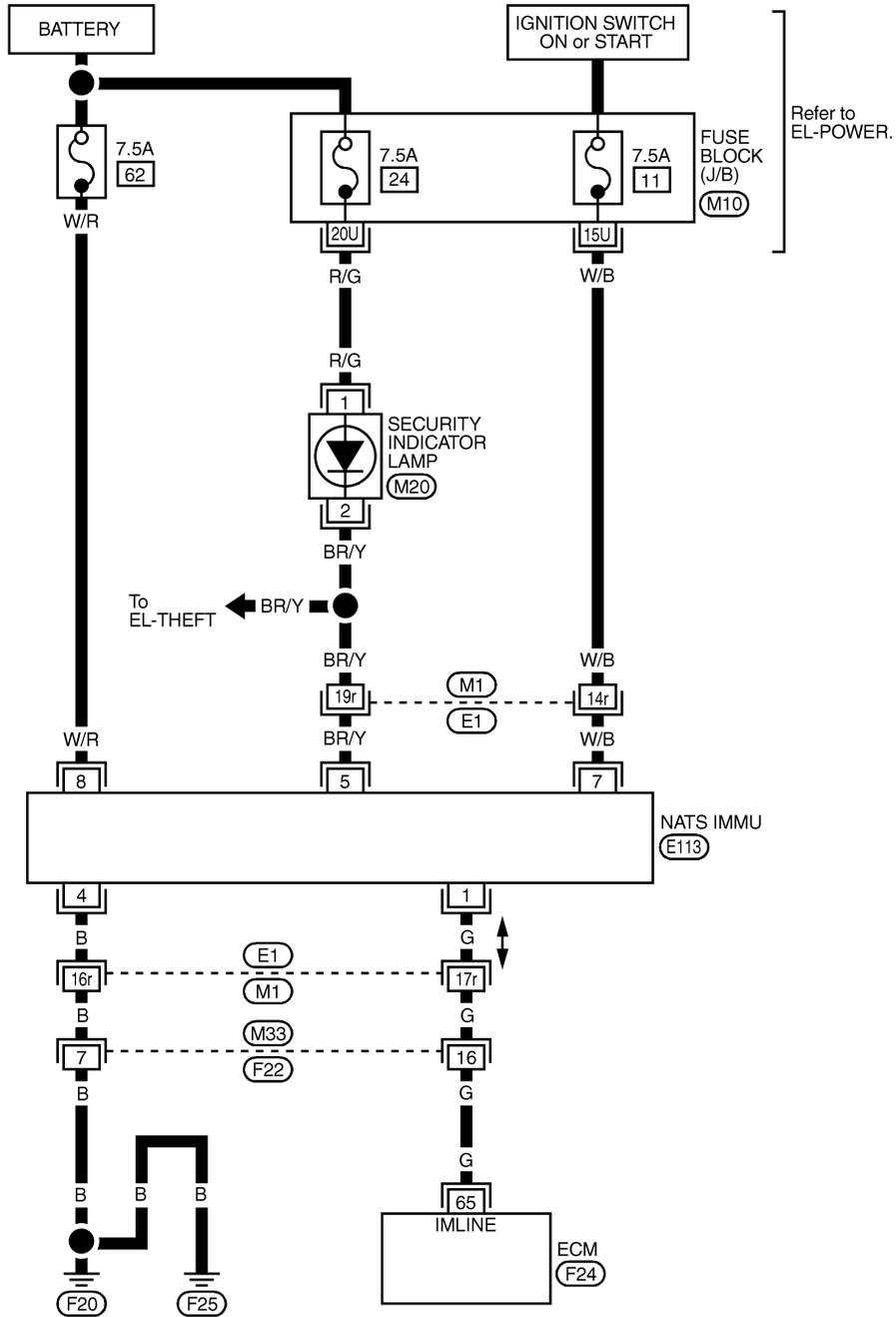
NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Wiring Diagram — NATS —

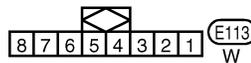
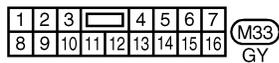
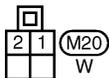
Wiring Diagram — NATS —

NAEL0173

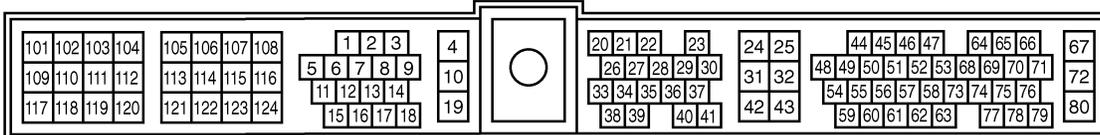
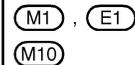
EL-NATS-01

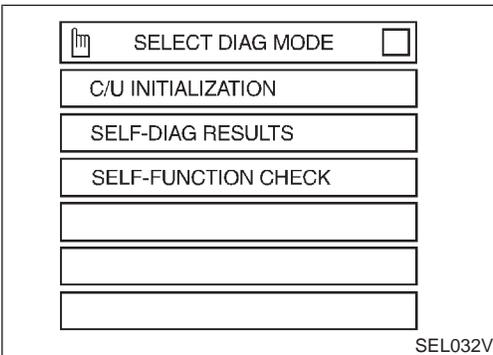
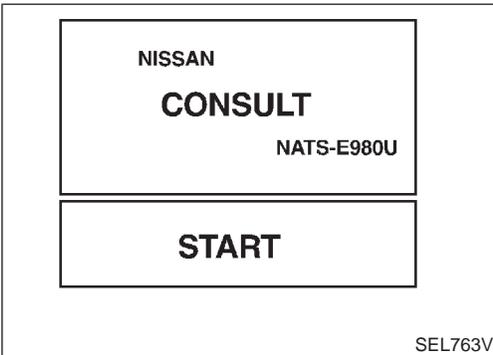
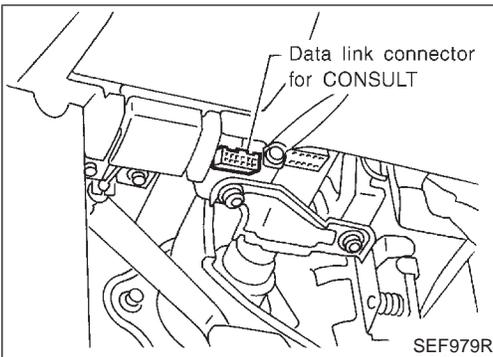


Refer to EL-POWER.



Refer to last page (Foldout page).





CONSULT

CONSULT INSPECTION PROCEDURE

NAEL0174

NAEL0174S01

1. Turn ignition switch OFF.
2. Connect "CONSULT" to Data link connector for CONSULT.

3. Insert NATS program card into CONSULT.

← : Program card
NATS-E980U

4. Turn ignition switch ON.
5. Touch "START".

6. Perform each diagnostic test mode according to each service procedure.

For further information, see the CONSULT Operation Manual, NATS.

CONSULT DIAGNOSTIC TEST MODE FUNCTION

NAEL0174S02

CONSULT DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following three components, C/U initialization is necessary. [NATS ignition key/IMMU/ECM]
SELF-FUNCTION CHECK	ECM checks its own NATS communication interface by itself.
SELF-DIAGNOSTIC RESULTS	Detected items (screen terms) are as shown in the chart below.

NOTE:

When any initialization is performed, all ID previously registered will be erased and all NATS ignition keys must be registered again. The engine cannot be started with an unregistered key. In this case, the system may show "DIFFERENCE OF KEY" or "LOCK MODE" as a self-diagnostic result on the CONSULT screen.

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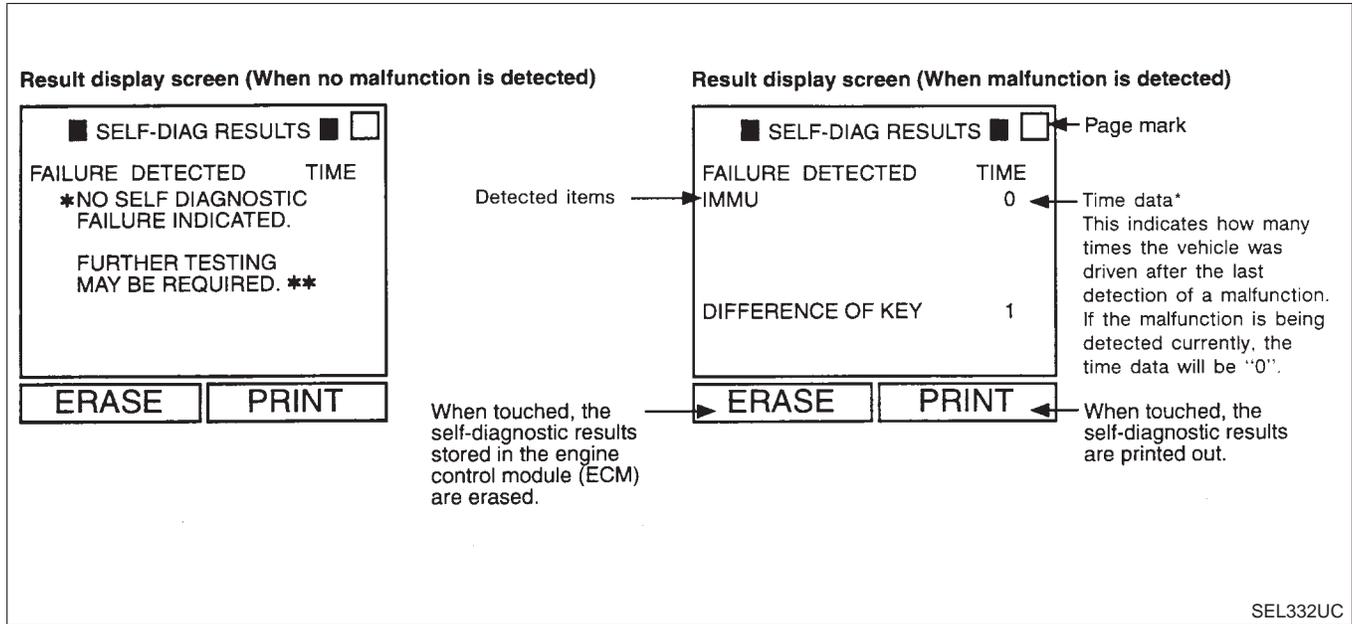
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HOW TO READ SELF-DIAGNOSTIC RESULTS

NAEL0174S03



SEL332UC

* If trip number is more than 1, MIL does not blink.

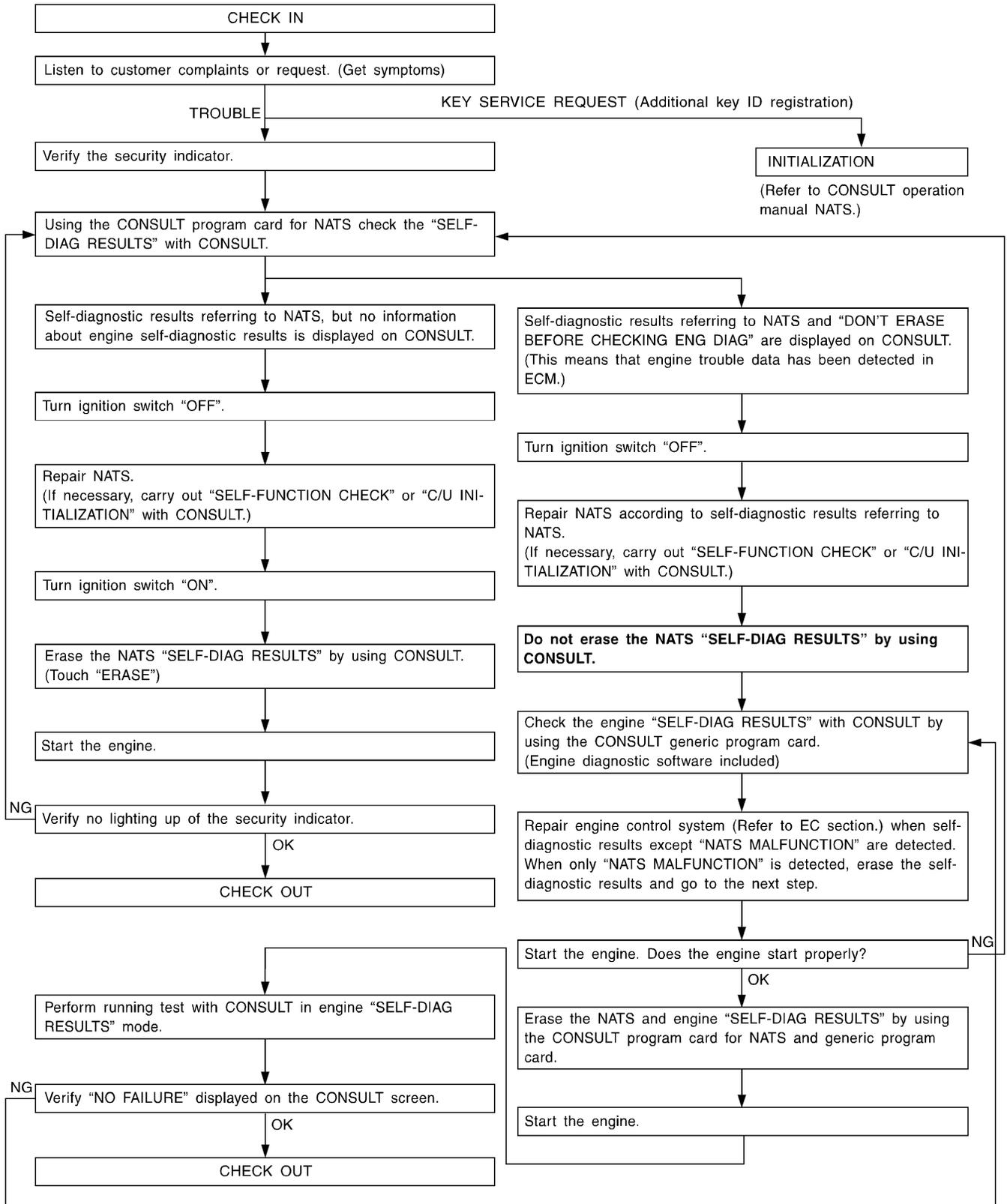
SELF-DIAGNOSTIC RESULTS ITEM CHART

NAEL0174S04

Detected items (Screen terms)	Description	Reference page
IMMU	ECM received the signal from IMMU that IMMU is malfunctioning.	EL-289
ECM	ECM is malfunctioning.	EL-289
CHAIN OF ECM-IMMU	Communication impossible between ECM and IMMU.	EL-290
DIFFERENCE OF KEY	IMMU can receive the key ID signal but the result of ID verification between key ID and IMMU is NG.	EL-294
CHAIN OF IMMU-KEY	IMMU cannot receive the key ID signal.	EL-295
ID DISCORD, IMM-ECM	The result of ID verification between IMMU and ECM is NG. System initialization is required.	EL-296
ELECTRONIC NOISE	Noise (interference) interfered into NATS communication lines during communicating.	EL-297
DON'T ERASE BEFORE CHECKING ENG DIAG	Engine trouble data and NATS trouble data have been detected in ECM.	EL-287
LOCK MODE	When the starting operation is carried out 5 or more times consecutively under the following conditions, NATS will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none"> ● unregistered ignition key is used ● IMMU or ECM malfunctioning 	EL-300

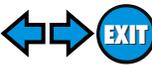
Trouble Diagnoses WORK FLOW

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)



Trouble Diagnoses (Cont'd)

SYMPTOM MATRIX CHART 1 (Self-diagnosis related item)

NAEL0175S02

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON NEXT PAGE
<ul style="list-style-type: none"> Security indicator lighting up* Engine will start. 	IMMU	PROCEDURE 1 (EL-289)	IMMU	A
	ECM	PROCEDURE 2 (EL-289)	ECM	B
<ul style="list-style-type: none"> Security indicator lighting up* Engine hard to start 	CHAIN OF ECM-IMMU	PROCEDURE 3 (EL-290)	Open circuit in battery voltage line of IMMU circuit	C1
			Open circuit in ignition line of IMMU circuit	C2
			Open circuit in ground line of IMMU circuit	C3
			Open circuit in communication line between IMMU and ECM	C4
			Short circuit between IMMU and ECM communication line and battery voltage line	C4
			Short circuit between IMMU and ECM communication line and ground line	C4
			ECM	B
			IMMU	A
	DIFFERENCE OF KEY	PROCEDURE 4 (EL-294)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 5 (EL-295)	Malfunction of key ID chip	E
			IMMU	A
	ID DISCORD, IMM-ECM	PROCEDURE 6 (EL-296)	System initialisation has not yet been completed.	F
			ECM	F
ELECTRONIC NOISE	PROCEDURE 7 (EL-297)	Noise interference in communication line	—	
LOCK MODE	PROCEDURE 9 (EL-300)	LOCK MODE	D	
<ul style="list-style-type: none"> MIL staying ON Security indicator lighting up* 	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-287)	Engine trouble data and NATS trouble data have been detected in ECM	—

*: When NATS detects trouble, the security indicator lights up while ignition key is in the "ON" position.

