

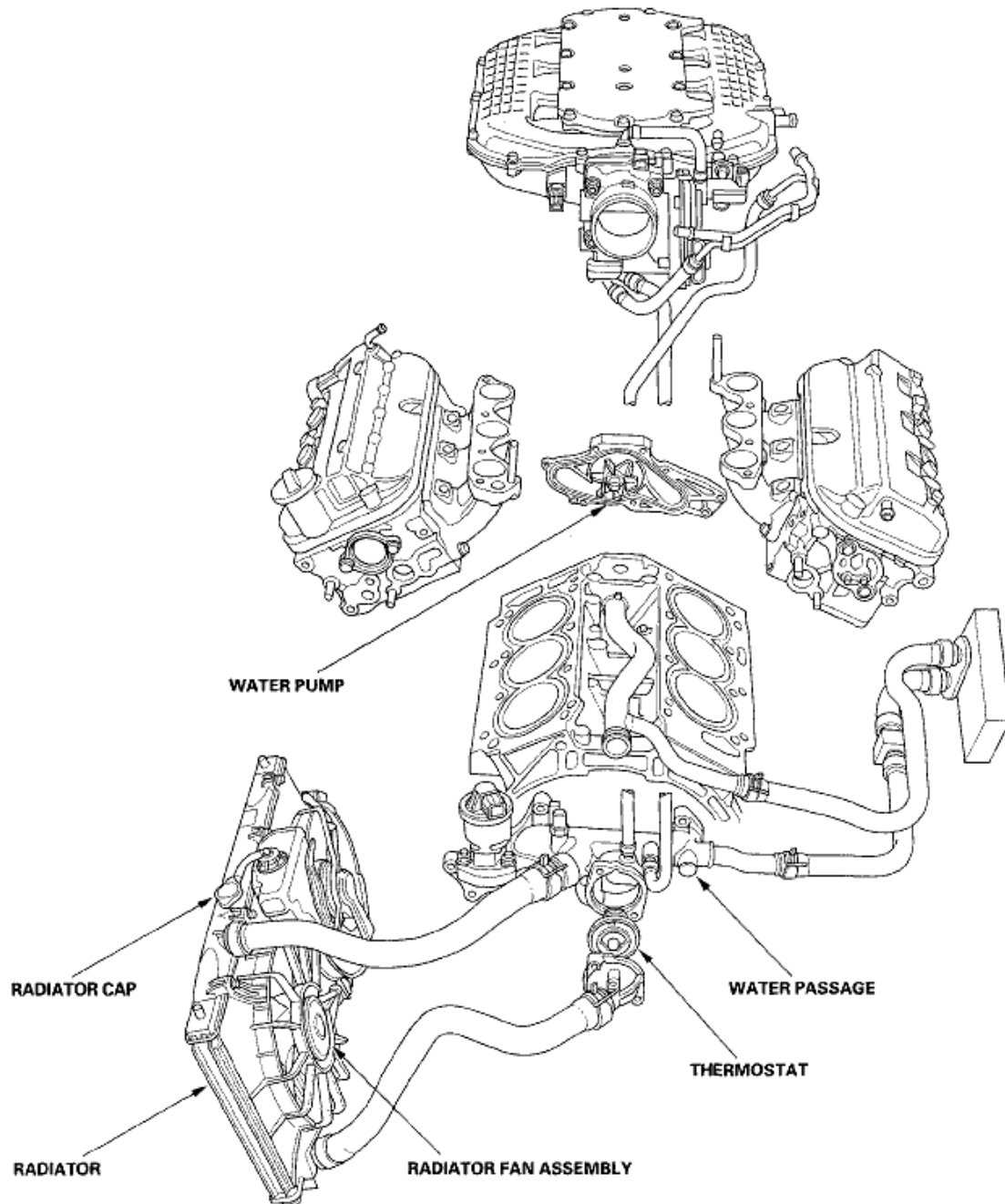
2007-2008 ENGINE**Cooling System - TL****COMPONENT LOCATION INDEX**

Fig. 1: Identifying Cooling System Component Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

RADIATOR CAP TEST

1. Remove the radiator cap (A), wet its seal with engine coolant, then install it on a commercially

available pressure tester (B).

