

INTRODUCTION

How to Use This Manual

This manual is divided into multiple sections. The first page of each section is marked with a black tab that lines up with its corresponding thumb index tab on this page and the back cover. You can quickly find the first page of each section without looking through a full table of contents. The symbols printed at the top corner of each page can also be used as a quick reference system.


Each section includes:

1. A table of contents, or an exploded view index showing:
 - Parts disassembly sequence.
 - Bolt torques and thread sizes.
 - Page references to descriptions in text.
2. Disassembly/assembly procedures and tools.
3. Inspection.
4. Testing/troubleshooting.
5. Repair.
6. Adjustments.

Safety Messages

Your safety, and the safety of others, is very important. To help you make informed decisions, we have provided safety messages, and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing this vehicle. You must use your own good judgment.

You will find important safety information in a variety of forms including:

- **Safety Labels** — on the vehicle.
- **Safety Messages** — preceded by a safety alert symbol  and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:

- ⚠ DANGER** You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.
- ⚠ WARNING** You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.
- ⚠ CAUTION** You CAN be HURT if you don't follow instructions.

- **Instructions** — how to service this vehicle correctly and safely.

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at anytime without notice. No part of this publication may be reproduced, or stored in a retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. This includes text, figures, and tables.

As you read this manual, you will find information that is preceded by a **NOTICE** symbol. The purpose of this message is to help prevent damage to your vehicle, other property, or the environment.

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HONDA MOTOR CO., LTD.
Service Publication Office

**As sections with * include SRS components;
special precautions are required when servicing.**

General Information



Specifications

specs

Maintenance



*Engine Electrical



Engine Mechanical



Engine Cooling



Fuel and Emissions



*Transaxle



*Steering



Suspension (Including TPMS)



Brakes (Including VSA)



*Body



*Heating, Ventilation, and Air Conditioning



*Body Electrical



*Audio, Navigation, and Telematics



*Restraints



SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

The CR-V SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, seat belt buckle tensioners in the front seat belt buckles, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items require special precautions and tools, and should be done only by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags and/or side airbags.
- Do not bump or impact the SRS unit, front impact sensors, or side impact sensors when the ignition switch is ON (II), or for at least 3 minutes after the ignition switch is turned OFF; otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

General Information

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General Information

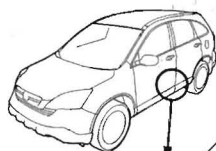
Chassis and Paint Codes

Vehicle Identification Number

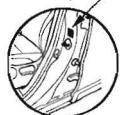
5J6 RE3 8 3 * 7 L 000001

a b c d e f g h

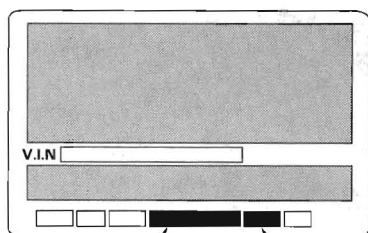
- a. Manufacturer, Make and Type of Vehicle**
5J6: Honda of America Mfg., Inc., U.S.A.
Honda Multipurpose passenger vehicle
JHL: Honda Motor Co., Ltd.
Honda Multipurpose passenger vehicle
- b. Line, Body and Engine Type**
RE3: CR-V 2WD/K24Z1
RE4: CR-V 4WD/K24Z1
- c. Body Type and Transmission Type**
8: 5-door/5-speed Automatic
- d. Vehicle Grade (Series)**
3: LX
5: EX
7: EX-L
- e. Check Digit**
- f. Model Year**
7: '07
- g. Factory Code**
L: East Liberty, Ohio Plant, USA
C: Saitama Factory in Japan
- h. Serial Number**
000001—: USA Models
800001—: Canada Models



Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification Paint Code.



Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification Paint Code.



PAINT CODE

INTERIOR COLOR CODE

Engine Number

K24Z1 - 1000001

a b

- a. Engine Type**
K24Z1: 2.4 L DOHC i-VTEC Sequential Multiport Fuel-injected engine
- b. Serial Number**
1000001—: Produced in Ohio plant
1410001—: Produced in Saitama factory (4WD)
1740001—: Produced in Saitama factory (2WD)

Transmission Number

MZJA - 1000001

a b

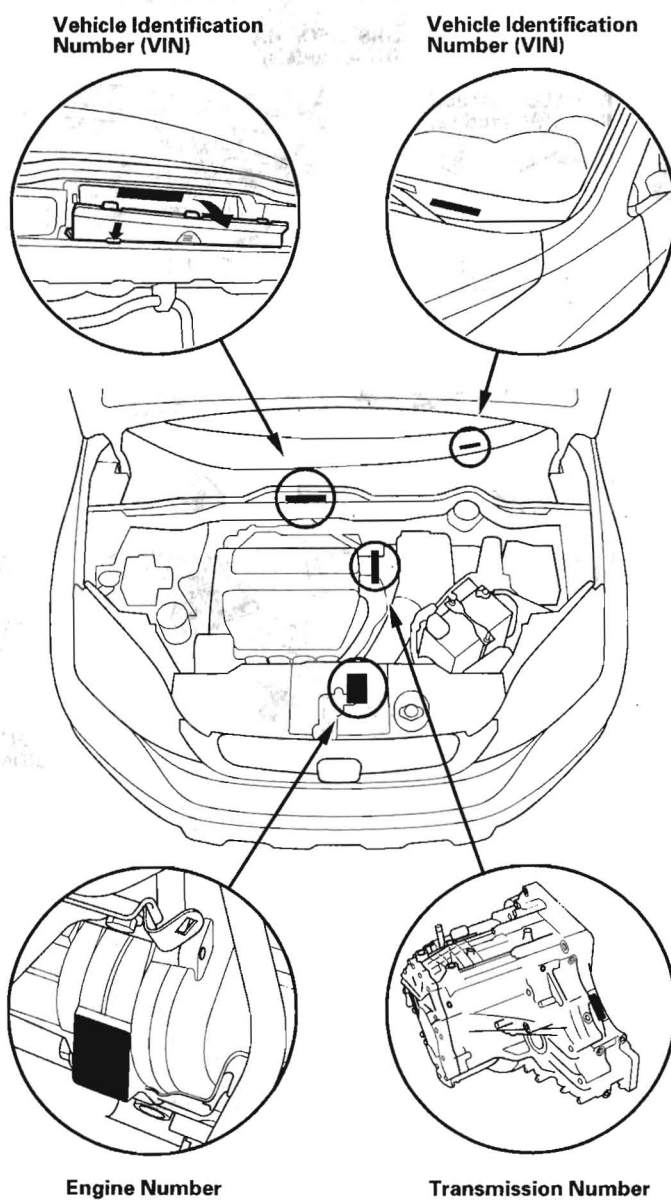
- a. Transmission Type**
MZJA: 5-speed Automatic (2WD)
MZHA: 5-speed Automatic (4WD)
- b. Serial Number**

Paint Code

Code	Color	USA models	Canada models
B-536P	Royal Blue Pearl	○	○
B-538M	Glacier Blue Metallic	○	○
B-92P	Nighthawk Black Pearl	○	○
G-526M	Green Tea Metallic	○	○
NH-578	Taffeta White	○	
NH-711M	Whistler Silver Metallic	○	○
R-525P	Tango Red Pearl	○	○
YR-566M	Borrego Beige Metallic	○	○



Identification Number Locations

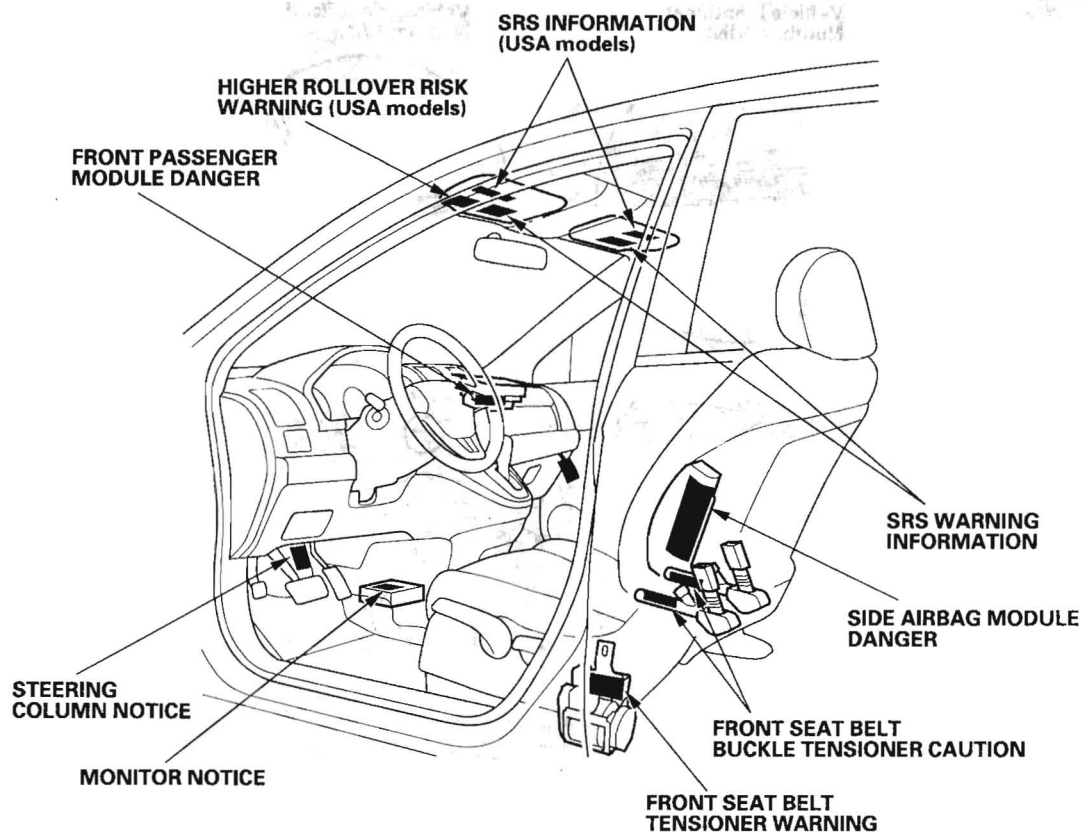


General Information

Danger/Warning/Caution Label Locations

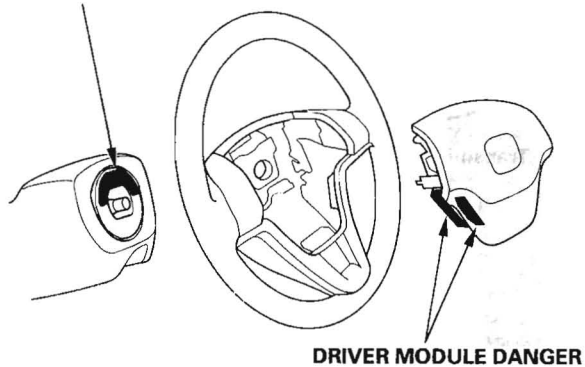
Front Passenger's Compartment:

NOTE: FRONT PASSENGER (CHILD SEAT) AIRBAG WARNING TAG is installed on the glove box in the USA models.



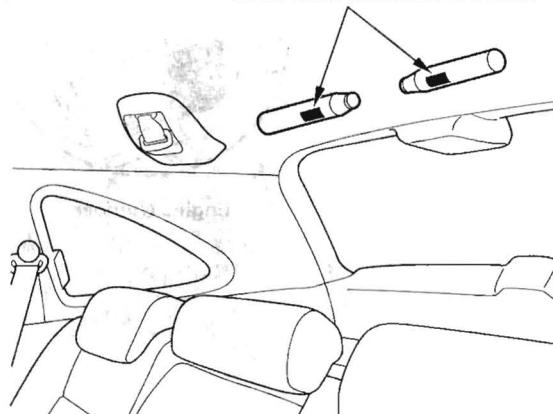
Steering Wheel:

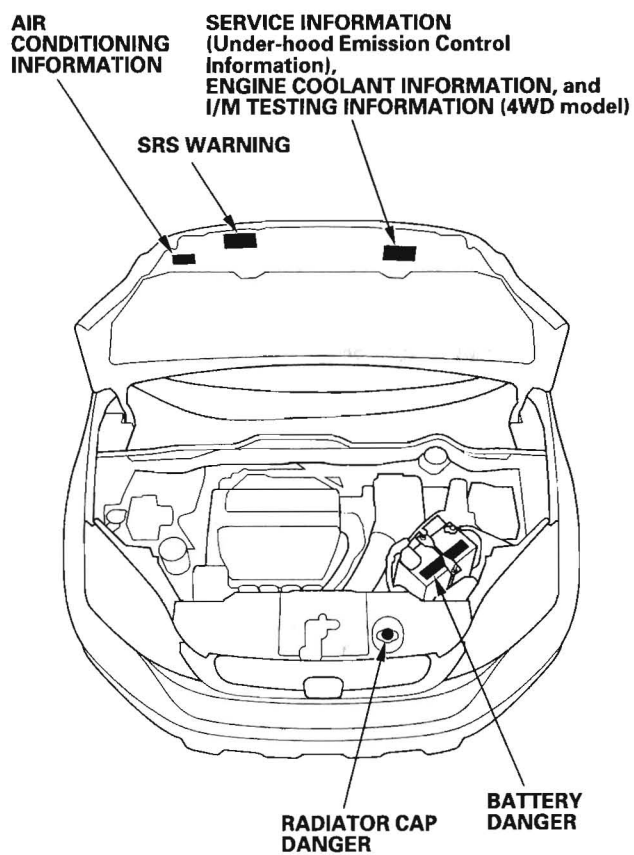
CABLE REEL CAUTION



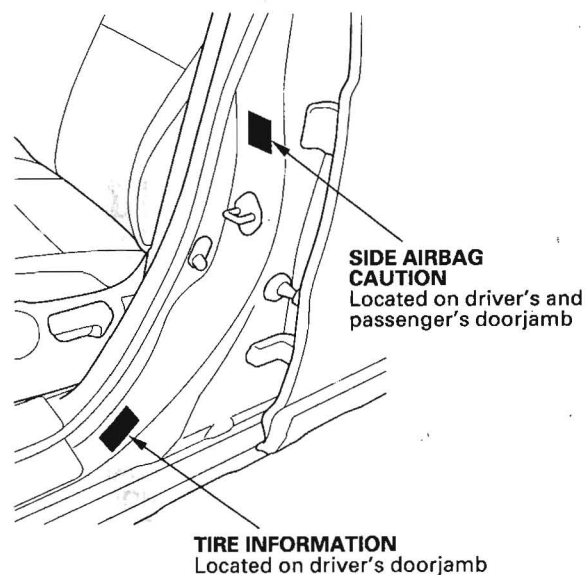
Rear Passenger's Compartment:

ROOF SIDE MODULE DANGER





Doorjamb:



General Information

Under-hood Emission Control Label

Emission Group Identification

Example:



THIS VEHICLE CONFORMS TO U.S. EPA TIER 2 BIN 5 REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW LIGHT-DUTY TRUCKS AND CALIFORNIA REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW LEV II ULEV LIGHT-DUTY TRUCKS.

Test Group and Evaporative Family

Test Group:

7 HNX T 02.4 FKR
a b c d e

- a. Model Year
7: '07
- b. Manufacturer Subcode
HNX: HONDA
- c. Family Type
T: LDT
- d. Displacement Group
02.4
- e. Sequence Characters
FKR

Evaporative Family:

7 HNX R 0140 BBA
a b c d e

- a. Model Year
7: '07
- b. Manufacturer Subcode
HNX: HONDA
- c. Family Type
R: EVAP/ORVR
- d. Canister Work Capacity
0140
- e. Sequence Characters
BBA

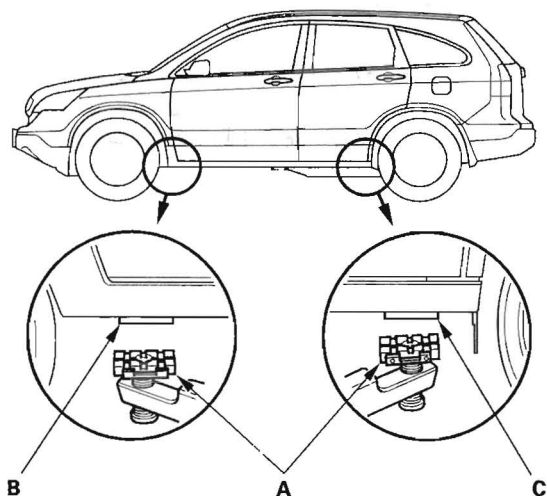


Lift and Support Points

NOTE: If you are going to remove heavy components such as the suspension or the fuel tank from the rear of the vehicle, first support the front of the vehicle with tall safety stands. When substantial weight is removed from the rear of the vehicle, the center of gravity can change, causing the vehicle to tip forward on the lift.

Vehicle Lift

1. Position the lift blocks (A) under the vehicle's front support points (B) and rear support points (C).



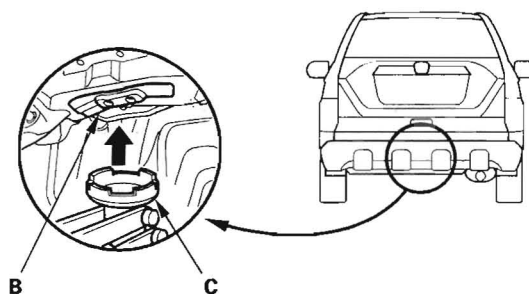
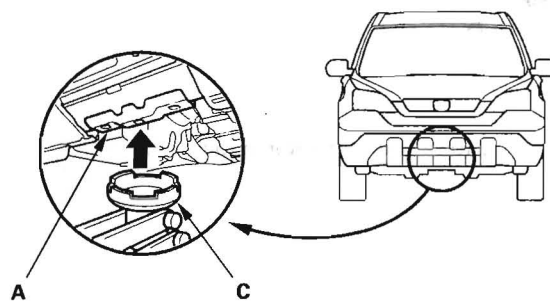
2. Raise the lift a few inches, and rock the vehicle gently to be sure it is firmly supported.
3. Raise the lift to its full height, and inspect the vehicle support points for solid contact with the lift blocks.

Safety Stands

To support the vehicle on safety stands, use the same support points (B and C) as for a vehicle lift. Always use safety stands when working on or under any vehicle that is supported only by a jack.

Floor Jack

1. When lifting the front of the vehicle, set the parking brake. When lifting the rear of the vehicle, put the shift lever in the P position.
2. Block the wheels that are not being lifted.
3. Position the floor jack under the front jacking bracket (A) or the rear jacking bracket (B). Center the jacking bracket on the jack lift platform (C), and jack up the vehicle high enough to fit the safety stands under it.



4. Position the safety stands under the support points, and adjust them so the vehicle is level.
5. Lower the vehicle onto the stands.

General Information

Towing

If the vehicle needs to be towed, call a professional towing service. Never tow the vehicle behind another vehicle with a rope or chain. It is very dangerous.

Emergency Towing

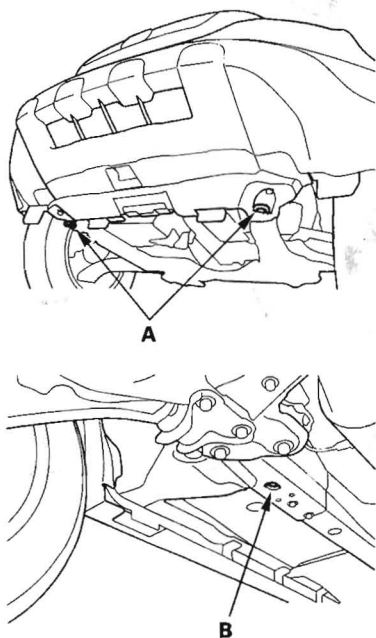
There are three popular methods of towing a vehicle.

Flat-bed Equipment — The operator loads the vehicle on the back of a truck. **This is the best way of transporting the vehicle.**

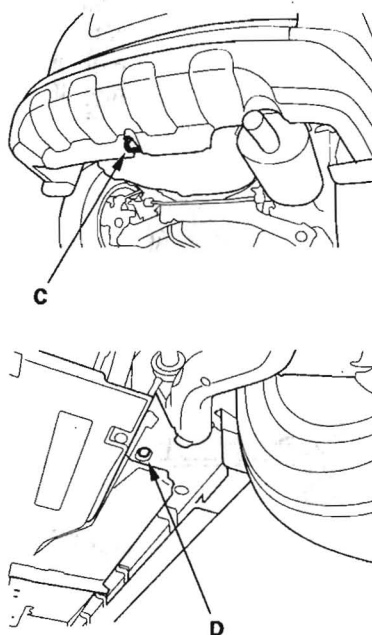
To accommodate flat-bed equipment, the vehicle is equipped with front towing hooks (A), front tie down hook slots (B), rear towing hook (C), and rear tie down hook slots (D).

The rear towing hook can be used with a winch to pull the vehicle onto the truck, and the tie down hook slots can be used to secure the vehicle to truck.

Front:



Rear:



Wheel Lift Equipment — The tow truck uses two pivoting arms that go under the tires (front or rear) and lifts them off the ground. The other two wheels remain on the ground. **Never tow the vehicle with wheel lift equipment.**

Sling-type Equipment — The tow truck uses metal cables with hooks on the ends. These hooks go around parts of the frame or suspension, and the cables lift that end of the vehicle off the ground. The vehicle's suspension and body can be seriously damaged if this method of towing is attempted. **This method of towing the vehicle is unacceptable.**

The only recommended way of towing the CR-V is on a flat-bed truck. Towing the 4WD CR-V with only two wheels on the ground will damage parts of the 4WD system. The 2WD CR-V may also be towed with the front wheels off the ground, or with all four wheels on the ground.

If the 2WD CR-V cannot be transported by a flat-bed, it should be towed with the front wheels off the ground. If the vehicle is damaged, and the vehicle must be towed with the front wheels on the ground, or if the vehicle is towed with all four wheels on the ground, do this.

- Release the parking brake.
- Start the engine.
- Shift to the D position, then to the N position.
- Turn off the engine.
- Leave the ignition switch in the ACCESSORY (I) position so the steering wheel does not lock.
- Make sure all accessories are turned off to minimize battery current draw.

It is best to tow the vehicle no farther than 50 miles (80 km), and keep the speed below 35 mph (55 km/h).

NOTICE

- Improper towing preparation will damage the transmission. Follow the above procedure exactly. If you cannot shift the transmission or start the engine, the vehicle must be transported on a flat-bed.
- Trying to lift or tow the vehicle by the bumpers will cause serious damage. The bumpers are not designed to support the vehicle's weight.

General Information

Parts Marking

To deter vehicle theft, certain major components are marked with the vehicle identification number (VIN). Original parts have self-adhesive labels. Replacement body parts have generic self-adhesive labels. These labels should not be removed. The original engine or transmission VIN plates are not transferable to the replacement engine or transmission.

NOTE: Be careful not to damage the parts marking labels during body repair. Mask the labels before repainting the part.

Precautions for Real-time 4WD (Four-wheel Drive)

Under normal conditions, the vehicle is in 2WD (front-wheel drive). However, the system will instantly transmit appropriate driving force to the rear wheels (depending on the driving force of the front wheels and the road conditions).

The Real-time 4WD-Dual Pump System does not have a manual switch to disable the 4WD system. Whenever service work requires spinning the front or rear wheels with the engine, always lift up and support the vehicle so all four wheels are off the ground.

Specifications

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Standards and Service Limits

Engine Electrical

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1—3—4—2	
Spark plug	Type		NGK: IZFR6K11 DENSO: SKJ20DR-M11	
	Gap		1.0—1.1 mm (0.039—0.043 in.)	—
Ignition timing	At idle Check the <i>red</i> mark	In N or P position	8±2 ° BTDC	
Drive belt	Tension		Auto-tensioner	
Alternator	Output	At 13.5 V and normal engine temperature	105 A	
	Coil (rotor) resistance	At 68 °F (20 °C)	2.5 Ω	
	Slip ring O.D.		14.4 mm (0.57 in.)	14.0 mm (0.55 in.)
	Brush length		10.5 mm (0.41 in.)	1.5 mm (0.06 in.)
	Brush spring tension		3.2 N (0.33 kgf, 0.7 lbf)	
Starter	Output		1.6 kW	
	Commutator mica depth		0.40—0.50 mm (0.016—0.020 in.)	0.15 mm (0.006 in.)
	Commutator runout		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)
	Commutator O.D.		28.0—28.1 mm (1.102—1.106 in.)	27.5 mm (1.083 in.)
	Brush length		11.1—11.5 mm (0.44—0.45 in.)	4.3 mm (0.17 in.)