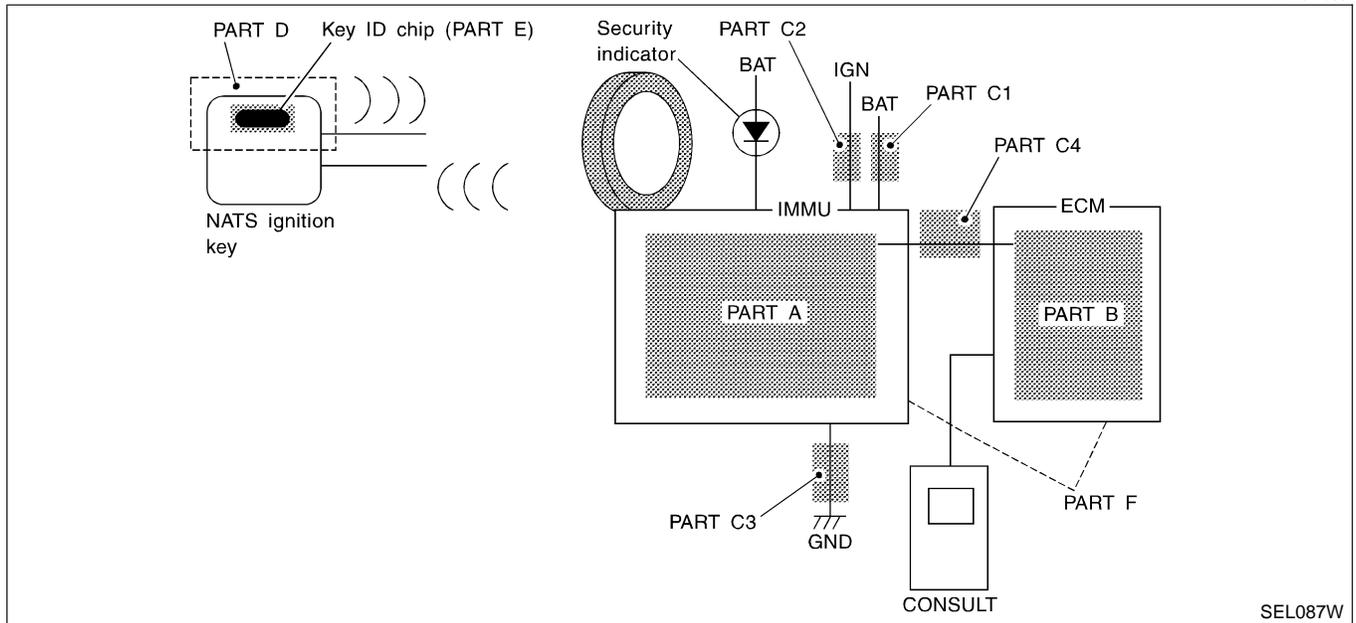
SYMPTOM MATRIX CHART 2 (Non self-diagnosis related item)

NAEL0175S03

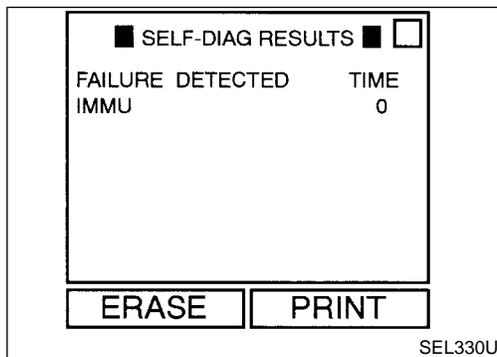
SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
Security ind. does not light up.	PROCEDURE 8 (EL-298)	Security ind.
		Open circuit between Fuse and NATS IMMU
		Continuation of initialization mode
		NATS IMMU

DIAGNOSTIC SYSTEM DIAGRAM

NAEL0175S04



SEL087W

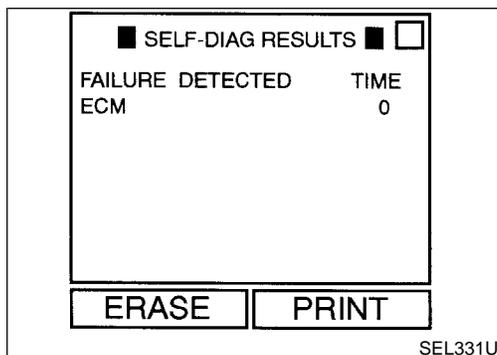


DIAGNOSTIC PROCEDURE 1

NAEL0175S05

Self-diagnostic results:
"IMMU" displayed on CONSULT screen

1. Confirm SELF-DIAGNOSTIC RESULTS "ECM" displayed on CONSULT screen. Ref. part No. B.
2. Replace IMMU.
3. Perform initialization with CONSULT.
For initialization, refer to "CONSULT operation manual NATS".



DIAGNOSTIC PROCEDURE 2

NAEL0175S06

Self-diagnostic results:
"ECM" displayed on CONSULT screen

1. Confirm SELF-DIAGNOSTIC RESULTS "ECM" displayed on CONSULT screen. Ref. part No. B.
2. Replace ECM.
3. Perform initialization with CONSULT.
For initialization, refer to "CONSULT operation manual NATS".

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DIAGNOSTIC PROCEDURE 3

NAEL0175S07

Self-diagnostic results:
"CHAIN OF ECM-IMMU" displayed on CONSULT screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS	
Confirm SELF-DIAGNOSTIC RESULTS "CHAIN OF ECM-IMMU" displayed on CONSULT screen.		
SEL333U		
Is CONSULT screen displayed as above?		
Yes	▶	GO TO 2.
No	▶	GO TO SYMPTOM MATRIX CHART 1.

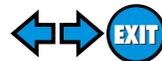
2	CHECK POWER SUPPLY CIRCUIT FOR IMMU	
<p>1. Disconnect IMMU connector.</p> <p>2. Check voltage between terminal 8 of IMMU and ground with CONSULT or tester.</p>		
SEL088W		
Does battery voltage exist?		
Yes	▶	GO TO 3.
No	▶	<p>Check the following</p> <ul style="list-style-type: none"> ● 7.5A fuse (No. 62, located in the fuse and fusible link box) ● Harness for open or short between fuse and IMMU connector <p>Ref. Part No. C1</p>

3	CHECK IGN SW. ON SIGNAL	<p>1. Turn ignition switch ON. 2. Check voltage between terminal 7 of IMMU and ground with CONSULT or tester.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>IMMU connector (E113)</p> <p>W/B</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL089W</p> <p style="text-align: center;">Does battery voltage exist?</p>	GI MA EM LC EC FE CL MT
Yes	▶	GO TO 4.	
No	▶	<p>Check the following</p> <ul style="list-style-type: none"> ● 7.5A fuse [No. 11, located in the fuse block (J/B)] ● Harness for open or short between fuse and IMMU connector <p>Ref. part No. C2</p>	

4	CHECK GROUND CIRCUIT FOR IMMU	<p>1. Turn ignition OFF. 2. Check harness continuity between IMMU terminal 4 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>IMMU connector (E113)</p> <p>B</p> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right;">SEL090W</p> <p style="text-align: center;">Does continuity exist?</p>	AT TF PD AX SU BR
Yes	▶	GO TO 5.	
No	▶	Repair harness. Ref. part No. C3	

5	CHECK COMMUNICATION LINE OPEN CIRCUIT	<p>1. Disconnect ECM connector. 2. Check harness continuity between IMMU terminal 1 and ECM terminal 65.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>ECM CONNECTOR (F24)</p> <p>65</p> <p>G</p> <p>IMMU connector (E113)</p> <p>1</p> <p>G</p> </div> </div> <p style="text-align: right;">SEL091W</p> <p style="text-align: center;">Does continuity exist?</p>	ST RS BT HA SC EL IDX
Yes	▶	GO TO 6.	
No	▶	Repair harness or connector. Ref. part No. C4	

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)



Trouble Diagnoses (Cont'd)

6	CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT	
<p>1. Turn ignition ON. 2. Check voltage between ECM terminal 65 or IMMU terminal 1 and ground.</p>		
<p>Voltage: 0V</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 7.
NG	▶	Communication line is short-circuited with battery voltage line or ignition switch ON line. Repair harness or connectors. Ref. part No. C4

SEL092W

7	CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT	
<p>1. Turn ignition switch OFF. 2. Check continuity between ECM terminal 65 or IMMU terminal 1 and ground.</p>		
<p>Continuity should not exist.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 8.
NG	▶	Communication line is short-circuited with ground line. Repair harness or connectors. Ref. part No. C4

SEL093W

8	SELF-FUNCTION CHECK	
<ol style="list-style-type: none"> 1. Connect ECM connector and disconnect IMMU connector. 2. Turn ignition switch ON. 3. Touch "SELF-FUNCTION CHECK" on CONSULT "SELECT DIAG MODE" screen. 4. Touch "START". ECM will then check its communication interface by itself. 		
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">■ SELF-FUNCTION CHECK ■</p> <p>TOUCH START, THE ECM WILL CHECK THE IMMU COMMUNICATION INTERFACE.</p> </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto; text-align: center;"> <p>START</p> </div>		
<p>SELF-FUNCTION CHECK result:</p> <p style="text-align: right;">SEL037V</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	IMMU is malfunctioning. Replace IMMU. Ref. part No. A Perform initialization with CONSULT. For the operation of initialization, refer to "CONSULT operation manual NATS".
NG	▶	ECM is malfunctioning. Replace ECM. Ref. part No. B Perform initialization with CONSULT. For the operation of initialization, refer to "CONSULT operation manual NATS".

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DIAGNOSTIC PROCEDURE 4

=NAEL0175S08

**Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT screen**

1	CONFIRM SELF-DIAGNOSTIC RESULTS					
Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT screen.						
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;"> ■ SELF-DIAG RESULTS ■ <input type="checkbox"/> </div> <table style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <tr> <td style="width: 60%;">FAILURE DETECTED</td> <td style="width: 40%;">TIME</td> </tr> <tr> <td>DIFFERENCE OF KEY</td> <td style="text-align: center;">0</td> </tr> </table> <div style="display: flex; justify-content: center; gap: 20px; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px 10px;">ERASE</div> <div style="border: 1px solid black; padding: 2px 10px;">PRINT</div> </div> </div>			FAILURE DETECTED	TIME	DIFFERENCE OF KEY	0
FAILURE DETECTED	TIME					
DIFFERENCE OF KEY	0					
SEL344U						
Is CONSULT screen displayed as above?						
Yes	▶	GO TO 2.				
No	▶	GO TO SYMPTOM MATRIX CHART 1.				

2	PERFORM INITIALIZATION WITH CONSULT	
Perform initialization with CONSULT. Re-register all NATS ignition key IDs. For initialization, refer to “CONSULT operation manual NATS”.		
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;"> ■ C/U INITIALIZATION ■ </div> <p style="text-align: center; margin: 0;">INITIALIZATION</p> <p style="text-align: center; margin: 0;">STOPPED or FAILED</p> <p style="text-align: center; margin: 0; font-size: 0.8em;">TURN IGN KEY SW "OFF" AND "ON", AFTER CONFIRMING SELF-DIAG RESULTS, PERFORM C/U INITIALIZATION AGAIN.</p> </div>		
SEL038V		
NOTE:		
If the initialization is not completed or fails, CONSULT shows above message on the screen. Can the system be initialized?		
Yes or No		
Yes	▶	Start engine. (END) (Ignition key ID was unregistered. Ref. part No. D)
No	▶	IMMU is malfunctioning. Replace IMMU. Ref. part No. A Perform initialization with CONSULT. For initialization, refer to “CONSULT operation manual NATS”.

DIAGNOSTIC PROCEDURE 5

=NAEL0175S09

Self-diagnostic results:
 “CHAIN OF IMMU-KEY” displayed on CONSULT screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS					
Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT screen.						
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">■ SELF-DIAG RESULTS ■ □</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">FAILURE DETECTED</td> <td style="width: 40%;">TIME</td> </tr> <tr> <td>CHAIN OF IMMU-KEY</td> <td style="text-align: center;">0</td> </tr> </table> </div>			FAILURE DETECTED	TIME	CHAIN OF IMMU-KEY	0
FAILURE DETECTED	TIME					
CHAIN OF IMMU-KEY	0					
<div style="display: flex; justify-content: center; gap: 20px; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px 10px;">ERASE</div> <div style="border: 1px solid black; padding: 2px 10px;">PRINT</div> </div>						
SEL373U						
Is CONSULT screen displayed as above?						
Yes	▶	GO TO 2.				
No	▶	GO TO SYMPTOM MATRIX CHART 1.				

2	CHECK NATS IGNITION KEY ID CHIP	
Start engine with another registered NATS ignition key.		
Does the engine start?		
Yes	▶	Ignition key ID chip is malfunctioning. Replace the ignition key. Ref. part No. E Perform initialization with CONSULT. For initialization, refer to “CONSULT operation manual NATS”.
No	▶	GO TO 3.

3	CHECK NATS IMMU INSTALLATION	
Check NATS IMMU installation. Refer to “How to Replace NATS IMMU” in EL-301.		
OK or NG		
OK	▶	IMMU is malfunctioning. Replace IMMU. Ref. part No. A Perform initialization with CONSULT. For initialization, refer to “CONSULT operation manual NATS”.
NG	▶	Reinstall NATS IMMU correctly.

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DIAGNOSTIC PROCEDURE 6

=NAEL0175S10

**Self-diagnostic results:
"ID DISCORD, IMM-ECM" displayed on CONSULT screen**

1	CONFIRM SELF-DIAGNOSTIC RESULTS					
Confirm SELF-DIAGNOSTIC RESULTS "ID DISCORD, IMM-ECM" displayed on CONSULT screen.						
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">■ SELF-DIAG RESULTS ■ <input type="checkbox"/></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">FAILURE DETECTED</td> <td style="width: 40%;">TIME</td> </tr> <tr> <td>ID DISCORD,IMM-ECM</td> <td style="text-align: center;">0</td> </tr> </table> </div>			FAILURE DETECTED	TIME	ID DISCORD,IMM-ECM	0
FAILURE DETECTED	TIME					
ID DISCORD,IMM-ECM	0					
<div style="display: flex; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; padding: 2px 10px;">ERASE</div> <div style="border: 1px solid black; padding: 2px 10px;">PRINT</div> </div>						
<p>NOTE: "ID DISCORD IMM-ECM": Registered ID of IMMU is in discord with that of ECM.</p> <p style="text-align: right;">SEL383U</p>						
Is CONSULT screen displayed as above?						
Yes	▶	GO TO 2.				
No	▶	GO TO SYMPTOM MATRIX CHART 1.				

