



Service Manual
1999-2003 3.2 TL



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General Information

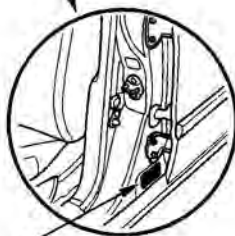
Chassis and Paint Codes - 1999 Model

Vehicle Identification Number

19U UA5 6 4 * X A 000001

a b c d e f g h

- a. **Manufacturer, Make and Type of Vehicle**
19U: HONDA OF AMERICA MFG., INC., U.S.A.
ACURA Passenger vehicle
- b. **Line, Body and Engine Type**
UA5: ACURA 3.2TL/J32A1
- c. **Body Type and Transmission Type**
6: 4-door Sedan/4-speed Automatic
- d. **Vehicle Grade (Series)**
US model
4: Base Package
5: With Navigation System
Canada model
4: Base Package
- e. **Check Digit**
- f. **Model Year**
X: 1999
- g. **Factory Code**
A: Marysville, Ohio Factory in U.S.A.
- h. **Serial Number**
US model: 000001—
Canada model: 800001—



Vehicle Identification Number
and Federal Motor Vehicle
Safety Standard Certification.
Vehicle Identification Number
and Canadian Motor Vehicle
Safety Standard Certification.

Engine Number

J32A1 - 1000001

a b

- a. **Engine Type**
J32A1: 3.2 l SOHC VTEC Sequential Multiport
Fuel-injected engine
- b. **Serial Number**

Transmission Number

B7VA - 6500001

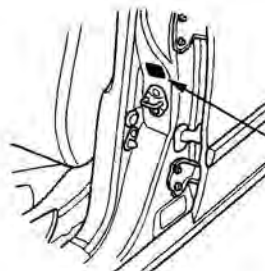
a b

- a. **Transmission Type**
B7VA: 4-speed Automatic
- b. **Serial Number**

Paint Code

Code	Color	US model	Canada model
B-93P	Monterey Blue Pearl	☐	☐
G-87P	Dark Emerald Pearl	☐	☐
G-91M	Laguna Metallic	☐	☐
NH-578	Taffeta White	☐	☐
NH-592	Flamenco Black Pearl	☐	☐
NH-603P	White Diamond Pearl	☐	☐
NH-623M	Satin Silver Metallic	☐	☐
R-507P	Firepepper Pearl	☐	☐
YR-508M	Heather Mist Metallic	☐	☐

☐: indicates applicable



COLOR LABEL
Example:

INT. COLOR
TYPE F
EXT. COLOR
YR-508M
A5 XS0K A

Paint Code



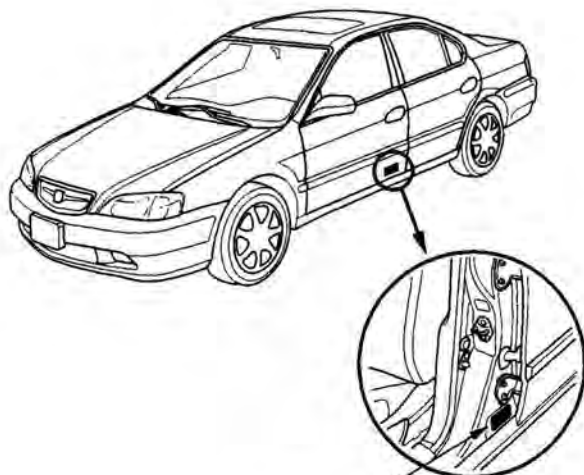
Chassis and Paint Codes - 2000 Model

Vehicle Identification Number

19U UA5 6 4 * Y A 000001

a b c d e f g h

- a. **Manufacturer, Make and Type of Vehicle**
19U: HONDA OF AMERICA MFG., INC., U.S.A.
ACURA Passenger vehicle
- b. **Line, Body and Engine Type**
UA5: ACURA 3.2TL/J32A1
- c. **Body Type and Transmission Type**
6: 4-door Sedan/5-speed Automatic
- d. **Vehicle Grade (Series)**
US model
4: Base Package
5: With Navigation System
Canada model
4: Base Package
- e. **Check Digit**
- f. **Model Year**
Y: 2000
- g. **Factory Code**
A: Marysville, Ohio Factory in U.S.A.
- h. **Serial Number**
US model: 000001—
Canada model: 800001—



Vehicle Identification Number
and Federal Motor Vehicle
Safety Standard Certification.
Vehicle Identification Number
and Canadian Motor Vehicle
Safety Standard Certification.

Engine Number

J32A1 - 2000001

a b

- a. **Engine Type**
J32A1: 3.2 l SOHC VTEC Sequential Multiport
Fuel-injected engine
- b. **Serial Number**

Transmission Number

M7WA - 1000001

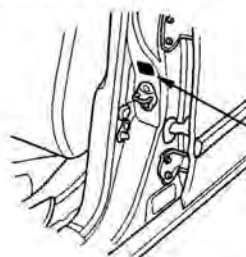
a b

- a. **Transmission Type**
M7WA: 5-speed Automatic
- b. **Serial Number**

Paint Code

Code	Color	US model	Canada model
B-92P	Nighthawk Black Pearl	☐	☐
B-93P	Monterey Blue Pearl	☐	☐
G-87P	Dark Emerald Pearl	☐	☐
G-91M	Laguna Metallic	☐	☐
NH-578	Taffeta White	☐	☐
NH-603P	White Diamond Pearl	☐	☐
NH-623M	Satin Silver Metallic	☐	☐
R-507P	Firepepper Pearl	☐	☐
YR-524M	Naples Gold Metallic	☐	☐

○: indicates applicable



COLOR LABEL
Example:

INT. COLOR
TYPE F
EXT. COLOR
YR-508M
A5 YS0K A

Paint Code

General Information

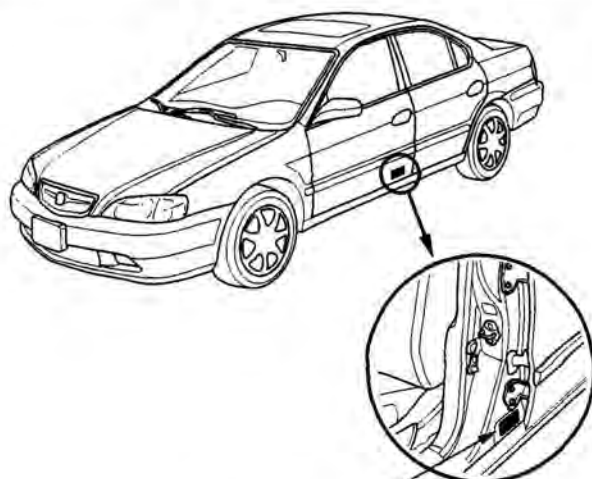
Chassis and Paint Codes - 2001 Model

Vehicle Identification Number

19U UA5 6 6 * 1 A 000001

a b c d e f g h

- a. Manufacturer, Make and Type of Vehicle**
19U: HONDA OF AMERICA MFG., INC., U.S.A.
ACURA Passenger vehicle
- b. Line, Body and Engine Type**
UA5: ACURA 3.2TL/J32A1
- c. Body Type and Transmission Type**
6: 4-door Sedan/5-speed Automatic
- d. Vehicle Grade (Series)**
US model
6: With Sunroof
7: With Navigation System
Canada model
6: With Sunroof
- e. Check Digit**
- f. Model Year**
1: 2001
- g. Factory Code**
A: Marysville, Ohio Factory in U.S.A.
- h. Serial Number**
US model: 000001 –
Canada model: 800001 –



