

## Cooling

<b>Illustrated Index .....</b>	<b>10-2</b>
<b>Radiator</b>	
<b>Replacement .....</b>	<b>10-6</b>
<b>Engine Coolant Refilling and         Bleeding .....</b>	<b>10-7</b>
<b>Cap Testing .....</b>	<b>10-9</b>
<b>Testing .....</b>	<b>10-9</b>
<b>Thermostat</b>	
<b>Replacement .....</b>	<b>10-10</b>
<b>Testing .....</b>	<b>10-10</b>
<b>Engine Coolant Temperature     (ECT) Switch</b>	
<b>Testing .....</b>	<b>10-11</b>
<b>Water Pump</b>	
<b>Illustrated Index .....</b>	<b>10-12</b>
<b>Inspection .....</b>	<b>10-14</b>
<b>Replacement .....</b>	<b>10-14</b>



# Illustrated Index

**⚠ WARNING** System is under high pressure when the engine is hot. To avoid danger of releasing scalding engine coolant, remove the cap only when the engine is cool.

**Total Cooling System Capacity (Including heater and reservoir (0.4 ℓ (0.42 US qt, 0.35 Imp qt))):**

M/T	4.2 ℓ (4.4 US qt, 3.7 Imp qt)* <sup>1</sup> 5.0 ℓ (5.3 US qt, 4.4 Imp qt)* <sup>2</sup>
A/T	4.1 ℓ (4.3 US qt, 3.6 Imp qt)* <sup>3</sup> 4.3 ℓ (4.5 US qt, 3.8 Imp qt)* <sup>4</sup>
CVT	4.3 ℓ (4.5 US qt, 3.8 Imp qt)