Engine Assembly

Item	Measurement	Qualification	Standard or New
Compression	Pressure	Minimum	930 kPa (9.5 kgf/cm ² , 135 psi)
	Check with the starter cranking the engine	Maximum variation	200 kPa (2.0 kgf/cm ² , 28 psi)

Cylinder Head

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage			0.05 mm (0.002 in.)
	Height		103.95—104.05 mm (4.093—4.096 in.)	
Camshaft	End play		0.05—0.20 mm (0.002—0.008 in.)	0.4 mm (0.02 in.)
	Camshaft-to-holder oil clearance	No. 1 journal	0.030—0.069 mm (0.001—0.003 in.)	0.15 mm (0.006 in.)
		No. 2, 3, 4, 5 journals	0.060—0.099 mm (0.002—0.004 in.)	0.15 mm (0.006 in.)
	Total runout		0.03 mm (0.001 in.) max.	0.04 mm (0.002 in.)
	Cam lobe height	Intake, primary	34.263 mm (1.3489 in.)	
		Intake, secondary	29.638 mm (1.1668 in.)	
		Exhaust	34.092 mm (1.3422 in.)	
Valve	Clearance (cold)	Intake	0.21—0.25 mm (0.008—0.010 in.)	
		Exhaust	0.28—0.32 mm (0.011—0.013 in.)	
	Stem O.D.	Intake	5.475—5.485 mm (0.2156—0.2159 in.)	5.445 mm (0.214 in.)
		Exhaust	5.450—5.460 mm (0.2146—0.2150 in.)	5.42 mm (0.213 in.)
	Stem-to-guide clearance	Intake	0.030—0.055 mm (0.0012—0.0022 in.)	0.08 mm (0.003 in.)
		Exhaust	0.055—0.080 mm (0.0022—0.0031 in.)	0.11 mm (0.004 in.)
Valve seat	Width	Intake	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
		Exhaust	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
	Stem installed height	Intake	44.0—44.5 mm (1.73—1.75 in.)	44.7 mm (1.76 in.)
		Exhaust	44.1—44.6 mm (1.74—1.76 in.)	44.8 mm (1.76 in.)
Valve spring	Free length	Intake	47.57 mm (1.873 in.)	
			47.58 mm (1.873 in.)	
		Exhaust	49.64 mm (1.954 in.)	
			49.63 mm (1.954 in.)	
Valve guide	I.D.	Intake	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
		Exhaust	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
	Installed height	Intake	15.2—16.2 mm (0.598—0.638 in.)	
		Exhaust	15.5—16.5 mm (0.610—0.650 in.)	
Rocker arm	Arm-to-shaft clearance	Intake	0.025—0.052 mm (0.0010—0.0020 in.)	0.08 mm (0.003 in.)
		Exhaust	0.018—0.056 mm (0.0007—0.0022 in.)	0.08 mm (0.003 in.)

Standards and Service Limits

Engine Block

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in.) max.	0.10 mm (0.004 in.)
	Bore diameter	A or I	87.010—87.020 mm (3.4256—3.4260 in.)	87.070 mm (3.4279 in.)
		B or II	87.000—87.010 mm (3.4252—3.4256 in.)	87.070 mm (3.4279 in.)
	Bore taper		—	0.05 mm (0.002 in.)
	Reboring limit		—	0.25 mm (0.01 in.)
Piston	Skirt O.D. at 13 mm (0.5 in.) from bottom of skirt	No letter or A	86.980—86.990 mm (3.4244—3.4248 in.)	86.930 mm (3.4224 in.)
		Letter B	86.970—86.980 mm (3.4240—3.4244 in.)	86.920 mm (3.4220 in.)
	Clearance in cylinder		0.020—0.040 mm (0.0008—0.0016 in.)	0.05 mm (0.002 in.)
	Ring groove width	Top	1.230—1.240 mm (0.0484—0.0488 in.)	1.26 mm (0.0450 in.)
		Second	1.240—1.250 mm (0.0488—0.0492 in.)	1.270 mm (0.050 in.)
Piston ring	Ring-to-groove clearance	Top	0.035—0.060 mm (0.0014—0.0024 in.)	0.13 mm (0.005 in.)
		Second	0.030—0.055 mm (0.0012—0.0022 in.)	0.13 mm (0.005 in.)
	Ring end gap	Top	0.20—0.35 mm (0.008—0.014 in.)	0.60 mm (0.024 in.)
		Second	0.40—0.55 mm (0.016—0.022 in.)	0.70 mm (0.028 in.)
		Oil	0.25—0.65 mm (0.010—0.026 in.)	0.75 mm (0.030 in.)
Piston pin	O.D.		21.961—21.965 mm (0.8646—0.8648 in.)	21.953 mm (0.8643 in.)
	Pin-to-piston clearance		—0.005 to +0.002 mm (—0.00020 to +0.00008 in.)	0.005 mm (0.0002 in.)
Connecting rod	Pin-to-rod clearance		0.005—0.015 mm (0.0002—0.0006 in.)	0.02 mm (0.0008 in.)
	Small-end bore diameter		21.970—21.976 mm (0.8650—0.8652 in.)	—
	Large-end bore diameter		51.0 mm (2.01 in.)	—
	End play installed on crankshaft		0.15—0.30 mm (0.006—0.012 in.)	0.40 mm (0.016 in.)
Crankshaft	Main journal diameter	No. 1 journal	54.984—55.008 mm (2.1648—2.1657 in.)	—
		No. 2 journal		
		No. 4 journal		
		No. 5 journal		
		No. 3 journal	54.976—55.000 mm (2.1644—2.1654 in.)	—
	Rod journal diameter		47.976—48.000 mm (1.8888—1.8898 in.)	—
	Rod/main journal taper		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
Crankshaft bearing	Rod/main journal out-of-round		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
	End play		0.10—0.35 mm (0.004—0.014 in.)	0.45 mm (0.018 in.)
	Runout		0.03 mm (0.0012 in.) max.	0.04 mm (0.0016 in.)
	Main bearing-to-journal oil clearance	No. 1 journal	0.017—0.041 mm (0.0007—0.0016 in.)	0.050 mm (0.0020 in.)
		No. 2 journal		
		No. 4 journal		
		No. 5 journal		
		No. 3 journal	0.025—0.049 mm (0.0010—0.0019 in.)	0.055 mm (0.0022 in.)
	Rod bearing clearance		0.020—0.050 mm (0.0008—0.0020 in.)	0.060 mm (0.0024 in.)

Engine Lubrication

Item	Measurement	Qualification	Standard or New	Service Limit
Engine oil	Capacity	Engine overhaul	5.3 L (5.6 US qt)	
		Oil change including filter	4.2 L (4.4 US qt)	
		Oil change without filter	4.0 L (4.2 US qt)	
Oil pump	Inner-to-outer rotor clearance		0.06—0.16 mm (0.002—0.006 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor clearance		0.15—0.21 mm (0.006—0.008 in.)	0.23 mm (0.009 in.)
	Pump housing-to-rotor axial clearance		0.035—0.070 mm (0.0014—0.0028 in.)	0.12 mm (0.005 in.)
	Balancer shafts, journal diameter	No. 1 journal, front shaft	19.938—19.950 mm (0.7850—0.7854 in.)	19.92 mm (0.784 in.)
		No. 1 journal, rear shaft	23.938—23.950 mm (0.9424—0.9429 in.)	23.92 mm (0.942 in.)
		No. 2 journal, front and rear shafts	32.949—32.961 mm (1.2972—1.2977 in.)	32.93 mm (1.296 in.)
	Balancer shafts, journal taper		0.005 mm (0.0002 in.) max.	
	Balancer shafts, end play	Front	0.063—0.108 mm (0.0025—0.0043 in.)	0.14 mm (0.0055 in.)
		Rear	0.063—0.108 mm (0.0025—0.0043 in.)	0.14 mm (0.0055 in.)
	Balancer shafts, shaft-to-bearing clearance	No. 1 journal, front shaft	0.050—0.082 mm (0.0020—0.0032 in.)	0.10 mm (0.004 in.)
		No. 1 journal, rear shaft	0.050—0.082 mm (0.0020—0.0032 in.)	0.10 mm (0.004 in.)
		No. 2 journal, front and rear shafts	0.060—0.120 mm (0.0024—0.0047 in.)	0.15 mm (0.006 in.)
	Balancer shaft bearings, I.D.	No. 1 journal, front shaft	20.000—20.020 mm (0.7874—0.7882 in.)	20.03 mm (0.789 in.)
		No. 1 journal, rear shaft	24.000—24.020 mm (0.9449—0.9457 in.)	24.03 mm (0.946 in.)
		No. 2 journal, front and rear shafts	33.021—33.069 mm (1.3000—1.3019 in.)	33.09 mm (1.303 in.)
	Relief valve, oil pressure with oil temperature at 176 °F (80 °C)	At idle	70 kPa (0.7 kgf/cm ² , 10 psi) min.	
		At 3,000 rpm	300 kPa (3.1 kgf/cm ² , 44 psi) min.	

Cooling System

Item	Measurement	Qualification	Standard or New
Radiator	Coolant capacities (including engine, heater, hoses, and reservoir) Use Honda Long Life Antifreeze/ Coolant Type 2	Engine overhaul	7.1 L (1.88 US gal)
		Coolant change	5.0 L (1.32 US gal)
Coolant reservoir	Coolant capacity		0.6 L (0.16 US gal)
Radiator cap	Opening pressure		93—123 kPa (0.95—1.25 kgf/cm ² , 14—18 psi)
Thermostat	Opening temperature	Begins to open	169—176 °F (76—80 °C)
		Fully open	194 °F (90 °C)
	Valve lift at fully open		8.0 mm (0.31 in.) min.

Standards and Service Limits

Fuel and Emissions

Item	Measurement	Qualification	Standard or New
Fuel pressure regulator	Pressure with fuel pressure gauge connected		320—370 kPa (3.3—3.8 kgf/cm ² , 47—54 psi)
Fuel tank	Capacity		58.0 L (15.3 US gal)
Engine idle	Idle speed without load	In N or P position	650±50 rpm
	Idle speed with high electrical load (A/C switch ON, temperature set to max cool, blower fan on High, rear window defogger ON, and headlights on high beam)	In N or P position	700±50 rpm

Automatic Transmission and A/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Automatic transmission fluid	Capacity	4WD at fluid change	2.5 L (2.6 US qt)	
	Use Honda ATF-Z1	4WD at overhaul	7.2 L (7.6 US qt)	
		2WD at fluid change	2.6 L (2.7 US qt)	
		2WD at overhaul	7.0 L (7.4 US qt)	
ATF pressure	Line pressure	At 2,000 rpm in N or P position	930—980 kPa (9.5—10.0 kgf/cm ² , 140—142 psi)	840 kPa (8.6 kgf/cm ² , 120 psi)
	1st clutch pressure	At 2,000 rpm in 1 position	930—980 kPa (9.5—10.0 kgf/cm ² , 140—142 psi)	840 kPa (8.6 kgf/cm ² , 120 psi)
	2nd clutch pressure	At 2,000 rpm in 2 position	930—980 kPa (9.5—10.0 kgf/cm ² , 140—142 psi)	840 kPa (8.6 kgf/cm ² , 120 psi)
	3rd clutch pressure	At 2,000 rpm in 3rd gear in D position	930—980 kPa (9.5—10.0 kgf/cm ² , 140—142 psi)	840 kPa (8.6 kgf/cm ² , 120 psi)
	4th clutch pressure	At 2,000 rpm in 4th gear in D position	930—980 kPa (9.5—10.0 kgf/cm ² , 140—142 psi)	840 kPa (8.6 kgf/cm ² , 120 psi)
	5th clutch pressure	At 2,000 rpm in 5th gear in D position	930—980 kPa (9.5—10.0 kgf/cm ² , 140—142 psi)	840 kPa (8.6 kgf/cm ² , 120 psi)
Torque converter	Stall speed Check with vehicle on level ground		2,445 rpm	2,295—2,595 rpm
Clutch	Clutch end plate-to-top disc clearance	1st	_____	1.38—1.58 mm (0.054—0.062 in.)
		2nd	_____	1.18—1.38 mm (0.046—0.054 in.)
		3rd	_____	1.23—1.43 mm (0.048—0.056 in.)
		4th and 5th	_____	0.93—1.13 mm (0.037—0.044 in.)
	Clutch return spring free length	1st, 2nd, and 3rd	50.8 mm (2.00 in.)	48.8 mm (1.92 in.)
		4th and 5th	33.5 mm (1.32 in.)	31.5 mm (1.24 in.)
	Clutch disc thickness		1.94 mm (0.076 in.)	_____
	Clutch plate thickness	1st and 3rd	1.6 mm (0.063 in.)	When discolored
		2nd	2.0 mm (0.079 in.)	When discolored
		4th and 5th	2.0 mm (0.079 in.)	When discolored
	Clutch waved-plate phase difference	1st	0.15—0.25 mm <2PLCS> (0.006—0.010 in.) 0.01—0.25 mm <1PLC> (0.0004—0.010 in.)	0.05 mm (0.002 in.) <2PLCS>
		2nd, 3rd, 4th, and 5th	0.10—0.20 mm <2PLCS> (0.004—0.008 in.) 0.01—0.20 mm <1PLC> (0.004—0.010 in.)	
	1st and 2nd clutch end plate thickness	Mark 1	2.6 mm (0.102 in.)	When discolored
		Mark 2	2.7 mm (0.106 in.)	When discolored
		Mark 3	2.8 mm (0.110 in.)	When discolored
		Mark 4	2.9 mm (0.114 in.)	When discolored
		Mark 5	3.0 mm (0.118 in.)	When discolored
		Mark 6	3.1 mm (0.122 in.)	When discolored
		Mark 7	3.2 mm (0.126 in.)	When discolored
		Mark 8	3.3 mm (0.130 in.)	When discolored
		Mark 9	3.4 mm (0.134 in.)	When discolored

(cont'd)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch (cont'd)	3rd, 4th and 5th clutch end plate thickness	Mark 1	2.1 mm (0.083 in.)	When discolored
		Mark 2	2.2 mm (0.087 in.)	When discolored
		Mark 3	2.3 mm (0.091 in.)	When discolored
		Mark 4	2.4 mm (0.095 in.)	When discolored
		Mark 5	2.5 mm (0.098 in.)	When discolored
		Mark 6	2.6 mm (0.102 in.)	When discolored
		Mark 7	2.7 mm (0.106 in.)	When discolored
		Mark 8	2.8 mm (0.110 in.)	When discolored
		Mark 9	2.9 mm (0.114 in.)	When discolored
Mainshaft	Diameter of needle bearing contact area	At stator shaft	22.984—23.000 mm (0.905—0.906 in.)	When worn or damaged
		At 5th gear	51.975—51.991 mm (2.046—2.047 in.)	When worn or damaged
		At 4th gear collar	33.975—33.991 mm (1.3376—1.3382 in.)	When worn or damaged
	I.D. of gears	5th gear	57.000—57.019 mm (2.2441—2.2448 in.)	When worn or damaged
		4th gear	40.000—40.016 mm (1.5748—1.5754 in.)	When worn or damaged
	End play of gears	5th gear	0.04—0.10 mm (0.0016—0.004 in.)	—
		4th gear	0.1—0.22 mm (0.004—0.009 in.)	—
	41 x 68 mm thrust washer thickness	No. 1	4.450 mm (0.1752 in.)	When worn or damaged
		No. 2	4.475 mm (0.1762 in.)	When worn or damaged
		No. 3	4.500 mm (0.1772 in.)	When worn or damaged
		No. 4	4.525 mm (0.1781 in.)	When worn or damaged
		No. 5	4.550 mm (0.1791 in.)	When worn or damaged
		No. 6	4.575 mm (0.1801 in.)	When worn or damaged
		No. 7	4.600 mm (0.1811 in.)	When worn or damaged
		No. 8	4.625 mm (0.1821 in.)	When worn or damaged
		No. 9	4.650 mm (0.1831 in.)	When worn or damaged
		No. 10	4.675 mm (0.1841 in.)	When worn or damaged
		No. 11	4.700 mm (0.1850 in.)	When worn or damaged
		No. 12	4.725 mm (0.1860 in.)	When worn or damaged
		No. 13	4.750 mm (0.1870 in.)	When worn or damaged
		No. 14	4.775 mm (0.1880 in.)	When worn or damaged
		No. 15	4.800 mm (0.1890 in.)	When worn or damaged
	4th gear collar length		66.3—66.4 mm (2.610—2.614 in.)	—
	Length of 4th gear collar flange from end		19.15—19.30 mm (0.754—0.760 in.)	When worn or damaged
	Sealing ring thickness		1.91—1.97 mm (0.0752—0.0776 in.)	1.86 mm (0.0732 in.)
	Width of sealing ring groove		2.025—2.060 mm (0.0797—0.0811 in.)	2.080 mm (0.0819 in.)
	Clutch feed pipe O.D.		7.97—7.98 mm (0.3138—0.3142 in.)	7.95 mm (0.313 in.)
	Clutch feed pipe bushing I.D.		8.000—8.015 mm (0.3150—0.3156 in.)	8.030 mm (0.3161 in.)
Countershaft	Diameter of needle bearing contact area	At torque converter housing	36.005—36.015 mm (1.4175—1.4179 in.)	When worn or damaged
		At 4th gear	34.982—34.998 mm (1.3772—1.3779 in.)	When worn or damaged
		At reverse gear	39.979—40.000 mm (1.5740—1.5748 in.)	When worn or damaged
	I.D. of gears	4th gear	41.000—41.016 mm (1.6142—1.6148 in.)	When worn or damaged
		Reverse gear	46.000—46.016 mm (1.8110—1.8116 in.)	When worn or damaged
	End play of gears	5th gear	0.00—0.48 mm (0.000—0.019 in.)	—
		4th gear	0.04—0.27 mm (0.002—0.0106 in.)	—
		Reverse gear	0.10—0.25 mm (0.004—0.010 in.)	—
	Collar, 35 x 47 x 7.8 mm thickness		7.8 mm (0.31 in.)	—
	Collar, 37 x 41 x 54.3 mm length		54.25—54.3 mm (2.1358—2.1378 in.)	—
	Reverse selector hub width		25.45—25.65 mm (1.002—1.010 in.)	—
	Reverse selector hub O.D.		55.87—55.90 mm (2.200—2.201 in.)	When worn or damaged

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft	Diameter of needle bearing contact area	At 1st gear	39.986—39.999 mm (1.5742—1.5748 in.)	When worn or damaged
		At 2nd gear	39.986—39.999 mm (1.5742—1.5748 in.)	When worn or damaged
		At 3rd gear collar	36.975—36.991 mm (1.4557—1.4563 in.)	When worn or damaged
	I.D. of gears	1st gear	47.000—47.016 mm (1.8504—1.8510 in.)	When worn or damaged
		2nd gear	46.000—46.016 mm (1.8110—1.8116 in.)	When worn or damaged
		3rd gear	43.000—43.016 mm (1.6929—1.6935 in.)	When worn or damaged
	End play of gears	1st gear	0.04—0.12 mm (0.002—0.005 in.)	—
		2nd gear	0.04—0.12 mm (0.002—0.005 in.)	—
		3rd gear	0.10—0.22 mm (0.004—0.009 in.)	—
	37 x 58 mm thrust washer thickness	No. 1	3.900 mm (0.154 in.)	When worn or damaged
		No. 2	3.925 mm (0.155 in.)	When worn or damaged
		No. 3	3.950 mm (0.156 in.)	When worn or damaged
		No. 4	3.975 mm (0.156 in.)	When worn or damaged
		No. 5	4.000 mm (0.157 in.)	When worn or damaged
		No. 6	4.025 mm (0.158 in.)	When worn or damaged
		No. 7	4.050 mm (0.159 in.)	When worn or damaged
		No. 8	4.075 mm (0.160 in.)	When worn or damaged
		No. 9	4.100 mm (0.161 in.)	When worn or damaged
		No. 10	4.125 mm (0.162 in.)	When worn or damaged
		No. 11	4.150 mm (0.163 in.)	When worn or damaged
		No. 12	4.175 mm (0.164 in.)	When worn or damaged
		No. 13	4.200 mm (0.165 in.)	When worn or damaged
		No. 14	4.225 mm (0.166 in.)	When worn or damaged
		No. 15	4.250 mm (0.167 in.)	When worn or damaged
		No. 16	4.275 mm (0.168 in.)	When worn or damaged
		No. 17	4.300 mm (0.169 in.)	When worn or damaged
		No. 18	4.325 mm (0.170 in.)	When worn or damaged
		No. 19	4.350 mm (0.171 in.)	When worn or damaged
		No. 20	4.375 mm (0.172 in.)	When worn or damaged
	40 x 51.5 mm thrust washer thickness	No. 1	4.80 mm (0.189 in.)	When worn or damaged
		No. 2	4.85 mm (0.191 in.)	When worn or damaged
		No. 3	4.90 mm (0.193 in.)	When worn or damaged
		No. 4	4.95 mm (0.195 in.)	When worn or damaged
		No. 5	5.00 mm (0.197 in.)	When worn or damaged
		No. 6	5.05 mm (0.199 in.)	When worn or damaged
	3rd gear collar length		43.9—44.0 mm (1.728—1.732 in.)	—
	Length of 3rd gear collar flange from end		5.25—5.40 mm (0.207—0.213 in.)	When worn or damaged
	Sealing ring thickness		1.91—1.97 mm (0.0752—0.0776 in.)	1.86 mm (0.0732 in.)
	Width of sealing ring groove		2.025—2.060 mm (0.0797—0.0811 in.)	2.080 mm (0.0819 in.)
	Clutch feed pipe O.D.	3rd clutch feed pipe	11.47—11.48 mm (0.4516—0.4520 in.)	11.45 mm (0.4508 in.)
		1st clutch feed pipe	6.97—6.98 mm (0.2744—0.2748 in.)	6.95 mm (0.2736 in.)
	Clutch feed pipe bushing I.D.	3rd clutch feed pipe	11.500—11.518 mm (0.4528—0.4553 in.)	11.530 mm (0.4539 in.)
		1st clutch feed pipe	7.018—7.030 mm (0.2763—0.2768 in.)	7.045 mm (0.2774 in.)
	ATF guide collar of sealing ring contact I.D.		29.000—29.021 mm (1.1417—1.1426 in.)	29.05 mm (1.144 in.)

(cont'd)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Idler gear shaft	Diameter of needle bearing contact area	End cover side	32.003—32.013 mm (1.2600—1.2604 in.)	When worn or damaged
	Thickness of coters		1.39—1.42 mm (0.0547—0.0559 in.)	—
Reverse idler gear	Reverse idler gear shaft diameter at needle bearing contact area		14.99—15.00 mm (0.5902—0.5906 in.)	When worn or damaged
	I.D.		20.007—20.020 mm (0.7877—0.7882 in.)	When worn or damaged
	I.D. of reverse idler gear shaft contact area on transmission housing		14.800—14.818 mm (0.5827—0.5834 in.)	—
	I.D. of reverse idler gear shaft holder		14.800—14.824 mm (0.5827—0.5836 in.)	When worn or damaged
ATF pump	ATF pump thrust clearance		0.03—0.06 mm (0.001—0.002 in.)	0.07 mm (0.003 in.)
	ATF pump gear-to-body clearance	Drive gear	0.210—0.265 mm (0.008—0.010 in.)	—
		Driven gear	0.070—0.125 mm (0.003—0.005 in.)	—
	ATF pump driven gear I.D.		14.016—14.034 mm (0.5518—0.5525 in.)	When worn or damaged
	ATF pump driven gear shaft O.D.		13.980—13.990 mm (0.5504—0.5508 in.)	When worn or damaged
Stator shaft	Needle bearing contact I.D.	Torque converter side	27.000—27.021 mm (1.063—1.064 in.)	When worn or damaged
		ATF pump side	29.000—29.021 mm (1.1417—1.1426 in.)	—
	Sealing ring contact area I.D.		29.000—29.021 mm (1.1417—1.1426 in.)	29.05 mm (1.144 in.)
Reverse shift fork	Fork finger thickness		5.90—6.00 mm (0.232—0.236 in.)	5.40 mm (0.213 in.)
Park gear and pawl	—		—	When worn or damaged
Servo body	Shift fork shaft bore I.D.		14.000—14.010 mm (0.5512—0.5516 in.)	—
	Shift fork shaft valve bore I.D.		37.000—37.039 mm (1.4567—1.4582 in.)	37.045 mm (1.4585 in.)
Regulator valve body	Sealing ring contact I.D.		29.000—29.021 mm (1.1417—1.1426 in.)	29.05 mm (1.144 in.)