Vehicle Identification Number
and Federal Motor Vehicle
Safety Standard Certification.
Vehicle Identification Number
and Canadian Motor Vehicle
Safety Standard Certification.

Engine Number

J32A1 - 3400001

a b

- a. Engine Type**
J32A1: 3.2 L SOHC VTEC Sequential Multiport
Fuel-injected engine
- b. Serial Number**

Transmission Number

B7WA - 8000001

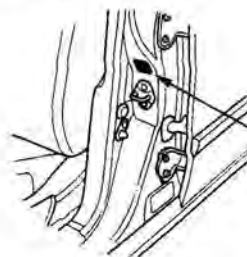
a b

- a. Transmission Type**
B7WA: 5-speed Automatic
- b. Serial Number**

Paint Code

Code	Color	US model	Canada model
B-92P	Nighthawk Black Pearl	☐	☐
B-93P	Monterey Blue Pearl	☐	☐
G-87P	Dark Emerald Pearl	☐	☐
G-91M	Laguna Metallic	☐	☐
NH-578	Taffeta White	☐	☐
NH-603P	White Diamond Pearl	☐	☐
NH-623M	Satin Silver Metallic	☐	☐
R-507P	Firepepper Pearl	☐	☐
YR-524M	Naples Gold Metallic	☐	☐

☐: indicates applicable



COLOR LABEL
Example:

INT. COLOR
TYPE F
EXT. COLOR
YR-508M
A5 1S0K A

Paint Code



Chassis and Paint Codes - 2002 Model

Vehicle Identification Number

19U UA5 6 6 * 2 A 000001

a b c d e f g h

- a. **Manufacturer, Make and Type of Vehicle**
19U: HONDA OF AMERICA MFG., INC., U.S.A.
ACURA Passenger vehicle
- b. **Line, Body and Engine Type**
UA5: ACURA 3.2TL/J32A1, J32A2
- c. **Body Type and Transmission Type**
6: 4-door Sedan/5-speed Automatic
- d. **Vehicle Grade (Series)**
US model
6: Premium with sunroof
7: Premium with Navigation System
8: Type-S
9: Type-S with Navigation System
Canada model
6: Premium
8: Type-S
- e. **Check Digit**
- f. **Model Year**
2: 2002
- g. **Factory Code**
A: Marysville, Ohio Factory in U.S.A.
- h. **Serial Number**
US model: 000001—
Canada model: 800001—



Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification.
Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification.

Engine Number

J32A1 - 4400001

a b

- a. **Engine Type**
J32A1: 3.2 l SOHC VTEC Sequential Multiport Fuel-injected, 225HP engine
J32A2: 3.2 l SOHC VTEC Sequential Multiport Fuel-injected, 260HP engine
- b. **Serial Number**
J32A1: 4400001—
J32A2: 1300001—

Transmission Number

B7WA - 9000001

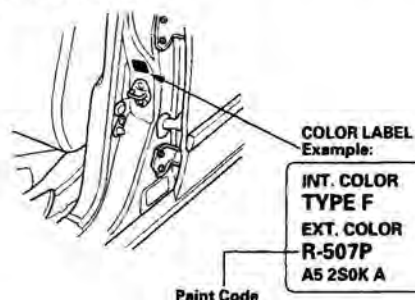
a b

- a. **Transmission Type**
B7WA: 5-speed Automatic
- b. **Serial Number**

Paint Code

Code	Color	US model		Canada model	
		Premium	Type-S	Premium	Type-S
B-92P	Nighthawk Black Pearl	○	○	○	○
B-96P	Eternal Blue Pearl				○
B-504P	Aegean Blue Pearl		○		
G-87P	Dark Emerald Pearl		○		
G-508P	Noble Green Pearl	○	○	○	○
NH-603P	White Diamond Pearl	○	○		○
NH-623M	Satin Silver Metallic	○	○	○	○
NH-643M	Anthracite Metallic	○		○	
R-507P	Firepepper Pearl	○		○	
YR-524M	Naples Gold Metallic	○		○	○

○: indicates applicable.



General Information

Chassis and Paint Codes - 2003 Model

Vehicle Identification Number

19U UA5 6 6 * 3 A 000001

a b c d e f g h

- a. Manufacturer, Make and Type of Vehicle**
19U: HONDA OF AMERICA MFG., INC., U.S.A.
ACURA Passenger vehicle
- b. Line, Body and Engine Type**
UA5: ACURA 3.2TL/J32A1, J32A2
- c. Body Type and Transmission Type**
6: 4-door Sedan/5-speed Automatic
- d. Vehicle Grade (Series)**
US model
6: Premium with sunroof
7: Premium with Navigation System
8: Type-S
9: Type-S with Navigation System
Canada model
6: Premium
8: Type-S
- e. Check Digit**
- f. Model Year**
3: 2003
- g. Factory Code**
A: Marysville, Ohio Factory in U.S.A.
- h. Serial Number**
US model: 000001 –
Canada model: 800001 –



Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification.
Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification.

Engine Number

J32A1 - 5400001

a b

- a. Engine Type**
J32A1: 3.2 l SOHC VTEC Sequential Multiport Fuel-injected, 225HP engine
J32A2: 3.2 l SOHC VTEC Sequential Multiport Fuel-injected, 260HP engine
- b. Serial Number**
J32A1: 5400001 –
J32A2: 2300001 –

Transmission Number

B7WA - 5000001

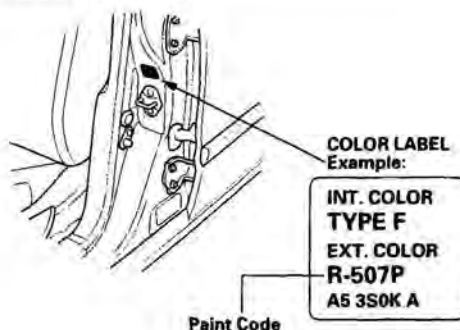
a b

- a. Transmission Type**
B7WA: 5-speed Automatic
- b. Serial Number**

Paint Code

Code	Color	US model		Canada model	
		Premium	Type-S	Premium	Type-S
B-92P	Nighthawk Black Pearl	○	○	○	○
B-96P	Eternal Blue Pearl	○			○
B-504P	Aegean Blue Pearl		○		
G-508P	Noble Green Pearl		○		
NH-603P	White Diamond Pearl	○	○		○
NH-623M	Satin Silver Metallic	○	○	○	○
NH-643M	Anthracite Metallic	○	○	○	○
R-507P	Firepepper Pearl	○		○	
YR-524M	Naples Gold Metallic	○		○	○

○: indicates applicable.