\*1: D16Y5, D16Y7, D16Y8 engines

\*2: B16A2 engine

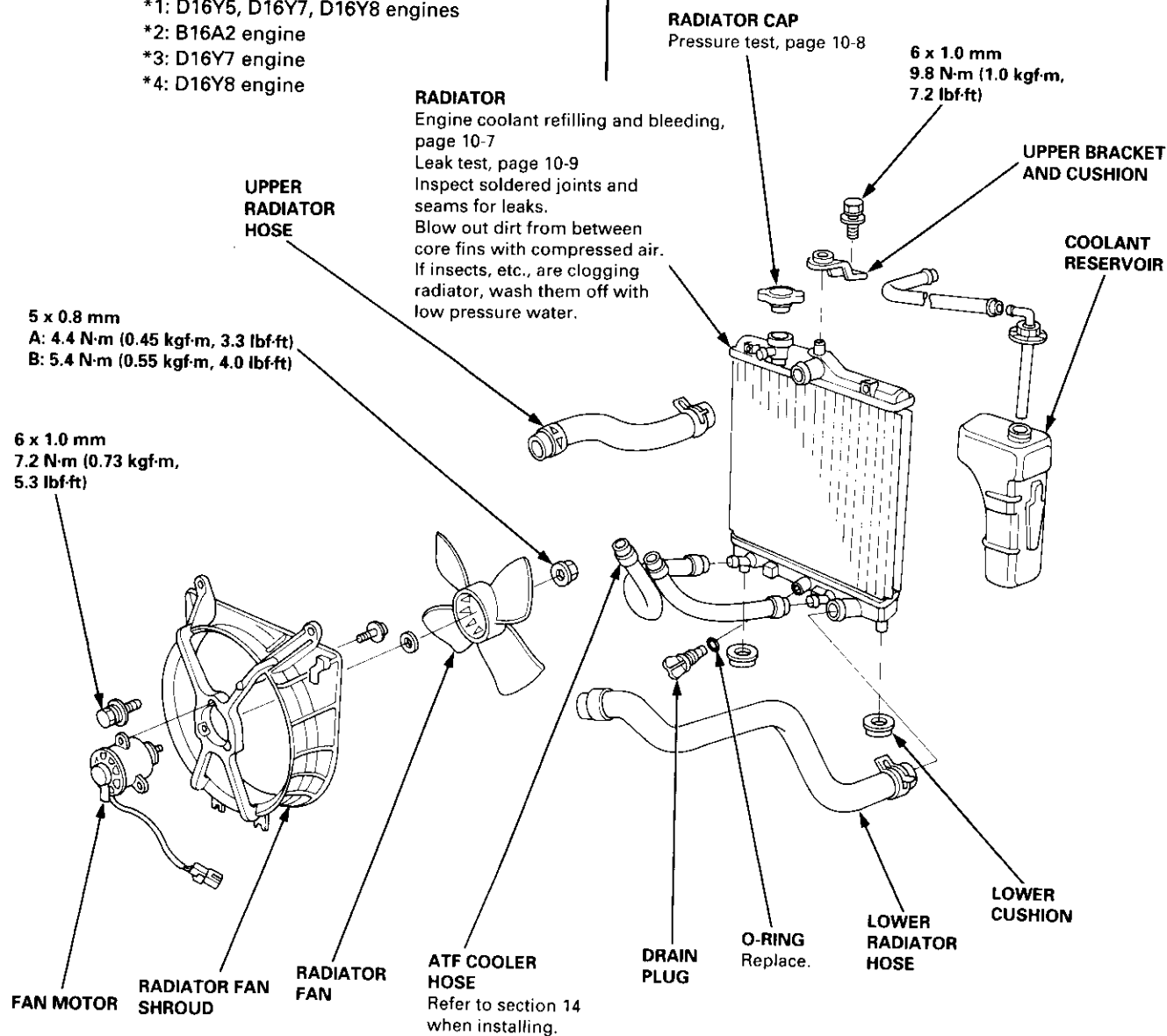
\*3: D16Y7 engine

\*4: D16Y8 engine

**CAUTION:** If any engine coolant spills on painted portions of the body, rinse it off immediately.

## NOTE:

- Check all cooling system hoses for damage, leaks or deterioration and replace if necessary.
- Check all hose clamps and retighten if necessary.
- Use new O-rings when reassembling.