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coil
Main valve body spring (see page 14-339)	Shift valve A spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	Shift valve B spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	Shift valve C spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	Relief valve spring		1.0 mm (0.039 in.)	9.6 mm (0.378 in.)	34.1 mm (1.343 in.)	10.2
	Lock-up control valve spring		0.65 mm (0.026 in.)	7.1 mm (0.280 in.)	23.1 mm (0.909 in.)	12.7
	Cooler check valve spring		0.85 mm (0.033 in.)	6.6 mm (0.260 in.)	27.0 mm (1.063 in.)	11.3
	Servo control valve spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	35.7 mm (1.406 in.)	17.2
	Shift valve E spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coil
Regulator valve body spring (see page 14-341)	Stator reaction spring		4.5 mm (0.177 in.)	35.4 mm (1.394 in.)	30.3 mm (1.193 in.)	1.92
	Regulator valve spring A		1.85 mm (0.073 in.)	14.7 mm (0.579 in.)	83.0 mm (3.268 in.)	16.9
	Regulator valve spring B		1.6 mm (0.063 in.)	9.2 mm (0.362 in.)	44.0 mm (1.732 in.)	12.5
	Torque converter check valve spring		1.2 mm (0.047 in.)	8.6 mm (0.339 in.)	33.8 mm (1.331 in.)	12.2
	Lock-up shift valve spring		1.0 mm (0.039 in.)	6.6 mm (0.260 in.)	35.5 mm (1.398 in.)	18.2
	3rd accumulator spring		2.5 mm (0.098 in.)	14.6 mm (0.575 in.)	29.4 mm (1.157 in.)	4.9
	1st accumulator spring A		2.4 mm (0.094 in.)	18.6 mm (0.732 in.)	49.0 mm (1.929 in.)	7.1
	1st accumulator spring B		2.3 mm (0.091 in.)	12.2 mm (0.480 in.)	31.5 mm (1.240 in.)	6.6
Servo body spring (see page 14-342)	Shift valve D spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	4th accumulator spring B		2.3 mm (0.091 in.)	12.2 mm (0.480 in.)	31.5 mm (1.240 in.)	6.6
	4th accumulator spring A		2.4 mm (0.094 in.)	18.6 mm (0.732 in.)	49.0 mm (1.929 in.)	7.1
	2nd accumulator spring B		2.1 mm (0.083 in.)	10.8 mm (0.425 in.)	34.0 mm (1.339 in.)	8.2
	2nd accumulator spring A		2.1 mm (0.083 in.)	16.6 mm (0.654 in.)	48.7 mm (1.917 in.)	8.4
	5th accumulator spring		2.5 mm (0.098 in.)	14.6 mm (0.575 in.)	29.9 mm (1.177 in.)	4.9

Item	Measurement	Qualification	Standard or New	Service Limit
A/T differential carrier	Pinion shaft contact area F.W.		12.000—12.080 mm (0.473—0.476 in.)	—
	Carrier-to-pinion shaft clearance		0.017—0.109 mm (0.001—0.004 in.)	—
	Driveshaft contact area I.D.		28.015—28.045 mm (1.103—1.104 in.)	—
	Carrier-to-driveshaft clearance		0.035—0.086 mm (0.002—0.003 in.)	0.12 mm (0.005 in.)
	Carrier bearing starting torque (preload)	For new bearing	2.7—3.9 N·m (28—40 kgf·cm, 24—35 lbf·in.)	Adjust
		For used bearing	2.5—3.6 N·m (25—37 kgf·cm, 22—32 lbf·in.)	Adjust
	Final driven gear backlash		0.086—0.142 mm (0.0034—0.0056 in.)	0.2 mm (0.008 in.)
A/T differential pinion gear	Backlash		0.05—0.15 mm (0.002—0.006 in.)	—
	I.D.		18.042—18.066 mm (0.7103—0.7113 in.)	—
	Pinion gear-to-pinion shaft clearance		0.055—0.095 mm (0.0022—0.0037 in.)	0.12 mm (0.005 in.)

(cont'd)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Transfer assembly	Diameter of transfer shaft on bearing contact area	At roller bearing	38.485—38.500 mm (1.5152—1.5157 in.)	38.43 mm (1.513 in.)
		At tapered roller bearing	24.975—24.990 mm (0.9833—0.9839 in.)	24.92 mm (0.9811 in.)
	Transfer drive gear diameter	At tapered roller bearing	40.002—40.018 mm (1.5749—1.5755 in.)	38.95 mm (1.533 in.)
	Diameter of transfer driven gear on tapered roller bearing contact area	At driven gear side	35.002—35.018 mm (1.3780—1.3787 in.)	34.95 mm (1.376 in.)
		At shaft splines side	26.975—26.988 mm (1.0620—1.0625 in.)	26.92 mm (1.060 in.)
	Transfer gear backlash		0.06—0.16 mm (0.002—0.006 in.)	Adjust
	Total starting torque (preload)		2.44—3.87 N·m (24.8—39.4 kgf·cm, 21.5—34.1 lbf·in.)	Adjust

Rear Differential

Item	Measurement	Qualification	Standard or New
Differential fluid	Capacity	Fluid change	1.2 L (1.3 US qt)
	Use Honda Dual Pump Fluid	Overhaul	1.4 L (1.5 US qt)

Steering

Item	Measurement	Qualification	Standard or New
Steering wheel	Rotational play measured at outside edge with engine running		0—10 mm (0—0.39 in.)
	Starting load measured at outside edge with engine running		34 N (3.5 kgf, 7.7 lbf)
Gearbox	Angle of rack guide screw loosened from locked position		10°±5°
Pump	Output pressure with shut-off valve closed		7,350—8,050 kPa (75—82 kgf/cm ² , 1,070—1,170 psi)
Power steering fluid	Capacity	Reservoir capacity	0.29 L (0.31 US qt)
	Use Honda Power Steering Fluid	System overhaul	0.99 L (1.05 US qt)

Suspension

Item	Measurement	Qualification	Standard or New	Service Limit
Wheel alignment	Camber	Front	0°00'±30'	
		Rear	-1°00'±45'	
	Caster	Front	3°02'±1°	
	Total toe-in	Front	0±2 mm (0±0.08 in.)	
		Rear	2 ⁺² ₋₁ mm (0.08 ^{+0.08} _{-0.04} in.)	
	Front wheel turning angle	Inward	36°29'±2°	
		Outward	31°14' (Reference)	
Wheel	Aluminum wheel runout	Axial	0—0.7 mm (0—0.03 in.)	2.0 mm (0.08 in.)
		Radial	0—0.7 mm (0—0.03 in.)	1.5 mm (0.06 in.)
	Steel wheel runout	Axial	0—1.0 mm (0—0.04 in.)	2.0 mm (0.08 in.)
		Radial	0—1.0 mm (0—0.04 in.)	1.5 mm (0.06 in.)
Wheel bearing	End play	Front	0—0.05 mm (0—0.002 in.)	
		Rear	0—0.05 mm (0—0.002 in.)	

Brakes

Item	Measurement	Qualification	Standard or New	Service Limit
Parking brake	Number of clicks when pedal pressed with 294 N (30 kgf, 66 lbf) of force		6 to 7 clicks	
	Drum I.D.		199.9 mm—200.0 mm (7.870—7.874 in.)	201.0 mm (7.913 in.)
	Shoe lining thickness		2.4 mm (0.094 in.)	1.0 mm (0.04 in.)
Brake pedal	Pedal height (carpet removed)		165 mm (6 1/2 in.)	
	Free play		1—5 mm (1/16—3/16 in.)	
Master cylinder	Piston-to-push rod clearance		0 mm (0 in.)	
Brake disc	Thickness	Front	27.8—28.1 mm (1.10—1.11 in.)	26.0 mm (1.02 in.)
		Rear	8.9—9.1 mm (0.35—0.36 in.)	7.5 mm (0.30 in.)
	Runout	Front and rear	—	0.04 mm (0.0016 in.)
	Parallelism	Front and rear	—	0.015 mm (0.0006 in.)
Brake pad	Thickness	Front	11.5—12.2 mm (0.45—0.48 in.)	1.6 mm (0.06 in.)
		Rear	8.3—9.0 mm (0.33—0.35 in.)	1.6 mm (0.06 in.)

Air Conditioning

Item	Measurement	Qualification	Standard or New
Refrigerant	Type		HFC-134a (R-134a)
	Capacity of system		440—490 g (14.9—16.6 oz)
Refrigerant oil	Type		SP-10 (P/N 38897-P13-A01AH or 38899-P13-A01)
	Capacity of components	Condenser	50 mL (1 2/3 fl-oz)
		Evaporator	40 mL (1 1/3 fl-oz)
		Each line and hose	10 mL (1/3 fl-oz)
		Compressor	80—90 mL (2 2/3—3 fl-oz)
Compressor	Field coil resistance	At 68 °F (20 °C)	3.15 —3.45 Ω
	Pulley-to-armature plate clearance		0.35—0.65 mm (0.014—0.026 in.)

Design Specifications

Item	Measurement	Qualification	Specification
DIMENSIONS	Overall length		4,518 mm (177.9 in.)
	Overall width		1,820 mm (71.6 in.)
	Overall height		1,680 mm (66.1 in.)
	Wheelbase		2,620 mm (103.1 in.)
	Track	Front	1,565 mm (61.6 in.)
		Rear	1,565 mm (61.6 in.)
	Seating capacity		Five (5)
WEIGHT	Gross Vehicle Weight Rating (GVWR)		2,070 kg (4,610 lbs)
ENGINE	Type		Water cooled, 4-stroke DOHC i-VTEC gasoline engine
	Cylinder arrangement		Inline 4-cylinder, transverse
	Bore and stroke		87 x 99 mm (3.43 x 3.90 in.)
	Displacement		2,354 cm ³ (144 cu in.)
	Compression ratio		9.7
	Valve train		Chain drive, DOHC i-VTEC 4 valves per cylinder
	Lubrication system		Forced, wet sump, with trochoid pump
	Oil pump displacement	At 6,000 rpm	58.0 L (61.3 US qt)/minute
	Water pump displacement	At 6,000 rpm	120 L (127 US qt)/minute
	Fuel required		Regular UNLEADED gasoline with 87 Pump Octane Number or higher
STARTER	Type		Gear reduction
	Normal output		1.1 kW
	Nominal voltage		12 V
	Hour rating		30 seconds
	Direction of rotation		Counterclockwise as viewed from drive end

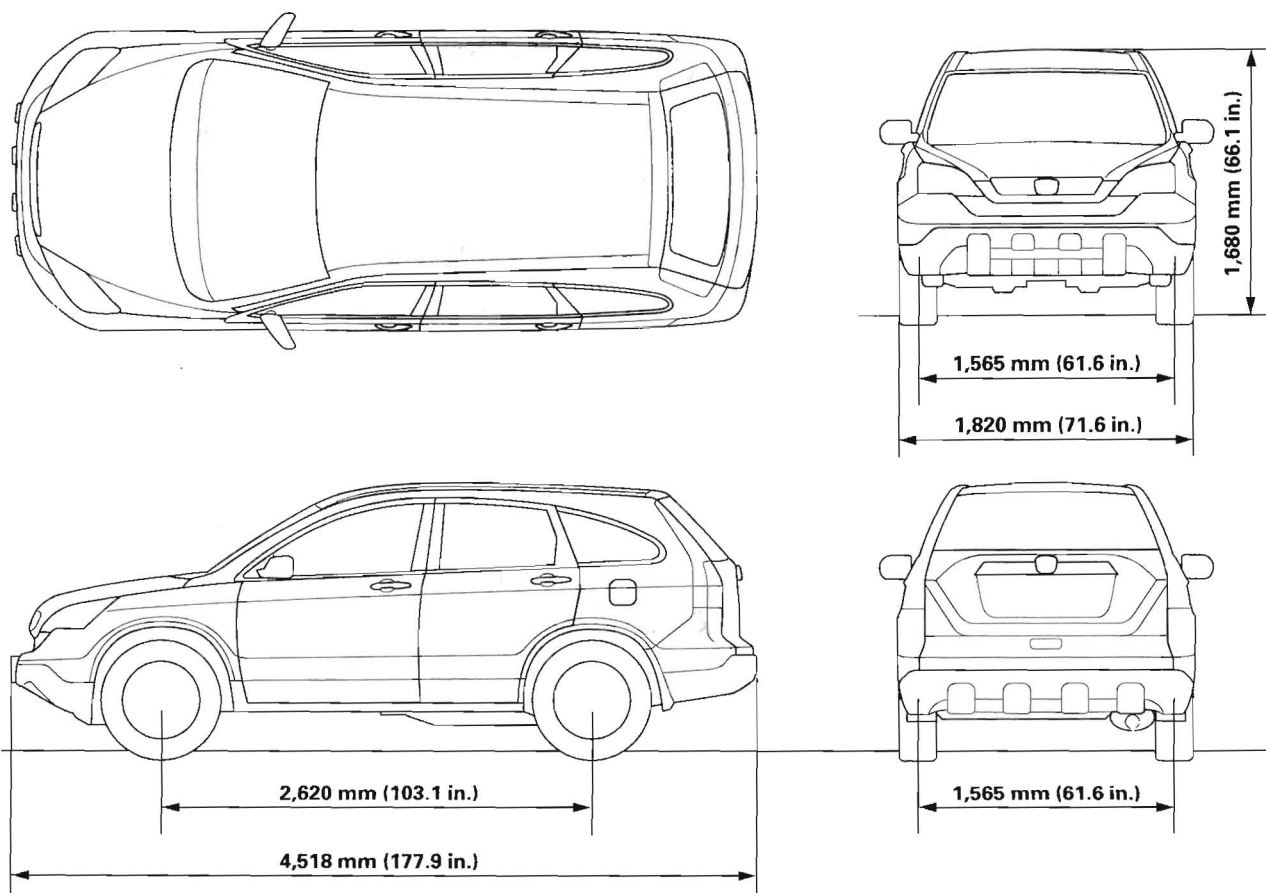
Item	Measurement	Qualification	Specification
AUTOMATIC TRANSMISSION	Type		Electronically controlled automatic, 5-speed forward, 1 reverse, 3-element torque converter with lock-up clutch
	Primary reduction		Direct 1:1
	Gear ratio	1st	2.786
		2nd	1.614
		3rd	1.082
		4th	0.773
		5th	0.566
		Reverse	2.000
	Transfer gear	Type	Single helical gear
		Gear ratio	0.875
STEERING	Differential final gears	Type	Single helical gear
		Gear ratio	4.500
	Type		Hydraulic power-assisted rack and pinion
	Overall ratio		13.73
	Turns, lock-to-lock		2.67
SUSPENSION	Steering wheel diameter		380 mm (14.9 in.)
	Type	Front	Independent strut with stabilizer, coil spring
		Rear	Independent double wishbone with stabilizer, coil spring
	Shock absorber	Front	Telescopic, hydraulic, nitrogen gas-filled
		Rear	Telescopic, hydraulic, nitrogen gas-filled
TIRES	Size		225/65R17 102T
WHEEL ALIGNMENT	Camber	Front	0°00'
		Rear	-1°00'
	Caster	Front	3°02'
	Total toe-in	Front	0 mm (0 in.)
		Rear	2 mm (0.08 in.)
BRAKES	Type of service brake	Front	Power-assisted self-adjusting ventilated disc
		Rear	Power-assisted self-adjusting solid disc
	Type of parking brake		Mechanical actuating, rear wheels
	Pad friction surface area	Front	60.5 cm ² (9.38 sq in.) x 2
		Rear	27.9 cm ² (4.32 sq in.) x 2
	Parking brake shoe friction surface area	Rear	57.0 cm ² (8.84 sq in.) x 2

(cont'd)

Design Specifications

Item	Measurement	Qualification	Specification
AIR CONDITIONING	Compressor	Type	Scroll
		Capacity	97.9 mL (5.97 cu in.)/rev.
		Maximum speed	10,000 rpm
		Lubricant capacity	80 mL (2 2/3 fl-oz)
		Lubricant type	SP-10
	Condenser	Type	Corrugated fin
	Evaporator	Type	Corrugated fin
	Blower	Type	Stabilized swirling flow
		Motor type	260 W/12 V
		Speed control	5-speed
		Maximum capacity	465 m ³ (16.394 cu ft)/h
	Temperature control		Air-mix type
	Compressor clutch	Type	Dry, single plate, poly-V belt drive
		Electrical power consumption at 68 °F (20 °C)	42 W max. at 12 V
ELECTRICAL RATINGS	Refrigerant	Type	HFC-134a (R-134a)
		Capacity	440—490 g (14.9—16.6 oz)
	Battery		12 V—47 Ah/20 HR (12 V—38 Ah/5 HR)
	Fuses	Under-hood fuse/relay box	100 A, 80 A, 50 A, 40 A, 30 A, 20 A, 15 A, 10 A, 7.5 A
		Under-dash fuse/relay box	30 A, 20 A, 15 A, 10 A, 7.5 A
	Light bulbs	Headlight high beam	12 V—55 W
		Headlight low beam	12 V—50 W
		Front side marker/parking light	12 V—5 W
		Front turn signal lights	12V—21 W Amber color
		Rear turn signal lights	12 V—21 W Amber color
		Brake/Taillights	12 V—21/5 W (two filaments)
		Rear side marker light	12 V—5 W
		High mount brake light	12 V—21 W
		Back-up lights	12 V—18 W
		License plate light	12 V—5 W
		Ceiling lights	12 V—8 W
		Individual map light	12 V—8 W
		Cargo area light	12 V—8 W
		Gauge lights	12 V—LED (non-replaceable)
		Indicator lights	12 V—LED, 14 V—0.56 W, 0.84 W

Body Specifications



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Maintenance

Lubricants and Fluids **3-2**

Maintenance Minder

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Lubricants and Fluids

For details of lubrication points and type of lubricants to be applied, refer to the illustrated index and various work procedures (such as Assembly/Reassembly, Replacement, Overhaul, Installation, etc.) contained in each section.

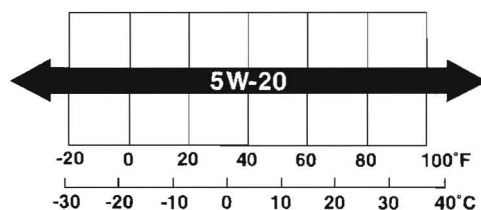
Application		Lubricant or Fluid
A	Engine	Honda Motor Oil: American Honda P/N 08798-9023 (5W-20), Honda Canada P/N CA66806 (5W-20) Look for the API certification seal on the oil container. Make sure it says "For Gasoline Engines." SAE viscosity: See chart.
B	Automatic transmission	Honda Automatic Transmission Fluid (ATF-Z1): American Honda P/N 08200-9001, Honda Canada P/N CA66689 Always use Honda ATF-Z1. Using a non-Honda ATF can affect shift quality.
C	Brake system (including VSA lines)	Honda DOT 3 Brake Fluid: P/N 08798-9008 Always use Honda DOT 3 Brake Fluid. Using a non-Honda brake fluid can cause corrosion and decrease the life of the system.
D E F G H I	Brake booster clevis Battery terminals Fuel fill door Door checker pin Hood hinges and hood latch Tailgate hinges	Multipurpose Grease
J	Caliper piston boots, caliper piston seals, caliper pins, and boots	Honda Silicone Grease: P/N 08C30-B0234M
K	Air conditioning compressor	Compressor Oil: SP-10 (P/N 38897-P13-A01AH or 38899-P13-A01) for refrigerant HFC-134a (R-134a)
L	Power steering system	Honda Power Steering Fluid: P/N 08206-9002 Always use Honda Power Steering Fluid. Using any other type of power steering fluid or automatic transmission fluid can cause increased wear and poor steering in cold weather.
M	Rear differential (4WD)	Honda Dual Pump Fluid: P/N 08200-9002
N	Cooling system	Honda Long Life Antifreeze/Coolant Type 2: P/N OL 999-9001

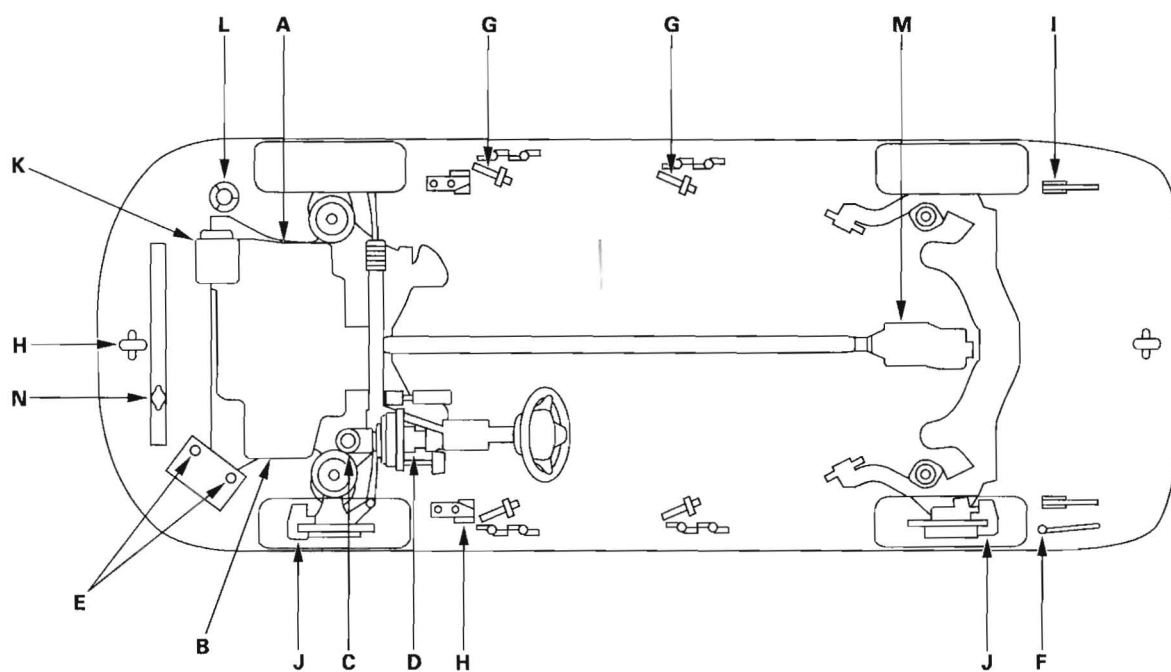
API CERTIFICATION SEAL



Recommended Engine Oil

Engine oil viscosity for ambient temperature ranges



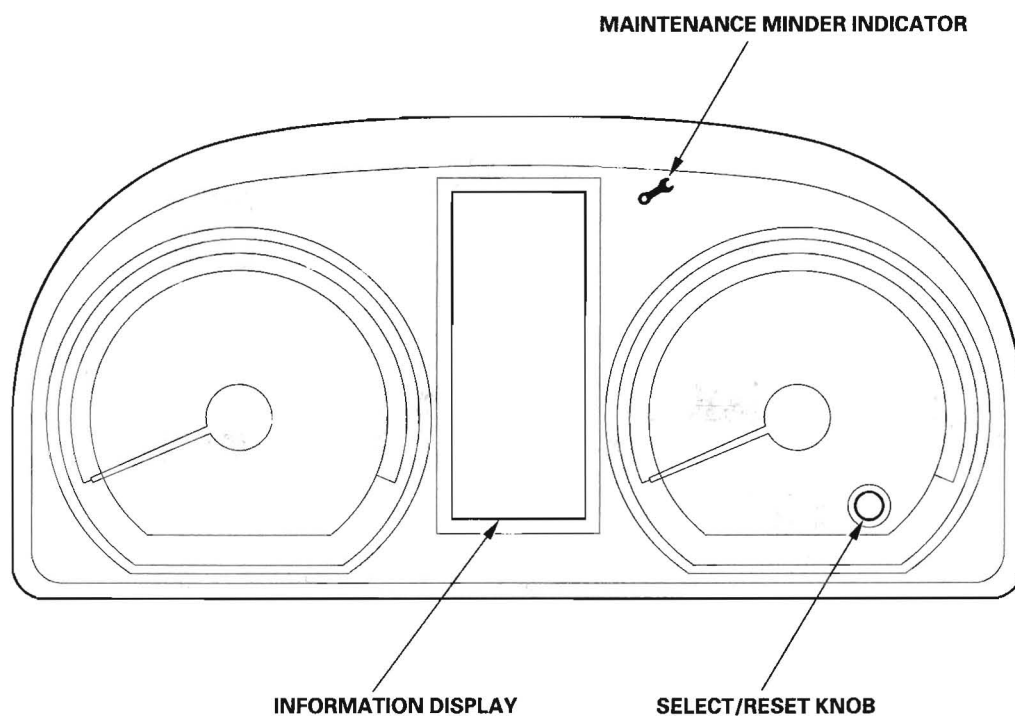


Maintenance Minder

General Information

Maintenance Display

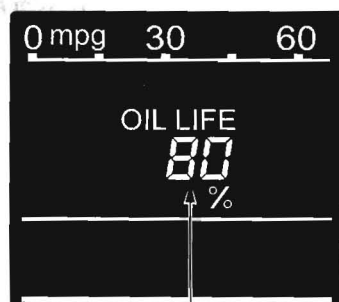
The Maintenance Minder is an important feature of the information display. The CR-V's onboard computer (PCM) calculates the remaining engine oil life and automatic transmission fluid life. The system also displays the code for other scheduled maintenance items needing service.





Service Information

1. The remaining engine oil life (A) is shown as a percentage on the information display. To see the current engine oil life, turn the ignition switch to the ON (II) position, then push and release the SELECT/RESET knob repeatedly until the engine oil life displays.

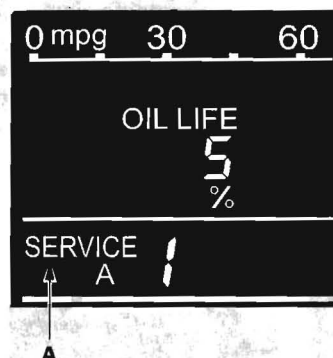


2. When the ignition switch is in the ON (II) position, and the remaining engine oil life (A) is 6 % to 15 %, the remaining engine oil life and other scheduled maintenance item(s) needing service are displayed. The maintenance minder indicator (B) also comes on when the engine oil life is 15 % or less. To cancel the display and the indicator, press the SELECT/RESET knob.

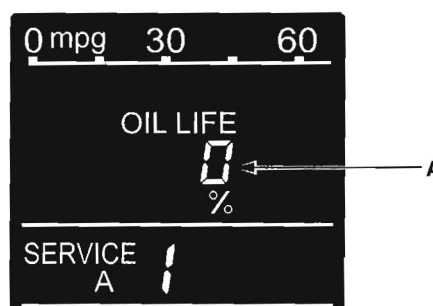
- Complete list of maintenance main items (C) (see page 3-7).
- Complete list of maintenance sub items (D) (see page 3-8).



3. When the ignition switch is in the ON (II) position, and the remaining engine oil life is 1 % to 5 %, the message "SERVICE" (A) is displayed along with engine oil life and the same maintenance item code(s).