Engine Electrical

Engine Electrical

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Engine Electrical

Special Tools

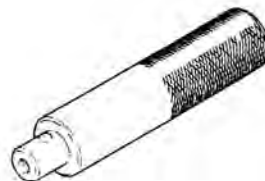
Number	Tool Number	Description	Qty
①	A973X-041-XXXXXX	Vacuum Pump/Gauge, 0—30 in.Hg	1
②	07746-0010400	Attachment, 52 x 55 mm	1
③	07749-0010000	Driver	1



①



②

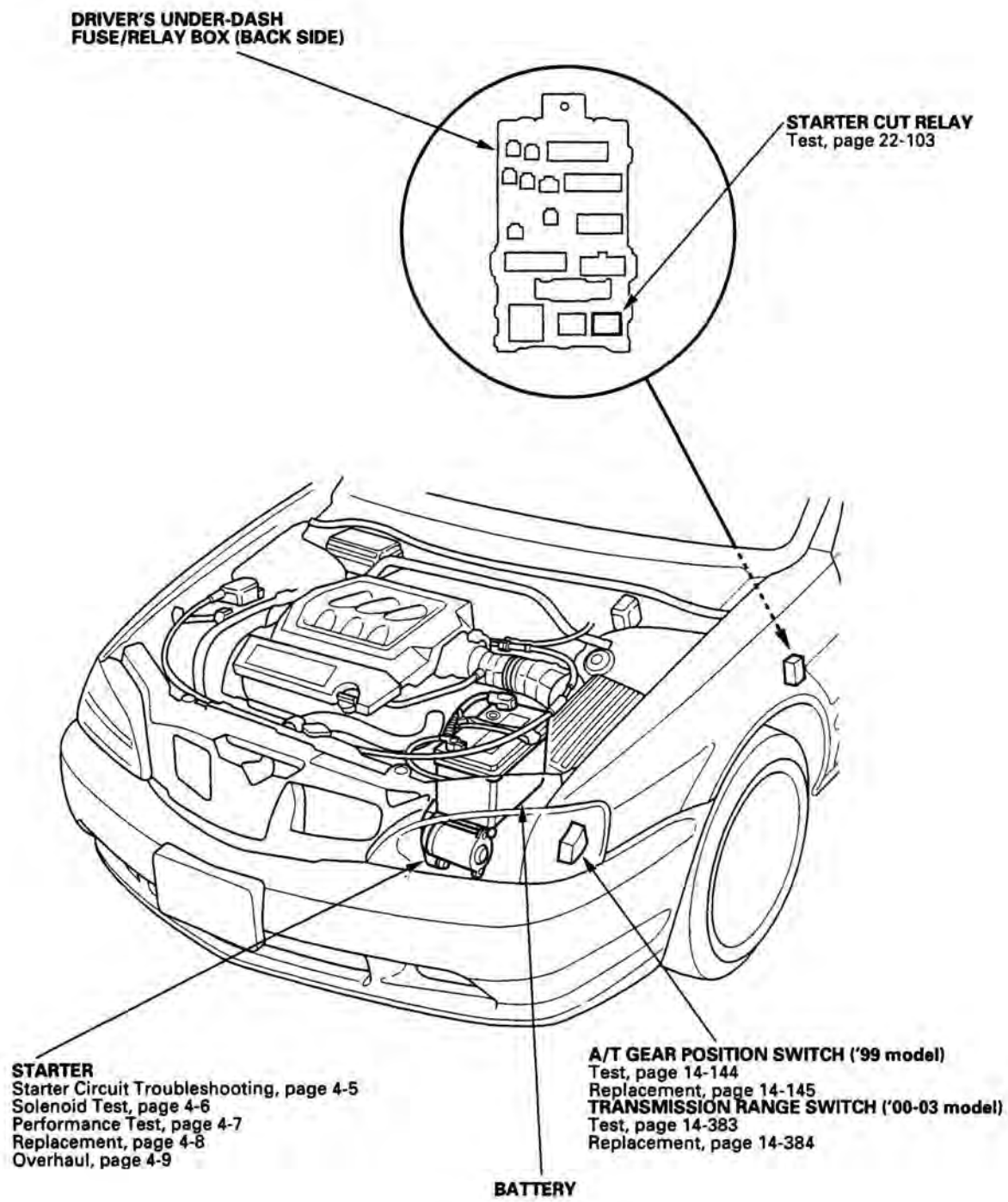


③



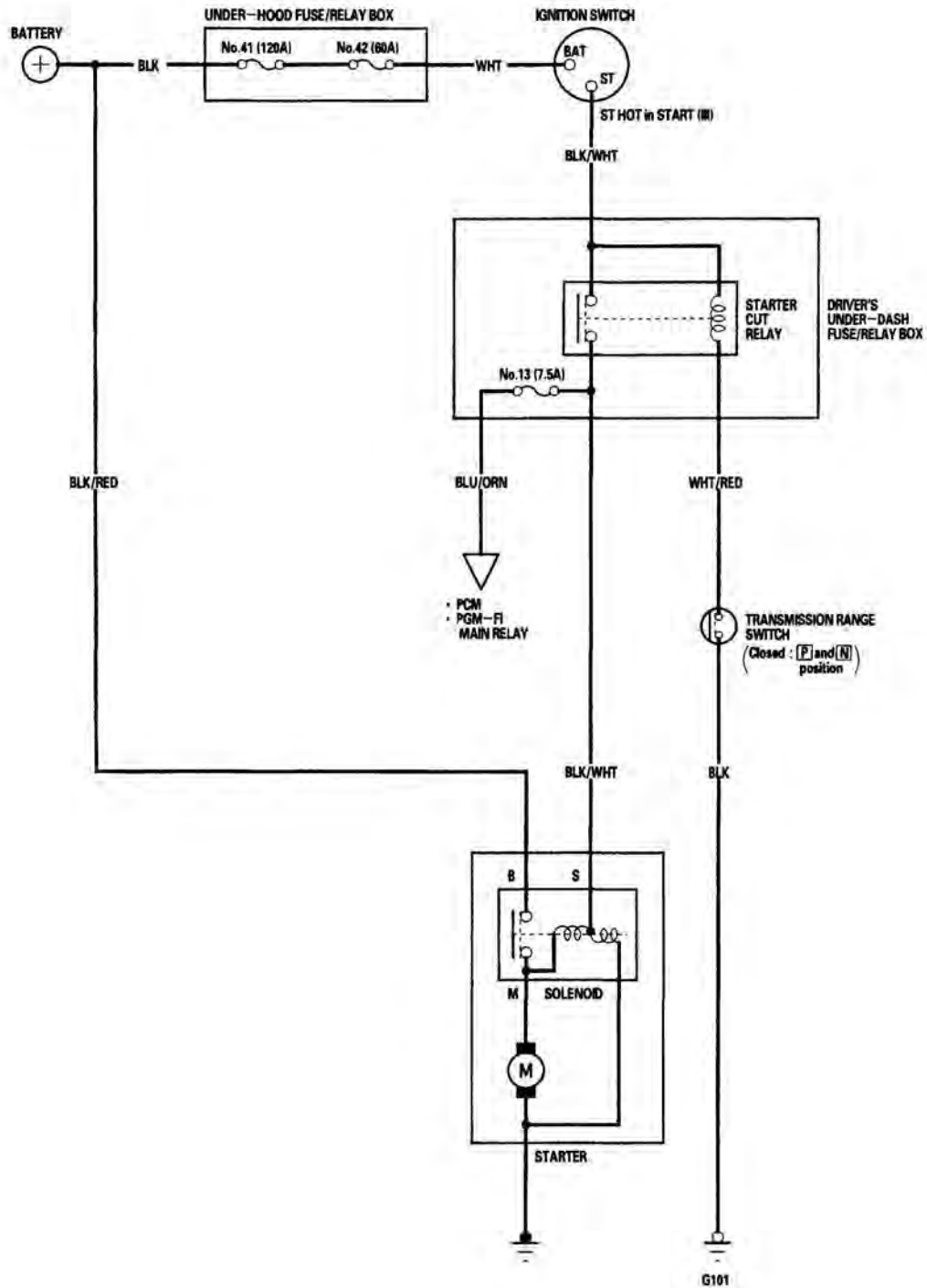
Starting System

Component Location Index



Starting System

Circuit Diagram





Starter Circuit Troubleshooting

NOTE:

- Air temperature must be between 59° and 100°F (15° and 38°C) during this procedure.
- After this test, or any subsequent repair, reset the powertrain control module (PCM) to clear any codes (see page 11-4).
- The battery must be installed in good condition and fully charged.

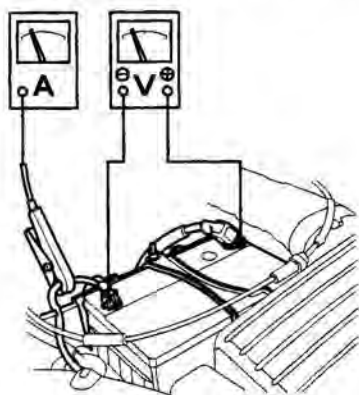
Recommended Procedure:

- Use a starter system tester.
- Connect and operate the equipment in accordance with the manufacturer's instructions.

Alternate Procedure

1. Hook up the following equipment:

- Ammeter, 0–400 A
- Voltmeter, 0–20 V (accurate within 0.1 volt)
- Tachometer, 0–1200 rpm



2. Remove the No. 1 FUEL PUMP (15A) fuse from the driver's under-dash fuse/relay box.
3. With the shift lever in Park or Neutral, turn the ignition switch to start (III).

Did the starter crank the engine normally?

YES—The starting system is OK. ■

NO—If the starter will not crank the engine at all, go to step 4. If it cranks the engine erratically or too slowly, go to step 7. If it won't disengage from the torque converter ring gear when you release the key, check for the following until you find the cause.

- Solenoid plunger and switch malfunction
- Dirty drive gear or damaged overrunning clutch.

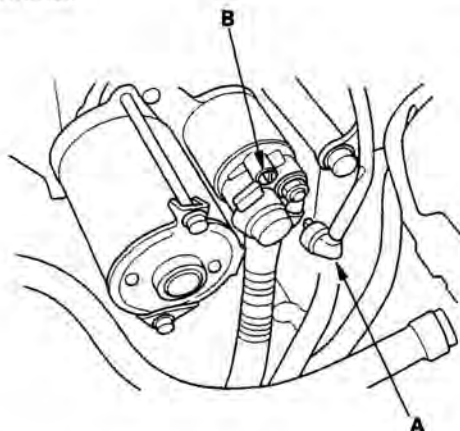
4. Check the battery condition. Check electrical connections at the battery, the negative battery cable to body, the engine ground cables and the starter for looseness and corrosion. Then try starting the engine again.