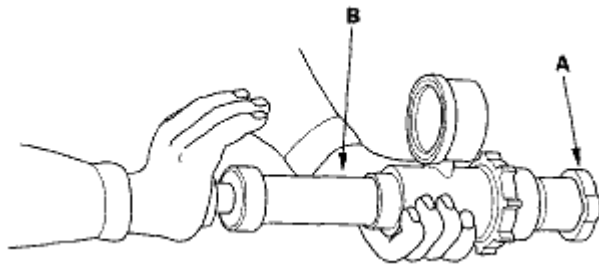


Fig. 2: Testing Radiator Cap

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Apply a pressure of 93-123 kPa (0.95-1.25 kgf/cm² , 14-18 psi).
3. Check for a drop in pressure.
4. If the pressure drops, replace the cap.

RADIATOR TEST

1. Wait until the engine is cool, then carefully remove the radiator cap, and fill the radiator with engine coolant to the top of the filler neck.
2. Attach a commercially available pressure tester (A) to the radiator, and apply a pressure of 93-123 kPa (0.95-1.25 kgf/cm² , 14-18 psi).

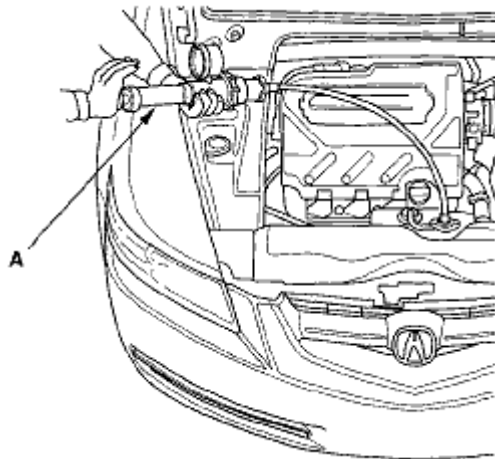


Fig. 3: Attaching Pressure Tester To Radiator

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Inspect for engine coolant leaks and a drop in pressure.
4. Remove the tester, then reinstall the radiator cap.

FAN MOTOR TEST

1. Disconnect the 2P connectors from the radiator fan motor (A) and A/C condenser fan motor (B).

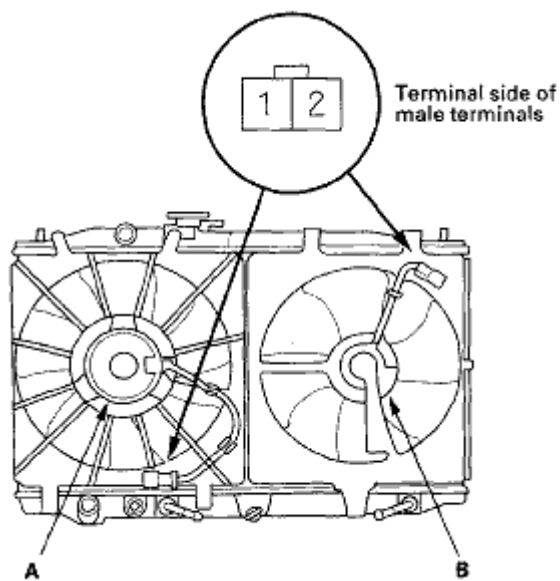


Fig. 4: Identifying Radiator Fan Motor 2P Connectors
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Test each motor by connecting battery power to terminal No. 2 and ground to terminal No. 1.
3. If either motor fails to run or does not run smoothly, replace it (see **RADIATOR AND FAN REPLACEMENT**).

THERMOSTAT TEST

Replace the thermostat if it is in the stuck open position at room temperature.

To test a closed thermostat:

1. Suspend the thermostat (A) in a container of water.

Do not let the thermometer (B) touch the bottom of the hot container.