4. When the ignition switch is in the ON (II) position, and the remaining engine oil life is 0 %, the engine oil life indicator (A) blinks. Pressing the SELECT/RESET knob cancels the display, but the maintenance minder indicator stays on.

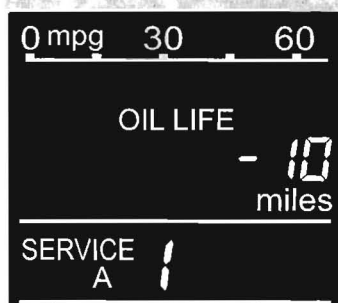


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Maintenance Minder

General Information (cont'd)

5. If the indicated maintenance is not done, the engine oil life indicator shows a negative mileage, for example “-10,” on the display. If the negative mileage is between 0 and -9, the indicator is displayed for only a few seconds when the ignition switch is turned to the ON (II) position. The negative mileage remains displayed after the vehicle is driven more than 10 miles (for USA models) or 10 km (for Canada models) after 0 % oil life is reached. This means the indicated maintenance item(s) should have been done more than 10 miles (or 10 km) ago.



Resetting the Maintenance Information Display

NOTE:

- The vehicle must be stopped to reset the display. If a required service is done and the display is not reset, or if the maintenance display is reset without doing the service, the system will not show the proper maintenance timing. This can lead to serious mechanical problems because there will be no accurate record of when the required maintenance is needed.
- The engine oil life and the maintenance items can be reset independently only with the HDS.

1. Turn the ignition switch to the ON (II) position.
2. Push and release the SELECT/RESET knob repeatedly until the engine oil life indicator is displayed.
3. Press and hold the SELECT/RESET knob for about 10 seconds. The information display shows the reset mode display.

NOTE: If you are resetting the display when the engine oil life is more than 15 %, make sure any maintenance item(s) requiring service are done before resetting the display.



4. Press and hold the SELECT/RESET knob for another 5 seconds. The maintenance item code(s) will disappear, and the engine oil life will reset to "100".





Maintenance Main Items

If the message "SERVICE" does not appear more than 12 months after the display is reset, change the engine oil every year.

NOTE:

- Replace the brake fluid every 3 years (independent of the maintenance messages in the information display).
- Inspect idle speed every 160,000 miles (256,000 km).
- Adjust the valves during services A, B, 1, 2, or 3, only if they are noisy.

Symbol	Maintenance Main Items
A	Replace engine oil (see page 8-10) Engine oil capacity without engine oil filter: 4.0 L (4.2 US qt).
B	Replace engine oil and oil filter (see page 8-11) Engine oil capacity with engine oil filter: 4.2 L (4.4 US qt).
	Inspect front and rear brakes (see page 19-3) <ul style="list-style-type: none">• Check pads and discs for wear (thickness), damage, and cracks.• Check calipers for damage, leaks, and tightness of mounting bolts.
	Check parking brake adjustment (see page 19-7) Check the number of clicks (6 to 7) when the parking brake pedal is pressed with 294 N (30 kgf, 66 lbf) of force.
	Inspect tie-rod ends, steering gearbox, and gearbox boots (see page 17-8) <ul style="list-style-type: none">• Check rack grease and steering linkage.• Check boots for damage and leaking grease.
	Inspect suspension components (see page 18-3) <ul style="list-style-type: none">• Check bolts for tightness.• Check condition of ball joint boots for deterioration and damage.
	Inspect driveshaft boots (see page 16-3) Check boots for cracks and boot bands for tightness.
	Inspect brake hoses and lines including VSA (see page 19-34) Check the master cylinder and VSA modulator-control unit for damage or leakage.
	Inspect all fluid levels, condition of fluids, and for leaks. <ul style="list-style-type: none">• Engine coolant (see page 10-6)• Automatic transmission fluid (ATF) (see page 14-238)• Rear differential fluid (see page 15-21)• Power steering fluid (see page 17-12)• Brake fluid (see page 19-9)• Windshield washer fluid
	Inspect exhaust system* (see page 9-9) Check catalytic converter heat shields, exhaust pipes, and muffler for damage, leaks, and tightness.
	Inspect fuel lines and connections* (see page 11-321) Check for loose connections, cracks, and deterioration; retighten loose connections and replace damaged parts.

NOTE: According to state and federal regulations, failure to do the maintenance items marked with an asterisk (*) will not void the customer's emissions warranties. However, Honda recommends that all maintenance services be done at the recommended interval, to ensure long-term reliability.

Maintenance Minder

Maintenance Sub Items

Number	Maintenance Sub Items
1	Rotate tires, and check tire inflation and condition. Follow the pattern shown in the Owner's Manual.
2	Replace air cleaner element (see page 11-340) Replace every 15,000 miles (24,000 km), if the vehicle is primarily driven in dusty conditions. Replace dust and pollen filter (see page 21-54) <ul style="list-style-type: none">• Replace the filter at 15,000 miles (24,000 km) intervals if the vehicle is primarily driven in urban areas that have high concentrations of soot in the air from industry and diesel-powered vehicles.• Replace the filter whenever airflow from the heating and cooling system is less than normal. Inspect drive belt (see page 4-29) Look for cracks and damage, then check the position of the drive belt auto-tensioner indicator.
3	Replace automatic transmission fluid (see page 14-239) Capacity 2WD: 2.6 L (2.7 US qt), 4WD: 2.5 L (2.6 US qt), use Honda Automatic transmission fluid (ATF-Z1)
4	Replace spark plugs (see page 4-20) Use IZFR6K11 (NGK) or SKJ20DR-M11 (DENSO). Inspect the valve clearance (cold) (see page 6-9) Intake: 0.21—0.25 mm (0.008—0.010 in.), Exhaust: 0.28—0.32 mm (0.011—0.013 in.).
5	Replace engine coolant (see page 10-6) Capacity (including reservoir): 5.0 L (1.32 US qt); use Honda Long Life Antifreeze/Coolant Type 2.
6	Replace rear differential fluid (see page 15-21) Capacity: 1.2 L (1.3 US qt); use Honda Dual Pump Fluid.

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SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If engine electrical maintenance is required)

The CR-V SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, seat belt buckle tensioners in the front seat belt buckles, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items require special precautions and tools, and should be done only by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags and/or side airbags.
- Do not bump or impact the SRS unit, front impact sensors, or side impact sensors when the ignition switch is ON (II), or for at least 3 minutes after the ignition switch is turned OFF; otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

Engine Electrical

Engine Electrical

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* Cruise Control Combination

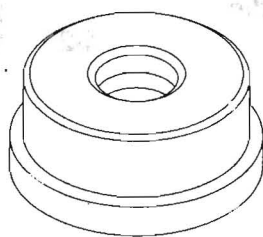
Switch Test/Replacement 4-45



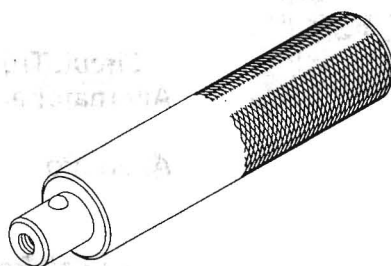
Engine Electrical

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07746-0010300	Attachment, 42 x 47 mm	1
②	07749-0010000	Driver	1

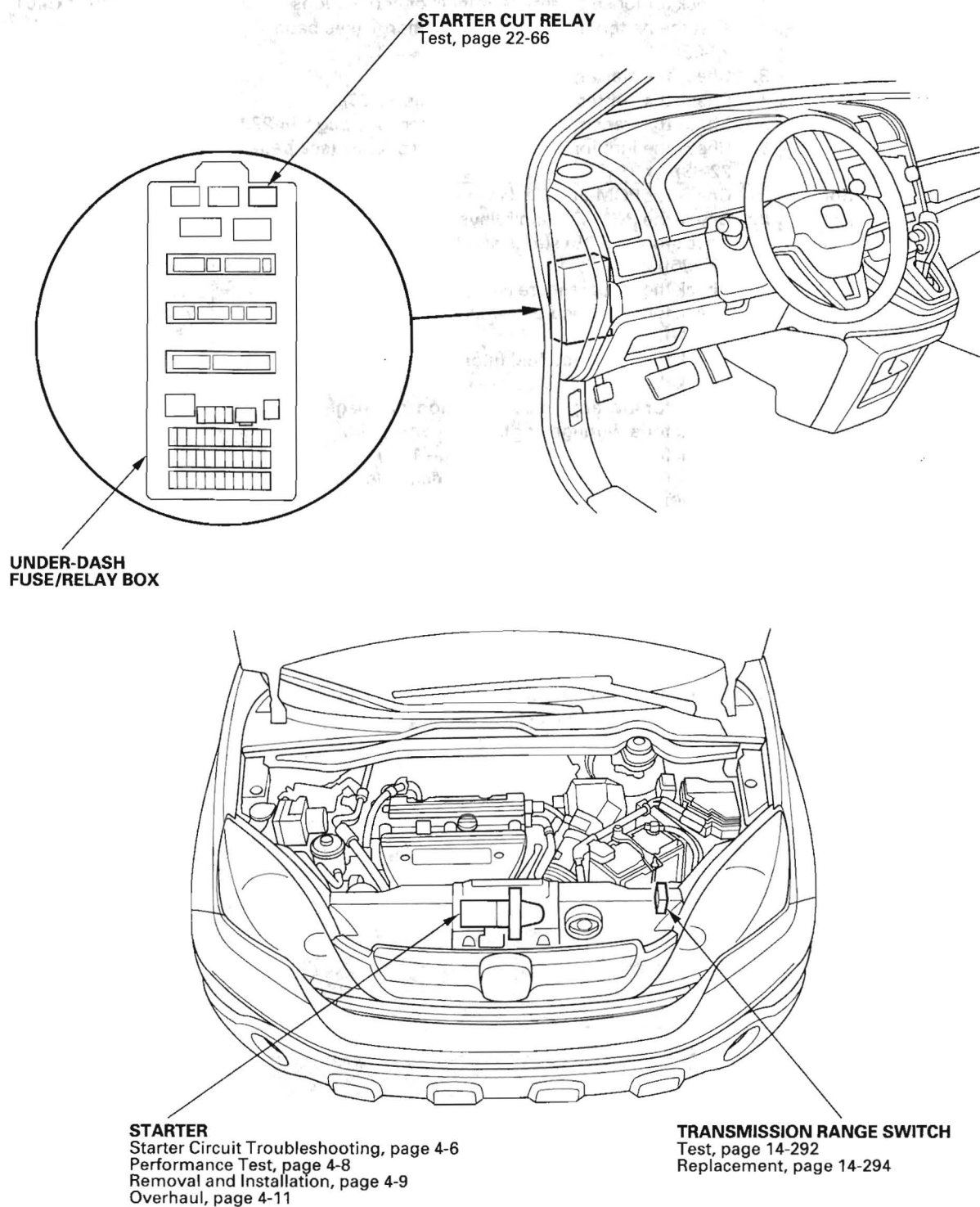


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②

Component Location Index

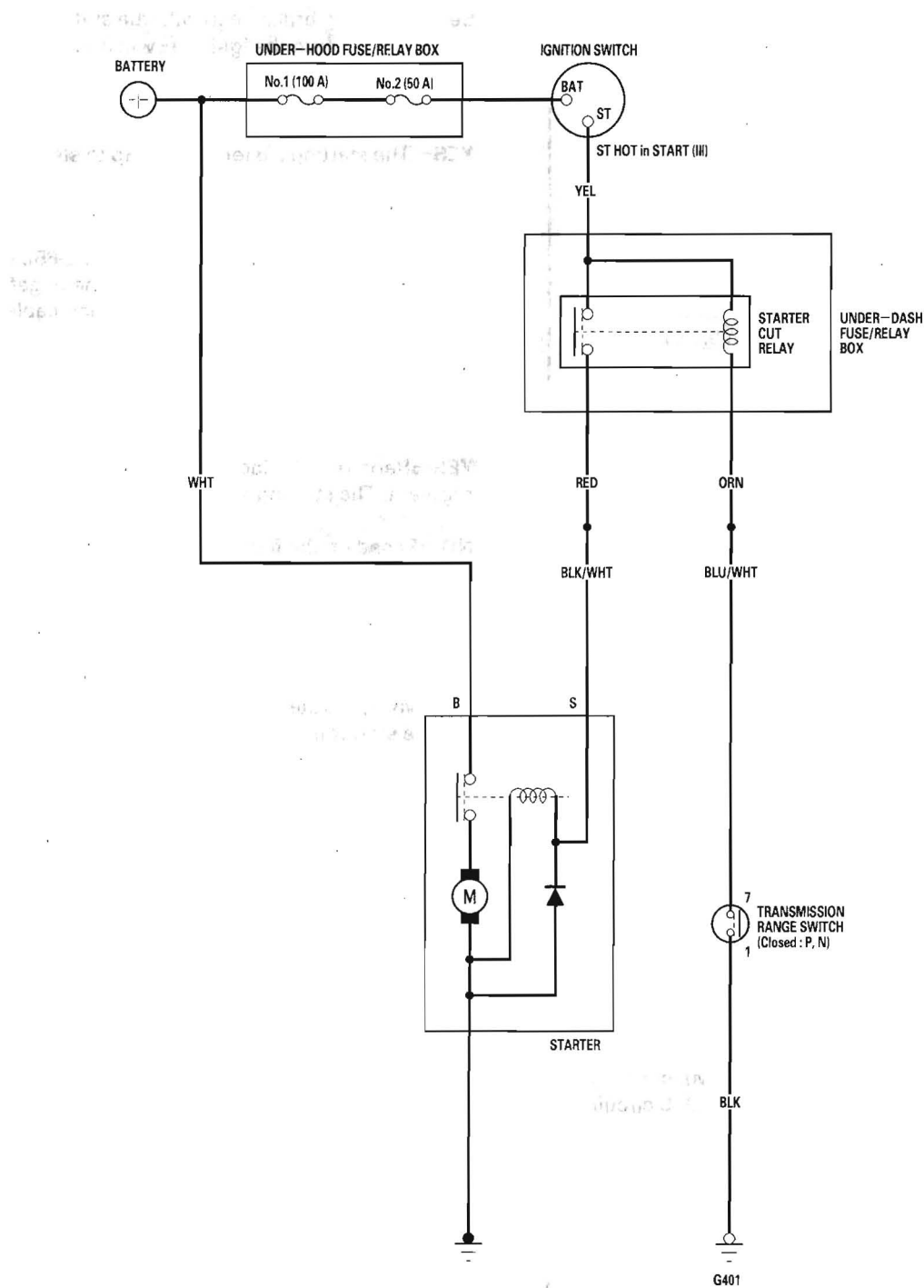


Starting System

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Engine does not start (does not crank)	<ol style="list-style-type: none">1. Check for loose battery terminals or connections.2. Test the battery for a low state of charge (see page 22-65).3. Check the starter (see page 4-6).4. Check the starter cut relay (see page 22-66).5. Check the transmission range switch (see page 14-292).6. Check the ignition switch or related circuits (see page 22-68).	Poor ground at G401
Engine cranks, but does not start	<ol style="list-style-type: none">1. Check for PGM-FI DTCs (see page 11-3).2. Check the PGM-FI main relays (see page 22-66).3. Check for IMMOBI status and function (see page 22-296).4. Check the fuel pressure (see page 11-319).5. Check for a plugged or damaged fuel line (see page 11-321).6. Check for a plugged fuel filter (see page 11-331).7. Check the throttle body (see page 11-342).8. Check for low engine compression (see page 6-6).9. Check for a damaged or broken cam chain.	
Engine is hard to start	<ol style="list-style-type: none">1. Check for PGM-FI DTCs (see page 11-3).2. Check for IMMOBI status and function (see page 22-296).3. Check the fuel pressure (see page 11-319).4. Check for a plugged or damaged fuel line (see page 11-321).5. Check for a plugged fuel filter (see page 11-331).	
Engine cranks slowly	<ol style="list-style-type: none">1. Check for loose battery terminals or connections.2. Test the battery for a low state of charge (see page 22-65).3. Check the starter for binding (see page 4-11).4. Check for excessive drag in the engine.	

Circuit Diagram



Starting System

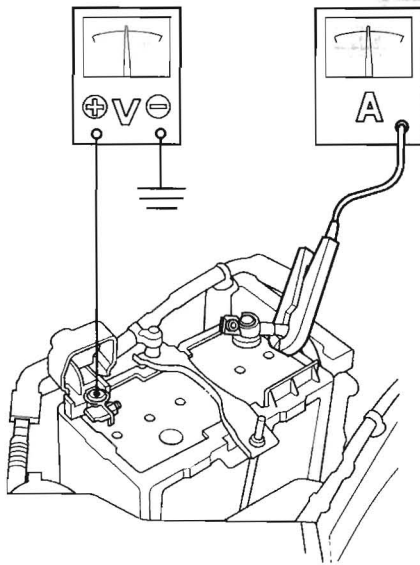
Starter Circuit Troubleshooting

NOTE:

- Air temperature must be between 59 and 100 °F (15 and 38 °C) during this procedure.
- After this inspection, you must reset the powertrain control module (PCM), otherwise the PCM will continue to stop the injectors from functioning.
- The battery must be in good condition and fully charged.

1. Hook up this equipment:

- Ammeter, 0—400 A
- Voltmeter, 0—20 V (accurate within 0.1 V)



2. Connect the HDS to the data link connector (DLC) (see step 2 on page 11-3).
3. Turn the ignition switch ON (II).
4. Make sure the HDS communicates with the vehicle and the powertrain control module (PCM). If it doesn't communicate, troubleshoot the DLC circuit (see page 11-197).
5. Select PGM-FI, INSPECTION, then ALL INJECTORS OFF on the HDS.

6. Set the parking brake, then with the shift lever in P or N position, turn the ignition switch to START (III).

Does the starter crank the engine normally?

YES—The starting system is OK. Go to step 13.

NO—Go to step 7.

7. Check the battery condition (see page 22-65). Check electrical connections at the battery, the negative battery cable to body, the engine ground cables, and the starter for looseness and corrosion. Then try cranking the engine again.

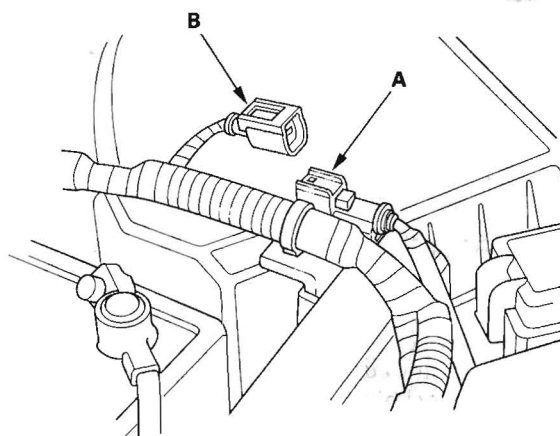
Does the starter crank the engine?

YES—Repairing the loose connection corrected the problem. The starting system is OK. Go to step 13.

NO—Based on the following symptoms, take the appropriate action:

- If the starter will not crank the engine at all, go to step 8.
- If the starter cranks the engine erratically or too slowly, go to step 10.
- If the starter does not disengage from the torque converter ring gear when you release the key, replace the starter, or remove and disassemble it, and check for the following:
 - Solenoid plunger and switch malfunction
 - Dirty drive gear or damaged overrunning clutch

8. Make sure the transmission is in Park or neutral, and set the parking brake. Disconnect the starter subharness 1P connector (A) from the main wire harness 1P connector (B). Connect a jumper wire from the battery positive terminal to the starter subharness 1P connector.



Does the starter crank the engine?

YES—Go to step 9.

NO—Check the BLK/WHT wire between the starter subharness 1P connector and the starter. If the wire is OK, remove the starter, and repair or replace it as necessary. ■

9. Check the following items in the order listed until you find the open circuit:
- The YEL wire and connectors between the under-dash fuse/relay box and the ignition switch.
 - The RED wire and connectors between the under-dash fuse/relay box and the main wire harness 1P connector.
 - The ignition switch (see page 22-68).
 - The transmission range switch and connector.
 - The starter cut relay (see page 22-66).

10. While cranking the engine, check the cranking voltage and the current draw.

Is the cranking voltage greater than or equal to 8.5 V and is the current draw less than or equal to 380 A?

YES—Go to step 11.

NO—Replace the starter, or remove and disassemble it, and check for these problems:

- Drag in the starter armature
- Shorted armature winding
- Excessive drag in the engine

11. Check the engine speed while cranking the engine.

Is the engine speed above 100 rpm?

YES—Go to step 12.

NO—Replace the starter, or remove and disassemble it, and check for these problems:

- Open circuit in the starter armature commutator segments
- Excessively worn starter brushes
- Open circuit in the commutator brushes
- Dirty or damaged helical splines or drive gear
- Faulty drive gear clutch

12. Remove the starter, and inspect its drive gear and the torque converter ring gear for damage. Replace any damaged parts.

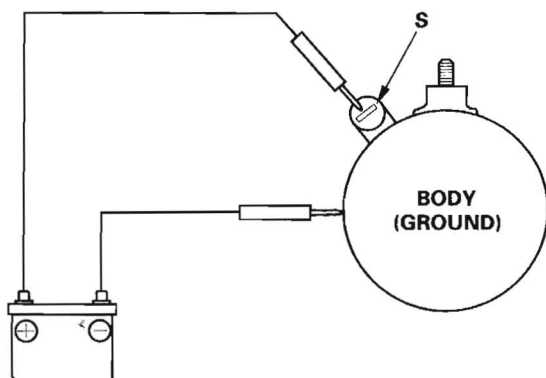
13. Select PCM reset (see page 11-4) to cancel ALL INJECTORS OFF on the HDS.

Starting System

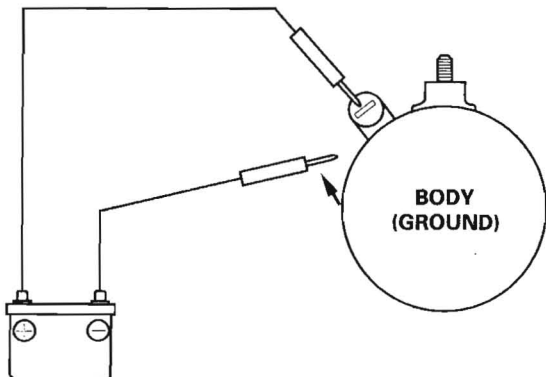
Starter Performance Test

1. Remove the starter (see page 4-9).
2. Connect a fully charged battery to the starter for this test using the thickest (gauge) wire possible (preferably the same gauge as used on the vehicle).

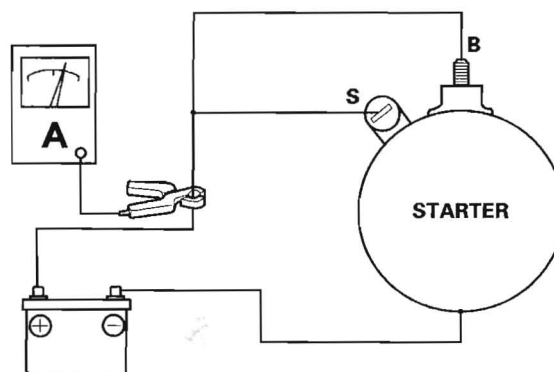
NOTE: To avoid damaging the starter, never leave the battery connected for more than 10 seconds.



3. Connect the battery as shown. If the starter pinion moves out, it is working properly.
4. Disconnect the battery from the starter body. If the pinion retracts immediately, it is working properly.



5. Firmly clamp the starter in a vise.
6. Connect the starter to the battery as shown, and check that the motor turns and keeps rotating.



7. If the electric current meets the specification when the battery voltage is at 11.5 V, the starter is working properly.

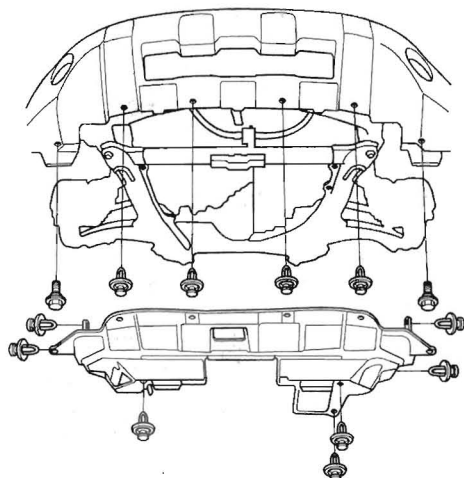
Specification

Electric Current: 80 A or less

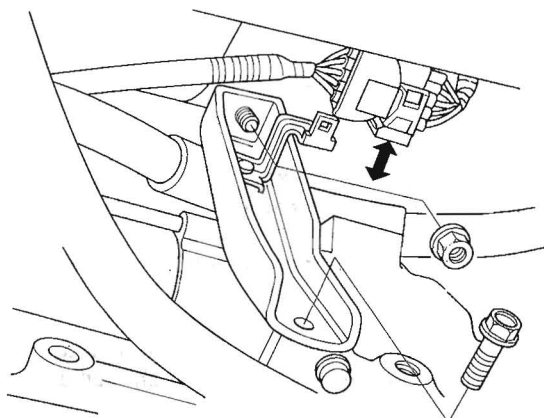
Starter Removal and Installation

Removal

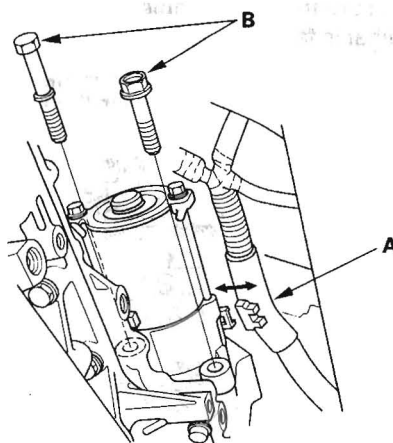
1. Make sure you have the anti-theft code for the audio system and the navigation system (if equipped), then write down the XM radio presets.
2. Disconnect the negative cable from the battery first, then disconnect the positive cable.
3. Remove the splash shield.