Did the starter crank the engine?

YES—Repairing the loose connection repaired the problem. The starting system is OK. ■

NO—Go to step 5.

5. Make sure the transmission is in Park or Neutral, then disconnect the BLK/WHT wire (A) from the starter solenoid (B). Connect a jumper wire from the battery positive terminal to the solenoid terminal.



Did the starter crank the engine?

YES—Go to step 6.

NO—Remove the starter and repair or replace as necessary.

6. Check the following items in the order listed until you find the open circuit.
 - Check the BLK/WHT wire and connectors between the driver's under-dash fuse/relay box and the ignition switch, and between the driver's under-dash fuse/relay box and the starter.
 - Check the ignition switch (see page 22-191).
 - Check the A/T gear position switch ('99 model)/transmission range switch ('00-03 models) and connector.
 - Check the starter cut relay.

(cont'd)

BACK

Starting System

Starter Circuit Troubleshooting (cont'd)

7. Check engine speed while cranking the engine.

Is engine speed above 100 rpm?

YES — Go to step 8.

NO — Replace the starter, or remove and disassemble it, and check for the following until you find the cause.

- Excessively worn starter brushes
- Open circuit in commutator brushes
- Dirty or damaged helical spline or drive gear
- Faulty drive gear clutch

8. Check the cranking voltage and current draw.

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

YES — Go to step 9.

NO — Replace the starter, or remove and disassemble it, and check for the following until you find the cause.

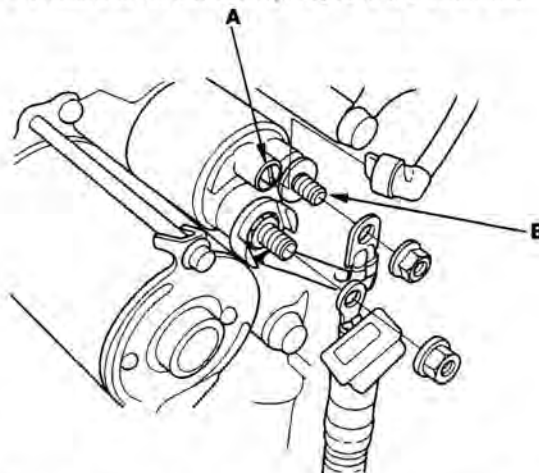
- Open circuit in starter armature commutator segments
- Starter armature dragging
- Shorted armature winding
- Excessive drag in engine

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

Starter Solenoid Test

1. Check the hold-in coil for continuity between the S terminal (A) and the armature housing (ground). There should be continuity.