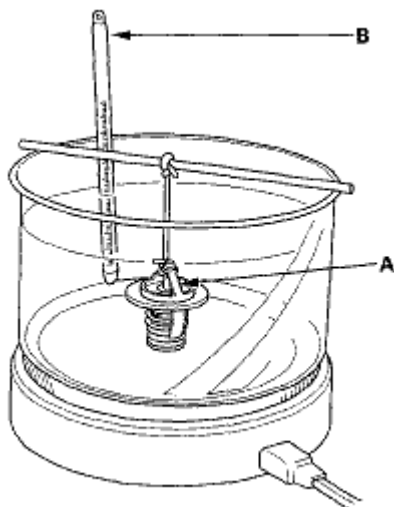


Fig. 5: Checking Thermostat Operation

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Heat the water and check the temperature with a thermometer. Check the temperature at which the thermostat first opens, and at which it is fully open.
3. Measure the lift height of the thermostat when it is fully open.

Standard Thermostat

Lift Height: Above 10.0 mm (0.39 in.)

Starts Opening: 169-176°F (76-80°C)

Fully Open: 194°F (90°C)

WATER PUMP INSPECTION

1. Remove the timing belt (see **TIMING BELT REMOVAL**).
2. Turn the water pump pulley counterclockwise.

Check that it turns freely. If it doesn't turn freely, replace the water pump (see **WATER PUMP REPLACEMENT**).

NOTE: When you check the water pump pulley, you may see a small amount of "weeping" from the bleed holes (A). This is normal.

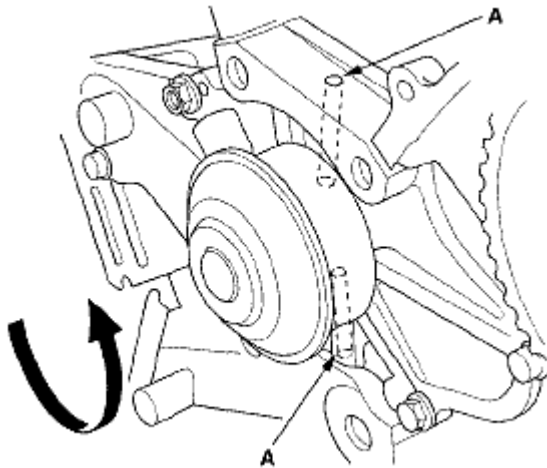


Fig. 6: Turning Water Pump Pulley

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the timing belt (see **TIMING BELT INSTALLATION**).

WATER PUMP REPLACEMENT

1. Drain the engine coolant (see **COOLANT CHECK**).
2. Remove the timing belt (see **TIMING BELT REMOVAL**).

3. Remove the timing belt adjuster (see **TIMING BELT ADJUSTER REPLACEMENT**).
4. Removing the five bolts then remove the water pump (A).

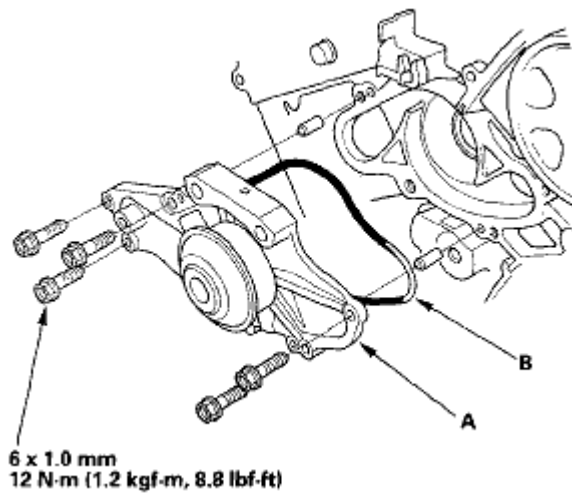


Fig. 7: Identifying Water Pump Bolts With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Inspect and clean the O-ring groove and the mating surface of the engine block.
6. Install the water pump with a new O-ring (B) in the reverse order of removal.
7. Clean up any spilled engine coolant.
8. Install the timing belt adjuster (see **TIMING BELT ADJUSTER REPLACEMENT**).
9. Install the timing belt (see **TIMING BELT INSTALLATION**).
10. Refill the radiator with engine coolant, then bleed the air from the cooling system (see step 8).