2	PERFORM INITIALIZATION WITH CONSULT	
Perform initialization with CONSULT. Re-register all NATS ignition key IDs. For initialization, refer to "CONSULT operation manual NATS".		
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">■ C/U INITIALIZATION ■</p> <p style="text-align: center;">INITIALIZATION</p> <p style="text-align: center;">STOPPED or FAILED</p> <p style="text-align: center;">TURN IGN KEY SW "OFF" AND "ON", AFTER CON- FIRMING SELF-DIAG RESULTS, PERFORM C/U INITIALIZATION AGAIN.</p> </div>		
<p>NOTE: If the initialization is not completed or fails, CONSULT shows above message on the screen.</p> <p style="text-align: right;">SEL038V</p>		
Can the system be initialized?		
Yes or No		
Yes	▶	Start engine. (END) (System initialization had not been completed. Ref. part No. F)
No	▶	ECM is malfunctioning. Replace ECM. Ref. part No. F Perform initialization with CONSULT. For initialization, refer to "CONSULT operation manual NATS".

DIAGNOSTIC PROCEDURE 7

=NAEL0175S11

**Self-diagnostic results:
“ELECTRONIC NOISE” displayed on CONSULT screen**

1	CONFIRM SELF-DIAGNOSTIC RESULTS					
Confirm SELF-DIAGNOSTIC RESULTS “ELECTRONIC NOISE” displayed on CONSULT screen.						
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">■ SELF-DIAG RESULTS ■ <input type="checkbox"/></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">FAILURE DETECTED</td> <td style="width: 50%;">TIME</td> </tr> <tr> <td>ELECTRONIC</td> <td style="text-align: center;">0</td> </tr> </table> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> ERASE PRINT </div> </div>			FAILURE DETECTED	TIME	ELECTRONIC	0
FAILURE DETECTED	TIME					
ELECTRONIC	0					
SEL039V						
Is CONSULT screen displayed as above?						
Yes	▶	GO TO 2.				
No	▶	GO TO SYMPTOM MATRIX CHART 1.				

2	TURN OFF AND REMOVE NOISE	
<ol style="list-style-type: none"> 1. Turn off or remove any possible noise sources. 2. Touch “ERASE” on CONSULT SELF-DIAGNOSTIC RESULTS screen. 3. Start engine. 		
Does engine start?		
Yes	▶	INSPECTION END
No	▶	GO TO 1.

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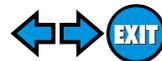
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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)



Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 8 “SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

=NAEL0175S12

1	CHECK FUSE	
Check 7.5A fuse [No. 24, located in the fuse block (J/B)].		
Is 7.5A fuse OK?		
Yes	▶	GO TO 2.
No	▶	Replace fuse.

2	CHECK SECURITY INDICATOR LAMP	
<ol style="list-style-type: none"> 1. Install 7.5A fuse. 2. Perform initialization with CONSULT. For initialization, refer to “CONSULT operation manual NATS”. 3. Turn ignition switch OFF. 4. Start engine and turn ignition switch OFF. 5. Check the security indicator lamp lighting. 		
Does security indicator lamp light up?		
Yes	▶	INSPECTION END
No	▶	GO TO 3.

3	CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT	
<ol style="list-style-type: none"> 1. Disconnect security indicator lamp connector. 2. Check voltage between security indicator lamp connector terminal 1 and ground. 		
<p style="text-align: right;">SEL094W</p>		
Does battery voltage exist?		
Yes	▶	GO TO 4.
No	▶	Check harness for open or short between fuse and security indicator lamp.

4	CHECK SECURITY INDICATOR LAMP	
Check security Indicator Lamp.		
Is security indicator lamp OK?		
Yes	▶	GO TO 5.
No	▶	Replace security indicator lamp.

5	CHECK NATS IMMU FUNCTION	
<p>1. Connect NATS IMMU connector. 2. Disconnect security indicator lamp connector. 3. Check continuity between NATS IMMU terminal 5 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>IMMU connector (E113)</p> <p>BR/Y</p> </div> <div style="text-align: center;"> <p>H.S.</p> <p>CONNECT</p> <p>OFF</p> </div> </div> <p style="text-align: right;">SEL095W</p> <p style="text-align: center;">Does continuity exist intermittently?</p>		
Yes	▶	Check harness for open or short between security indicator lamp and NATS IMMU.
No	▶	NATS IMMU is malfunctioning. Replace IMMU. Perform initialization with CONSULT. For initialization, refer to "CONSULT operation manual NATS".

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DIAGNOSTIC PROCEDURE 9

=NAEL0175S13

**Self-diagnostic results:
“LOCK MODE” displayed on CONSULT screen**

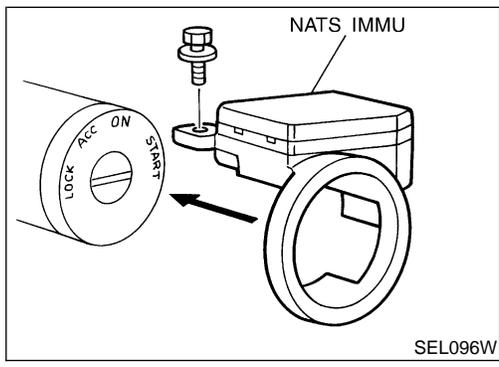
1	CONFIRM SELF-DIAGNOSTIC RESULTS							
Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT screen.								
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <div style="display: flex; justify-content: space-between; align-items: center;"> ■ SELF-DIAG RESULTS ■ <input type="checkbox"/> </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">FAILURE DETECTED</td> <td style="width: 40%;">TIME</td> </tr> <tr> <td>LOCK MODE</td> <td style="text-align: center;">0</td> </tr> <tr> <td colspan="2" style="padding-top: 10px;">DIFFERENCE OF KEY</td> </tr> </table> <div style="display: flex; justify-content: center; gap: 20px; margin-top: 10px;"> ERASE PRINT </div> </div>			FAILURE DETECTED	TIME	LOCK MODE	0	DIFFERENCE OF KEY	
FAILURE DETECTED	TIME							
LOCK MODE	0							
DIFFERENCE OF KEY								
SEL790U								
Is CONSULT screen displayed as above?								
Yes	▶	GO TO 2.						
No	▶	GO TO SYMPTOM MATRIX CHART 1.						

2	ESCAPE FROM LOCK MODE	
<ol style="list-style-type: none"> 1. Turn ignition switch OFF. 2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds. 3. Return the key to OFF position. 4. Repeat steps 2 and 3 twice (total of three cycles). 5. Start the engine. 		
Does engine start?		
Yes	▶	System is OK. (Now system is escaped from “LOCK MODE”.)
No	▶	GO TO 3.

3	CHECK NATS IMMU ILLUSTRATION	
Check NATS IMMU installation. Refer to “How to Replace NATS IMMU” in EL-301.		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Reinstall NATS IMMU corectly.

4	PERFORM INITIALIZATION WITH CONSULT						
<p>Perform initialization with CONSULT. For initialization, refer to "CONSULT operation manual NATS".</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 60%;"> <p style="text-align: center;">■ C/U INITIALIZATION ■</p> <p style="text-align: center;">INITIALIZATION STOPPED or FAILED</p> <p style="text-align: center;">TURN IGN KEY SW "OFF" AND "ON", AFTER CON- FIRMING SELF-DIAG RESULTS, PERFORM C/U INITIALIZATION AGAIN.</p> </div> <p style="text-align: right;">SEL038V</p> <p>NOTE: If the initialization is not completed or fails, CONSULT shows the above message on the screen. Can the system be initialized?</p> <p style="text-align: center;">Yes or No</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Yes</td> <td style="width: 5%; text-align: center;">▶</td> <td>System is OK.</td> </tr> <tr> <td>No</td> <td style="text-align: center;">▶</td> <td>GO TO DIAGNOSTIC PROCEDURE 5 to check "CHAIN OF IMMU-KEY", refer to EL-295.</td> </tr> </table>		Yes	▶	System is OK.	No	▶	GO TO DIAGNOSTIC PROCEDURE 5 to check "CHAIN OF IMMU-KEY", refer to EL-295.
Yes	▶	System is OK.					
No	▶	GO TO DIAGNOSTIC PROCEDURE 5 to check "CHAIN OF IMMU-KEY", refer to EL-295.					

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How to Replace NATS IMMU

NAEL0176

NOTE:

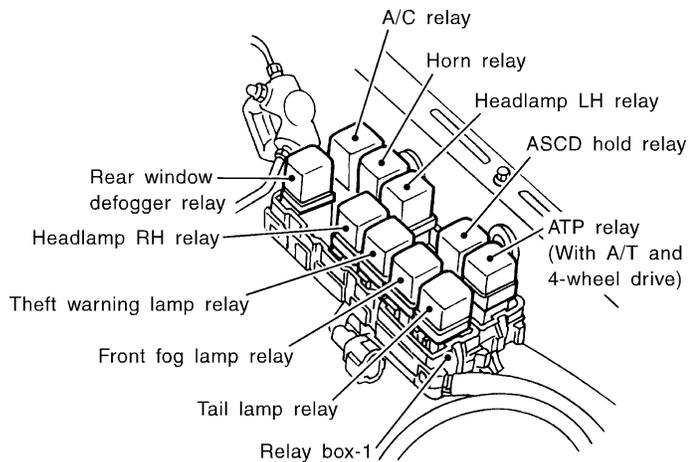
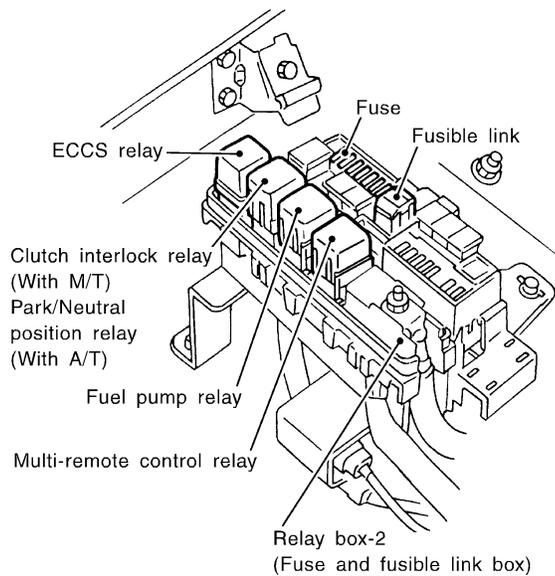
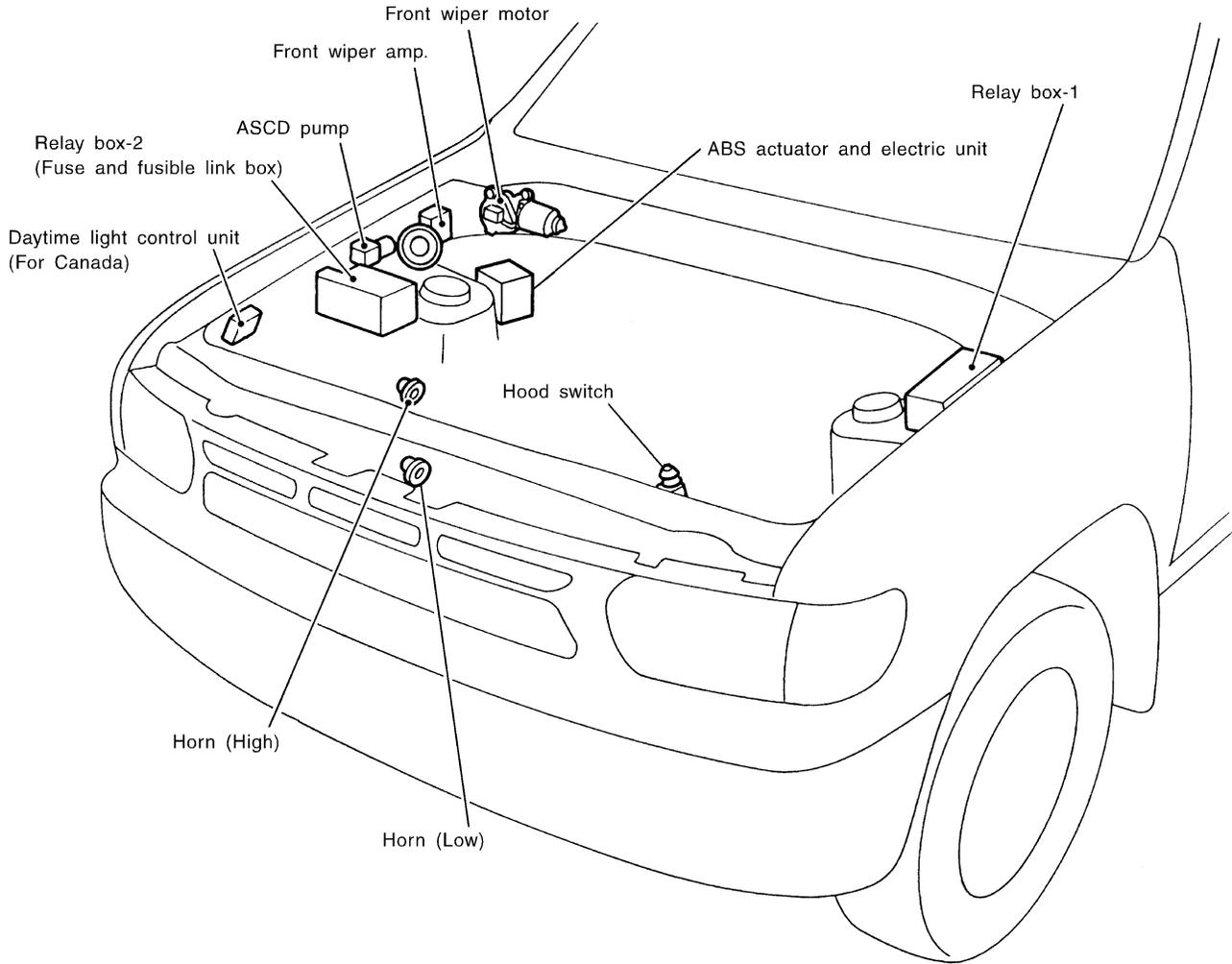
- If NATS IMMU is not installed correctly, NATS system will not operate properly and SELF-DIAG RESULTS on CONSULT screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".

