

2011-12 ENGINE

Cooling System - TSX V6

COMPONENT LOCATION INDEX

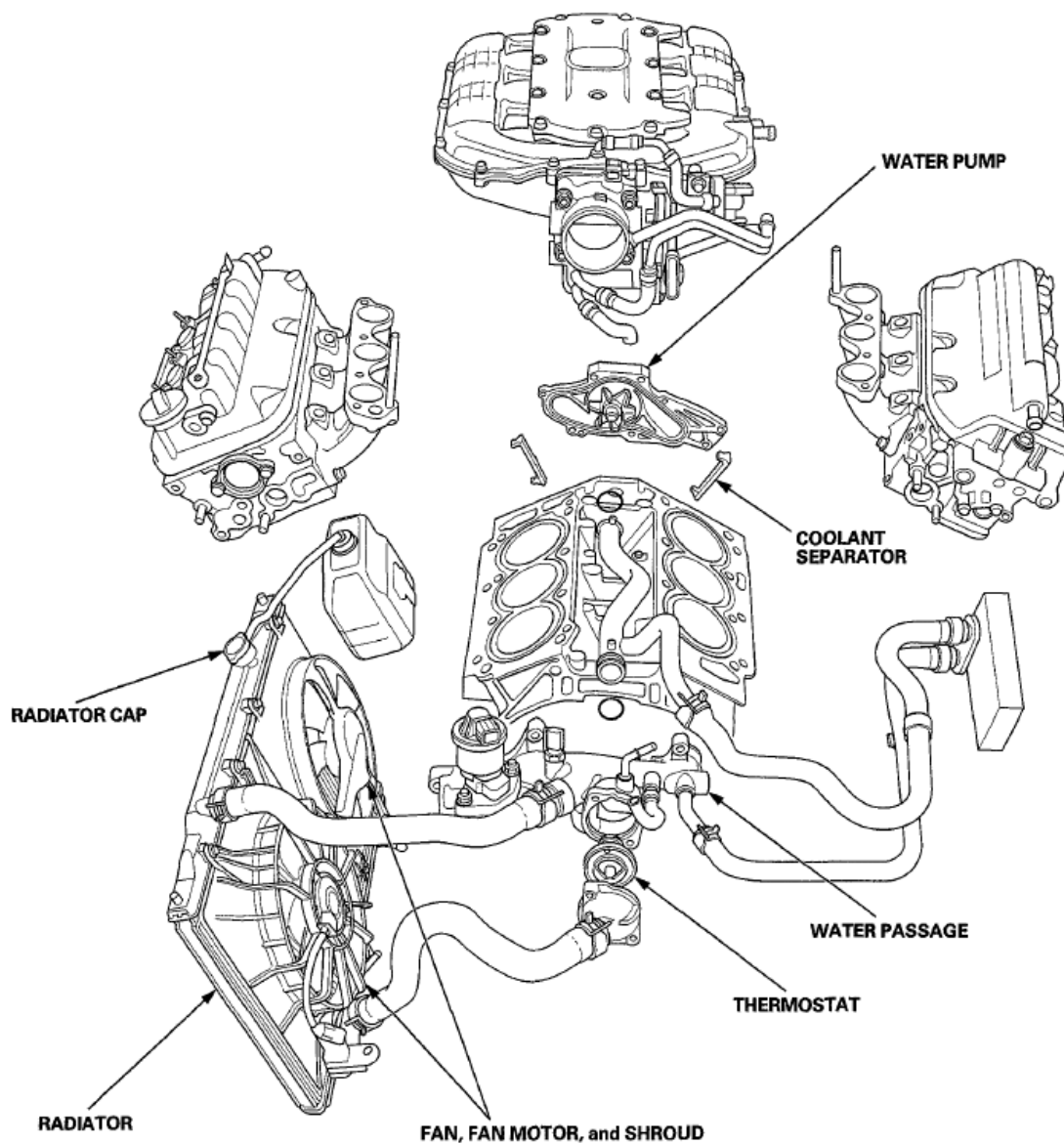


Fig. 1: Identifying Cooling System Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

RADIATOR CAP TEST

1. Remove the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).
2. Wait until the engine is cool, then carefully remove the radiator cap (A). Wet the radiator cap seal with engine coolant, then install it on a commercially available pressure tester (B).