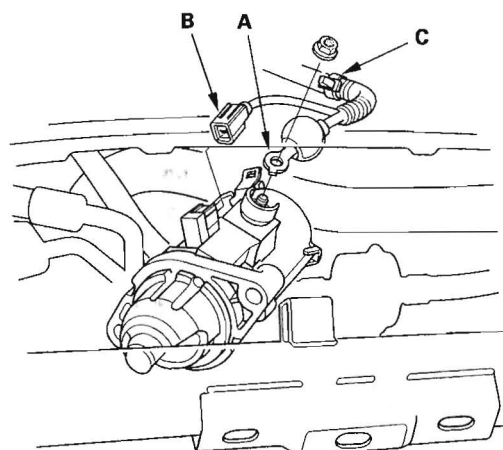
4. Remove the intake manifold bracket.



5. Remove the harness clamp (A), and remove the two bolts (B) securing the starter, then remove the starter from the engine.



6. Disconnect the starter cable (A) from the B terminal, then disconnect the BLK/WHT wire (B) from the S terminal.



7. Remove the harness clamp (C), then remove the starter.

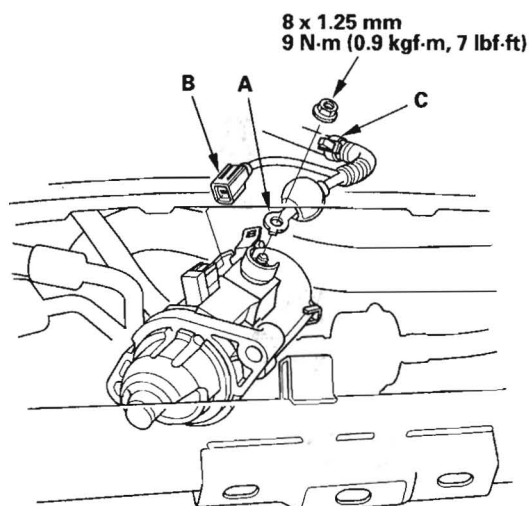
(cont'd)

Starting System

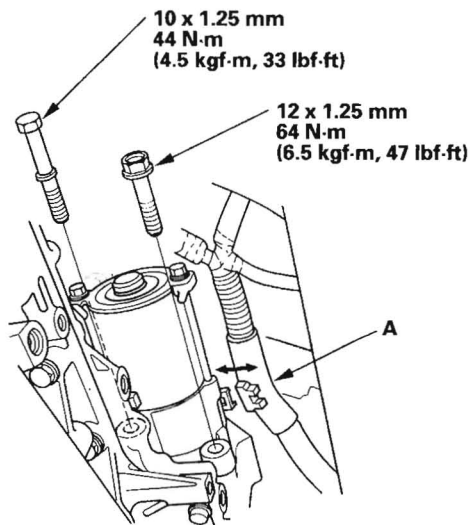
Starter Removal and Installation (cont'd)

Installation

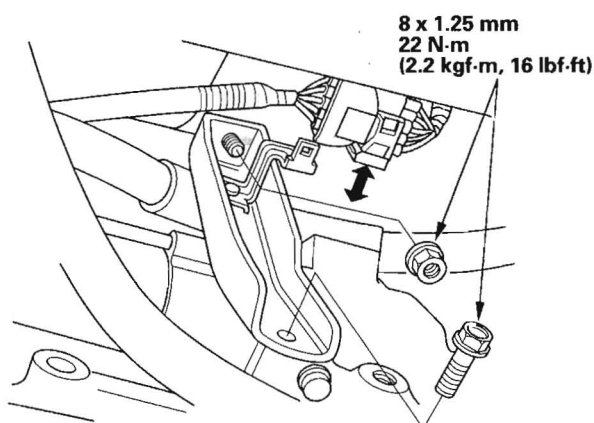
1. Install the starter cable (A) and BLK/WHT (B) wire. Make sure the starter cable crimped side of the ring terminal is facing out.



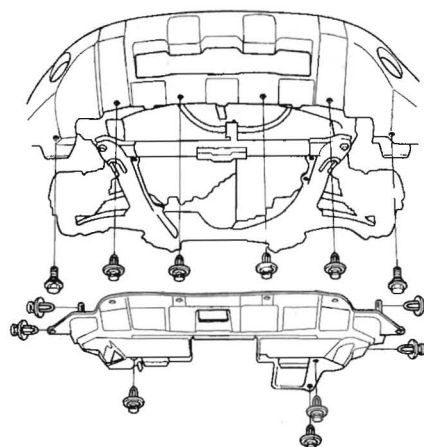
2. Install the harness clamp (C).
3. Install the starter, tighten the bolts, then install the harness clamp (A).



4. Install the intake manifold bracket.



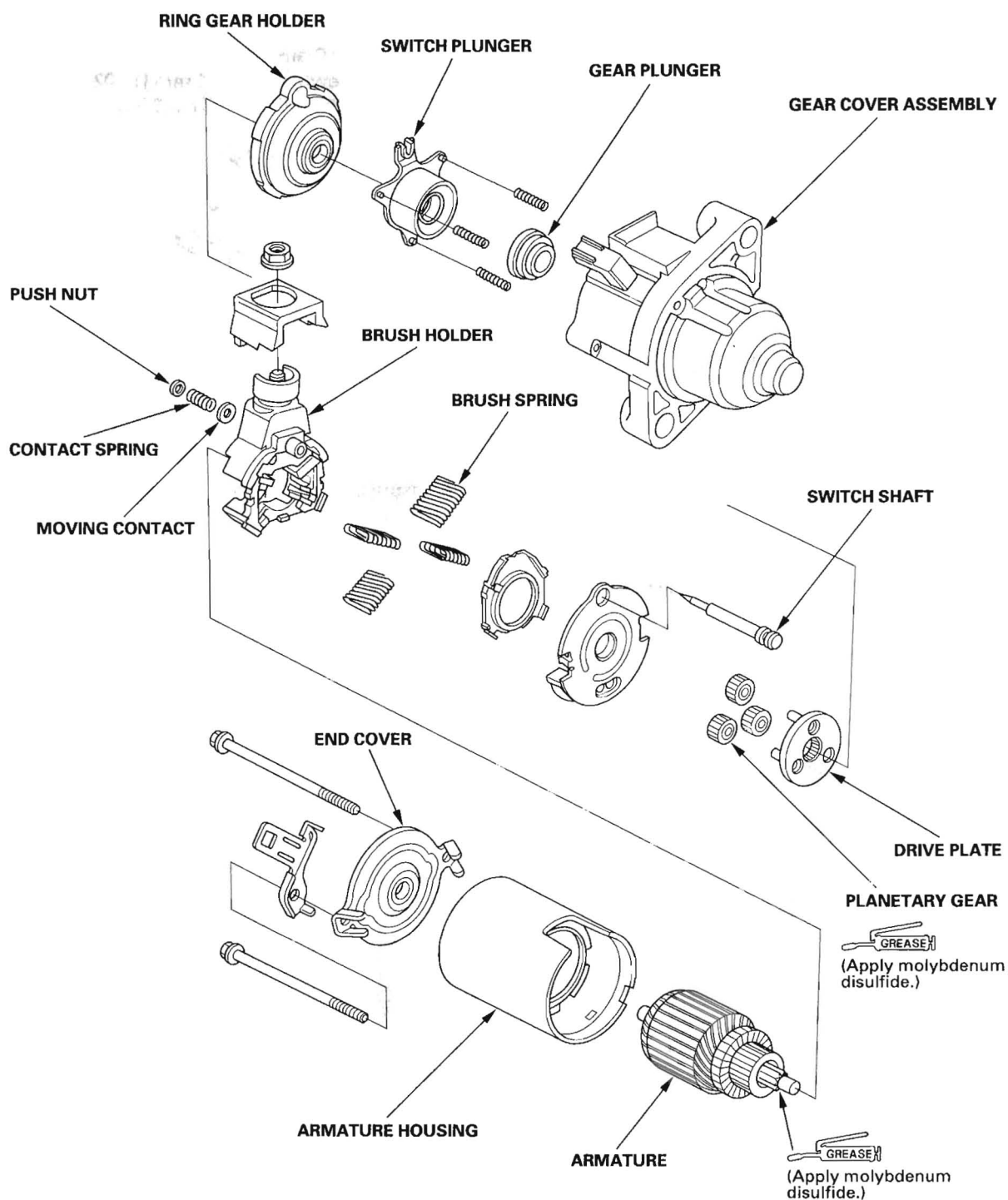
5. Install the splash shield.



6. Connect the positive cable to the battery first, then connect the negative cable.
7. Start the engine to make sure the starter works properly.
8. Enter the anti-theft code for the audio system and the navigation system (if equipped), then enter the XM radio presets.
9. Set the clock.

Starter Overhaul

Disassembly/Reassembly



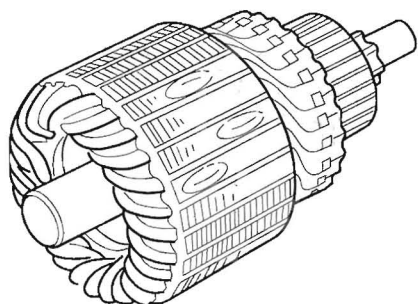
(cont'd)

Starting System

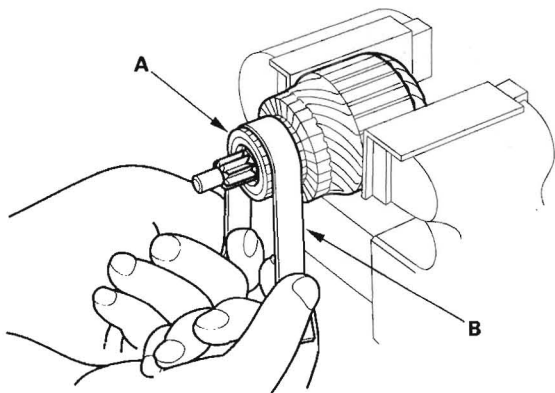
Starter Overhaul (cont'd)

Armature Inspection and Test

1. Remove the starter (see page 4-9).
2. Disassemble the starter as shown at the beginning of this procedure.
3. Inspect the armature for wear or damage from contact with the permanent magnet. If there is wear or damage, replace the armature.



4. Check the commutator (A) surface. If the surface is dirty or burnt, resurface it with an emery cloth or a lathe to the following specifications, or recondition with # 500 or # 600 sandpaper (B).

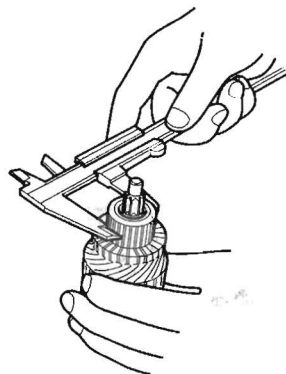


5. Check the commutator diameter. If the diameter is below the service limit, replace the armature.

Commutator Diameter

Standard (New): 28.0—28.1 mm (1.102—1.106 in.)

Service Limit: 27.5 mm (1.083 in.)



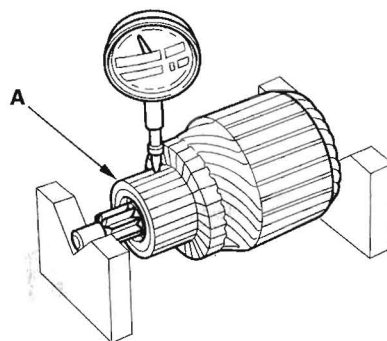
6. Measure the commutator (A) runout.

- If the commutator runout is within the service limit, check the commutator for carbon dust or brass chips between the segments.
- If the commutator runout is not within the service limit, replace the armature.

Commutator Runout

Standard (New): 0.02 mm (0.001 in.) max.

Service Limit: 0.05 mm (0.002 in.)

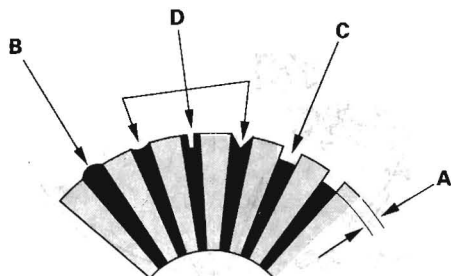


7. Check the mica depth (A). If the mica is too high (B), undercut the mica with a hacksaw blade to the proper depth. Cut away all the mica (C) between the commutator segments. The undercut should not be too shallow, too narrow, or V-shaped (D).

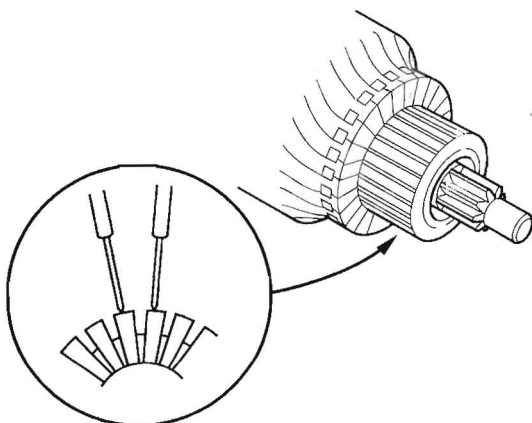
Commutator Mica Depth

Standard (New): 0.40—0.50 mm (0.016—0.020 in.)

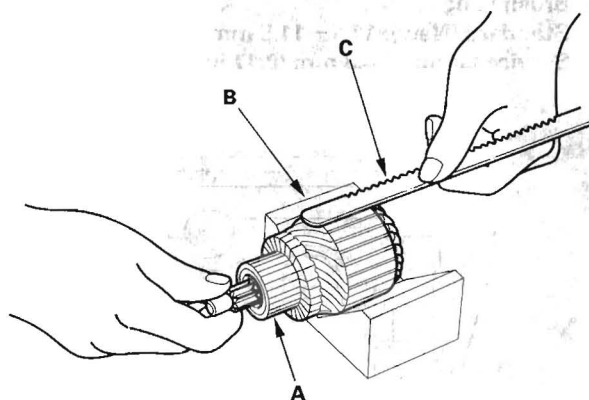
Service Limit: 0.15 mm (0.006 in.)



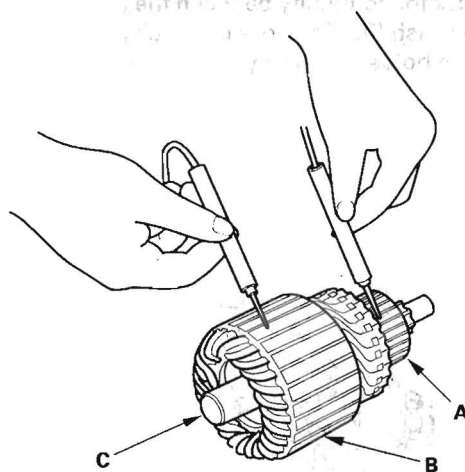
8. Check for continuity between the segments of the commutator. If there is an open circuit between any of the segments, replace the armature.



9. Place the armature (A) on an armature tester (B). Hold a hacksaw blade (C) on the armature core. If the blade is attracted to the core or vibrates while the core is turned, the armature is shorted. Replace the armature.



10. Check with an ohmmeter for continuity between the commutator (A) and armature coil core (B), and between the commutator and armature shaft (C). If there is continuity, replace the armature.



(cont'd)

Starting System

Starter Overhaul (cont'd)

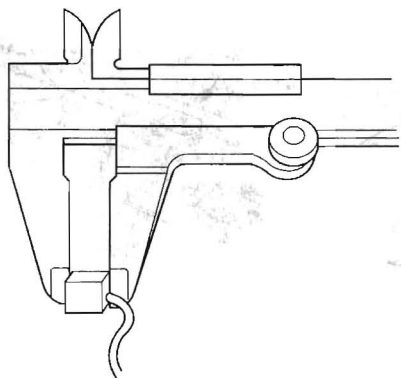
Starter Brush Inspection

11. Measure the brush length. If it is shorter than the service limit, replace the brush holder assembly.

Brush Length

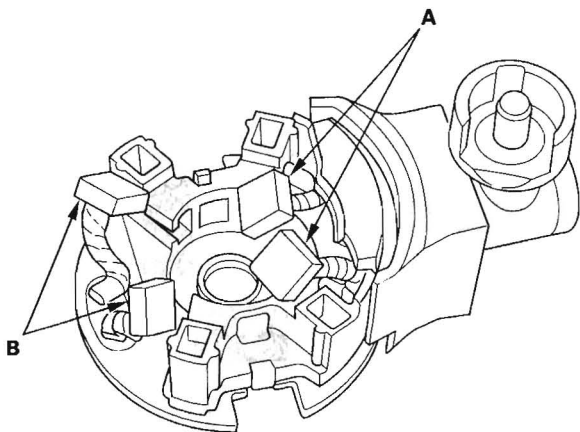
Standard (New): 11.1—11.5 mm (0.44—0.45 in.)

Service Limit: 4.3 mm (0.17 in.)



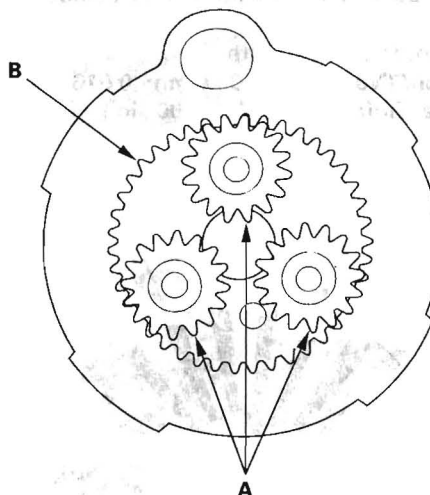
Starter Brush Holder Test

12. Check for continuity between the (+) brush (A) and (−) brush (B). If there is continuity, replace the brush holder assembly.



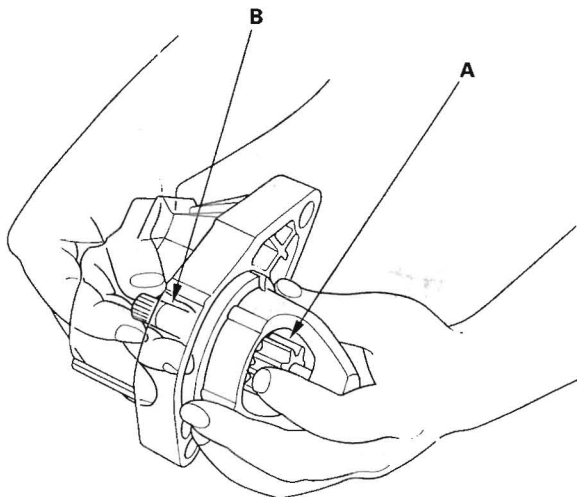
Planetary Gear Inspection

13. Check the planetary gears (A) and ring gear (B). Replace them if they are worn or damaged.



Overrunning Clutch Inspection

14. While holding the drive gear (A), turn the gear shaft (B) counterclockwise. Check that the drive gear comes out to the other end. If the drive gear does not move smoothly, replace the gear cover assembly.

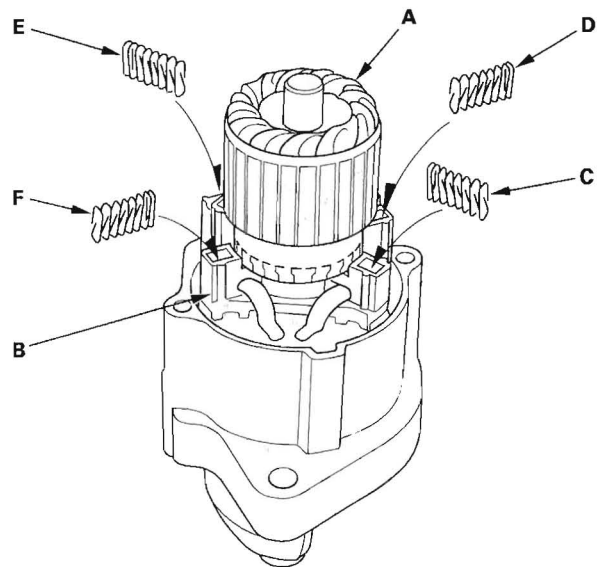


15. While holding the drive gear, turn the gear shaft clockwise. The gear shaft should turn freely. If the gear shaft does not turn freely, replace the gear cover assembly.
16. If the starter drive gear is worn or damaged, replace the overrunning clutch assembly; the gear is not available separately. Check the condition of the torque converter ring gear to see if the starter drive gear teeth are damaged.

Starter Reassembly

17. Install the brush into the brush holder, and set the armature (A) in the brush holder (B).

NOTE: To seat the new brushes, slip a strip of # 500 or # 600 sandpaper, with the grit side up, between the commutator and each brush, and smoothly turn the armature. The contact surface of the brushes will be sanded to the same contour as the commutator.

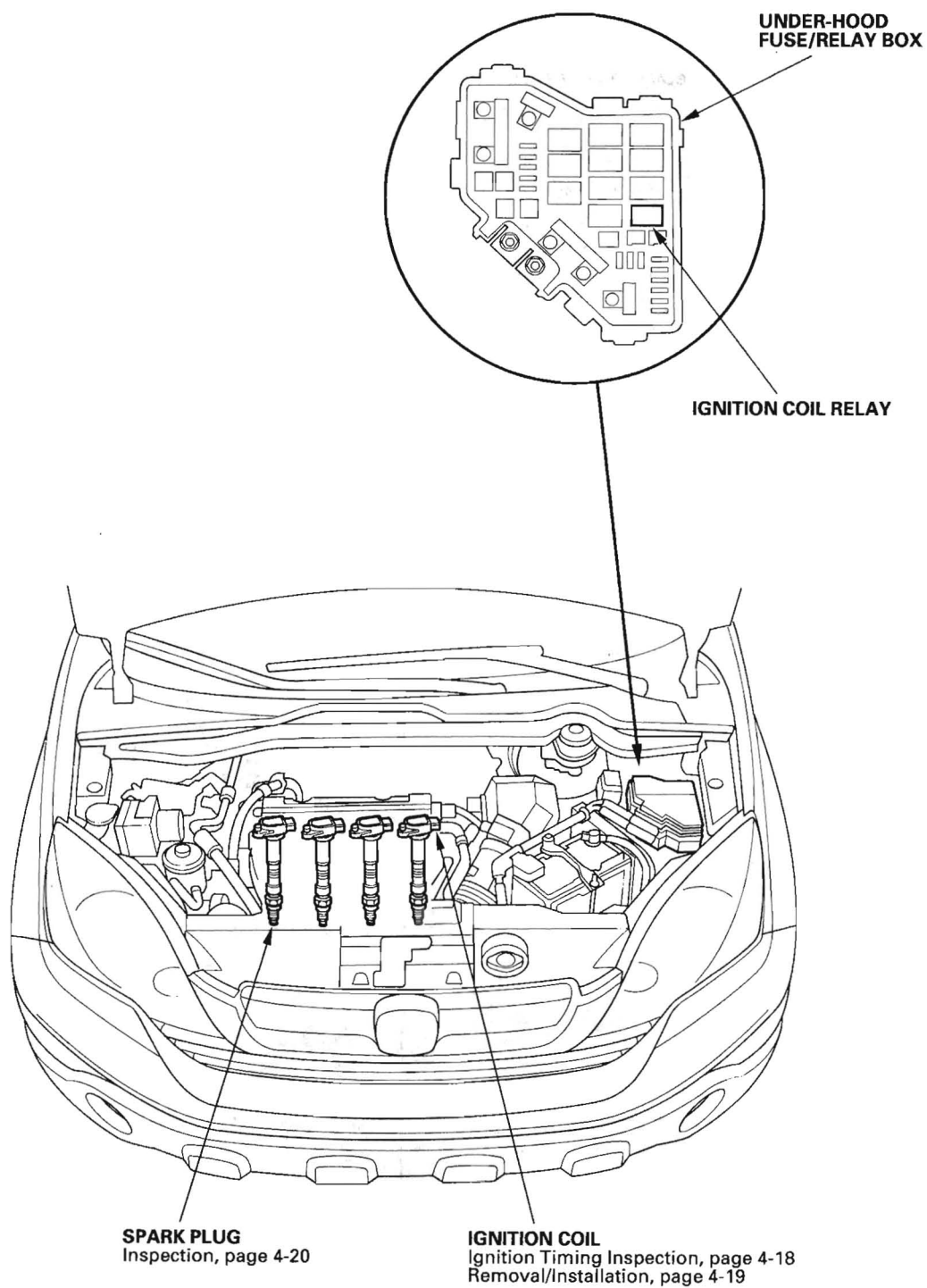


18. While squeezing a spring (C), insert it in the hole on the brush holder, and push it until it bottoms. Repeat this for the other three springs (D, E, and F).
19. Install the armature and brush holder assembly into the housing.