ELECTRICAL UNITS LOCATION

Engine Compartment

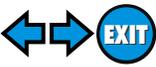
Engine Compartment

NAEL0129



MEL958K

ELECTRICAL UNITS LOCATION



Engine Compartment (Cont'd)

NOTE:

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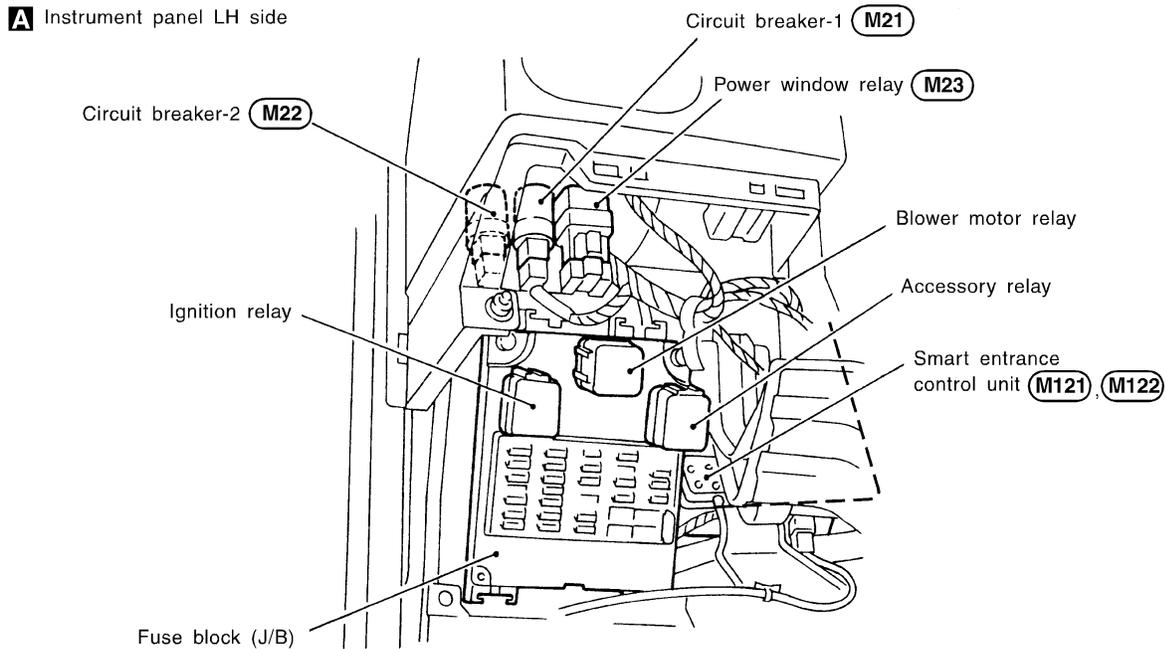
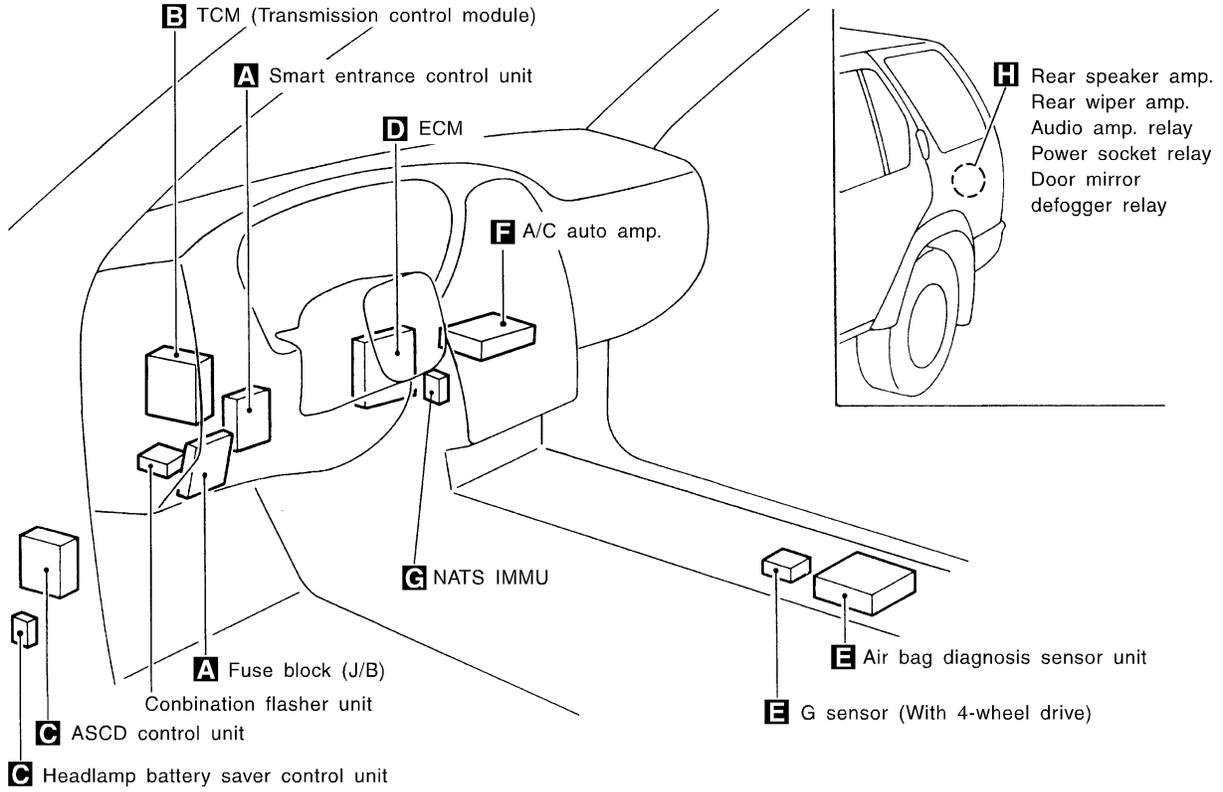
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ELECTRICAL UNITS LOCATION

Passenger Compartment

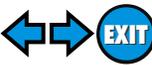
Passenger Compartment

NAEL0130

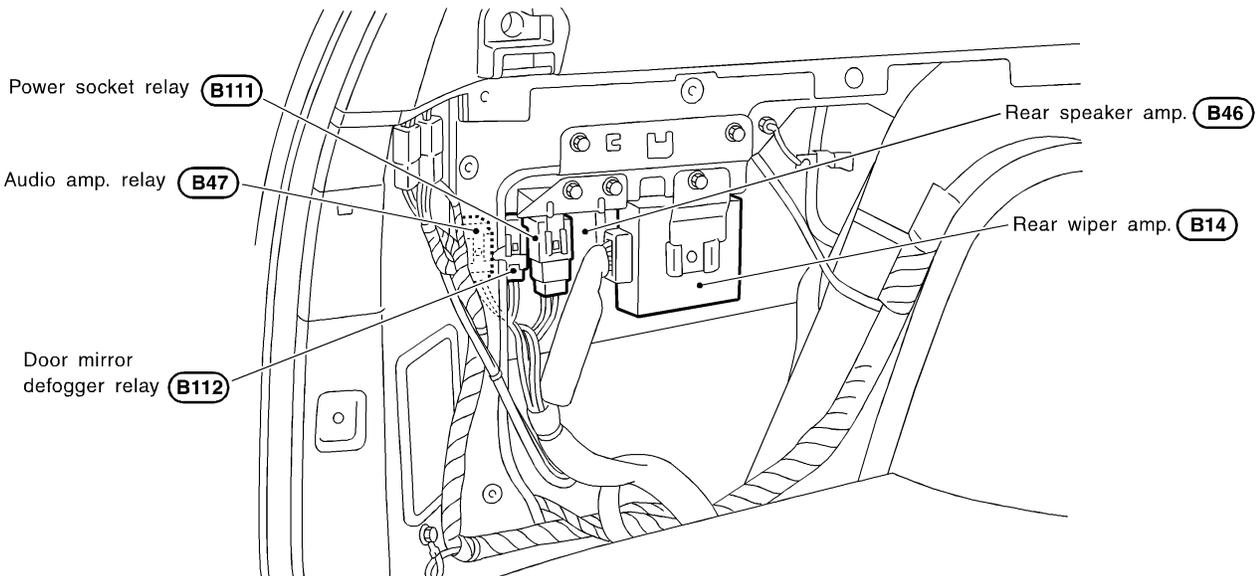
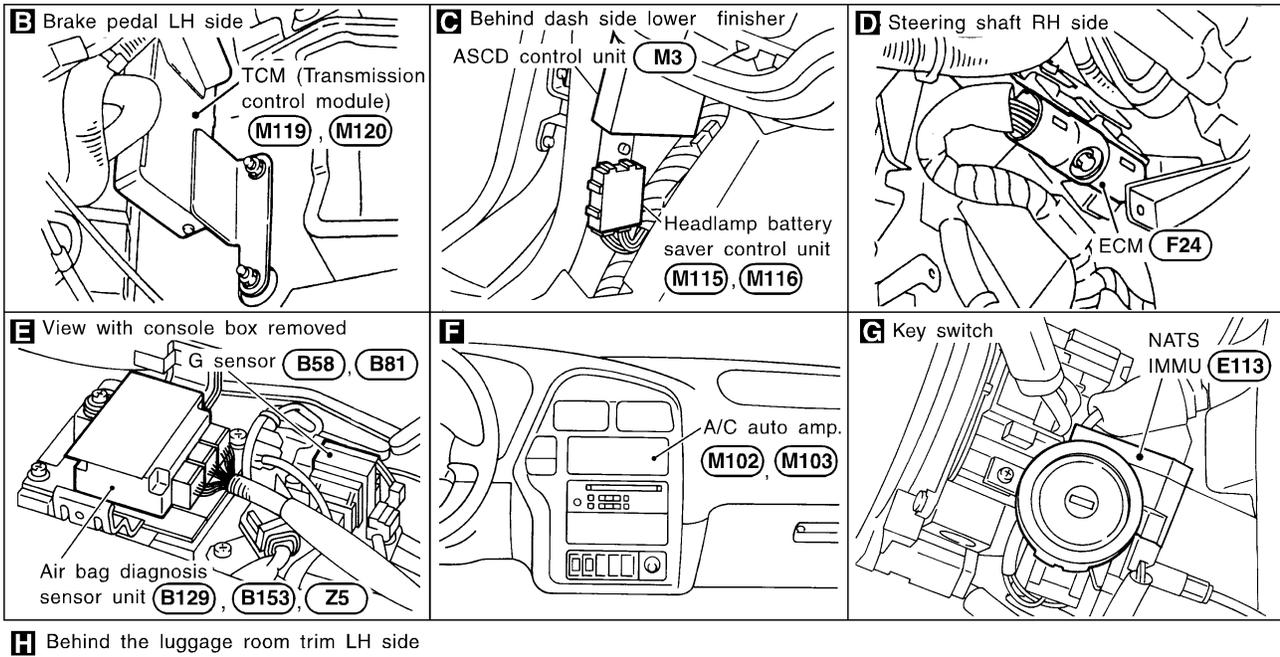


MEL029L

ELECTRICAL UNITS LOCATION



Passenger Compartment (Cont'd)



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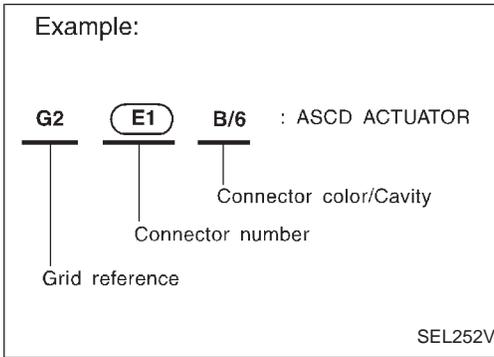
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HARNESS LAYOUT

How to Read Harness Layout

How to Read Harness Layout

NAEL0131



The following Harness Layouts use a map style grid to help locate connectors on the drawings:

- Main Harness
- Engine Room Harness (Engine Compartment)
- Engine Control Harness

TO USE THE GRID REFERENCE

1. Find the desired connector number on the connector list.
2. Find the grid reference.
3. On the drawing, find the crossing of the grid reference letter column and number row.
4. Find the connector number in the crossing zone.
5. Follow the line (if used) to the connector.

NAEL0131S01

CONNECTOR SYMBOL

Main symbols of connector (in Harness Layout) are indicated in the below.

NAEL0131S02

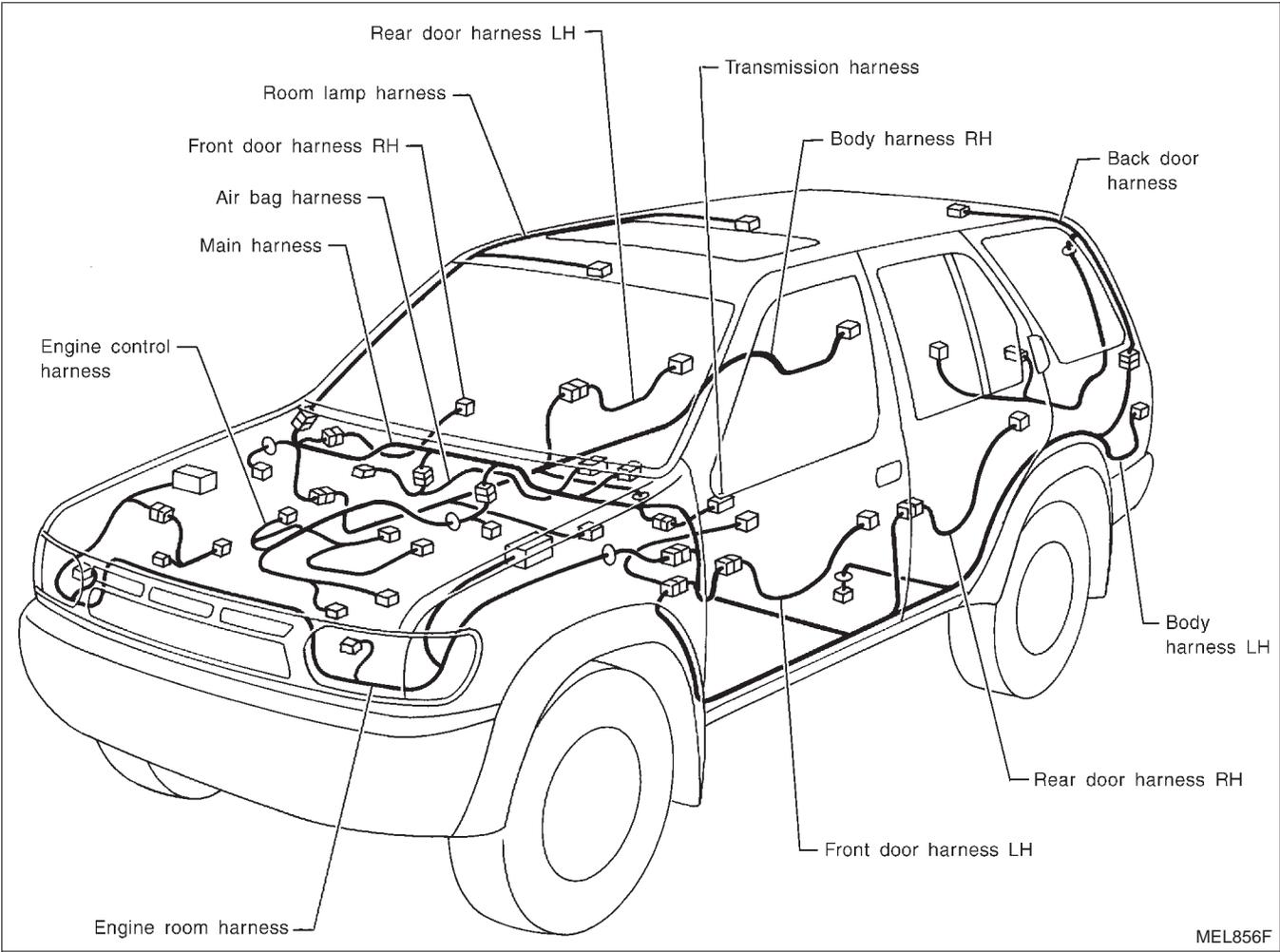
Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
<ul style="list-style-type: none"> • Cavity: Less than 4 • Relay connector 				
<ul style="list-style-type: none"> • Cavity: From 5 to 8 				
<ul style="list-style-type: none"> • Cavity: More than 9 	—	—		
<ul style="list-style-type: none"> • Ground terminal etc. 	—			