COOLANT CHECK

1. Look at the coolant level in the coolant reservoir.

Make sure it is between the MAX mark (A) and MIN mark (B).

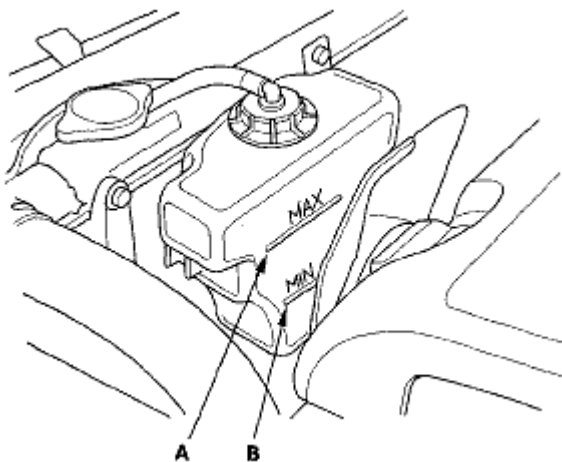


Fig. 8: Identifying Coolant Level In Coolant Reservoir

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. If the coolant level in the coolant reservoir is at or below the MIN mark, add coolant to bring it between the MIN and MAX marks, then inspect the cooling system for leaks.

COOLANT REPLACEMENT

1. Start the engine. Set the heater temperature control dial to maximum heat, then turn off the ignition switch. Make sure the engine and radiator are cool to the touch.
2. Remove the radiator cap.
3. Loosen the drain plug (A), and drain the coolant.

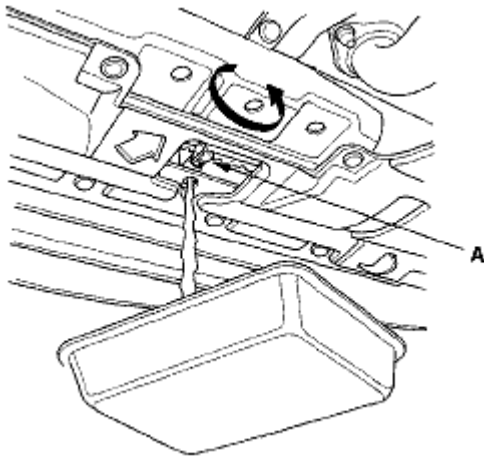


Fig. 9: Removing Drain Plug

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install a rubber hose (A) on the drain bolt (B) located at the rear of the engine block, then loosen the drain bolt.

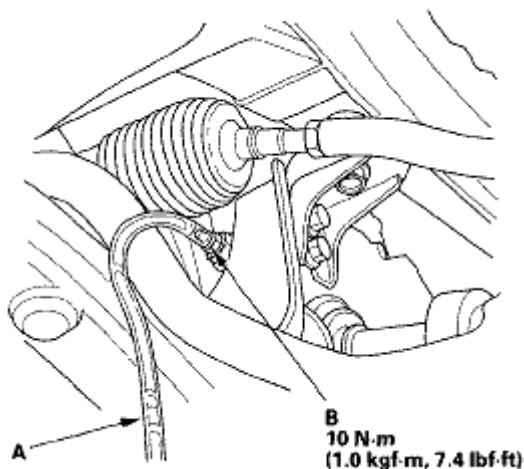


Fig. 10: Identifying Rubber Hose And Drain Bolt With Torque Specification

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. When the coolant stops draining, tighten the drain bolt. Remove the rubber hose.

6. Tighten the radiator drain plug securely.
7. Remove, drain, and reinstall the coolant reservoir.
8. Fill the coolant reservoir to the MAX mark (A) with Acura Long Life Antifreeze/Coolant Type 2 (P/N OL999-9001).