- If there is continuity, go to step 2.
- If there is no continuity, replace the solenoid.

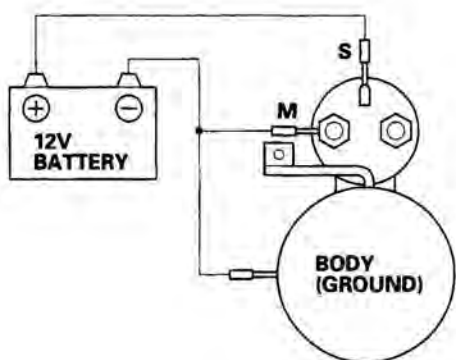


2. Check the pull-in coil for continuity between the S terminal (A) and M terminal (B). There should be continuity.

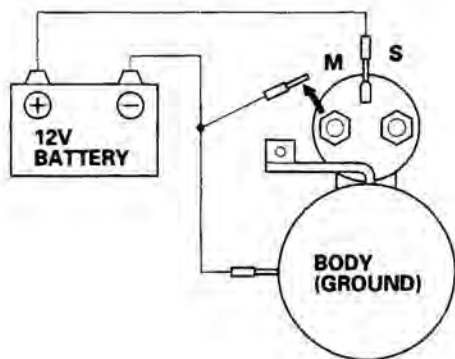
- If there is continuity, the solenoid is OK.
- If there is no continuity, replace the solenoid.

Starter Performance Test

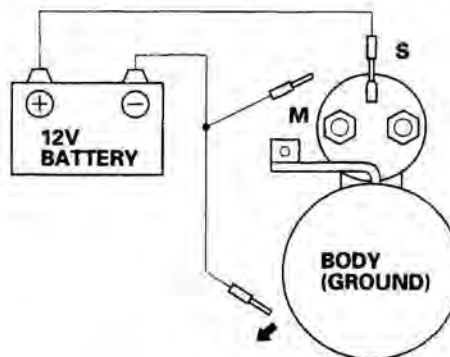
1. Disconnect the wires from the S terminal and the M terminal.
2. Make a connections as described below using as heavy a wire as possible (preferably equivalent to the wire used for the vehicle). To avoid damaging the starter, never leave the battery connected for more than 10 seconds.
3. Connect the battery as shown. Be sure to disconnect the starter motor wire from the solenoid. If the starter pinion moves out, it is working properly.



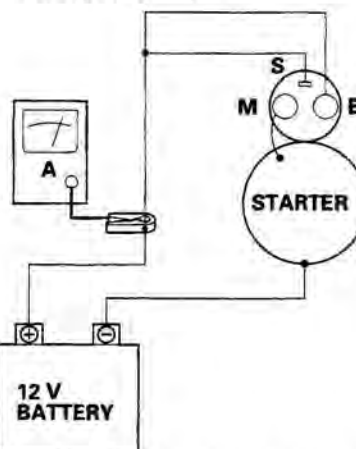
4. Disconnect the battery from the M terminal. If the pinion does not retract, the hold-in coil of the solenoid is working properly.



5. Disconnect the battery from the body. If the pinion retracts immediately, it is working properly.



6. Remove the starter (see page 4-8).
7. Clamp the starter firmly in a vise.
8. Connect the starter to the battery as described in the diagram below, and confirm that the motor starts and keeps rotating.



9. If the electric current and motor speed meet the specifications when the battery voltage is at 11.5 V, the starter is working properly.

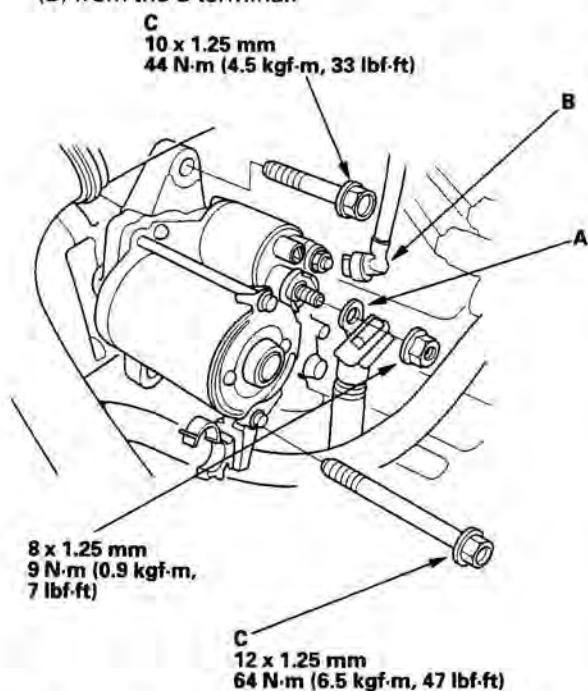
Specifications:

1.6 kw	80 A or less (Electric current), 2,600 rpm or more (Motor-speed)
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Starting System

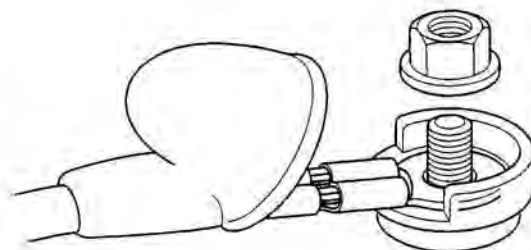
Starter Replacement

1. Make sure you have the anti-theft codes for the radio and the navigation system, then write down the frequencies for the radio's preset buttons.
2. Disconnect the battery negative cable, then disconnect the positive cable.
3. Remove the ATF cooler hose from the clamp on the starter motor ('99-01 models).
4. Disconnect the starter cable (A) from the B terminal on the solenoid, then disconnect the BLK/WHT wire (B) from the S terminal.