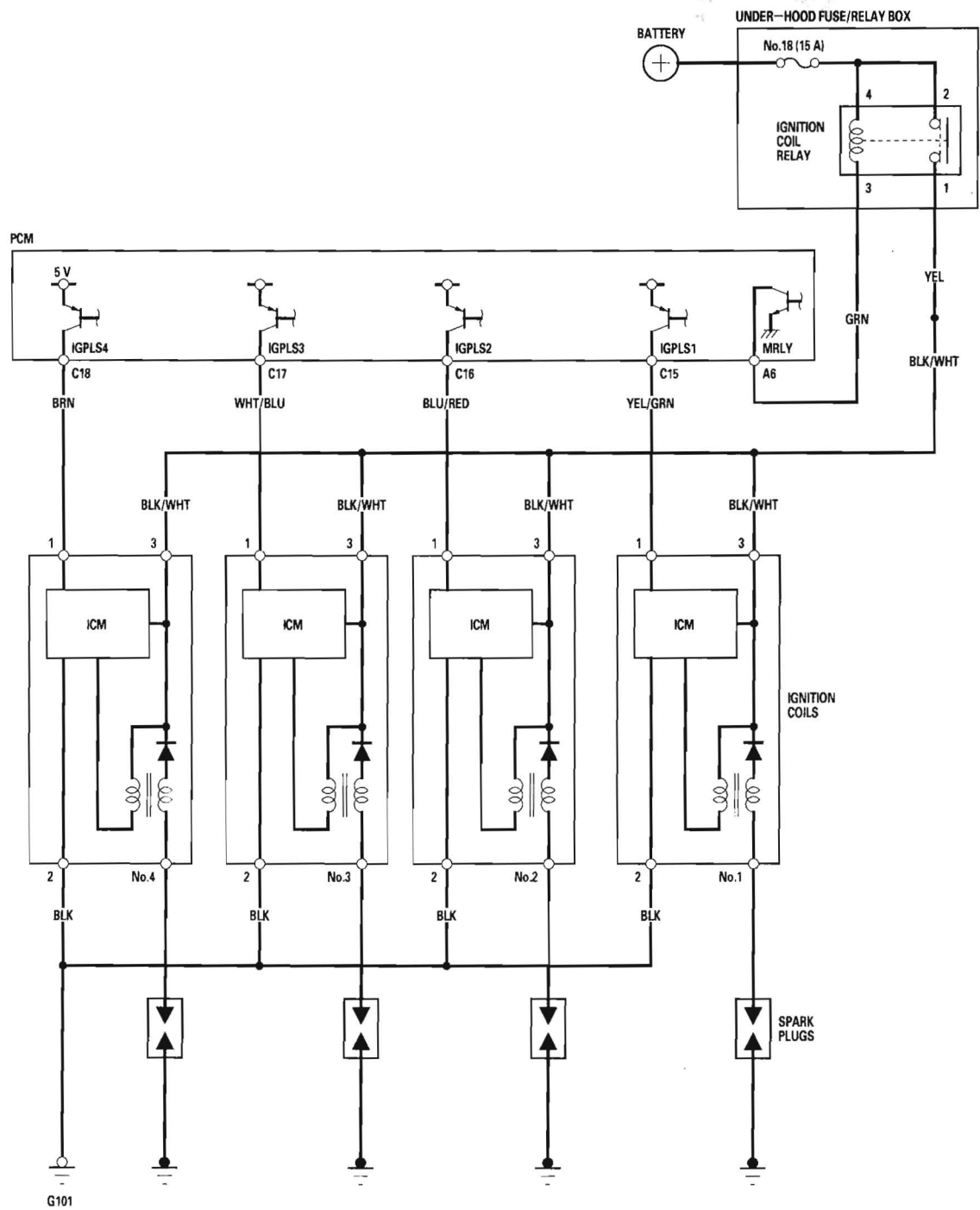
NOTE: Make sure the armature stays in the holder.

Ignition System

Component Location Index



Circuit Diagram

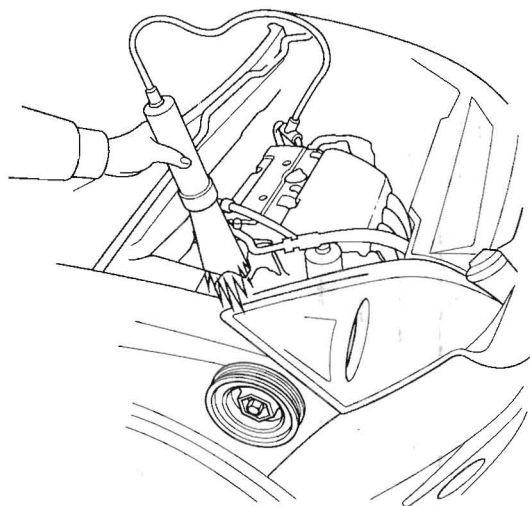


ICM : Ignition Control Module

Ignition System

Ignition Timing Inspection

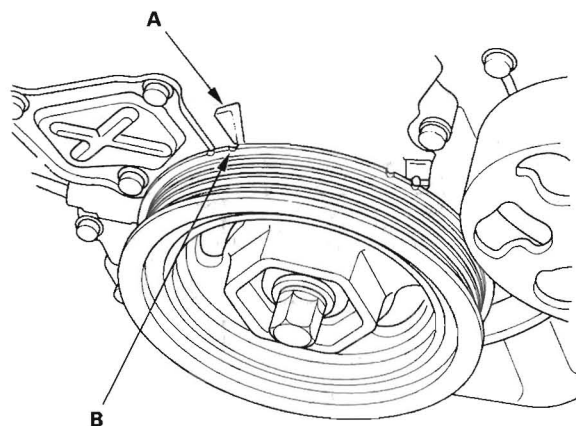
1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the powertrain control module (PCM). If it doesn't communicate, troubleshoot the DLC circuit (see page 11-197).
4. Start the engine. Hold the engine speed at 3,000 rpm without load (Park or neutral) until the radiator fan comes on, then let it idle.
5. Check the idle speed (see page 11-303).
6. Jump the SCS line with the HDS.
7. Connect the timing light to the service loop (white tape).



8. Aim the light toward the pointer (A) on the cam chain case. Check the ignition timing under a no load condition (headlights, blower fan, rear window defogger, and air conditioner are turned off).

Ignition Timing:

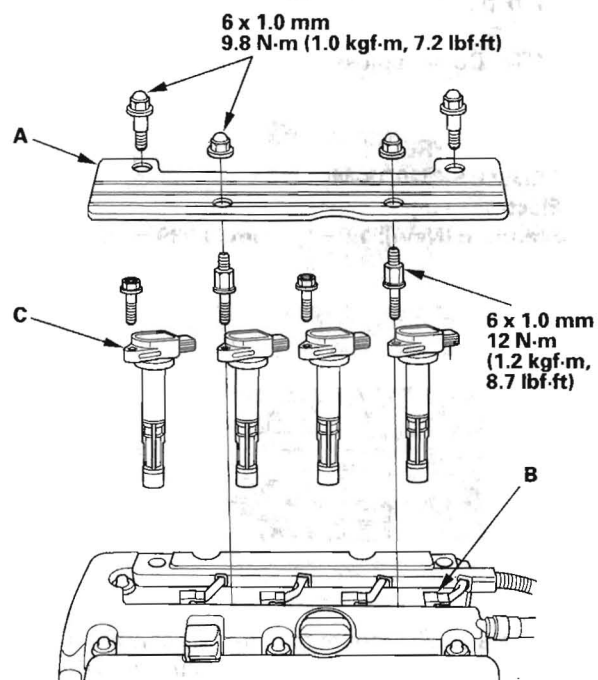
$8^{\circ} \pm 2^{\circ}$ BTDC (RED mark (B)) at idle in P or N position



9. If the ignition timing differs from the specification, check the cam timing. If the cam timing is OK, update the PCM, if it does not have the latest software (see page 11-7), or substitute a known-good PCM (see page 11-8), then recheck. If the system works properly, and the PCM was substituted, replace the original PCM (see page 11-219).
10. Disconnect the HDS and the timing light.

Ignition Coil Removal/Installation

1. Remove the ignition coil cover (A), disconnect the ignition coil connectors (B), then remove the ignition coils (C).



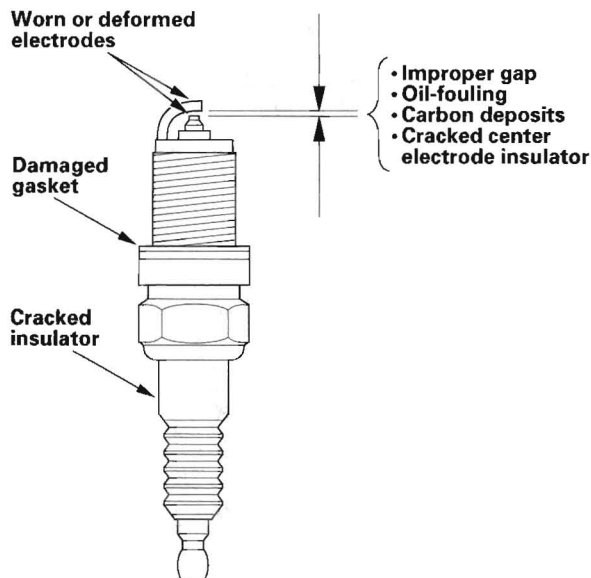
2. Install the ignition coils in the reverse order of removal.

Ignition System

Spark Plug Inspection

1. Remove the spark plugs, and inspect the electrodes and ceramic insulator.

- Burned or worn electrodes may be caused by these conditions:
 - Advanced ignition timing
 - Loose spark plug
 - Plug heat range too hot
 - Insufficient cooling
- Fouled plugs may be caused by these conditions:
 - Retarded ignition timing
 - Oil in combustion chamber
 - Incorrect spark plug gap
 - Plug heat range too cold
 - Excessive idling/low speed running
 - Clogged air cleaner element
 - Deteriorated ignition coils



2. If the spark plug electrode is dirty or contaminated, clean the electrode with a plug cleaner.

NOTE:

- Do not use a wire brush or scrape the iridium electrode since this will damage the electrode.
- When using a sand blaster spark plug cleaner, do not clean for more than 20 seconds to avoid damaging the electrode.

3. Replace the plug at the specified interval, or if the center electrode is rounded (A), or if the spark plug gap (B) is out of specification. Use only the listed spark plugs.

NOTE: Do not adjust the gap of iridium tip plugs.

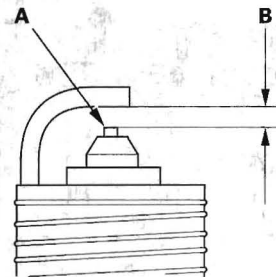
Spark Plugs

NGK: IZFR6K11

DENSO: SKJ20DR-M11

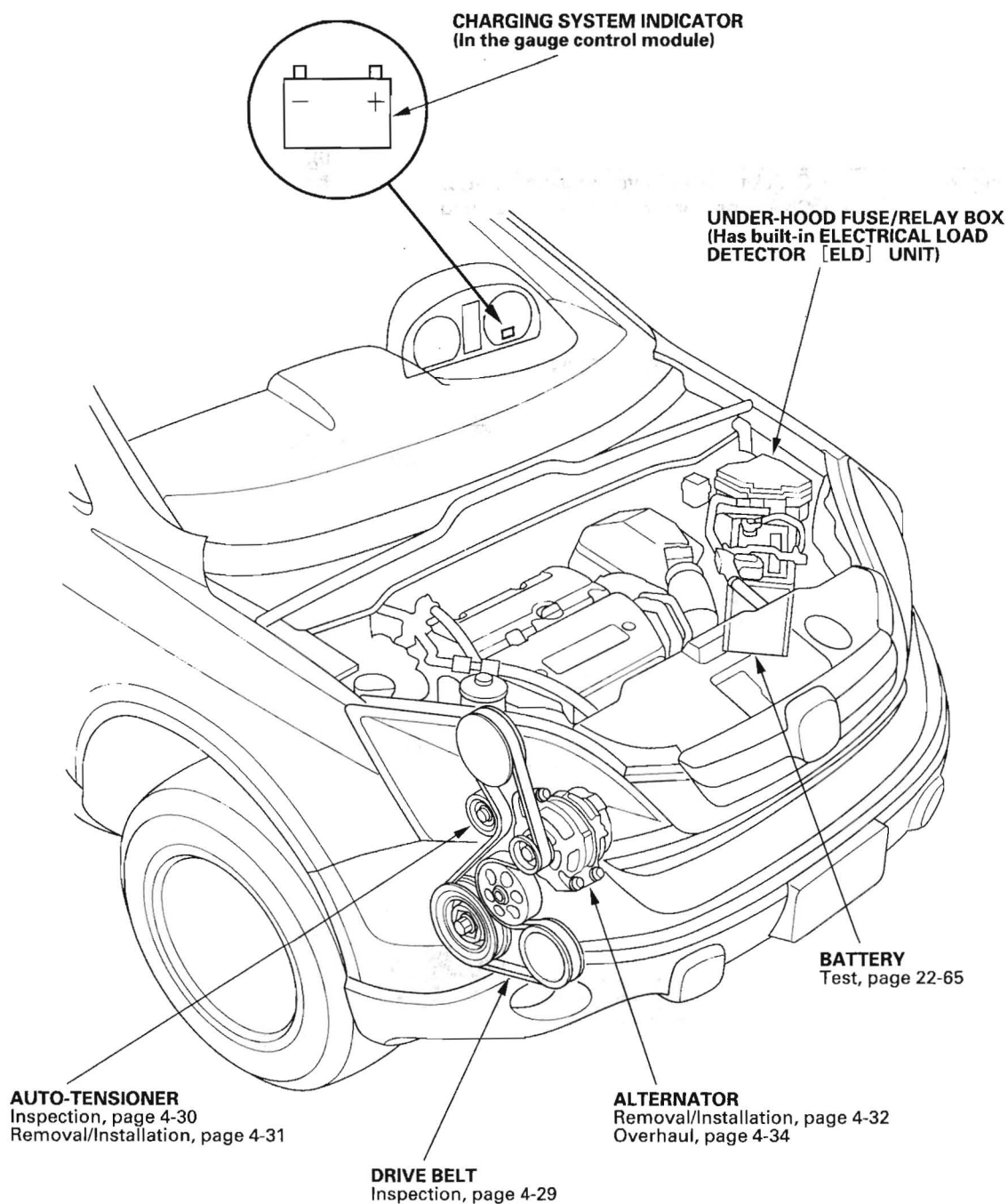
Electrode Gap

Standard (New): 1.0—1.1 mm (0.039—0.043 in.)



4. Apply a small amount of anti-seize compound to the plug threads, and screw the plugs into the cylinder head, finger-tight. Then torque them to 18 N·m (1.8 kgf·m, 13 lbf·ft).

Component Location Index

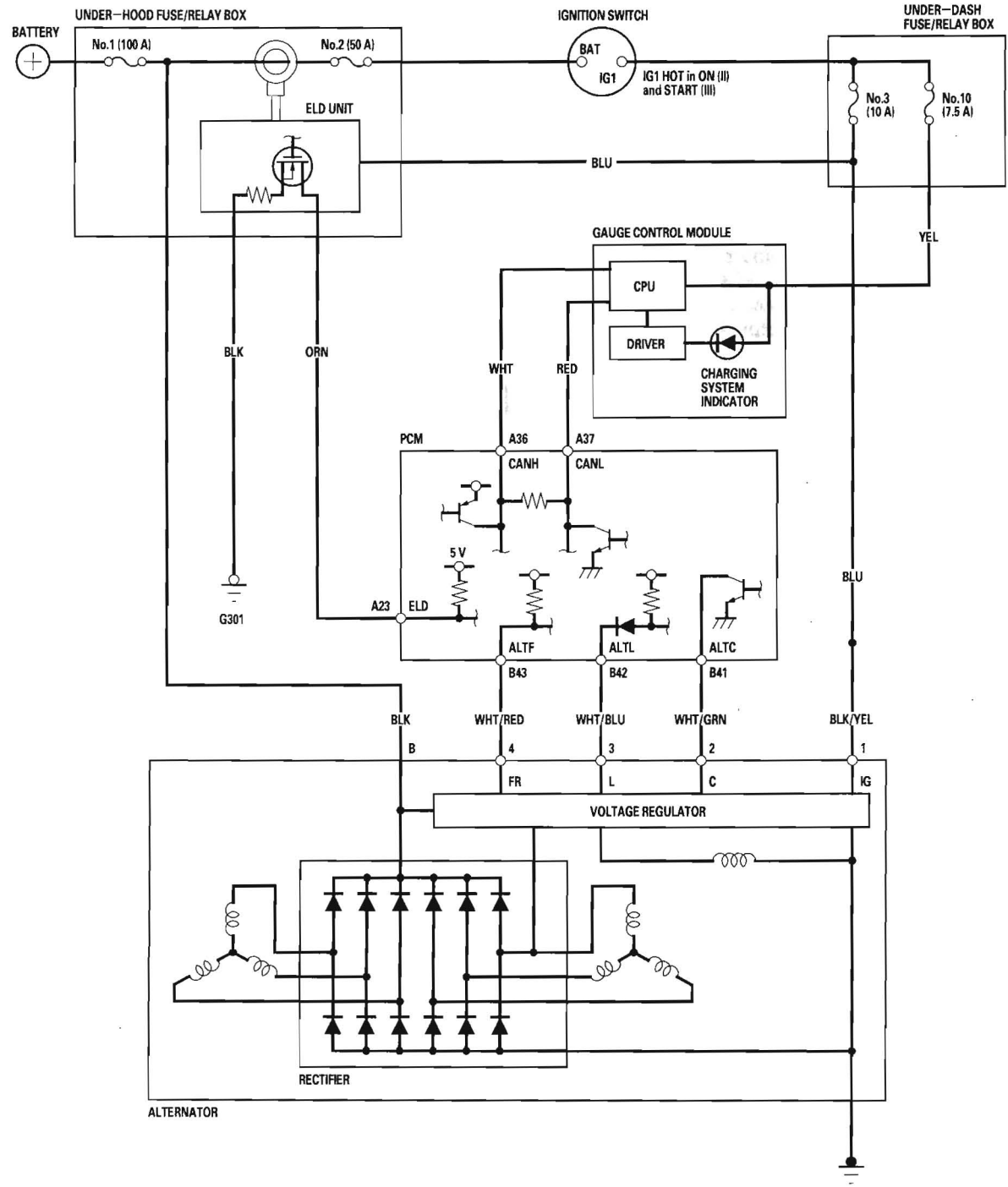


Charging System

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Charging system indicator does not come on with the ignition switch ON (II)	Troubleshoot the charging system indicator circuit (see page 4-24).	
Charging system indicator stays on	<ol style="list-style-type: none">1. Check for PGM-FI DTCs (see page 11-3).2. Troubleshoot the charging system indicator circuit (see page 4-24).3. Check for a broken drive belt (see page 4-29).4. Check the drive belt auto-tensioner (see page 4-30).	
Battery discharged	<ol style="list-style-type: none">1. Check for excessive parasitic electrical current draw.2. Check for a broken drive belt (see page 4-29).3. Check the drive belt auto-tensioner (see page 4-30).4. Troubleshoot the alternator and regulator circuit (see page 4-26).5. Check for a poor connection at the battery terminal.6. Test the battery (see page 22-65).	
Battery overcharged	<ol style="list-style-type: none">1. Troubleshoot the alternator and regulator circuit (see page 4-26).2. Test the battery (see page 22-65).	

Circuit Diagram



Charging System

Charging System Indicator Circuit Troubleshooting

1. Turn the ignition switch ON (II).

Does the charging system indicator come on?

YES—Go to step 2.

NO—Go to step 14.

2. Start the engine. Hold the engine speed at 2,000 rpm for 1 minute.

Does the charging system indicator go off?

YES—Charging system indicator circuit is OK. Go to the alternator and regulator circuit troubleshooting (see page 4-26). ■

NO—Go to step 3.

3. Do the gauge control module self-diagnostic function procedure (see page 22-229).

Does the charging system indicator flash?

YES—Go to step 4.

NO—Replace the gauge control module (see page 22-248). ■

4. Turn the ignition switch OFF.
5. Disconnect the alternator 4P connector.
6. Turn the ignition switch ON (II).

Does the charging system indicator go off?

YES—Replace the alternator (see page 4-32), or repair the alternator (see page 4-34). ■

NO—Go to step 7.

7. Turn the ignition switch OFF.

8. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).

9. Turn the ignition switch ON (II).

10. Make sure the HDS communicates with the vehicle and the powertrain control module (PCM). If it doesn't communicate, troubleshoot the DLC circuit (see page 11-197).

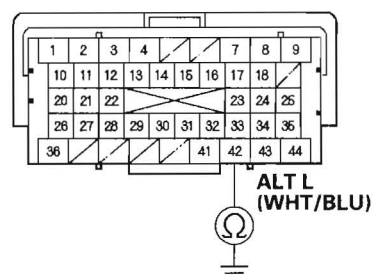
11. Jump the SCS line with the HDS, then turn the ignition switch OFF.

NOTE: This step must be done to protect the PCM from damage.

12. Disconnect PCM connector B (44P).

13. Check for continuity between PCM connector terminal B42 and body ground.

PCM CONNECTOR B (44P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the alternator and the PCM. ■

NO—Substitute a known-good PCM (see page 11-8), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see page 11-219). ■

14. Do the gauge control module self-diagnostic function procedure (see page 22-229).

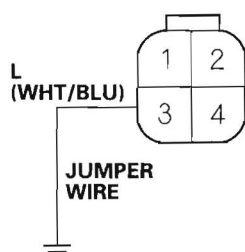
Does the charging system indicator flash?

YES—Go to step 15.

NO—Replace the gauge control module (see page 22-248). ■

15. Turn the ignition switch OFF.
16. Disconnect the alternator 4P connector.
17. Connect alternator 4P connector terminal No. 3 to body ground with a jumper wire.

ALTERNATOR 4P CONNECTOR



Wire side of female terminals

18. Turn the ignition switch ON (II).

Does the charging system indicator come on?

YES—Replace the alternator (see page 4-32), or repair the alternator (see page 4-34). ■

NO—Leave the jumper connected from step 17, and go to step 19.

19. Connect the HDS to the DLC (see step 2 on page 11-3).

20. Turn the ignition switch ON (II).

21. Make sure the HDS communicates with the vehicle and the PCM. If it doesn't communicate, troubleshoot the DLC circuit (see page 11-197).

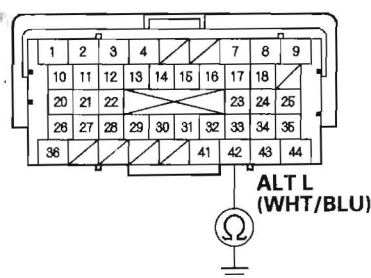
22. Jump the SCS line with the HDS, then turn the ignition switch OFF.

NOTE: This step must be done to protect the PCM from damage.

23. Disconnect PCM connector B (44P).

24. Check for continuity between PCM connector terminal B42 and body ground.

PCM CONNECTOR B (44P)



Terminal side of female terminals

Is there continuity?

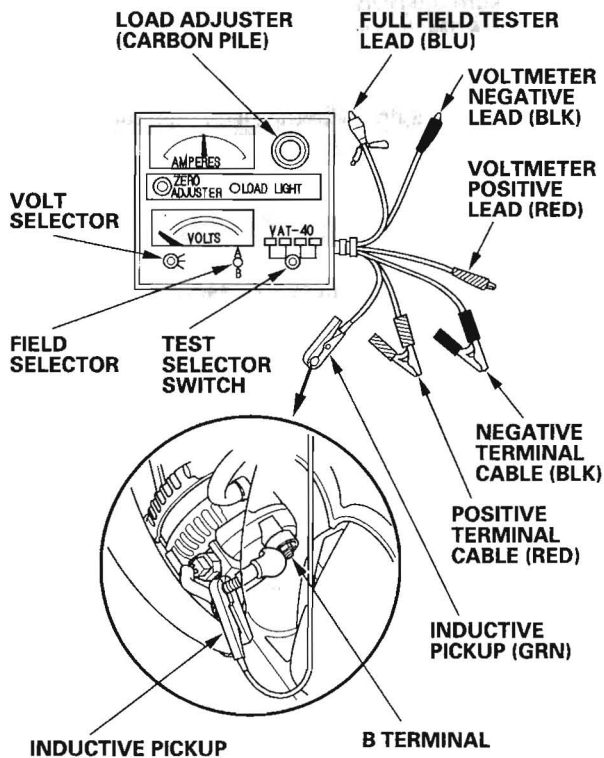
YES—Substitute a known-good PCM (see page 11-8), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see page 11-219). ■

NO—Repair open in the wire between the alternator and the PCM. ■

Charging System

Alternator and Regulator Circuit Troubleshooting

1. Make sure the battery connections are good and the battery is sufficiently charged.
2. Connect a VAT-40 (or equivalent tester), and turn the selector switch to position 1 (starting).



3. Start the engine. Hold the engine speed at 3,000 rpm with no load until the radiator fan comes on, then let it idle.
4. Raise the engine speed to 2,000 rpm, and hold it there.

Is the voltage over 15.1 V?

YES—Replace the alternator (see page 4-32), or rear housing assembly (see page 4-34). ■

NO—Go to step 5.