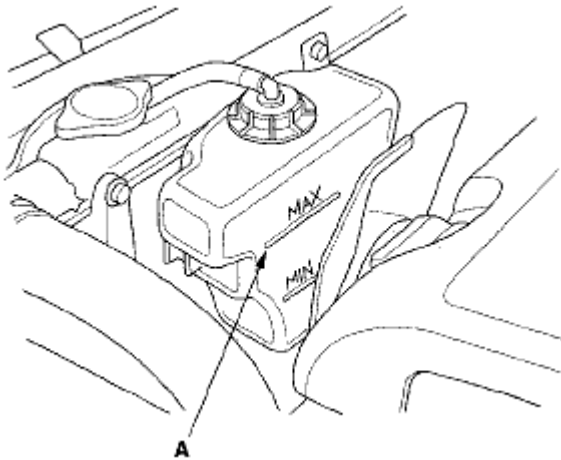


Fig. 11: Identifying Coolant Reservoir Max Mark
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Pour Acura Long Life Antifreeze/Coolant Type 2 into the radiator up to the base of the filler neck.

NOTE:

- Always use Acura Long Life Antifreeze/Coolant Type 2 (P/N OL999-9001). Using a non-Acura coolant can result in corrosion, causing the cooling system to malfunction or fail.
- Acura Long Life Antifreeze/Coolant Type 2 is a mixture of 50 % antifreeze and 50 % water. Do not add water.

Engine Coolant Refill Capacities (Including the coolant reservoir capacity of 0.6 L (0.16 US gal))

At Coolant Change:

M/T: 6.3 L (1.66 US gal)

A/T: 6.3 L (1.66 US gal)

After Engine Overhaul:

M/T: 8.1 L (2.14 US gal)

A/T: 8.0 L (2.11 US gal)

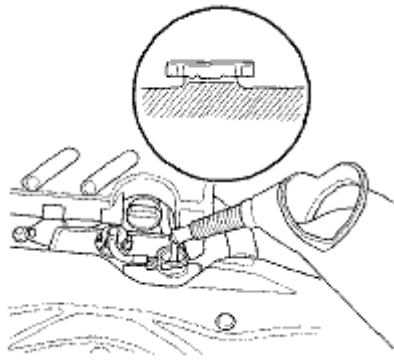


Fig. 12: Filling Engine Coolant

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Loosely install the radiator cap.
11. Start the engine, and let it run until it warms up (the radiator fan comes on at least twice). Turn off the engine.
12. If the maintenance minder required engine coolant replacement, reset the maintenance minder (see **MAINTENANCE MINDER**). If the maintenance minder did not require engine coolant replacement, go to step 13.
13. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 in **GENERAL TROUBLESHOOTING INFORMATION**).
14. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it doesn't communicate, troubleshoot the DLC circuit (see **DLC CIRCUIT TROUBLESHOOTING (PART 2)**).
15. Turn the ignition switch ON (II).
16. Select BODY ELECTRICAL with the HDS.
17. Select ADJUSTMENT in the GAUGE MENU with the HDS.
18. Select RESET in the MAINTENANCE MINDER with the HDS.
19. Select MAINTENANCE SUB ITEM 5 RESET with the HDS.
20. Check the level in the radiator, and add Acura Long Life Antifreeze/Coolant Type 2, if needed.
21. Tightly install the radiator cap, then run the engine, and check for leaks.
22. Clean up any spilled engine coolant.

THERMOSTAT REPLACEMENT

1. Make sure you have the anti-theft codes for the audio system and the navigation system (if equipped). Make sure the ignition switch is OFF.
2. Disconnect the negative cable from the battery, then disconnect the positive cable.
3. Remove the battery.
4. Drain the engine coolant (see **COOLANT CHECK**).
5. Remove the thermostat cover, then remove the thermostat.