HARNESS LAYOUT

Outline

Outline

NAEL0132



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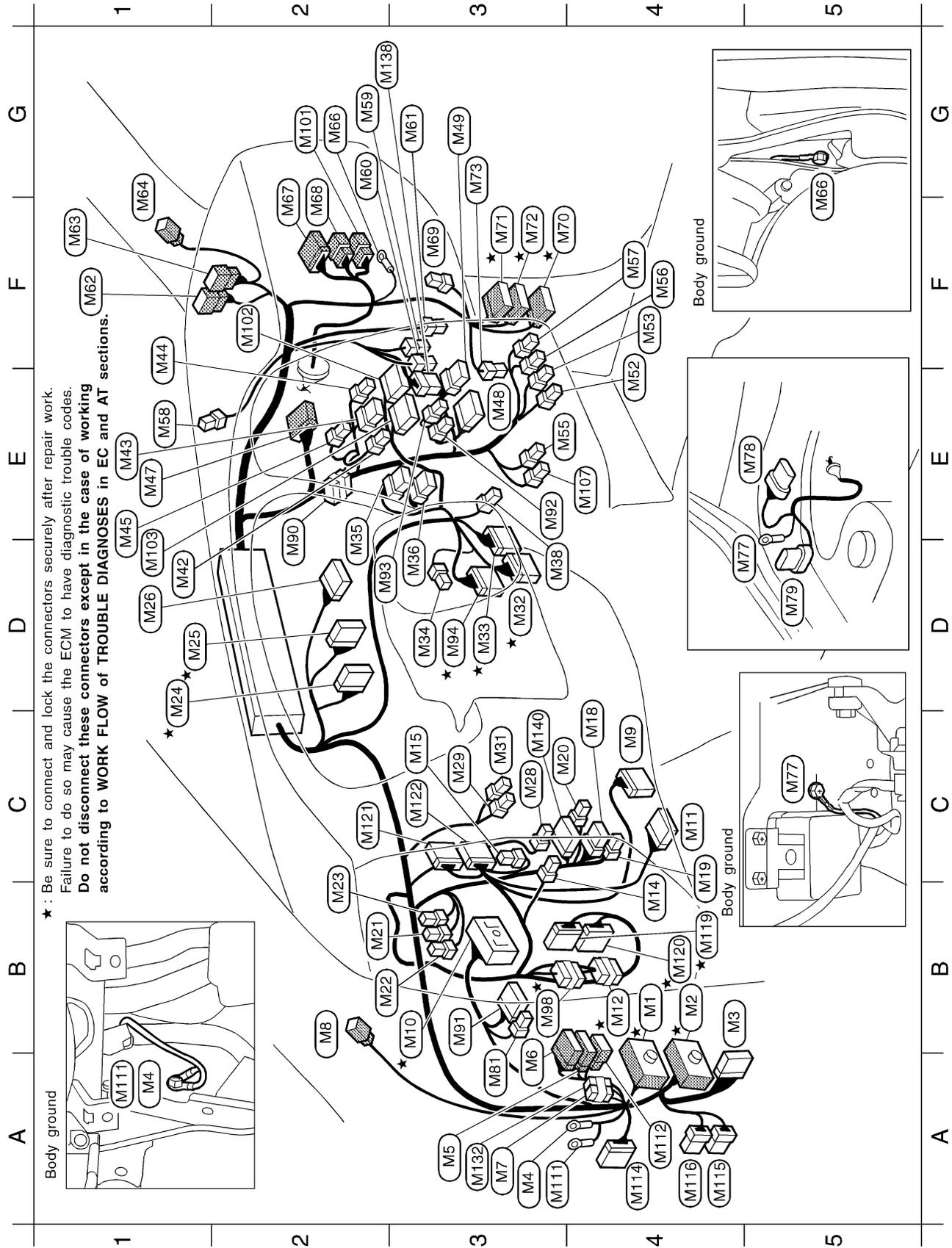
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HARNESS LAYOUT

Main Harness

Main Harness

NAEL0133



★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

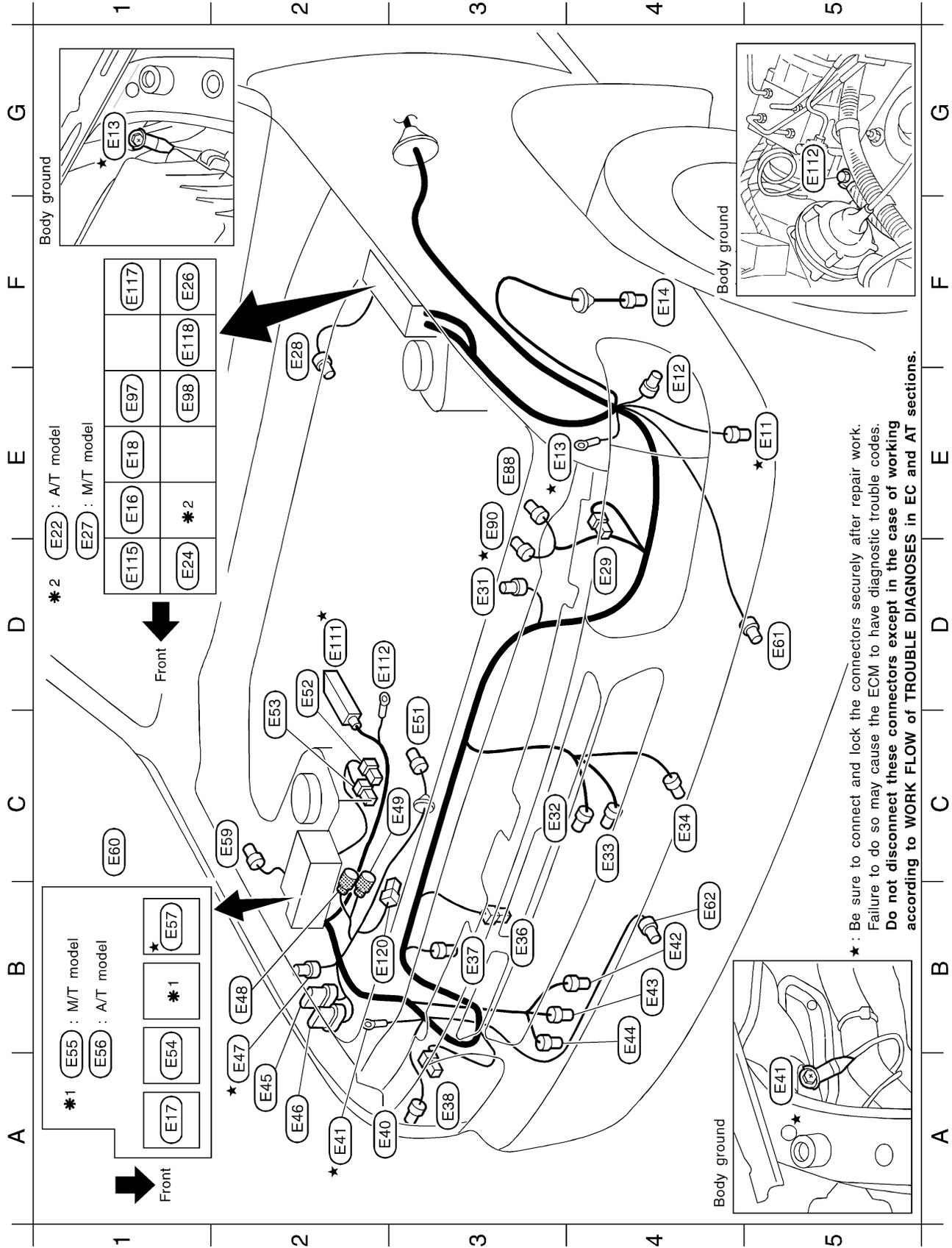
MEL948K

HARNESS LAYOUT

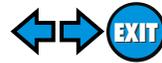
Engine Room Harness

Engine Room Harness

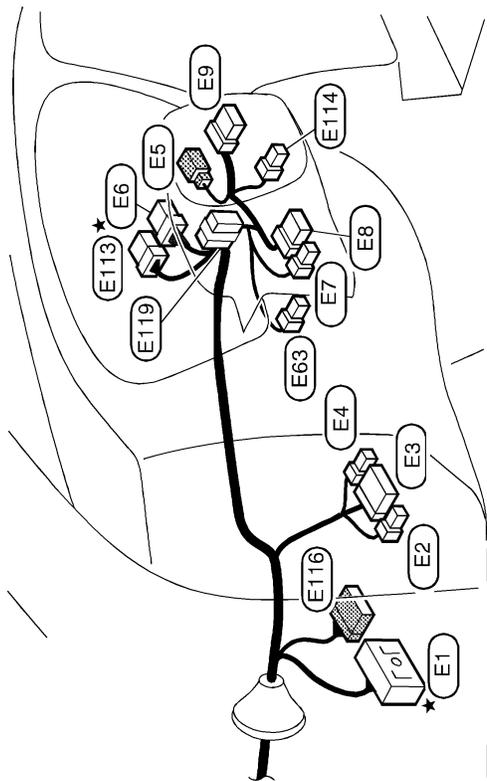
NAEL0134



* : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
 Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.



★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.



B3	E36	B/1	: Horn (Low)
B3	E37	B/2	: Dual-pressure switch
A3	E38	B/3	: Headlamp RH
A2	E40	GY/3	: Front turn signal and parking lamp RH
A2★	E41	-	: Body ground
B4	E42	BR/2	: Washer level switch
B4	E43	GY/2	: Rear washer motor
B4	E44	GY/2	: Front washer motor
A2	E45	GY/8	: Daytime light control unit
A2	E46	GY/6	: Daytime light control unit
A2★	E47	GY/2	: Dropping resistor
B2	E48	GY/4	: To (E102)
C3	E49	GY/1	: To (E104)
C3	E51	GY/2	: Front wheel sensor RH
D2	E52	B/1	: Battery
C2	E53	B/1	: Battery
B1	E54	L/4	: Fuel pump relay
B1	E55	L/4	: Clutch interlock relay (With M/T)
B1	E56	GY/6	: Park/Neutral position relay (With A/T and ASCD)
B1★	E57	BR/6	: ECCS relay
C2	E59	GY/4	: ASCD pump
C1	E60	-	: Fuse and fusible link box
D5	E61	L/2	: Front fog lamp LH
B4	E62	L/2	: Front fog lamp RH
E3	E63	W/3	: Combination switch (Front fog lamp switch)
E3★	E88	GY/3	: Absolute pressure sensor
E1	E90	B/2	: MAP/BARO switch solenoid valve
E1	E97	L/4	: Headlamp RH relay
E1	E98	L/4	: Headlamp LH relay
D2★	E111	SMJ	: ABS actuator and electric unit
D2	E112	-	: Body ground
E113	E113	W/8	: NATS IMMU
E114	E114	W/4	: Combination switch (Rear wiper switch)
D1	E115	L/4	: Tail lamp relay (Relay box-2)
F1	E116	W/12	: To (M114)
F1	E117	BR/6	: Rear window defogger relay (Relay box-1)
F1	E118	BR/6	: Horn relay
E119	E119	W/2	: Diode
B2	E120	B/1	: Horn (High)

★	E1	SMJ	: To (M1)
	E2	B/2	: Fuse block (J/B)
	E3	W/16	: Fuse block (J/B)
	E4	W/4	: Fuse block (J/B)
	E5	BR/2	: Key switch
★	E6	W/6	: Ignition switch
	E7	BR/4	: Combination switch (Lighting switch)
	E8	BR/8	: Combination switch (Lighting & turn signal switch)
	E9	GY/8	: Combination switch (Front wiper switch)
★	E11	GY/2	: Intake air temperature sensor
E4	E12	GY/3	: Front turn signal and parking lamp LH
E3★	E13	-	: Body ground
F4	E14	BR/2	: Front wheel sensor LH
E1	E16	L/4	: Front fog lamp relay (Relay box-1)
A1	E17	BR/6	: Multi-remote control relay (Relay box-2)
E1	E18	BR/6	: Theft warning lamp relay
E1	E22	BR/6	: ASCD hold relay (With A/T)
D1	E24	B/5	: ATP relay (With A/T and 4-wheel drive)
F1	E26	L/4	: A/C relay
E1	E27	L/4	: ASCD hold relay (With M/T)
F2	E28	GY/2	: Brake fluid level switch
D4	E29	B/3	: Headlamp LH
D3	E31	GY/2	: Hood switch
C3	E32	B/2	: Ambient sensor (With auto A/C)
C4	E33	B/2	: Ambient air temperature sensor (For thermometer)
C4	E34	GY/2	: Ambient air temperature switch

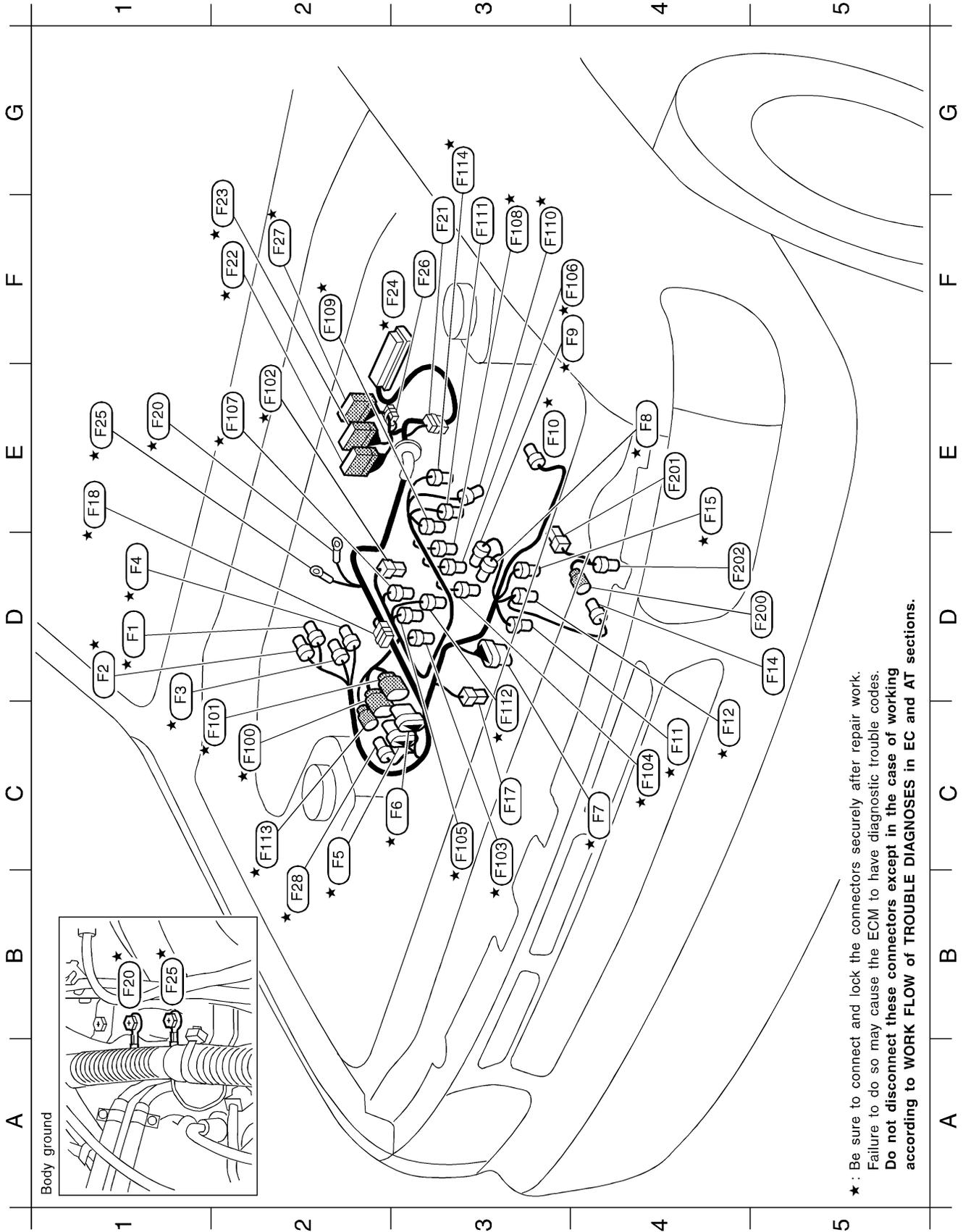
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- IDX

HARNESS LAYOUT

Engine Control Harness

Engine Control Harness

NAEL0135



★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

MEL896J

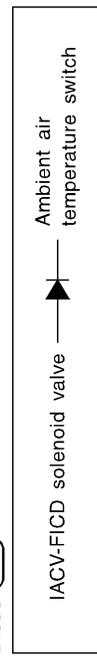
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IDX