5. Remove the two bolts (C) holding the starter, then remove the starter.

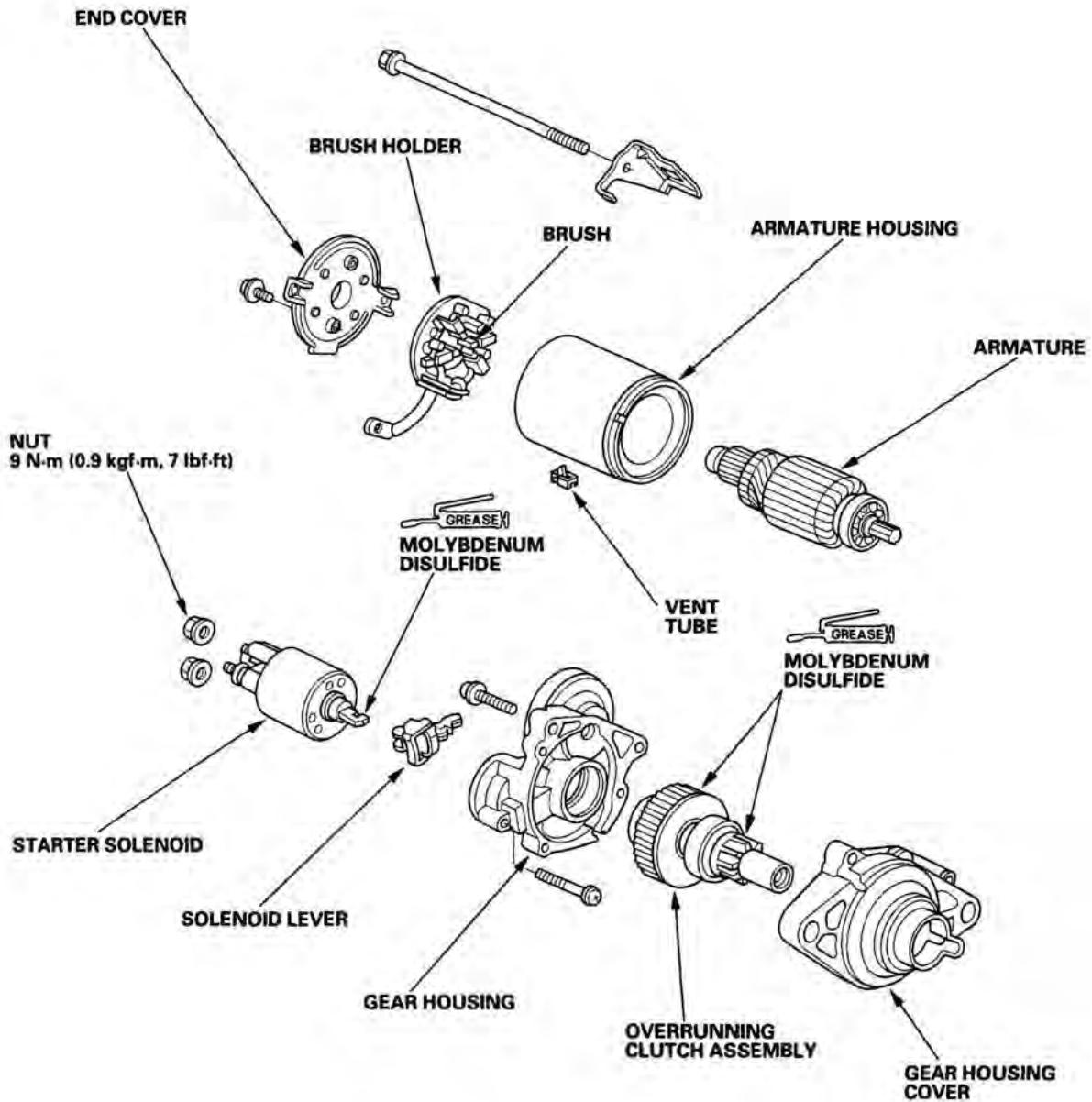
6. Install in the reverse order of removal. Make sure the crimped side of the ring terminal is facing out.



7. Connect the battery positive cable and negative cable to the battery.
8. Start the engine to make sure the starter works properly.
9. Enter the anti-theft codes for the radio and the navigation system, then enter the customer's radio station presets.
10. Perform the powertrain control module (PCM) idle learn procedure (see page 11-158).
11. Perform the power window control unit reset procedure ('02-03 models) (see page 22-308).

Starter Overhaul

Disassembly/Reassembly



(cont'd)

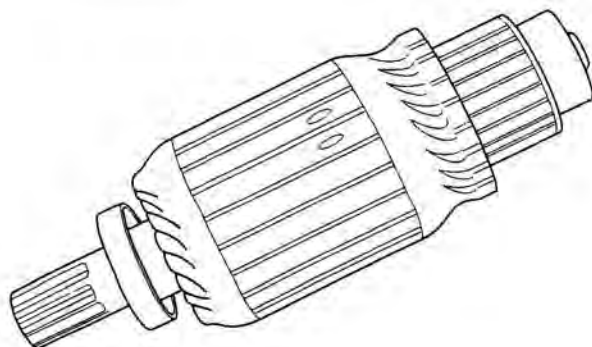
Starting System

Starter Overhaul (cont'd)

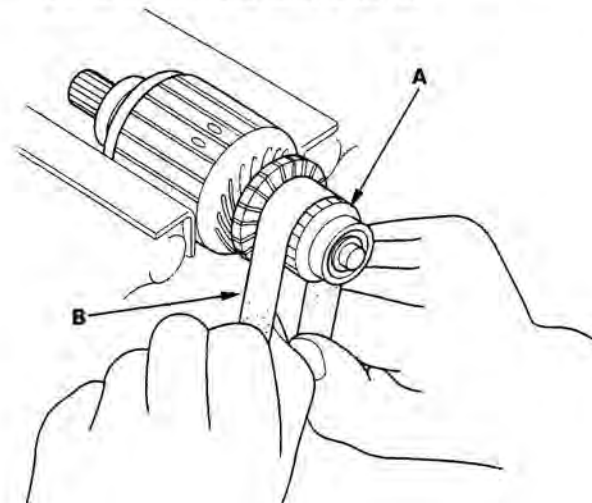
1. Remove the starter (see page 4-8).
2. Disassemble the starter as shown at the beginning of this procedure.

Armature Inspection and Test

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 with emery cloth or a lathe within the following specifications, or recondition with # 500 or # 600 sandpaper (B).

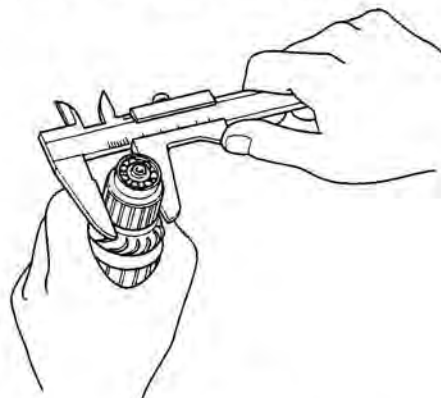


5. Check the commutator diameter. If the diameter is below the service limit, replace the armature.

Commutator Diameter

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

Service Limit: 27.5 mm (1.083 in.)