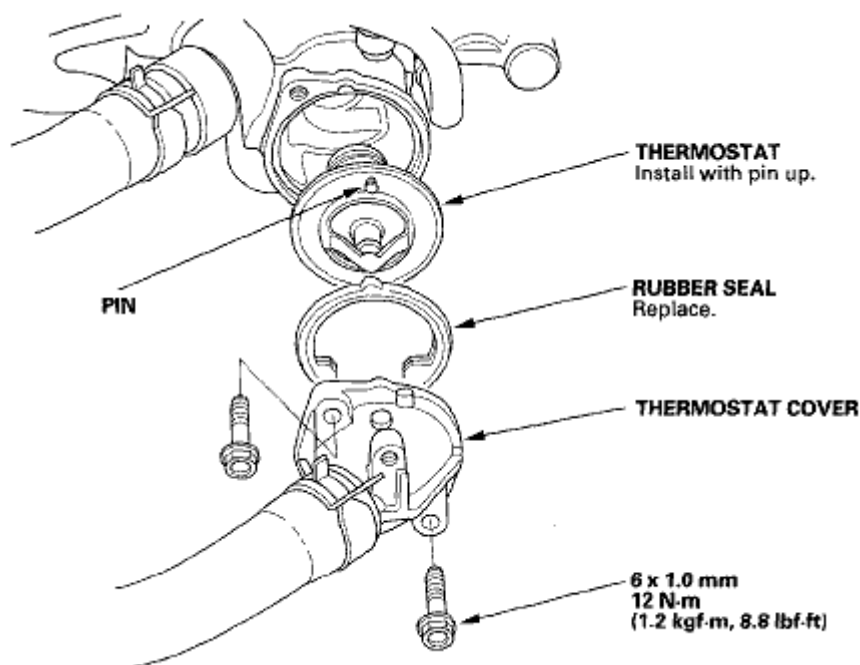


Fig. 13: Identifying Thermostat Components With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the new thermostat with a new rubber seal and the pin installed on the top-side.
7. Install the battery.
8. Refill the radiator with engine coolant, and bleed air from the cooling system with the heater valve open (see step 8).
9. Clean up any spilled engine coolant.
10. Enter the anti-theft codes for the audio system and the navigation system (if equipped).
11. Set the clock (on vehicles without navigation).

WATER PASSAGE REPLACEMENT

1. Make sure you have the anti-theft codes for the audio system and the navigation system (if equipped). Make sure the ignition switch is OFF.
2. Disconnect the negative cable from the battery first, then disconnect the positive cable. Remove the battery.
3. Drain the engine coolant (see **COOLANT CHECK**).
4. Disconnect the breather pipe, then remove the intake air duct (see step 10 in **ENGINE REMOVAL**).
5. Disconnect the upper radiator hose, lower radiator hose, heater hoses, and water bypass hoses from the water passage. Remove the water passage.