D1*	(F1)	GY/4	: Rear heated oxygen sensor RH
D1*	(F2)	GY/3	: Front heated oxygen sensor RH
D1*	(F3)	GY/4	: Rear heated oxygen sensor LH
D1*	(F4)	GY/3	: Front heated oxygen sensor LH
C2*	(F5)	GY/8	: To (F100)
C3*	(F6)	B/8	: To (F101)
C4*	(F7)	GY/6	: Distributor
E4*	(F8)	BR/3	: Throttle position sensor
F4*	(F9)	GY/3	: Throttle position switch
E3*	(F10)	BR/4	: Mass air flow sensor
C4*	(F11)	GY/2	: Distributor
C4*	(F12)	GY/2	: EGR temperature sensor
D5	(F14)	GY/2	: To (F200)
E4*	(F15)	G/2	: EGRC-solenoid valve
C3	(F17)	B/1	: Thermal transmitter
E1*	(F18)	GY/2	: Resistor
E1*	(F20)	-	: Engine ground
F3	(F21)	L/12	: Joint connector
F2*	(F22)	GY/16	: To (M33)
F2*	(F23)	W/24	: To (M32)
F2*	(F24)	SMJ	: ECM
E1*	(F25)	-	: Engine ground
F3	(F26)	W/2	: Diode
F2*	(F27)	W/18	: To (M94)
B2*	(F28)	B/4	: To (F113)
C2*	(F100)	GY/8	: To (F5)
C2*	(F101)	B/8	: To (F6)
E2*	(F102)	B/2	: Knock sensor
C3*	(F103)	B/2	: Injector No. 1
C4*	(F104)	B/2	: Injector No. 2
C3*	(F105)	B/2	: Injector No. 3
F4*	(F106)	B/2	: Injector No. 4
E2*	(F107)	B/2	: Injector No. 5
F3*	(F108)	B/2	: Injector No. 6
F2*	(F109)	BR/2	: IACV-AAC valve
F3*	(F110)	GY/2	: Crankshaft position sensor (OBD)
F3	(F111)	GY/2	: IACV-FICD solenoid valve
C3*	(F112)	GY/2	: Engine coolant temperature sensor
C2*	(F113)	B/4	: To (F28)
G3*	(F114)	L/2	: EVAP canister purge volume control solenoid valve
D5	(F200)	GY/2	: To (F14)
E4	(F201)	B/1	: Oil pressure switch
D4	(F202)	B/1	: Compressor (Air conditioner)

Diode (F26)



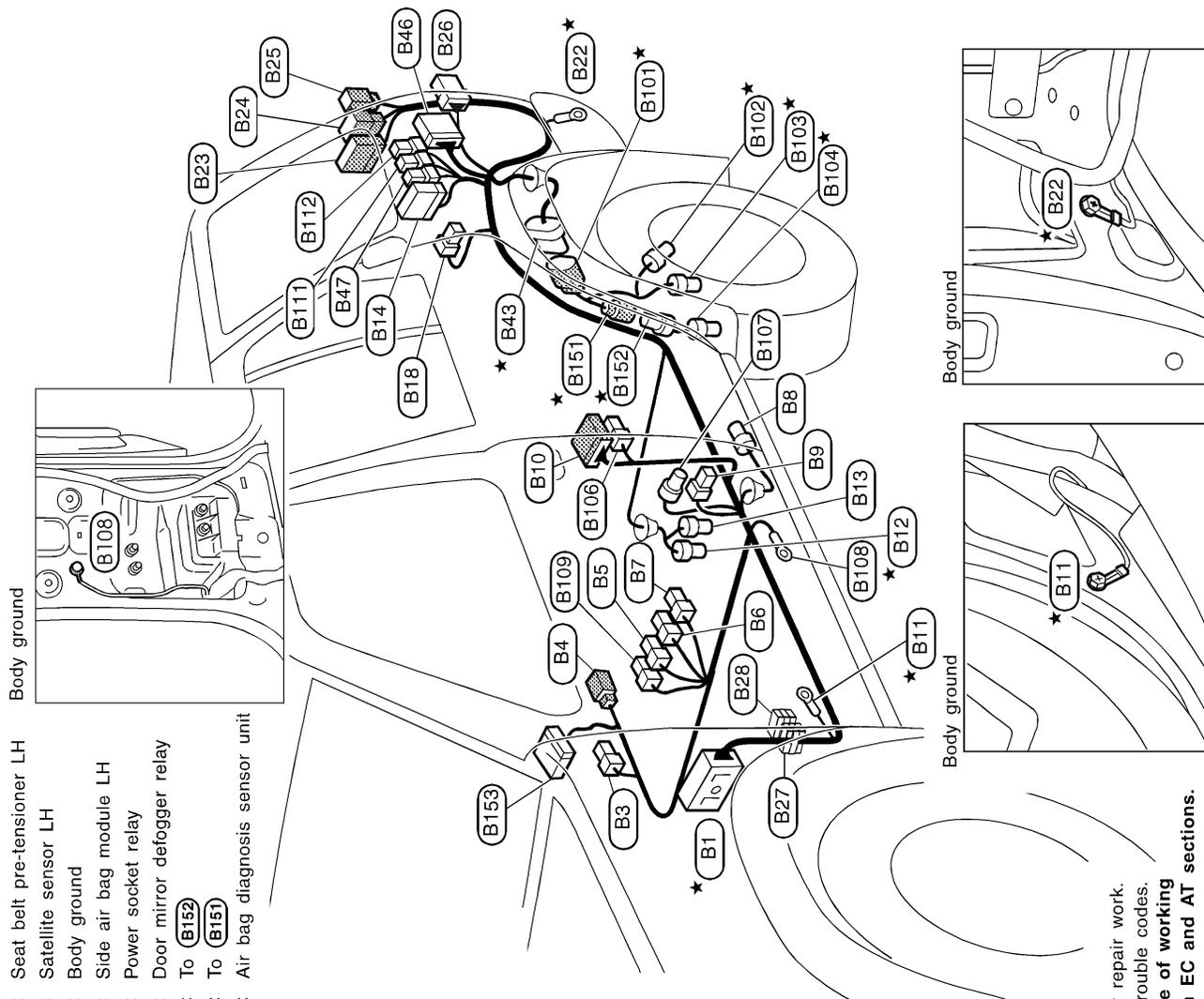
★ : Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.
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HARNESS LAYOUT

Body Harness LH

Body Harness LH

NAEL0136

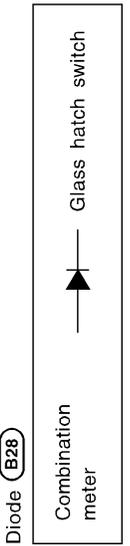
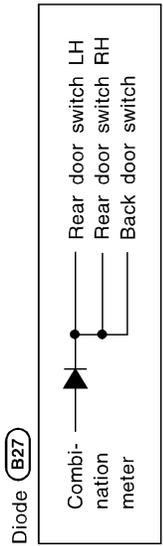


- W/4 : Seat belt pre-tensioner LH
- GY/2 : Satellite sensor LH
- : Body ground
- Y/2 : Side air bag module LH
- W/4 : Power socket relay
- W/4 : Door mirror defogger relay
- GY/2 : To **(B152)**
- GY/2 : To **(B151)**
- Y/12 : Air bag diagnosis sensor unit

- (B106)** : To **(M2)**
- (B107)** : Parking brake switch
- (B108)** : Power socket
- (B109)** : Heated seat LH
- (B111)** : Seat belt buckle switch
- (B112)** : Power seat LH
- (B151)** : Rear wheel sensor LH
- (B152)** : Front door switch LH
- (B153)** : To **(D50)**

- : Body ground
- GY/4 : Fuel tank gauge unit
- GY/2 : Fuel pump
- W/18 : Rear wiper amp.
- BR/1 : Rear door switch LH
- : Body ground
- W/12 : To **(D100)**
- W/6 : To **(D101)**
- W/4 : To **(D102)**
- W/6 : Rear combination lamp LH
- W/2 : Diode
- W/2 : Diode
- GY/8 : To **(B101)**
- W/26 : Rear speaker amp. (With BOSE system)
- W/4 : Audio amp. relay (With BOSE system)
- GY/8 : To **(B43)**
- GY/3 : EVAP control system pressure sensor
- B/2 : EVAP canister vent control valve
- G/2 : Vacuum cut valve bypass valve

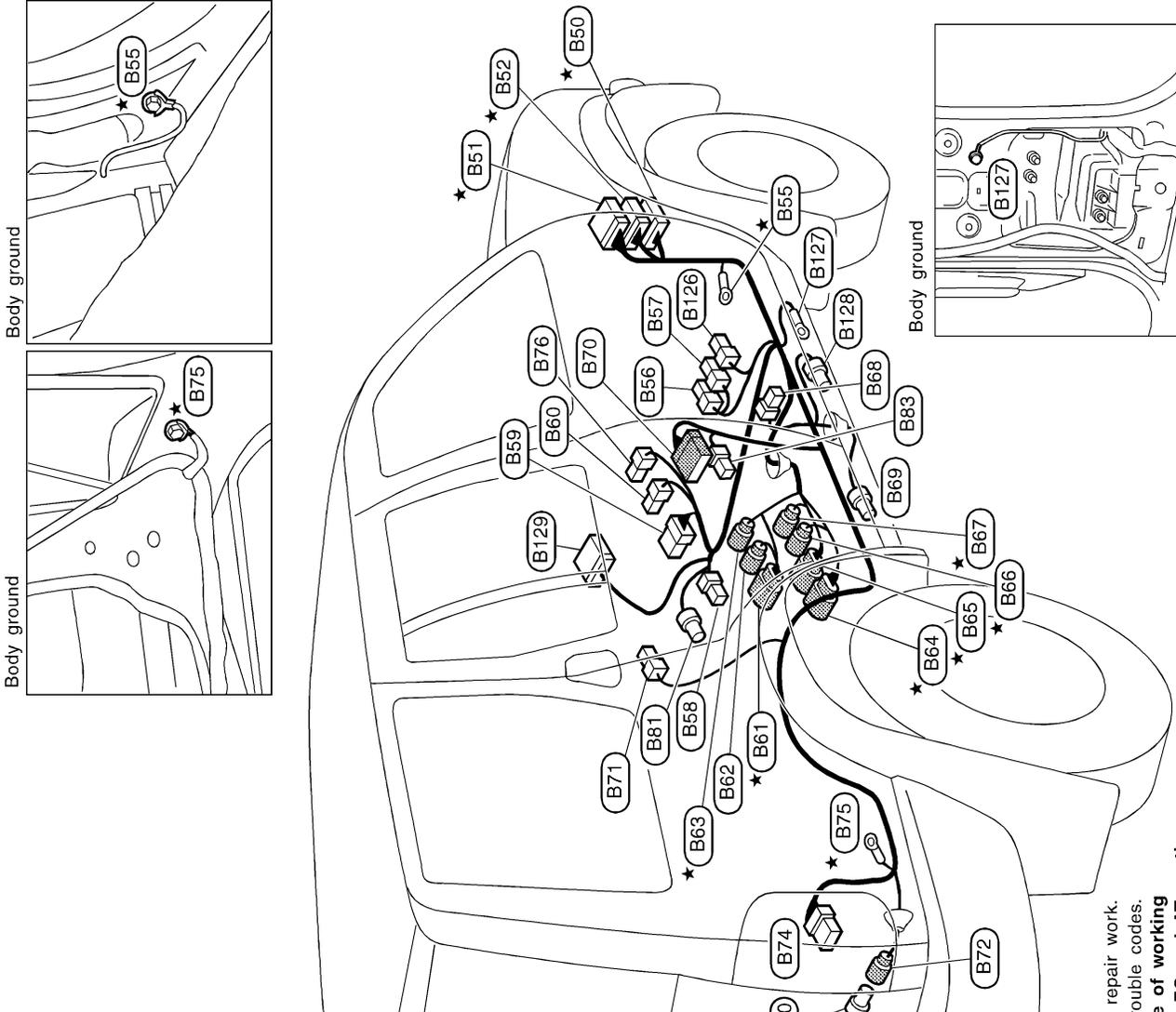
- SMJ : To **(M2)**
- B/1 : Parking brake switch
- W/2 : Power socket
- W/3 : Heated seat LH
- W/3 : Seat belt buckle switch
- W/2 : Power seat LH
- BR/2 : Rear wheel sensor LH
- B/3 : Front door switch LH
- W/10 : To **(D50)**
- : Body ground
- GY/4 : Fuel tank gauge unit
- GY/2 : Fuel pump
- W/18 : Rear wiper amp.
- BR/1 : Rear door switch LH
- : Body ground
- W/12 : To **(D100)**
- W/6 : To **(D101)**
- W/4 : To **(D102)**
- W/6 : Rear combination lamp LH
- W/2 : Diode
- W/2 : Diode
- GY/8 : To **(B101)**
- W/26 : Rear speaker amp. (With BOSE system)
- W/4 : Audio amp. relay (With BOSE system)
- GY/8 : To **(B43)**
- GY/3 : EVAP control system pressure sensor
- B/2 : EVAP canister vent control valve
- G/2 : Vacuum cut valve bypass valve



★ : Be sure to connect and lock the connectors securely after repair work.
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according to **WORK FLOW of TROUBLE DIAGNOSES** in EC and AT sections.

Body Harness RH

NAEL0137



Body ground

Body ground

Body ground

- ★ (B50) W/20 : To (M70)
- ★ (B51) W/24 : To (M71)
- ★ (B52) W/16 : To (M72)
- ★ (B55) - : Body ground
- (B56) W/3 : Heated seat RH
- (B57) W/2 : Power seat RH
- (B58) GY/2 : G sensor (For 4WD model with ABS)
- (B59) W/6 : A/T device (With A/T)
- (B60) W/2 : Ashtray illumination (With M/T)
- ★ (B61) B/6 : To (B200) (With M/T)
- (B62) B/4 : To (B201) (With A/T and 4-wheel drive)
- ★ (B63) GY/2 : Vehicle speed sensor
- ★ (B64) BR/8 : Terminal cord assembly
- ★ (B65) GY/8 : Park/neutral position switch
- ★ (B66) GY/2 : Park/neutral position switch
- ★ (B67) GY/3 : Revolution sensor
- (B68) BR/1 : Front door switch RH
- (B69) GY/2 : Rear wheel sensor RH
- (B70) W/10 : To (D70)
- (B71) BR/1 : Rear door switch RH
- (B72) GY/2 : To (B300)
- (B74) W/6 : Rear combination lamp RH
- ★ (B75) - : Body ground
- (B76) W/3 : Ashtray illumination (With A/T)
- (B81) GY/2 : G sensor (For 4WD model with ABS)
- (B83) W/4 : Seat belt pre-tensioner RH
- (B126) Y/2 : Side air bag module RH
- (B127) - : Body ground
- (B128) GY/2 : Satellite sensor RH
- (B129) Y/12 : Air bag diagnosis sensor unit
- (B300) GY/2 : To (B72)
- (B301) B/3 : Tire carrier switch