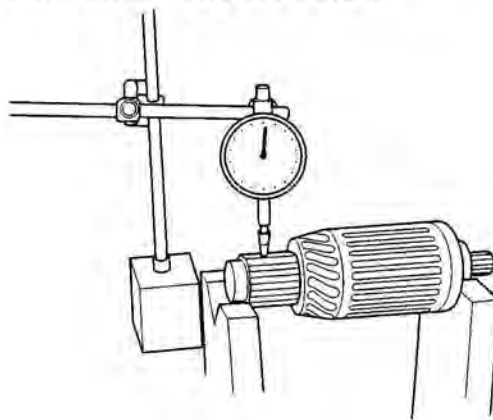
6. Measure the commutator runout.

- 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.)

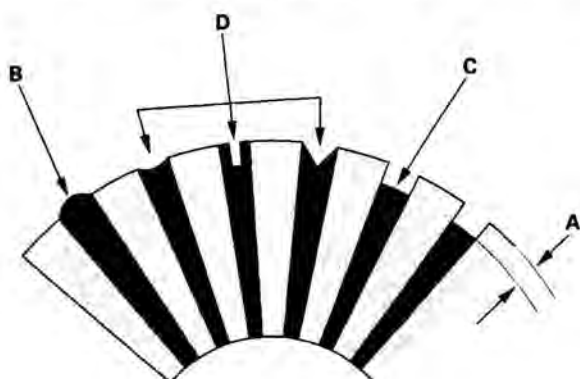


7. Check the mica depth (A). If the mica is too high (B), undercut the mica with a hacksaw blade to the proper depth. Cut away all the mica (C) between the commutator segments. The undercut should not be too shallow, too narrow, or V-shaped (D).

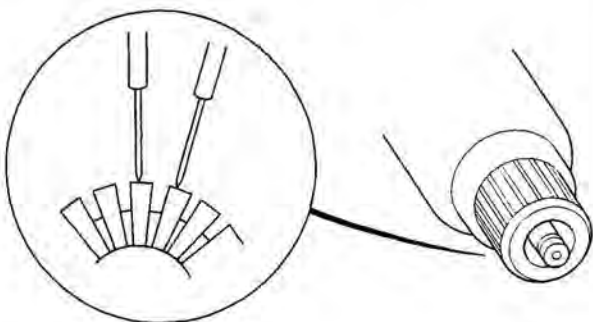
Commutator Mica Depth

Standard (New): 0.4–0.5 mm (0.016–0.020 in.)

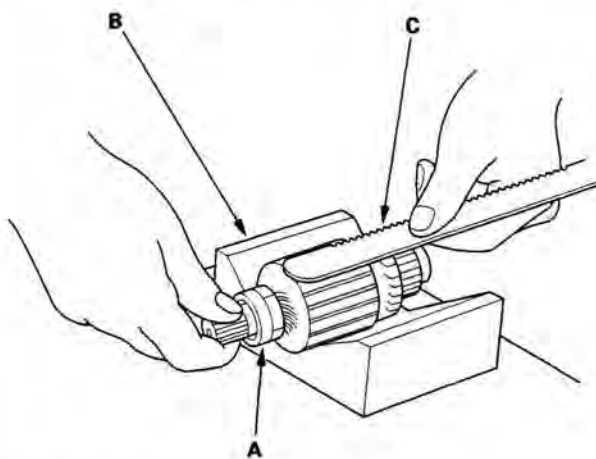
Service Limit: 0.15 mm (0.006 in.)



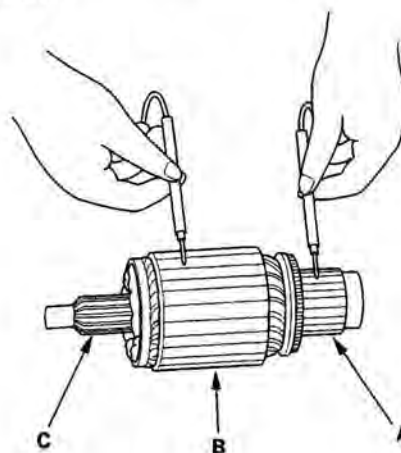
8. Check for continuity between the segments of the commutator. If an open circuit exists between any segments, replace the armature.



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 that no continuity exists between the commutator (A) and armature coil core (B), and between the commutator and armature shaft (C). If continuity exists, replace the armature.



(cont'd)

Starting System

Starter Overhaul (cont'd)

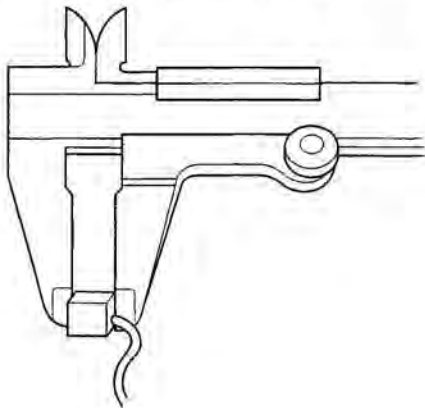
Starter Brush Inspection

11. Measure the brush length. If it is not within the service limit, replace the brush holder assembly.

Brush Length

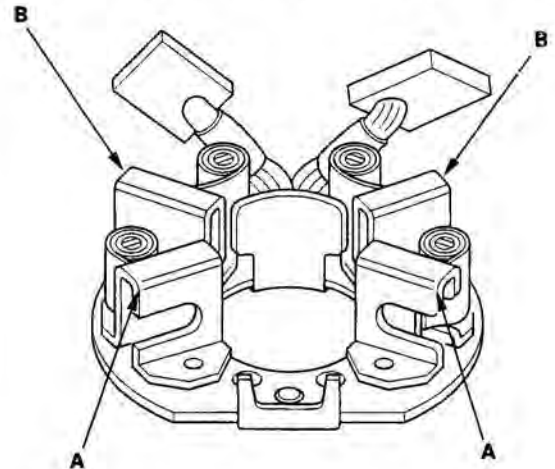
Standard (New): 15.8–16.2 mm (0.62–0.64 in.)

Service Limit: 11.0 mm (0.43 in.)



Starter Brush Holder Test

12. Check that there is no continuity between the (+) brush holder (A) and (–) brush holder (B). If there is continuity, replace the brush holder assembly.

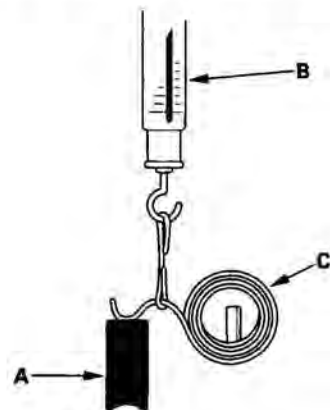


Brush Spring Inspection

13. Insert the brush (A) into the brush holder, and bring the brush into contact with the commutator, then attach a spring scale (B) to the spring (C). Measure the spring tension at the moment the spring lifts off the brush. If the spring tension is not within specification, replace the spring.