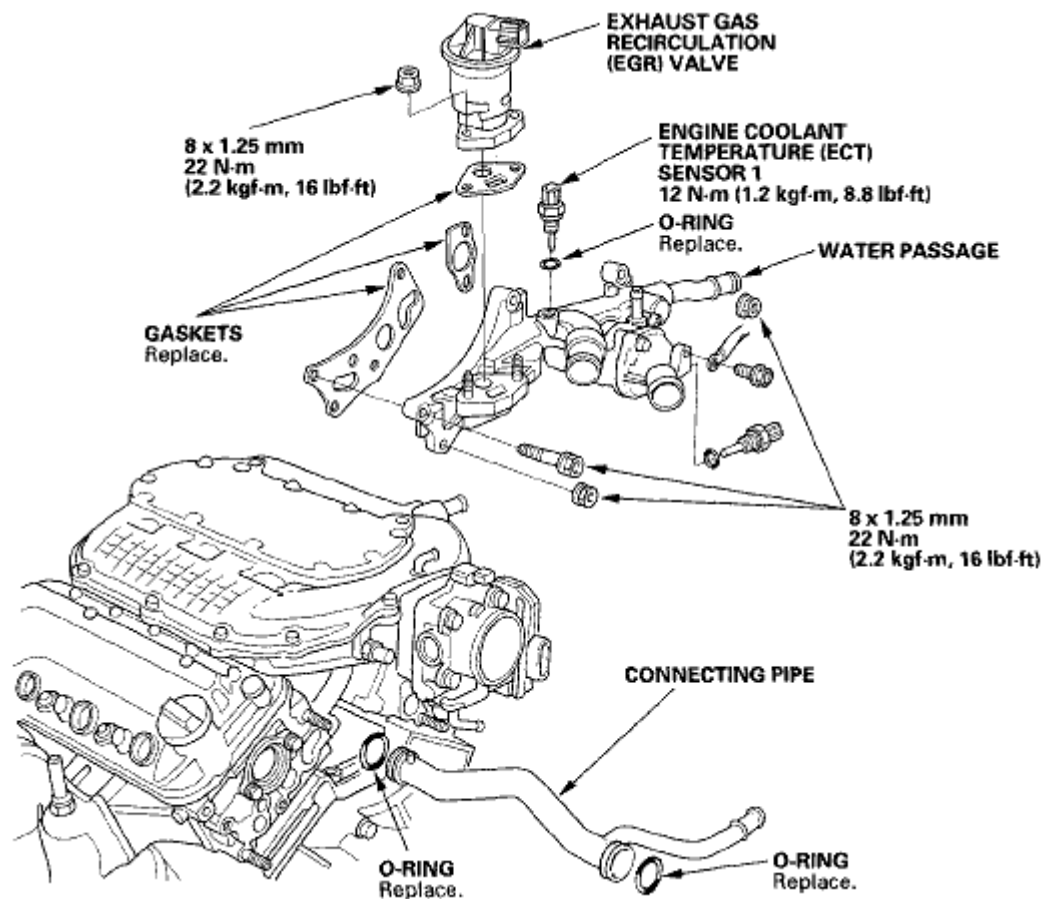


Fig. 14: Identifying Water Passage Components With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the water passage in the reverse order of removal.
7. Install the battery.
8. Refill the radiator with engine coolant, then bleed air from the cooling system (see step 8).
9. Clean up any spilled engine coolant.
10. Enter the anti-theft codes for the audio system and the navigation system (if equipped).
11. Set the clock (on vehicles without navigation).

RADIATOR AND FAN REPLACEMENT

1. Drain the engine coolant (see **COOLANT CHECK**).
2. Remove the front bulkhead cover (see **FRONT BULKHEAD COVER REPLACEMENT**).
3. Disconnect the radiator fan motor connector (A) and engine coolant temperature (ECT) sensor 2 connector (B), then remove the harness clamps (C) and radiator lower hose (D).

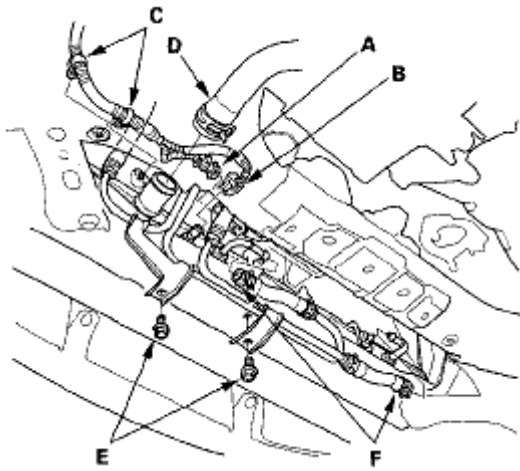


Fig. 15: Identifying Radiator Fan Motor Connector And Engine Coolant Temperature (ECT) Sensor Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. A/T model: Remove the automatic transmission fluid (ATF) cooler pipe mount bolts (E) and disconnect the ATF cooler hoses (F), then plug the line and hoses.
5. Lower the vehicle.
6. Disconnect the A/C condenser fan motor connector (A), harness clamps (B) and remove the radiator upper hose (C).

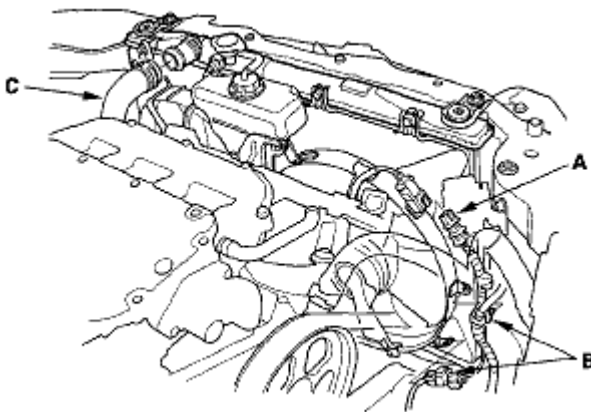


Fig. 16: Identifying A/C Condenser Fan Motor Connector And Harness Clamps

Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the upper bracket cushions, then pull up the radiator.