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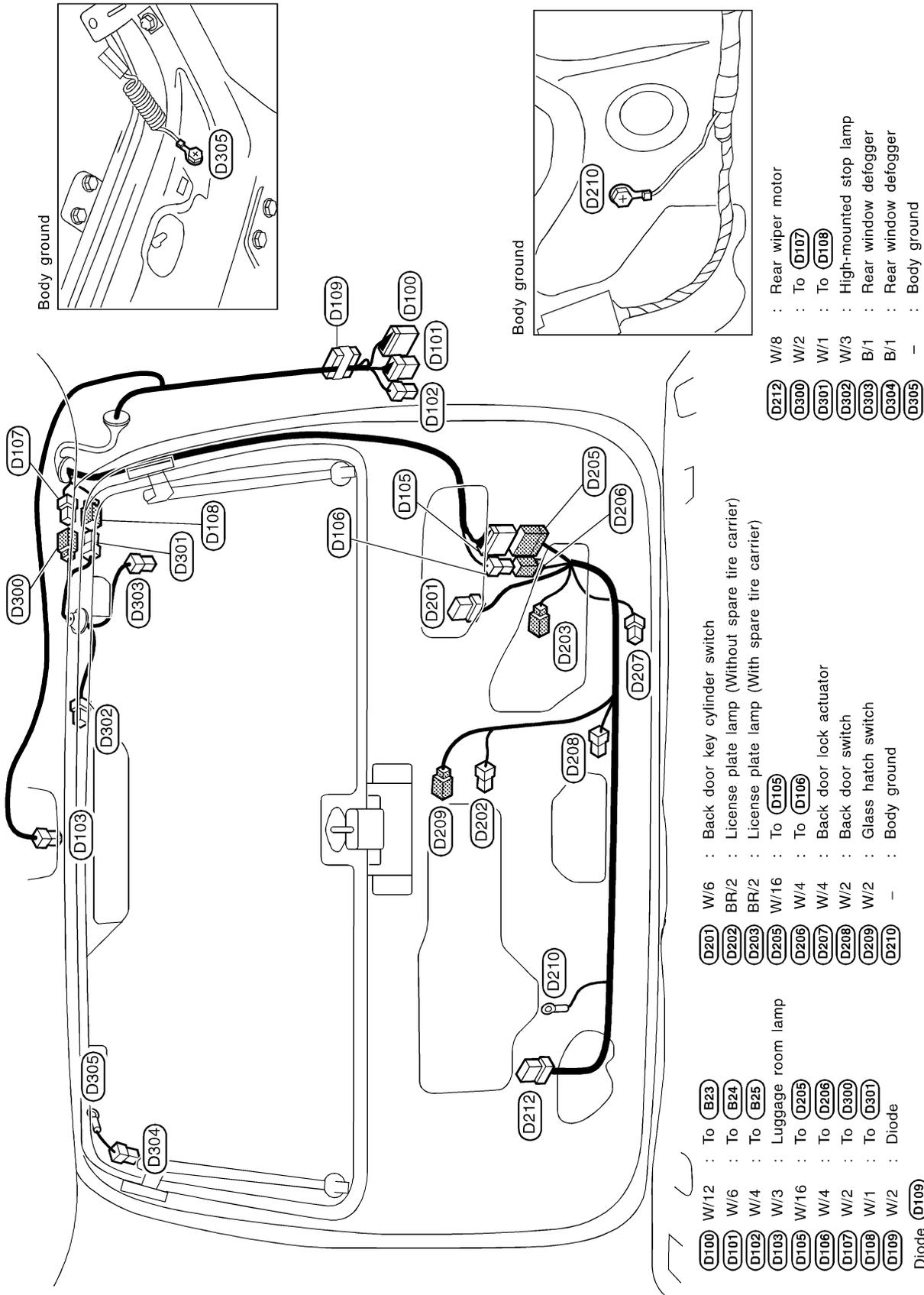
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HARNESS LAYOUT

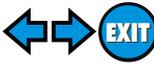
Back Door Harness

Back Door Harness

NAEL0138



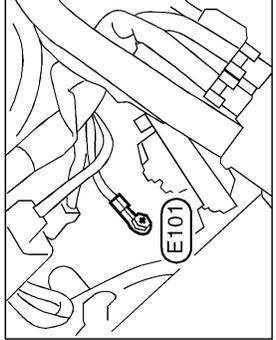
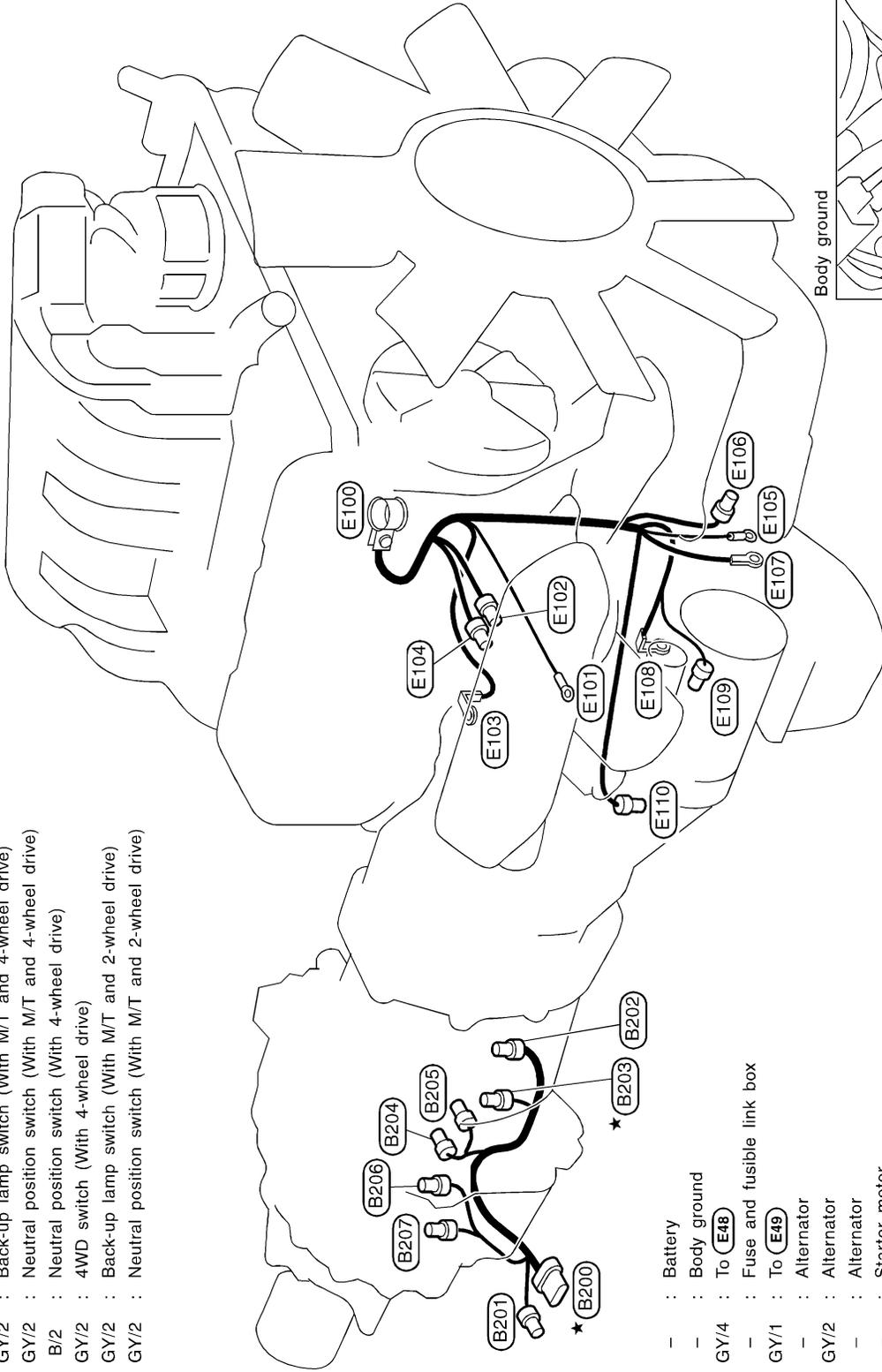
MEL016L



Engine and Transmission Harness

NAEL0139

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Body ground

- ★ (E200) B/6 : To (B61) (With M/T)
- (E201) B/4 : To (B62) (With A/T and 4-wheel drive)
- (E202) GY/2 : Back-up lamp switch (With M/T and 4-wheel drive)
- ★ (E203) GY/2 : Neutral position switch (With M/T and 4-wheel drive)
- (E204) B/2 : Neutral position switch (With 4-wheel drive)
- (E205) GY/2 : 4WD switch (With 4-wheel drive)
- (E206) GY/2 : Back-up lamp switch (With M/T and 2-wheel drive)
- (E207) GY/2 : Neutral position switch (With M/T and 2-wheel drive)

- (E100) - : Battery
- (E101) - : Body ground
- (E102) GY/4 : To (E48)
- (E103) - : Fuse and fusible link box
- (E104) GY/1 : To (E49)
- (E105) - : Alternator
- (E106) GY/2 : Alternator
- (E107) - : Alternator
- (E108) - : Starter motor
- (E109) GY/1 : Starter motor
- (E110) GY/2 : Power steering oil pressure switch

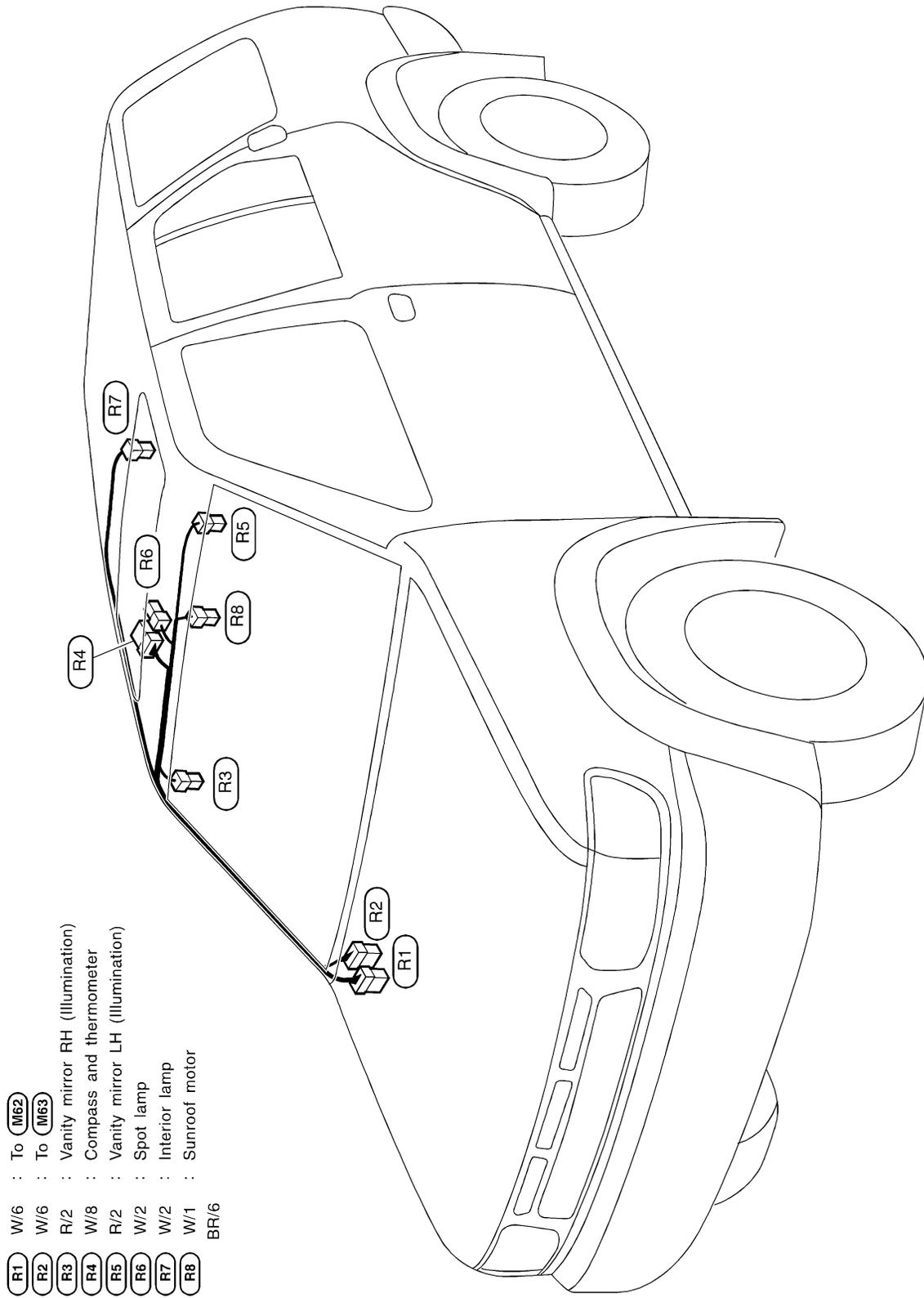
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