5. Release the accelerator pedal, and let the engine idle.
6. Make sure all accessories are turned off. Turn the selector switch to position 2 (charging).
7. Remove the inductive pickup, and zero the ammeter.
8. Place the inductive pickup over the B terminal wire of the alternator so the arrow points away from the alternator.
9. Raise the engine speed to 2,000 rpm, and hold it there.

Is the voltage less than 13.5 V?

YES—Go to alternator control circuit troubleshooting (see page 4-27). ■

NO—Go to step 10.

10. Apply a load with the VAT-40 until the battery voltage drops within 12—13.5 V.

Is the amperage 87.5 A or more?

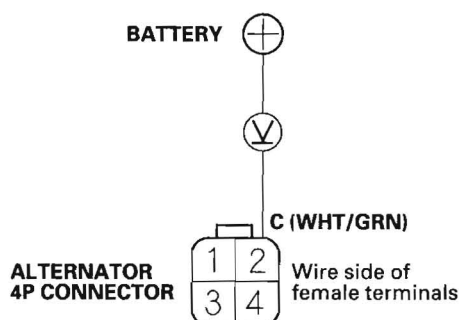
YES—The charging system is OK. ■

NOTE: If the charging system indicator is still on, replace the alternator (see page 4-32).

NO—Replace the alternator (see page 4-32), or repair the alternator (see page 4-34). ■

Alternator Control Circuit Troubleshooting

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the powertrain control module (PCM). If it doesn't, troubleshoot the DLC circuit (see page 11-197).
4. Check for DTCs (see page 11-3). If a DTC is present, diagnose and repair the cause before continuing with this test.
5. Disconnect the alternator 4P connector from the alternator.
6. Start the engine, and turn on the headlights to high beam.
7. Measure the voltage between alternator 4P connector terminal No. 2 and the positive terminal of the battery.



Is there 1 V or less?

YES—Go to step 11.

NO—Go to step 8.

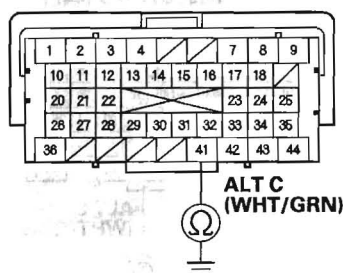
8. Jump the SCS line with the HDS, then turn the ignition switch OFF.

NOTE: This step must be done to protect the PCM from damage.

9. Disconnect PCM connector B (44P).

10. Check for continuity between PCM connector terminal B41 and body ground.

PCM CONNECTOR B (44P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the alternator and the PCM. ■

NO—Update the PCM if it does not have the latest software (see page 11-7), then recheck. If the problem is still present substitute a known good PCM (see page 11-8), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see page 11-219). ■

11. Jump the SCS line with the HDS, then turn the ignition switch OFF.

NOTE: This step must be done to protect the PCM from damage.

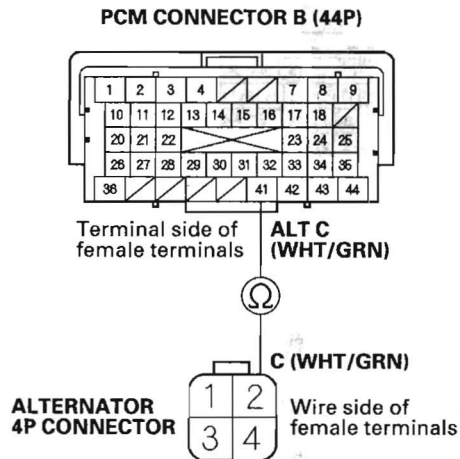
12. Disconnect PCM connector B (44P).

(cont'd)

Charging System

Alternator Control Circuit Troubleshooting (cont'd)

13. Check for continuity between PCM connector terminal B41 and alternator 4P connector terminal No. 2.



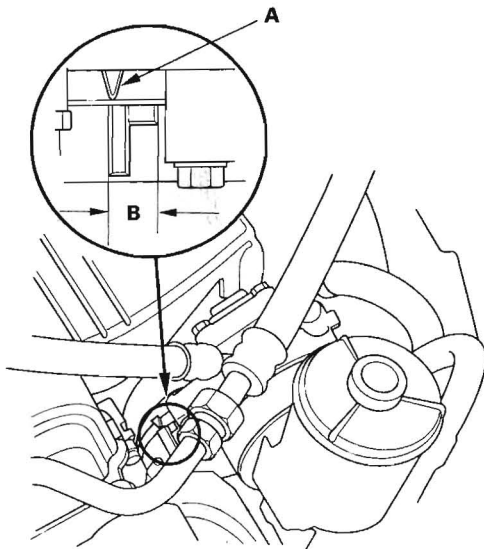
Is there continuity?

YES—Replace the alternator (see page 4-32), or repair the alternator (see page 4-34). ■

NO—Repair open in the wire between the alternator and the PCM. ■

Drive Belt Inspection

1. Inspect the belt for cracks and damage. If the belt is cracked or damaged, replace it.
2. Check that the auto-tensioner indicator (A) is within the standard range (B) as shown. If it is out of the standard range, replace the drive belt (see page 4-29).

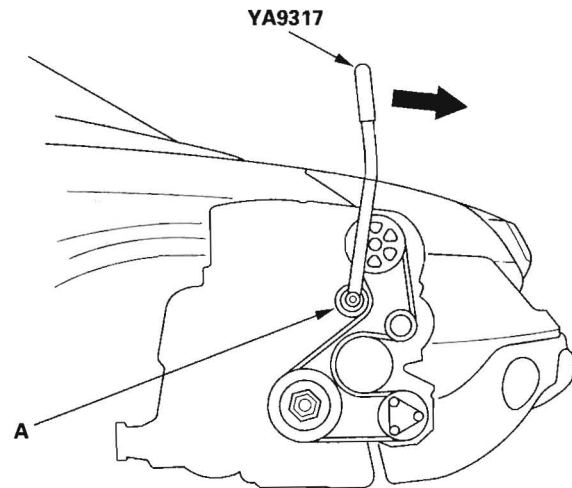


Drive Belt Removal/Installation

Special Tools Required

Belt tension release tool Snap-on YA9317 or equivalent, commercially available

1. Move the auto-tensioner (A) with the belt tension release tool to relieve tension from the drive belt, then remove the drive belt.



2. Install the new belt in the reverse order of removal.

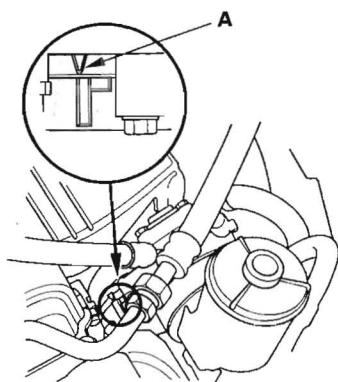
Charging System

Drive Belt Auto-tensioner Inspection

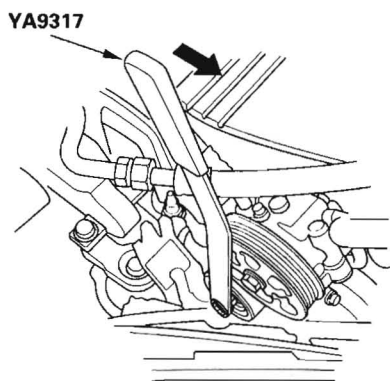
Special Tools Required

Belt tension release tool Snap-on YA9317 or equivalent, commercially available

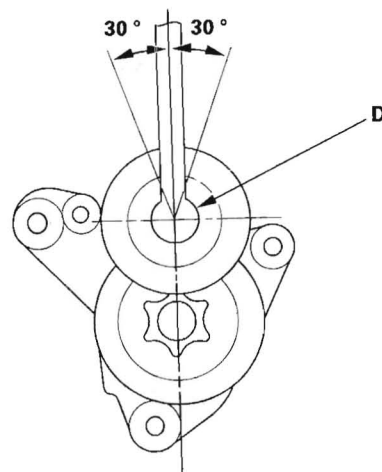
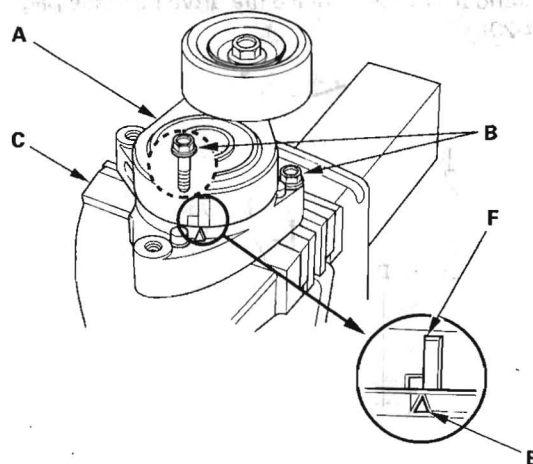
1. Turn the ignition switch ON (II), and make sure to turn the A/C switch OFF. Turn the ignition switch OFF.
2. Check the position of the auto-tensioner indicator's pointer (A). Start the engine then check the position again with the engine idling. If the position of the indicator moves or fluctuates very much, replace the auto-tensioner (see page 4-31).



3. Check for abnormal noise from the tensioner pulley. If you hear abnormal noise, replace the tensioner pulley.
4. Remove the drive belt (see page 4-29).
5. Move the auto-tensioner within its limit with the belt tension release tool in the direction shown. Check that the tensioner moves smoothly and without any abnormal noise. If the tensioner does not move smoothly or you hear abnormal noise, replace the auto-tensioner.



6. Remove the auto-tensioner (see page 4-31).
7. Clamp the auto-tensioner (A) by using two 8 mm bolts (B) and a vise (C) as shown. Do not clamp the auto-tensioner itself.



8. Set the torque wrench (D) on the pulley bolt, and align it as shown.
9. Align the indicator (E) on the tensioner base with center mark (F) on the tensioner arm by using the torque wrench, and measure the torque. If the torque value is out of specification, replace the auto-tensioner.

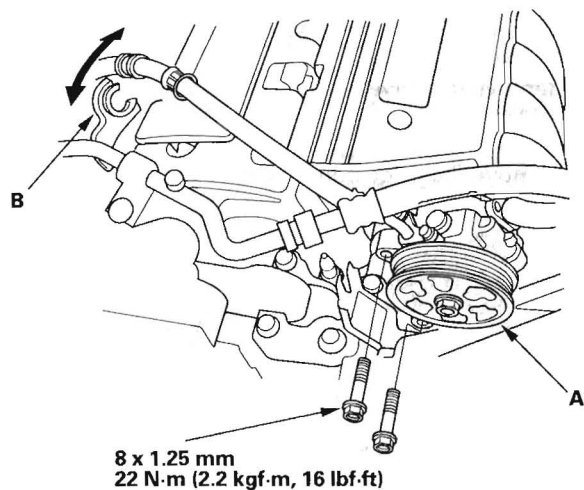
NOTE: If the indicator exceeds the center mark, recheck the torque.

Auto-tensioner Spring Torque:

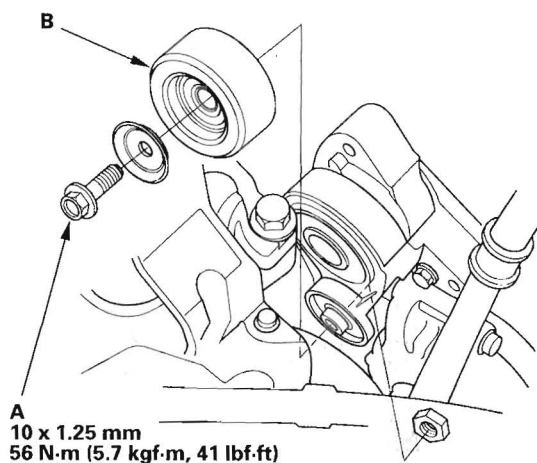
32.5—39.7 N·m (3.31—4.05 kgf·m, 23.9—29.3 lbf·ft)

Drive Belt Auto-tensioner Removal/Installation

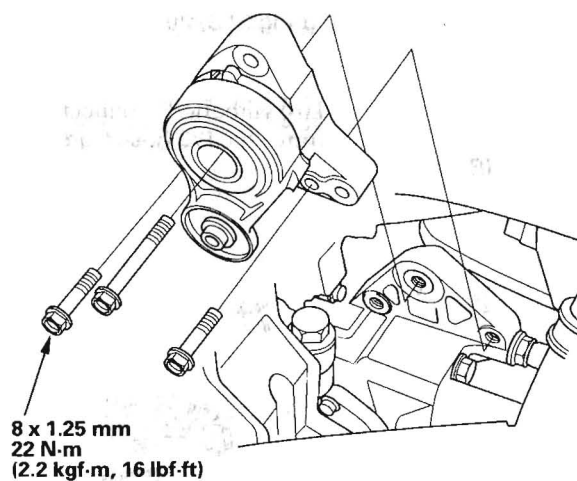
1. Remove the drive belt (see page 4-29).
2. Remove the power steering (P/S) fluid reservoir from the holder.
3. Remove the P/S pump (A) without disconnecting the P/S hoses, then remove the P/S hose from the clamp (B).



4. Remove the tensioner pulley bolt (A), then remove the tensioner pulley (B).



5. Remove the auto-tensioner.

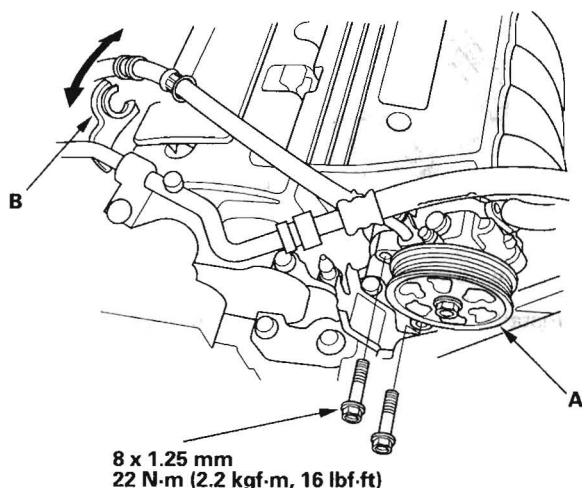


6. Install the auto-tensioner in the reverse order of removal.

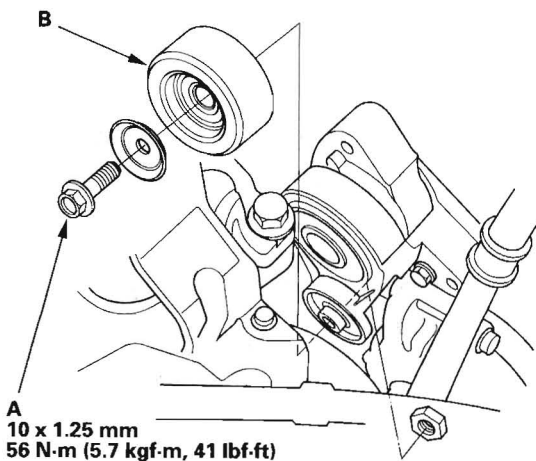
Charging System

Tensioner Pulley Replacement

1. Remove the drive belt (see page 4-29).
2. Remove the power steering (P/S) fluid reservoir from the holder.
3. Remove the P/S pump (A) without disconnecting the P/S hoses, then remove the P/S hose from the clamp (B).



4. Remove the tensioner pulley bolt (A), then remove the tensioner pulley (B).

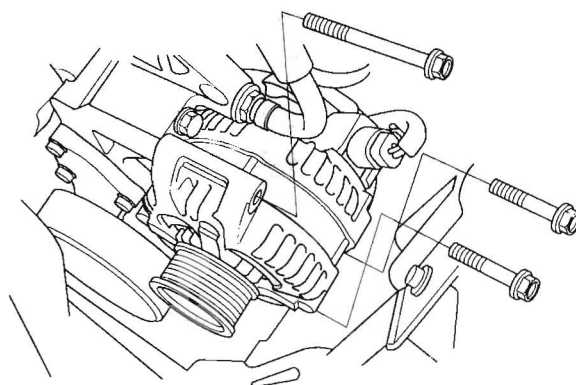


5. Install the tensioner pulley in the reverse order of removal.

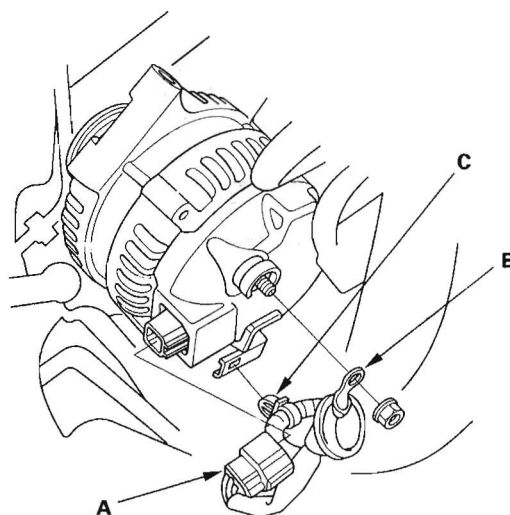
Alternator Removal and Installation

Removal

1. Make sure you have the anti-theft code for the audio system and the navigation system (if equipped), then write down the XM radio presets.
2. Disconnect the negative cable from the battery first, then disconnect the positive cable.
3. Remove the drive belt (see page 4-29).
4. Remove the drive belt auto-tensioner (see page 4-31).
5. Remove the three bolts securing the alternator.

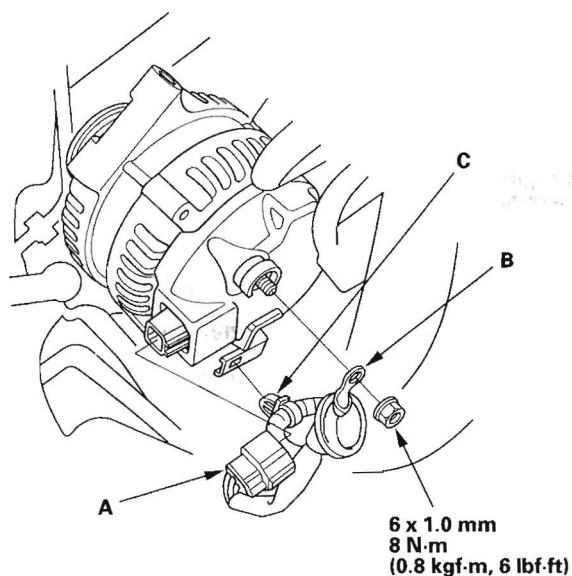


6. Disconnect the alternator connector (A), BLK wire (B), and harness clamp (C) from the alternator, then remove the alternator.

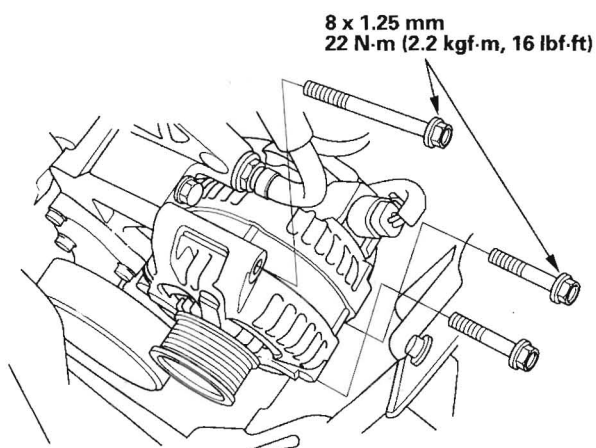


Installation

1. Connector the alternator connector (A), BLK wire (B), and harness clamp (C) to the alternator.



2. Tighten the three bolts securing the alternator.

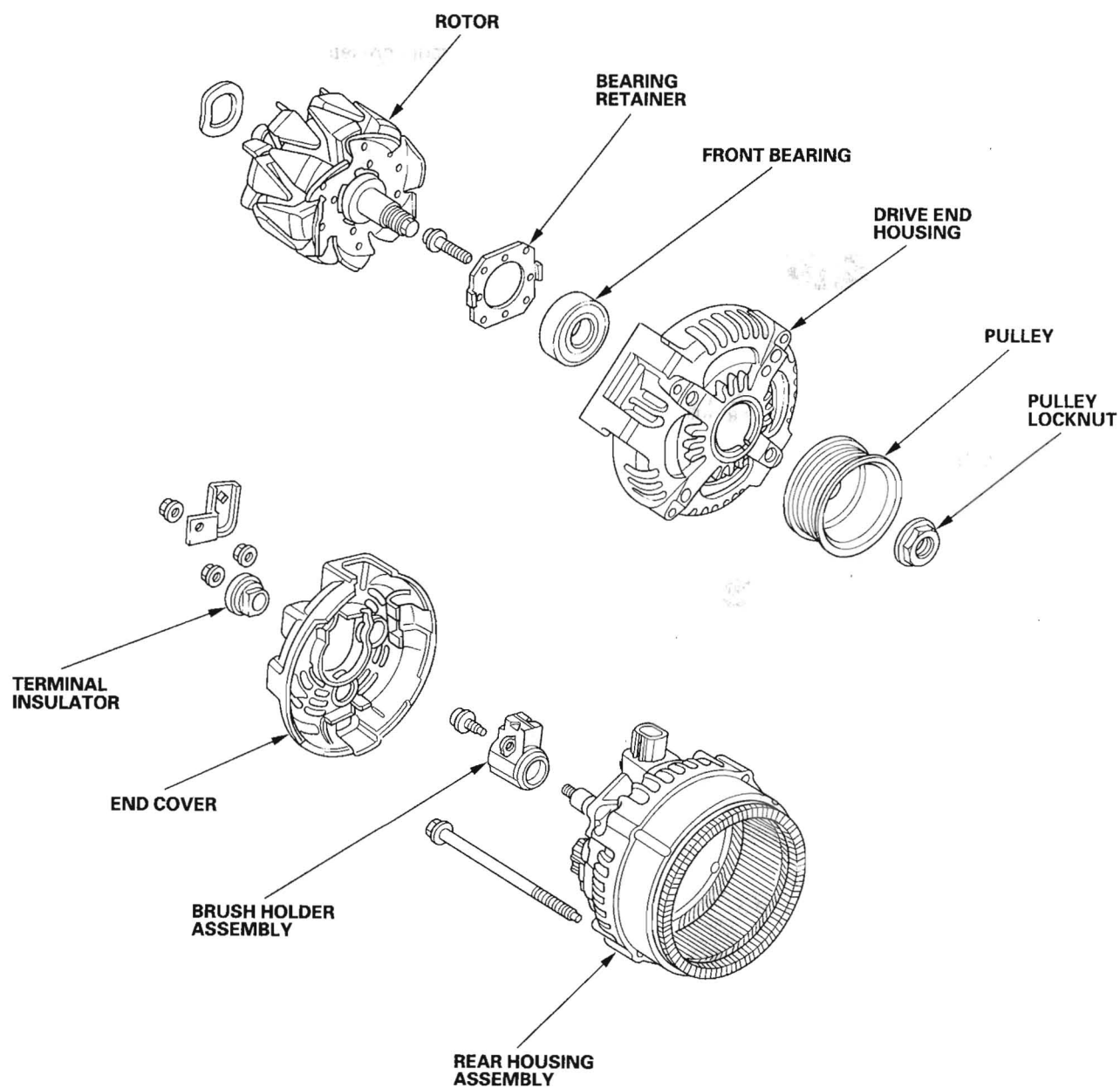


3. Install the drive belt auto-tensioner (see page 4-31).
4. Install the drive belt (see page 4-29).
5. Connect the positive cable to the battery first, then connect the negative cable.
6. Enter the anti-theft code for the audio system and the navigation system (if equipped), then enter the XM radio presets.
7. Set the clock.

Charging System

Alternator Overhaul

Exploded View

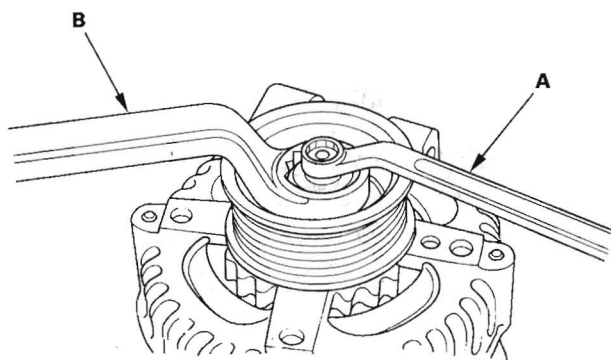


Special Tools Required

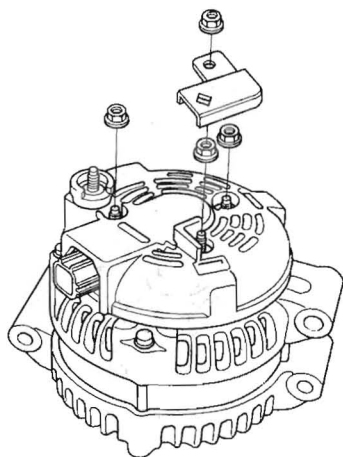
- Driver 07749-0010000
- Attachment, 42 x 47 mm 07746-0010300

NOTE: Refer to the Exploded View as needed during this procedure.