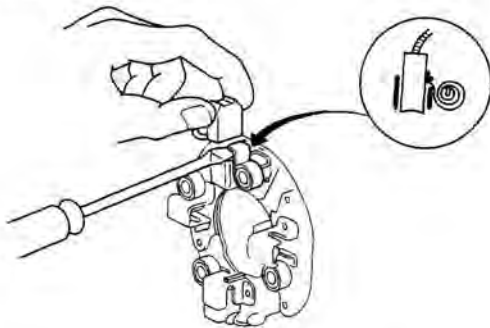
Spring Tension:

15.7–17.7 N (1.6–1.8 kgf, 3.53–3.97 lbf)

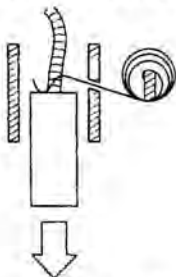


14. Pry back each brush spring with a screwdriver, then position the brush about halfway out of its holder, and release the spring to hold it there.

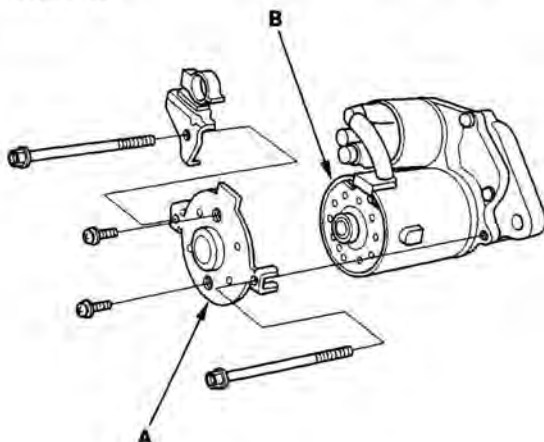
NOTE: To seat new brushes, slip a strip of # 500 or # 600 sandpaper, with the grit side up, between the commutator and each brush, and smoothly rotate the armature. The contact surface of the brushes will be sanded to the same contour as the commutator.



15. Install the armature in the housing. Next, pry back each brush spring again, and push the brush down until it seats against the commutator, then release the spring against the end of the brush.



16. Install the starter end cover (A) to retain the brush holder (B).



Overrunning Clutch Inspection

17. Slide the overrunning clutch along the shaft. Replace it if it does not slide smoothly.
18. Rotate the overrunning clutch (A) both ways. If it does not lock in either direction or it locks in both directions, replace it.



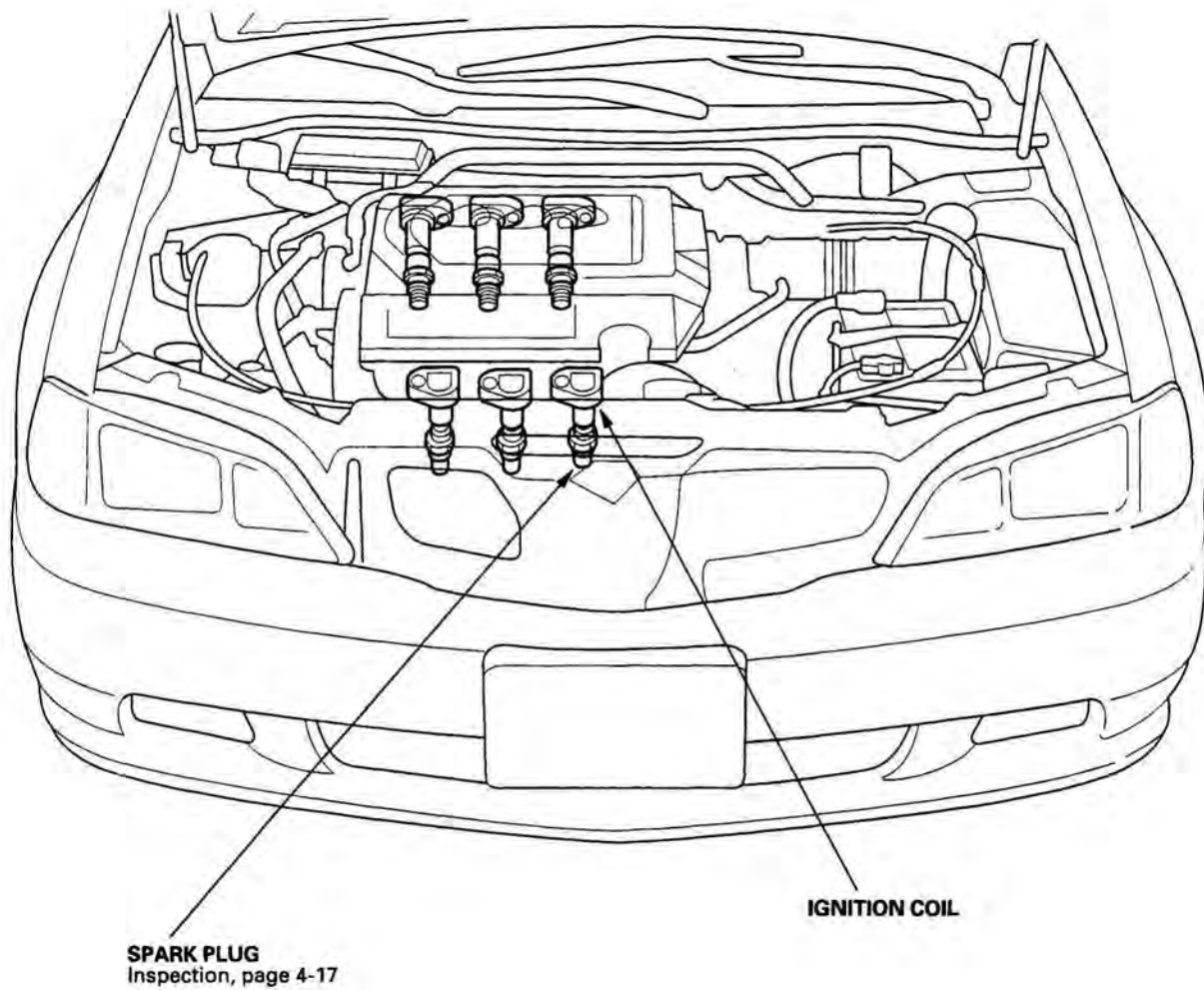
19. If the starter drive gear (B) is worn or damaged, replace the overrunning clutch assembly; the gear is not available separately.

Check the condition of the torque converter ring gear to see if the starter drive gear teeth are damaged.

20. Reassemble the starter in the reverse order of disassembly.

Ignition System

Component Location Index



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Information.**