HARNES LAYOUT

Room Lamp

Room Lamp

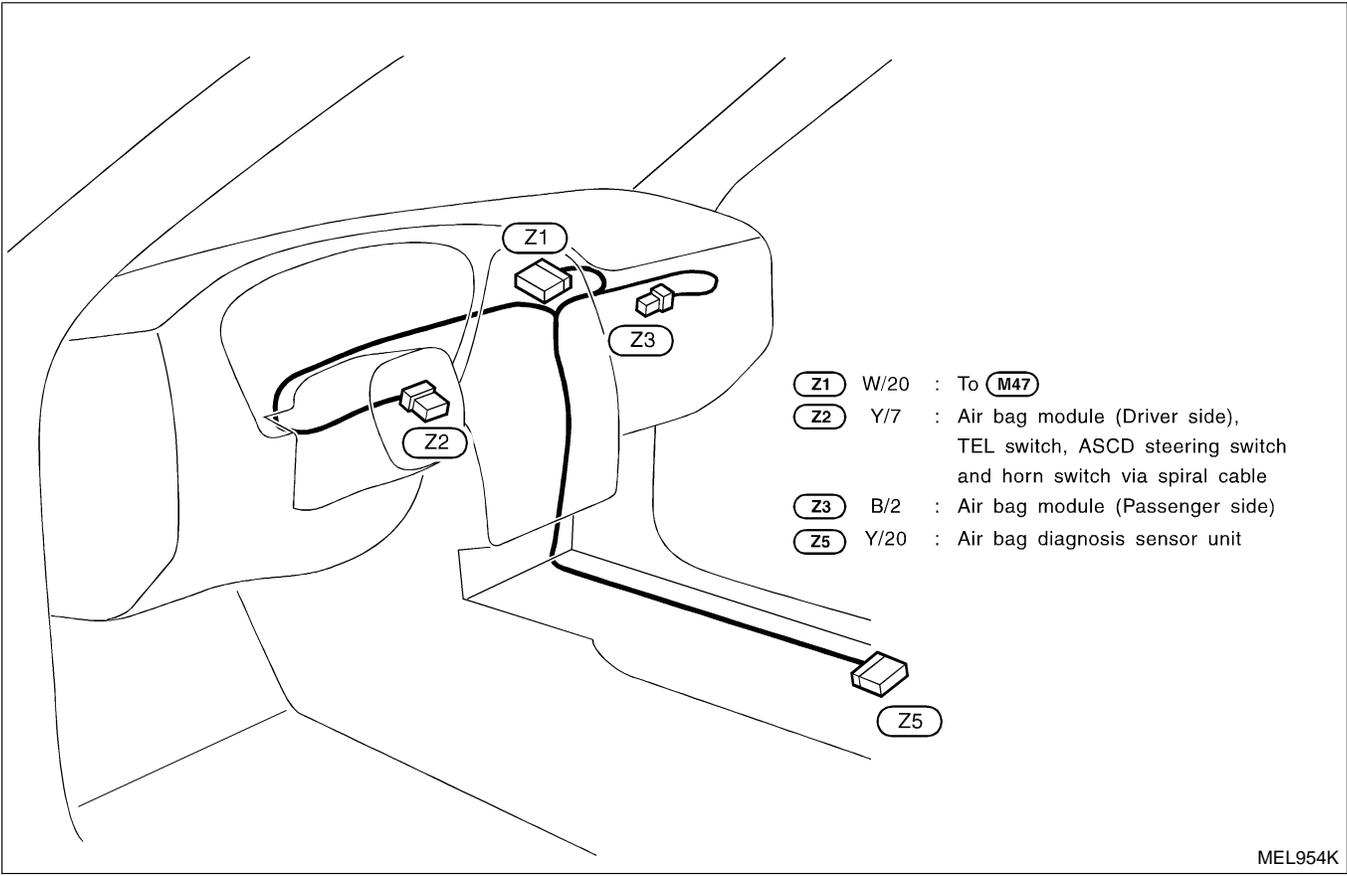
NAEL0140



MEL017L

Air Bag Harness

NAEL0141



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HARNESS LAYOUT

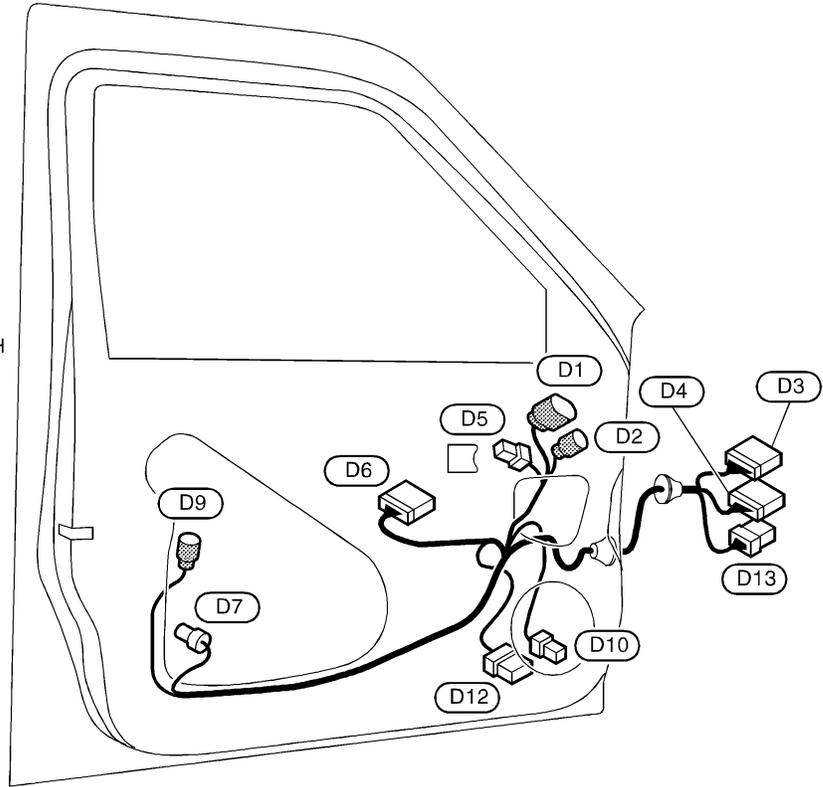
Front Door Harness

Front Door Harness

NAEL0142

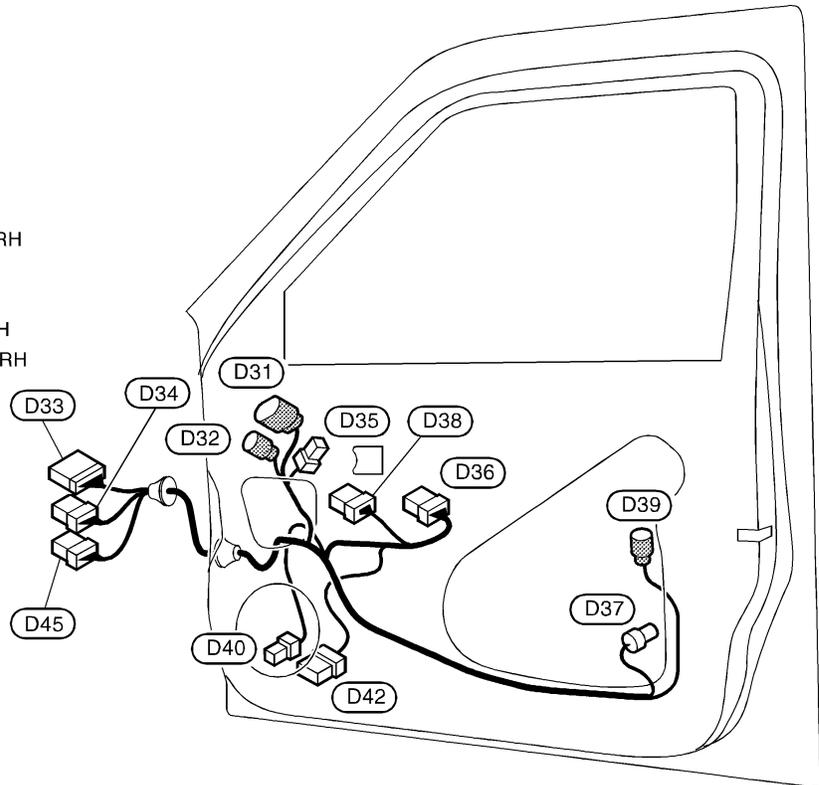
LH side

- D1** GY/5 : Door mirror defogger LH
- D2** BR/3 : Door mirror LH
- D3** W/16 : To **M5**
- D4** W/10 : To **M6**
- D5** B/2 : Front power window regulator LH
- D6** W/16 : Power window main switch
- D7** GY/4 : Front door lock actuator LH
- D9** BR/3 : Front door key cylinder switch LH
- D10** BR/2 : Front door speaker LH
(Without BOSE system)
- D12** W/6 : Front door speaker LH
(With BOSE system)
- D13** BR/6 : To **M12**



RH side

- D31** GY/5 : Door mirror defogger RH
- D32** BR/3 : Door mirror RH
- D33** W/12 : To **M67**
- D34** W/6 : To **M68**
- D35** B/2 : Front power window regulator RH
- D36** W/8 : Front power window sub-switch
- D37** GY/4 : Front door lock actuator RH
- D38** GY/8 : Door lock and unlock switch RH
- D39** BR/3 : Front door key cylinder switch RH
- D40** BR/2 : Front door speaker RH
(Without BOSE system)
- D42** W/6 : Front door speaker RH
(With BOSE system)
- D45** BR/6 : To **M10** (With BOSE system)

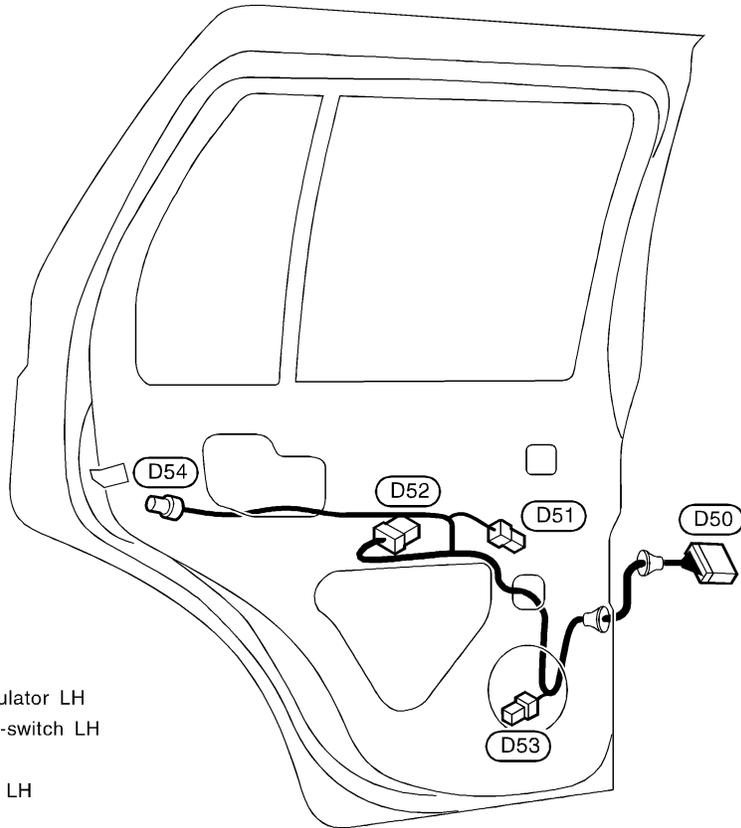


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Rear Door Harness

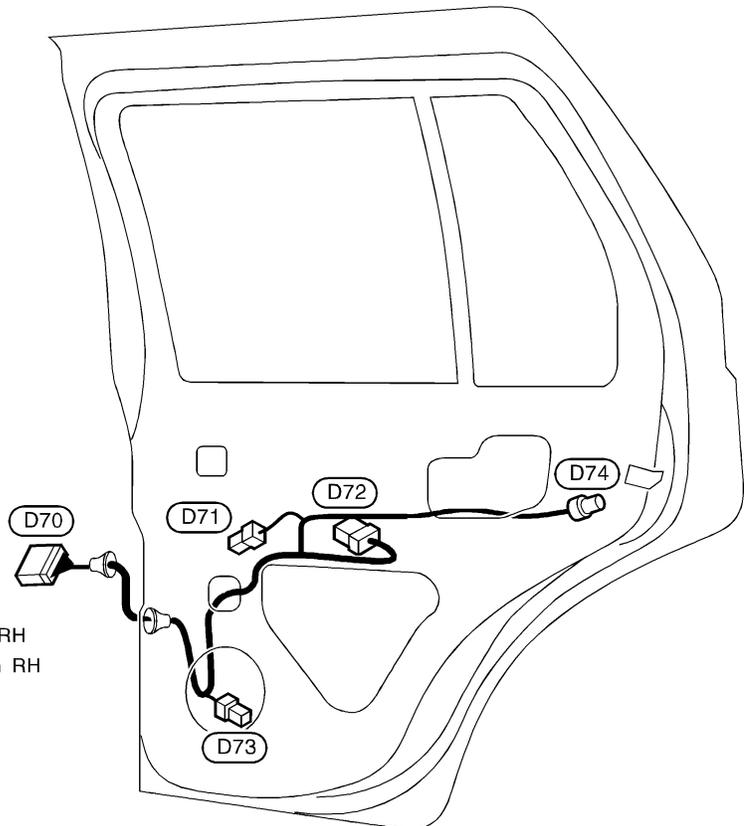
GI
NAEL0143

LH side



- (D50) W/10 : To (B10)
- (D51) B/2 : Rear power window regulator LH
- (D52) W/8 : Rear power window sub-switch LH
- (D53) BR/2 : Rear door speaker LH
- (D54) GY/4 : Rear door lock actuator LH

RH side



- (D70) W/10 : To (B70)
- (D71) B/2 : Rear power window regulator RH
- (D72) W/8 : Rear power window sub-switch RH
- (D73) BR/2 : Rear door speaker RH
- (D74) GY/4 : Rear door lock actuator RH

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MEL905J

IDX

BULB SPECIFICATIONS

Headlamp

Headlamp	
Item	Wattage W
High/Low (Semi-sealed beam)	60/55 (HB2)

NAEL0144S03

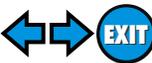
Exterior Lamp		
Item	Wattage W	
Front fog lamp	55	
Front turn signal lamp	21/5	
Parking lamp	5	
Rear combination lamp	Turn signal lamp	21
	Stop/Tail lamp	21/5
Back-up lamp	18	
License plate lamp	5	
High-mounted stop lamp	5	

NAEL0144S01

Interior Lamp	
Item	Wattage W
Interior lamp	10
Spot lamp	8
Luggage room lamp	10

NAEL0144S02

WIRING DIAGRAM CODES (CELL CODES)



Use the chart below to find out what each wiring diagram code stands for.

Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
1STSIG	AT	A/T 1ST Signal
2NDSIG	AT	A/T 2ND Signal
3RDSIG	AT	A/T 3RD Signal
4THSIG	AT	A/T 4TH Signal
A/C, A	HA	Auto Air Conditioner
A/C, M	HA	Manual Air Conditioner
AAC/V	EC	IACV-AAC Valve
ABS	BR	Anti-lock Brake System
AP/SEN	EC	Absolute Pressure Sensor
ASCD	EL	Automatic Speed Control Device
AT/C	EC	A/T Control
ATDIAG	EC	A/T Diagnosis Communication Line
AUDIO	EL	Audio
BA/FTS	AT	A/T Fluid Temperature Sensor and TCM Power Supply
BACK/L	EL	Back-up Lamp
BYPS/V	EC	Vacuum Cut Valve Bypass Valve
CHARGE	SC	Charging System
CHIME	EL	Warning Chime
CIGAR	EL	Cigarette Lighter
CKPS	EC	Crankshaft Position Sensor (OBD)
CMPS	EC	Camshaft Position Sensor
COMPAS	EL	Compass and Thermometer
D/LOCK	EL	Power Door Lock
DEF	EL	Rear Window Defogger
DTRL	EL	Headlamp — With Daytime Light System —
ECTS	EC	Engine Coolant Temperature Sensor
EGR/TS	EC	EGR Temperature Sensor
EGRC/V	EC	EGRC-solenoid Valve
EGRC1	EC	EGR Function
ENGSS	AT	Engine Speed Signal
F/FOG	EL	Front Fog Lamp
F/PUMP	EC	Fuel Pump Control

Code	Section	Wiring Diagram Name	
FICD	EC	IACV-FICD Solenoid Valve	GI
FO2H-L	EC	Front Heated Oxygen Sensor Heater (Left Bank)	MA
FO2H-R	EC	Front Heated Oxygen Sensor Heater (Right Bank)	EM
FRO2LH	EC	Front Heated Oxygen Sensor (Front HO2S) (Left Bank)	LC
FRO2RH	EC	Front Heated Oxygen Sensor (Front HO2S) (Right Bank)	EC
FTS	AT	A/T Fluid Temperature Sensor	FE
FUELLH	EC	Fuel Injection System Function (Left Bank)	CL
FUELRH	EC	Fuel Injection System Function (Right Bank)	MT
HEATER	HA	Heater System	AT
H/LAMP	EL	Headlamp	TF
HORN	EL	Horn	PD
HSEAT	EL	Heated Seat	AX
IATS	EC	Intake Air Temperature Sensor	SU
IGN/SG	EC	Ignition Signal	BR
ILL	EL	Illumination	ST
INJECT	EC	Injector	RS
INT/L	EL	Interior, Spot, Vanity Mirror, and Luggage Room Lamps	BT
KS	EC	Knock Sensor	HA
LPSV	AT	Line Pressure Solenoid Valve	SC
MAFS	EC	Mass Air Flow Sensor	EL
MAIN	AT	Main Power Supply and Ground Circuit	
MAIN	EC	Main Power Supply and Ground Circuit	
METER	EL	Speedometer, Tachometer, Temp., Oil, and Fuel Gauges	
MIL/DL	EC	MIL and Data Link Connectors	
MIRROR	EL	Door Mirror	
MULTI	EL	Multi-remote Control System	
NATS	EL	NVIS (Nissan Vehicle Immobiliser System)	
NONDTC	AT	Non-detectable Items	
OVRCSV	AT	Overrun Clutch Solenoid Valve	
P/ANT	EL	Power Antenna	
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve	IDX

WIRING DIAGRAM CODES (CELL CODES)



Code	Section	Wiring Diagram Name
PNP/SW	AT	Park/Neutral Position Switch
PNP/SW	EC	Park/Neutral Position Switch
POWER	EL	Power Supply Routing
PRE/SE	EC	EVAP Control System Pressure Sensor
PST/SW	EC	Power Steering Oil Pressure Switch
RO2H-L	EC	Rear Heated Oxygen Sensor Heater Left Bank
RO2H-R	EC	Rear Heated Oxygen Sensor Heater Right Bank
RRO2LH	EC	Rear Heated Oxygen Sensor Left Bank
RRO2RH	EC	Rear Heated Oxygen Sensor Right Bank
S/SIG	EC	Start Signal
SEAT	EL	Power Seat
SHIFT	AT	A/T Shift Lock System
SROOF	EL	Sunroof
SRS	RS	Supplemental Restraint System
SSV/A	AT	Shift Solenoid Valve A
SSV/B	AT	Shift Solenoid Valve B
START	SC	Starting System
STOP/L	EL	Stop lamp
SW/V	EC	MAP/BARO Switch Solenoid Valve
TAIL/L	EL	Parking, License and Tail Lamps
TCCSIG	AT	A/T TCC Signal (Lock up)
TCV	AT	Torque Converter Clutch Solenoid Valve
TFTS	EC	Tank Fuel Temperature Sensor
THEFT	EL	Theft Warning System
TP/SW	EC	Throttle Position Switch
TPS	AT	Throttle Position Sensor
TPS	EC	Throttle Position Sensor
TRNSMT	EL	Integrated HOMELINK [®] Transmitter
TURN	EL	Turn Signal and Hazard Warning Lamps
VENT/V	EC	EVAP Canister Vent Control Valve
VSS	EC	Vehicle Speed Sensor

Code	Section	Wiring Diagram Name
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)
VSSMTR	AT	Vehicle Speed Sensor MTR
WARN	EL	Warning Lamps
WINDOW	EL	Power Window
WIP/R	EL	Rear Wiper and Washer
WIPER	EL	Front Wiper and Washer