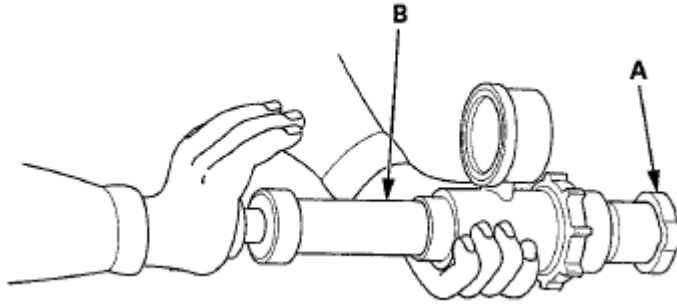


Fig. 2: Installing Radiator Cap Seal On Pressure Tester
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Apply a pressure of 93-123 kPa (0.95-1.25 kgf/cm² , 13.5-17.8 psi).
4. Check for a drop in pressure.
5. If the pressure drops, replace the radiator cap.
6. Install the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).

RADIATOR TEST

1. Remove the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).
2. Wait until the engine is cool, then carefully remove the radiator cap, and fill the radiator with engine coolant to the base of the filler neck.
3. Attach a commercially available pressure tester (A) to the radiator, and apply a pressure of 93-123 kPa (0.95-1.25 kgf/cm² , 13.5-17.8 psi).

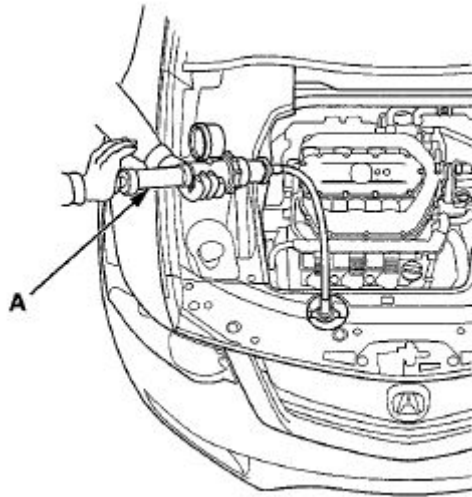


Fig. 3: Applying Pressure To Radiator
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Inspect for engine coolant leaks and a drop in pressure.
5. Remove the tester, then reinstall the radiator cap.
6. Install the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).

FAN MOTOR TEST

1. Remove the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).
2. Disconnect the 2P connectors from the radiator fan motor (A) and the A/C condenser fan motor (B).

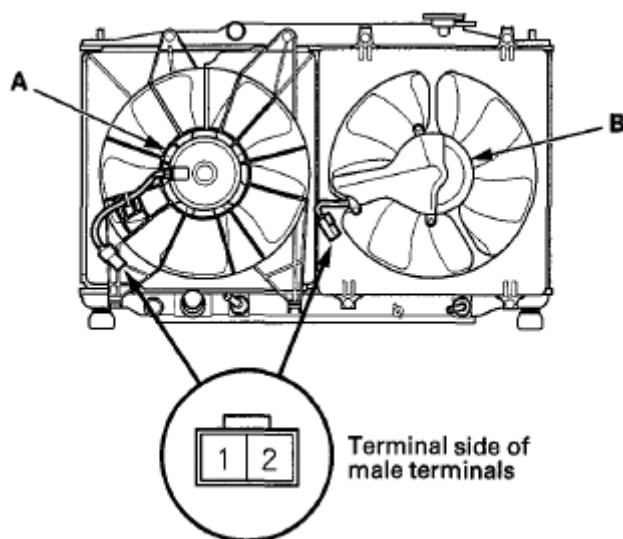


Fig. 4: Identifying 2P Connectors Of Radiator Fan Motor And A/C Condenser Fan Motor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Test each motor by connecting battery power to terminal No. 2 and ground to terminal No. 1.
4. If either motor fails to run or does not run smoothly, replace it (see **FAN, FAN MOTOR, AND SHROUD REMOVAL AND INSTALLATION**).
5. Install the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).