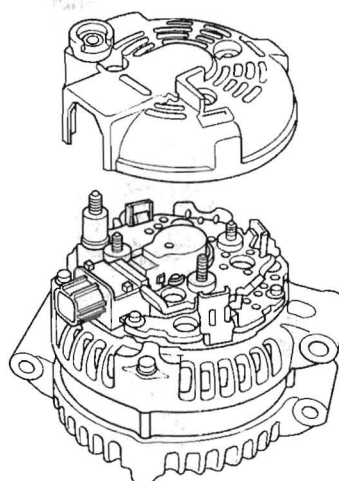
1. Test the alternator and regulator before you remove them (see page 4-26).
2. Remove the alternator (see page 4-32).
3. If the front bearing needs replacing, remove the pulley locknut with a 10 mm wrench (A) and a 22 mm wrench (B). If necessary, use an impact wrench.



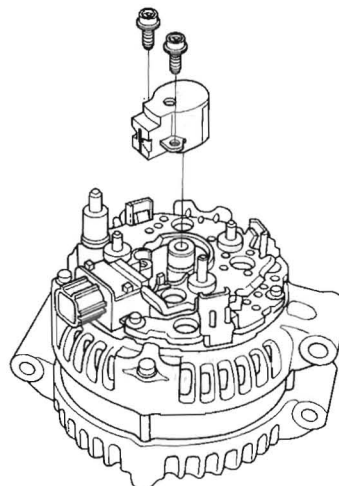
4. Remove the harness stay and the three flange nuts from the alternator.



5. Remove the end cover.



6. Remove the brush holder.

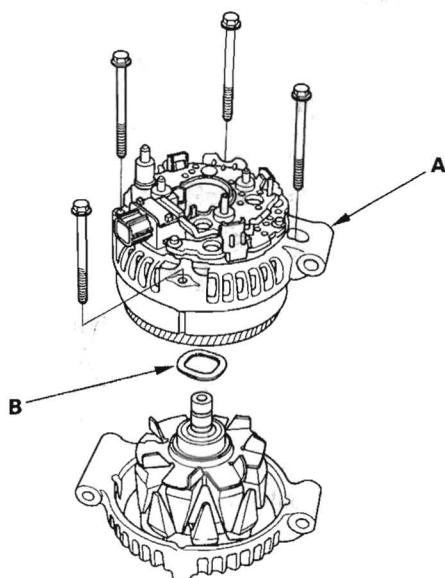


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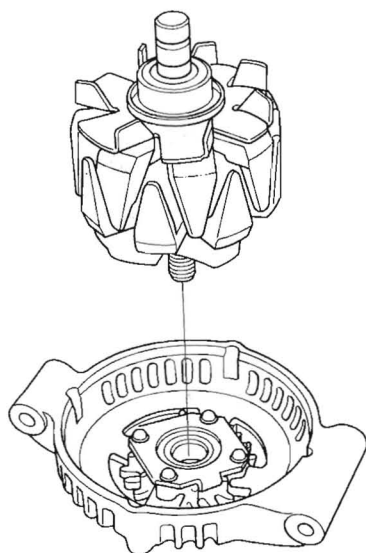
Charging System

Alternator Overhaul (cont'd)

7. Remove the four bolts, then remove the rear housing assembly (A), and washer (B).



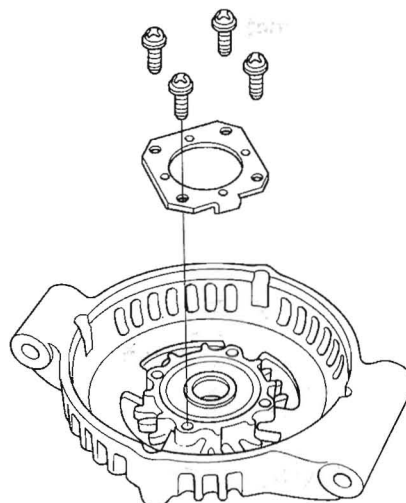
8. If you are not replacing the front bearing, go to step 13. Remove the rotor from the drive end housing.



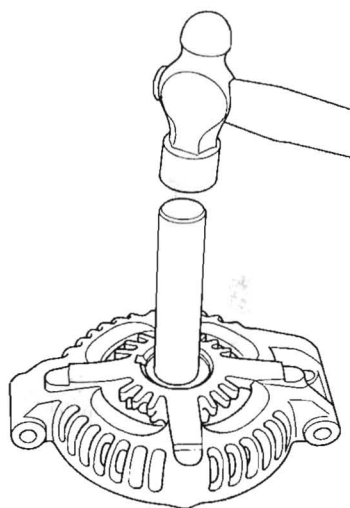
9. Inspect the rotor shaft for scoring, and inspect the bearing journal surface in the drive end housing for seizure marks.

- If the rotor is damaged, replace the rotor assembly.
- If the rotor is OK, go to step 10.

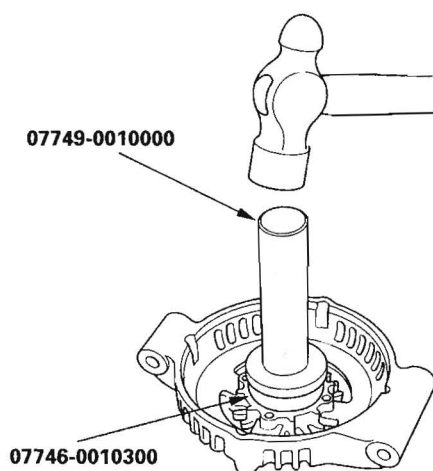
10. Remove the front bearing retainer plate.



11. Drive out the front bearing with a brass drift and hammer.



12. With a hammer, driver, and attachment, install a new front bearing in the drive end housing.



Alternator Brush Inspection

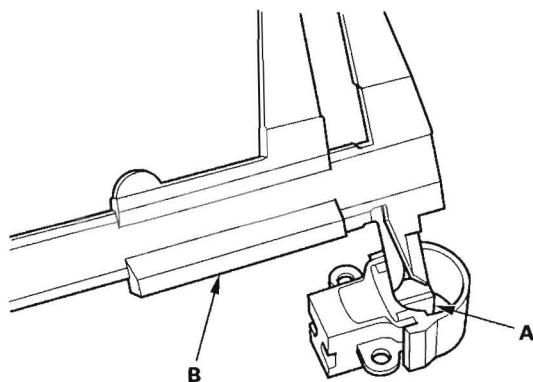
13. Measure the length of both brushes (A) with vernier calipers (B).

- If either brush is shorter than the service limit, replace the brush holder assembly.
- If brush length is OK, go to step 14.

Alternator Brush Length

Standard (New): 10.5 mm (0.41 in.)

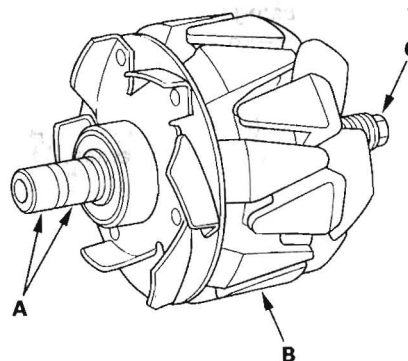
Service Limit: 1.5 mm (0.06 in.)



Rotor Slip Ring Test

14. Check for continuity between the slip rings (A).

- If there is continuity, go to step 15.
- If there is no continuity, replace the rotor assembly.



15. Check for continuity between each slip ring and the rotor (B) and the rotor shaft (C).

- If there is no continuity, replace the rear housing assembly, and go to step 16.
- If there is continuity, replace the rotor assembly.

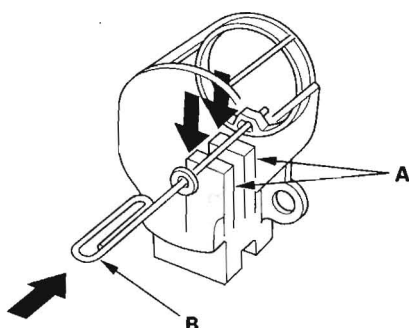
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Charging System

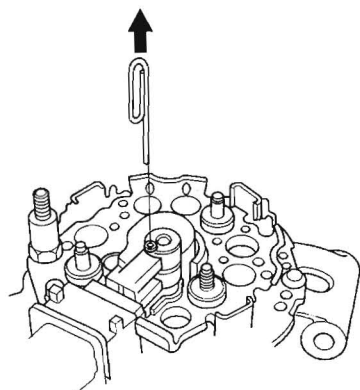
Alternator Overhaul (cont'd)

Alternator Reassembly

16. If you removed the pulley, put the rotor in the drive end housing, then tighten its locknut to 110 N·m (11.2 kgf·m, 81.0 lbf·ft).
17. Remove any grease or any oil from the slip rings.
18. Put the rear housing assembly and drive end housing/rotor assembly together, tighten the four through bolts.
19. Push the brushes (A) in, then insert a pin or drill bit (B) (about 1.6 mm (0.06 in.) diameter) to hold them there.

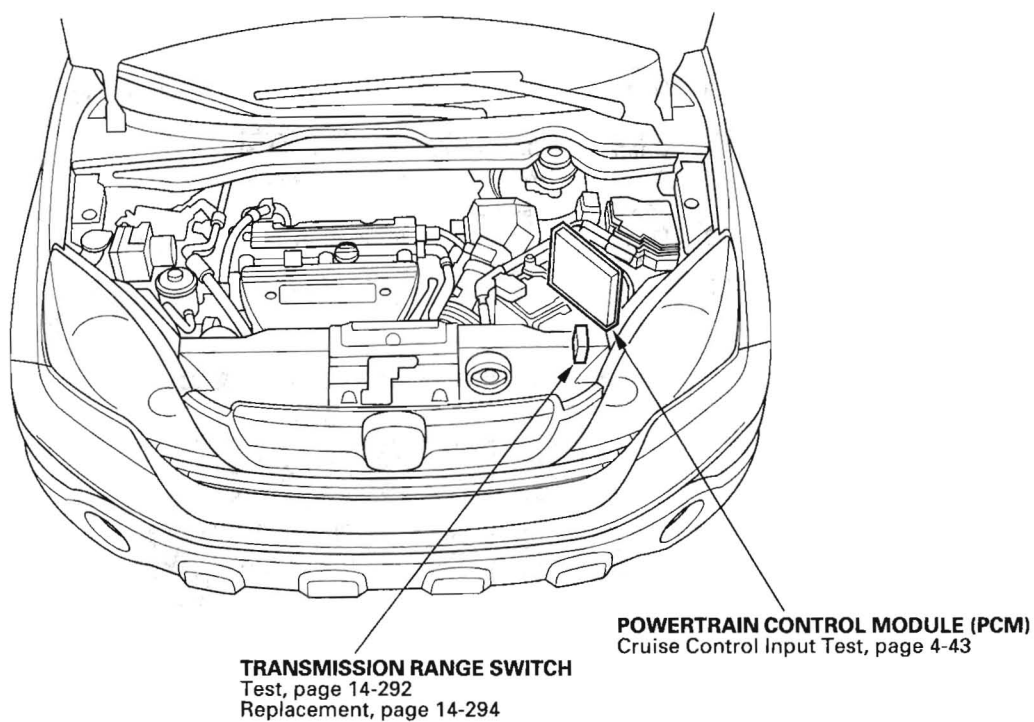
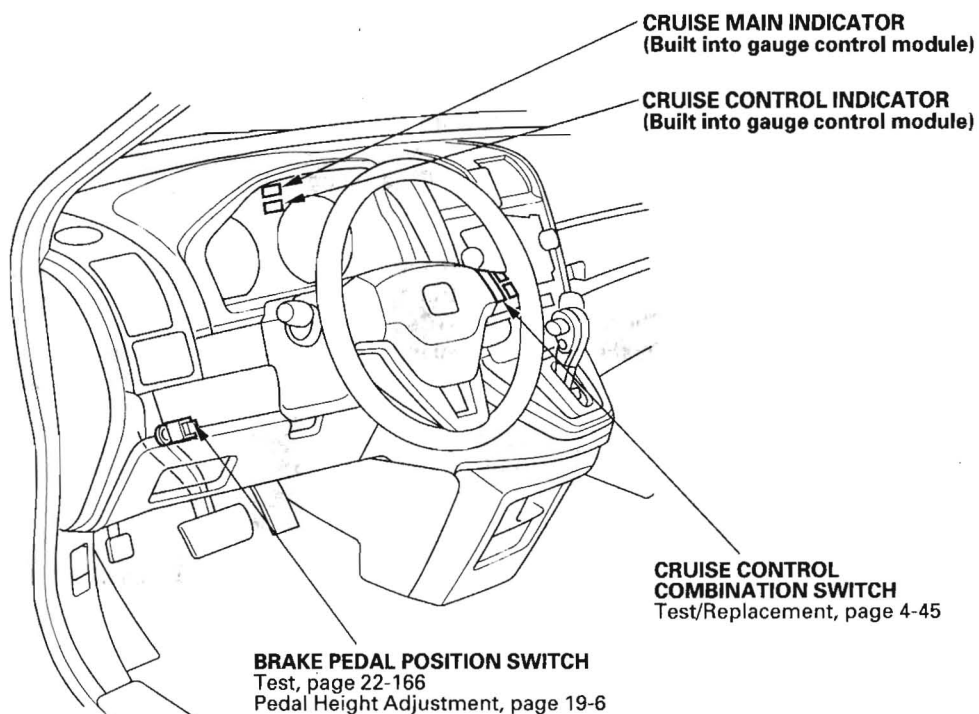


20. Install the brush holder, and pull out the pin.



21. Install the end cover.
22. After assembling the alternator, turn the pulley by hand to make sure the rotor turns smoothly and without noise.
23. Install the alternator (see page 4-33) and drive belt (see page 4-29).

Component Location Index



Cruise Control

Symptom Troubleshooting Index

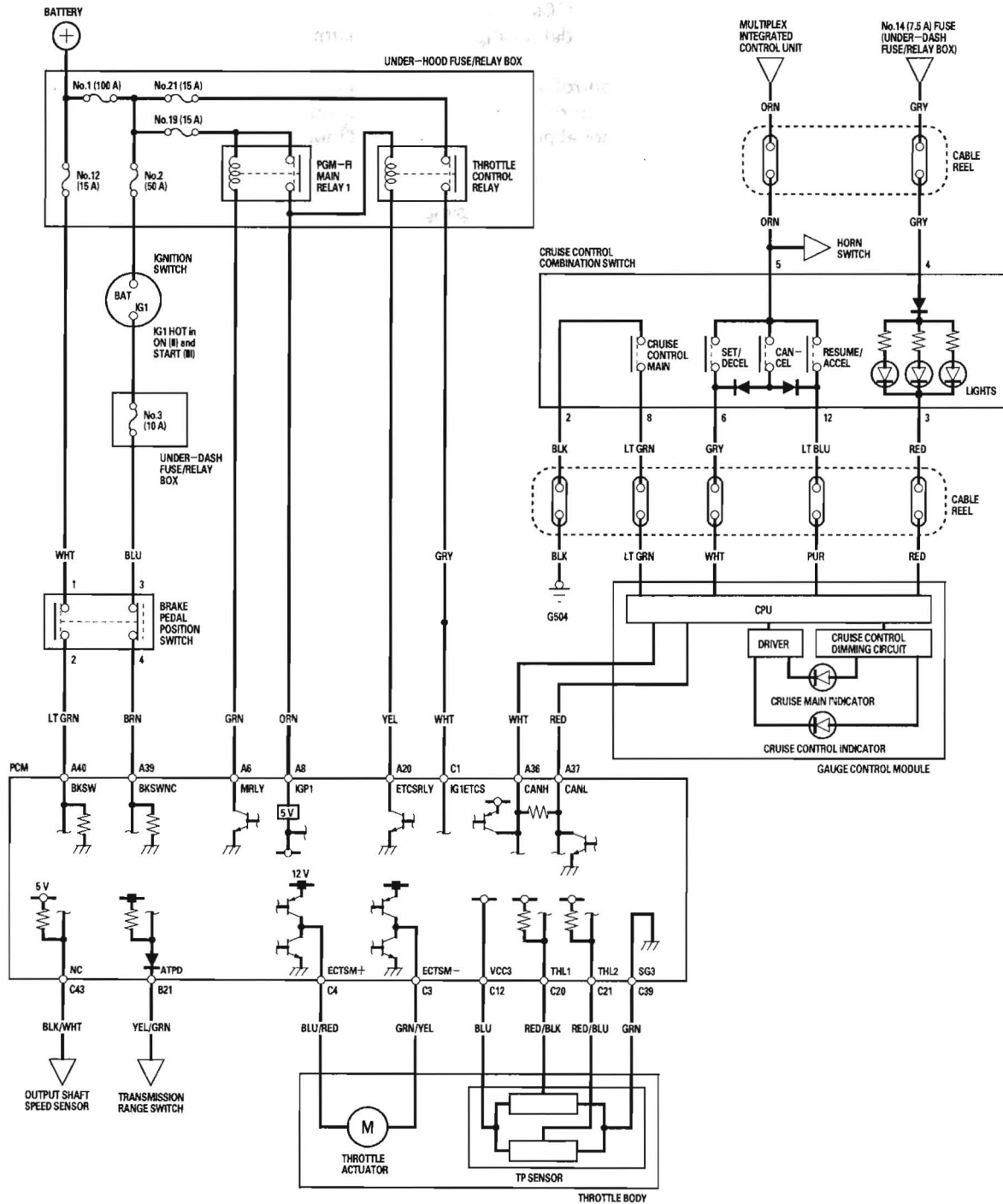
Symptom	Diagnostic procedure	Also check for
Cruise control cannot be set	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Check the No. 3 (10 A) fuse in the under-dash fuse/relay box. 3. Do the cruise control input test (see page 4-43). 4. Do the cruise control combination switch test (see page 4-45). 	
Cruise control can be set, but the cruise main indicator does not come on	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Do the gauge control module self-diagnostic function procedure (see page 22-229). 3. Do the cruise control input test (see page 4-43). Test the cruise control main switch signal input. 	Faulty gauge control module
Cruise control can be set, but the cruise control indicator does not come on	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Do the gauge control module self-diagnostic function (see page 22-229). 3. Do the cruise control input test (see page 4-43). Test the cruise control indicator signal input. 	Faulty gauge control module
Vehicle does not decelerate or accelerate accordingly when the set/ decel or resume/accel switch is pressed	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control input test (see page 4-43). Test the cruise control set/decel and resume/accel switch signal input. 3. Do the cruise control combination switch test (see page 4-45). 	Open circuit, loose or disconnected terminals: GRY, WHT or LT BLU, PUR
Set speed does not cancel when the brake pedal is pressed	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control input test (see page 4-43). Test the brake pedal position switch signal input. 3. Do the brake pedal position switch test (see page 19-6). 	<ul style="list-style-type: none"> • Short to power on the BRN wire • Faulty brake pedal position switch
Set speed does not cancel when the cruise control main switch is pressed	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control input test (see page 4-43). Test the cruise control main switch signal input. 3. Do the cruise control combination switch test (see page 4-45). 	Short to power on the LT GRN wire
Set speed does not cancel when the cancel switch is pressed	<ol style="list-style-type: none"> 1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control input test (see page 4-43). Test the cruise control cancel switch signal input. 3. Do the cruise control combination switch test (see page 4-45). 	Open circuit, loose or disconnected terminals: GRN, WHT or LT BLU, PUR



Symptom	Diagnostic procedure	Also check for
Set speed will not resume when the resume/accel switch is pressed (with the cruise control main switch turned on, and set speed temporarily canceled by pressing the brake pedal)	<ol style="list-style-type: none">1. Check for PGM-FI DTCs (see page 11-3).2. Check the brake pedal position switch adjustment (see page 19-6).3. Do the cruise control input test (see page 4-43). Test the cruise control resume/accel switch signal input. Test the brake pedal position switch signal input.4. Do the cruise control combination switch test (see page 4-45).	<ul style="list-style-type: none">• Faulty brake pedal position switch• Open circuit, loose or disconnected terminals: LT BLU, PUR
With the ignition switch ON (II), and the lighting switch turned on, the cruise control combination switch illumination does not come on	Do the cruise control combination switch test (see page 4-45).	

Cruise Control

Circuit Diagram





Cruise Control Input Test

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the powertrain control module (PCM). If it doesn't, troubleshoot the DLC circuit (see page 11-197).
4. Go to PGM-FI, and check for DTCs.
5. Do the following tests while monitoring parameters in the PGM-FI DATA LIST with the HDS.

NOTE: Intermittent failures are often caused by loose circuit connections. While monitoring cruise control inputs, flex their circuits, and note if any of the test results change.

Signal to be tested	Test condition	Parameter: Desired result	Possible cause if result is not obtained
Brake switch signal	Brake pedal pressed, then released	CRUISE BRAKE SW should indicate OFF when the brake pedal is pressed and ON when the brake pedal is released.	<ul style="list-style-type: none">• Faulty brake pedal position switch• Blown No. 3 (10 A) fuse in the under-dash fuse/relay box• An open in the wire between the PCM and the brake pedal position switch• A wire shorted to ground between the PCM and the brake pedal position switch
Transmission range switch signal	Shift lever in D	SHIFT/CLUTCH SW should indicate ON in P, R, N, 2, and 1 and OFF in D.	<ul style="list-style-type: none">• Faulty transmission range switch• An open in the wire between the PCM and the transmission range switch• A wire shorted to ground between the PCM and the transmission range switch• Poor ground G101
Cruise control main switch signal	Cruise control main switch ON and OFF	CRUISE CONTROL MAIN SW should indicate ON when the cruise control main switch is turned ON and OFF when the cruise control main switch is turned OFF.	<ul style="list-style-type: none">• Faulty cruise control main switch• An open in the wire between the gauge control module and the cruise control main switch• A wire shorted to ground between the gauge control module and the cruise control main switch
Set switch signal	Set/decel switch pressed and released	CRUISE CONTROL SET SW should indicate ON when the set/decel switch is pressed and OFF when the set/decel switch is released.	<ul style="list-style-type: none">• Faulty cruise control combination switch• An open in the wire between the gauge control module and the cruise control combination switch• A wire shorted to ground between the gauge control module and the cruise control combination switch

(cont'd)

Cruise Control

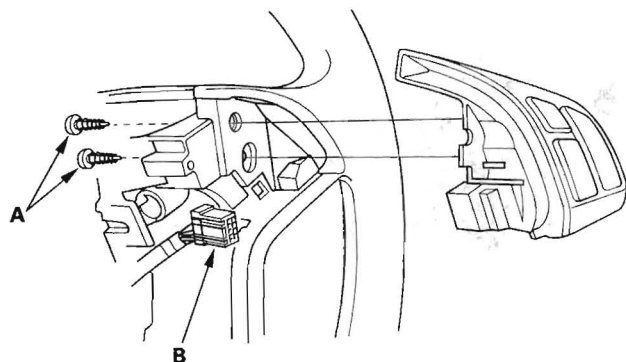
Cruise Control Input Test (cont'd)

Signal to be tested	Test condition	Parameter: Desired result	Possible cause if result is not obtained
Resume switch signal	Resume/accel switch pressed and released	CRUISE CONTROL RESUME SW should indicate ON when the resume/accel switch is pressed and OFF when the resume/accel switch is released.	<ul style="list-style-type: none">• Faulty cruise control combination switch• An open in the wire between the gauge control module and the cruise control combination switch• A wire shorted to ground between the gauge control module and the cruise control combination switch
Cancel switch signal	Cancel switch pressed and released	CRUISE CONTROL CANCEL SW should indicate ON when the cancel switch is pressed and OFF when the cancel switch is released.	Faulty cruise control combination switch
Cruise control indicator signal	Start the engine, turn the cruise control main switch on, and drive the vehicle to speeds over 25 mph (40 km/h). Set and cancel the cruise control.	CRUISE INDICATOR should indicate ON when the cruise control is set and OFF when the cruise control is canceled.	Faulty gauge control module

Cruise Control Combination Switch Test/Replacement

SRS components are located in this area. Review the SRS component locations (see page 24-13) and the precautions and procedures (see page 24-15) before doing repairs or service.

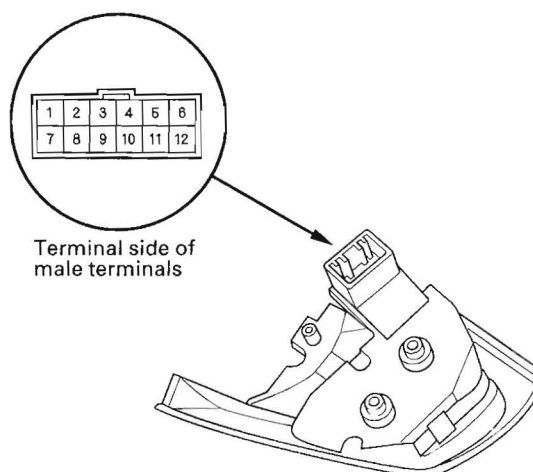
1. Remove the steering wheel (see page 17-22).
2. Remove the screws (A). Disconnect the 12P connector (B), then remove the cruise control combination switch.



3. Check for continuity between the terminals in each switch position according to the table.

- If there is continuity, and it matches the table, but switch failure occurred on the cruise control input test, check and repair the wire harness on the switch circuit.
- If there is no continuity in one or more positions, replace the switch.

Terminal Position	2	8	5		12	6
Cruise control main switch (ON)	○	○				
Cruise control main switch (OFF)						
Set/decel (PRESSED)			○	○	○	○
Resume/accel (PRESSED)			○	○	○	○
Cancel (PRESSED)			○	○	○	○



4. Check for continuity between the terminals in according to the table.

- If there is continuity, and it matches the table, check and repair the wire harness on the switch circuit.
- If there is no continuity in one or more positions, replace the switch.

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○	→	○



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