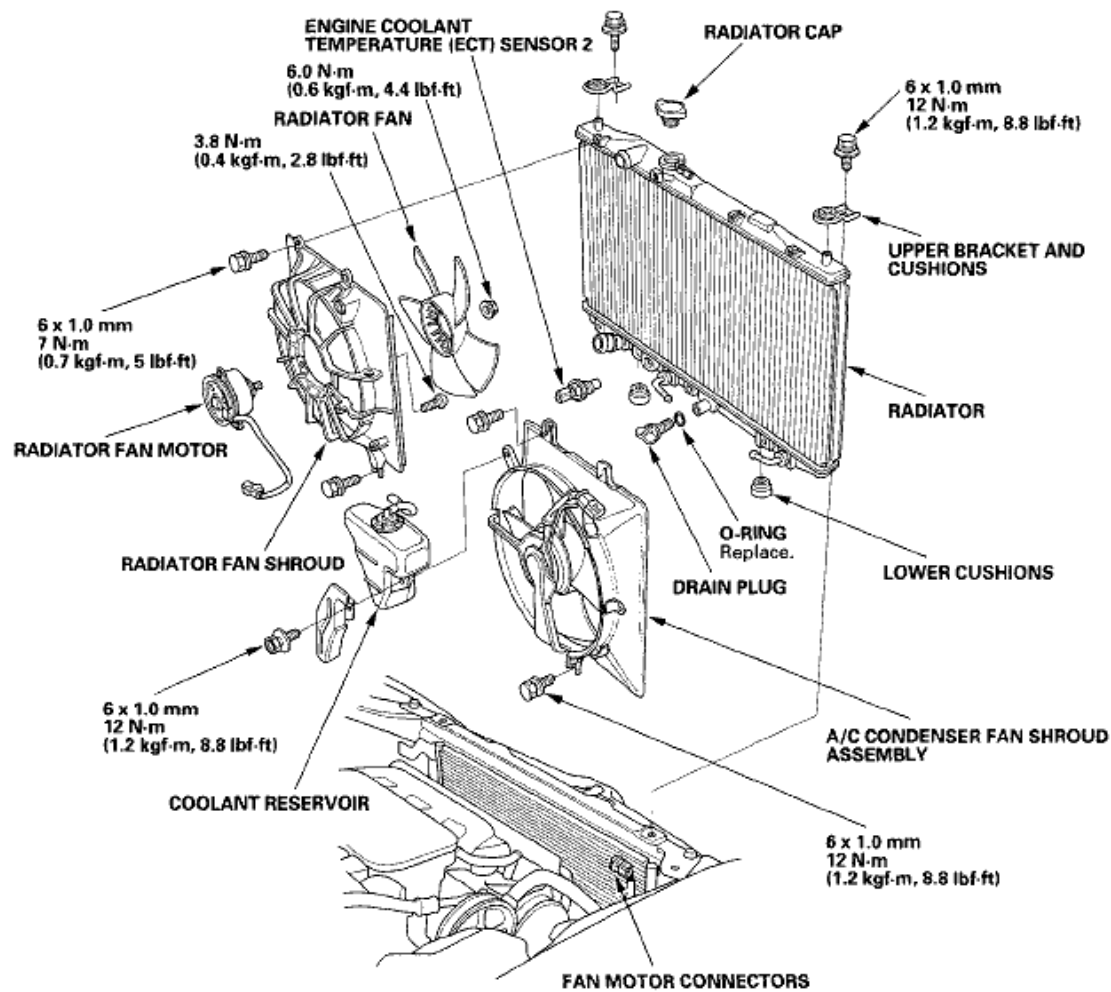


Fig. 17: Identifying Radiator And Fan Components With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the fan shroud assemblies and other parts from the radiator.
9. Install the radiator in the reverse order of removal. Make sure the upper and lower cushions are set securely.
10. A/T model: Fill the transmission with ATF (see [ATF REPLACEMENT](#)).
11. Fill the radiator with engine coolant, then bleed air from the cooling system (see step 8).