THERMOSTAT TEST

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

To test a closed thermostat:

1. Suspend the thermostat (A) in a container of water. Do not let the thermostat and the thermometer (B) touch the bottom of the hot container.

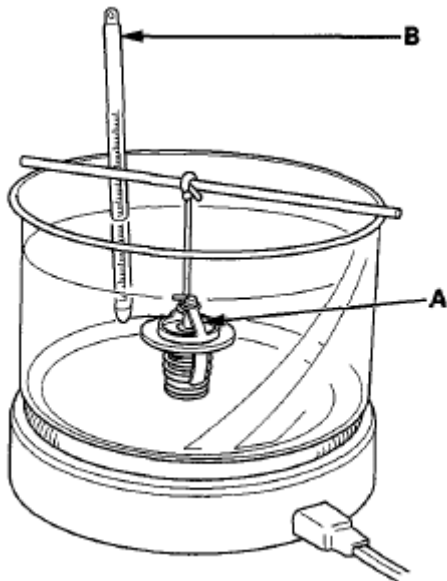


Fig. 5: Checking Water Temperature Using Thermostat
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 (0.394 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, and check that it turns freely. If it does not turn freely, replace the water pump (see **WATER PUMP INSPECTION**).

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

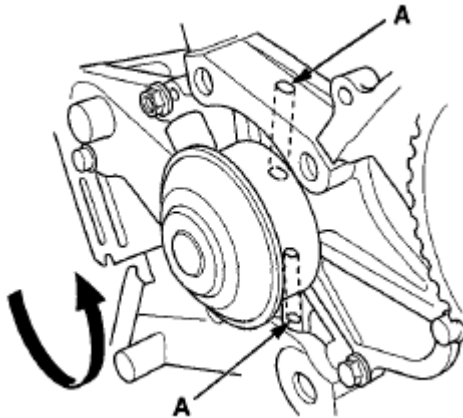


Fig. 6: Turning Water Pump Pulley Counterclockwise
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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. Remove the five bolts securing the water pump (A), then remove the water pump.

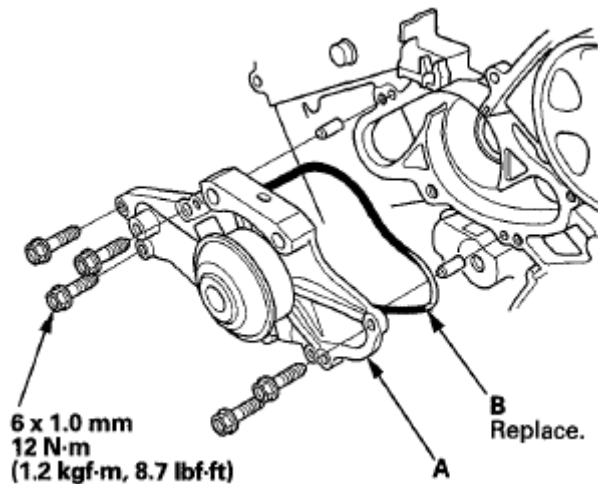


Fig. 7: Identifying O-Ring, Water Pump With Mounting Bolts With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Inspect and clean the mating surface of the engine block.
6. Install the water pump with a new O-ring (B).
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, and bleed the air from the cooling system (see **COOLANT CHECK**).

COOLANT CHECK

1. Remove the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).
2. Check the coolant level in the coolant reservoir. Make sure it is between the MAX mark (A) and the MIN mark (B).