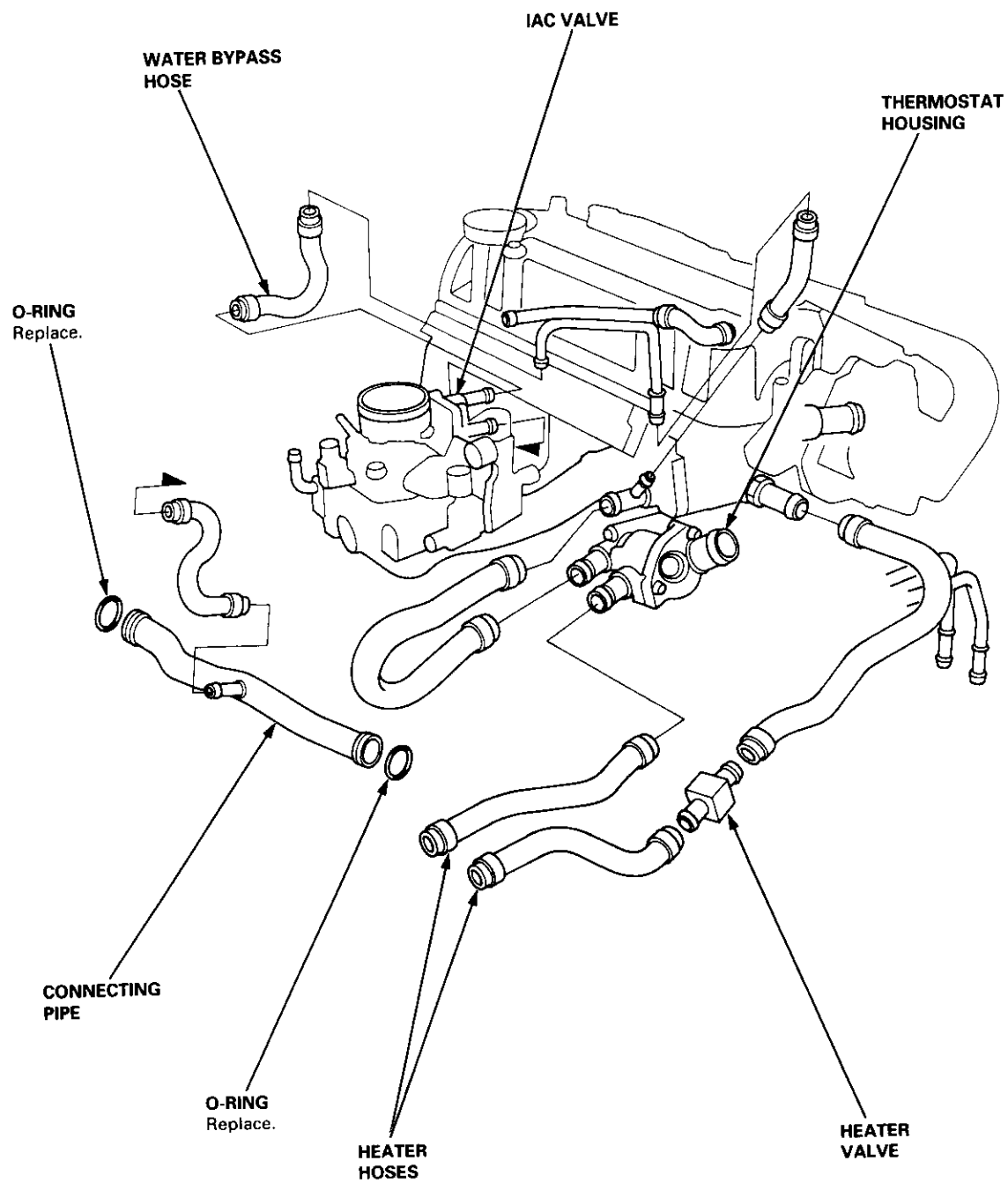


A: TOYO RADIATOR manufactured radiator

B: NIPPONDENSO manufactured radiator



**Engine Hose Connections:  
D16Y7 engine:**



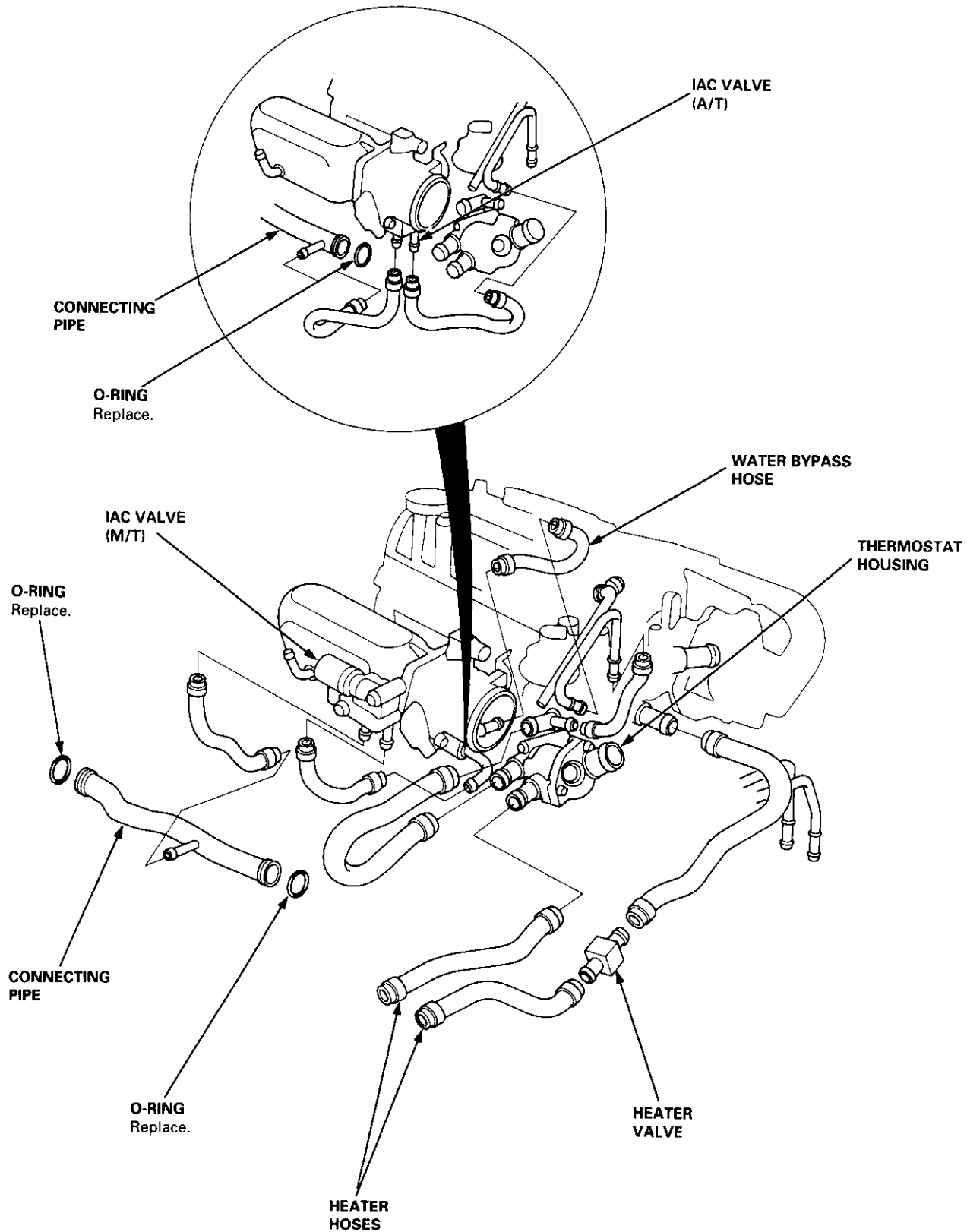
(cont'd)

# Illustrated Index

(cont'd)

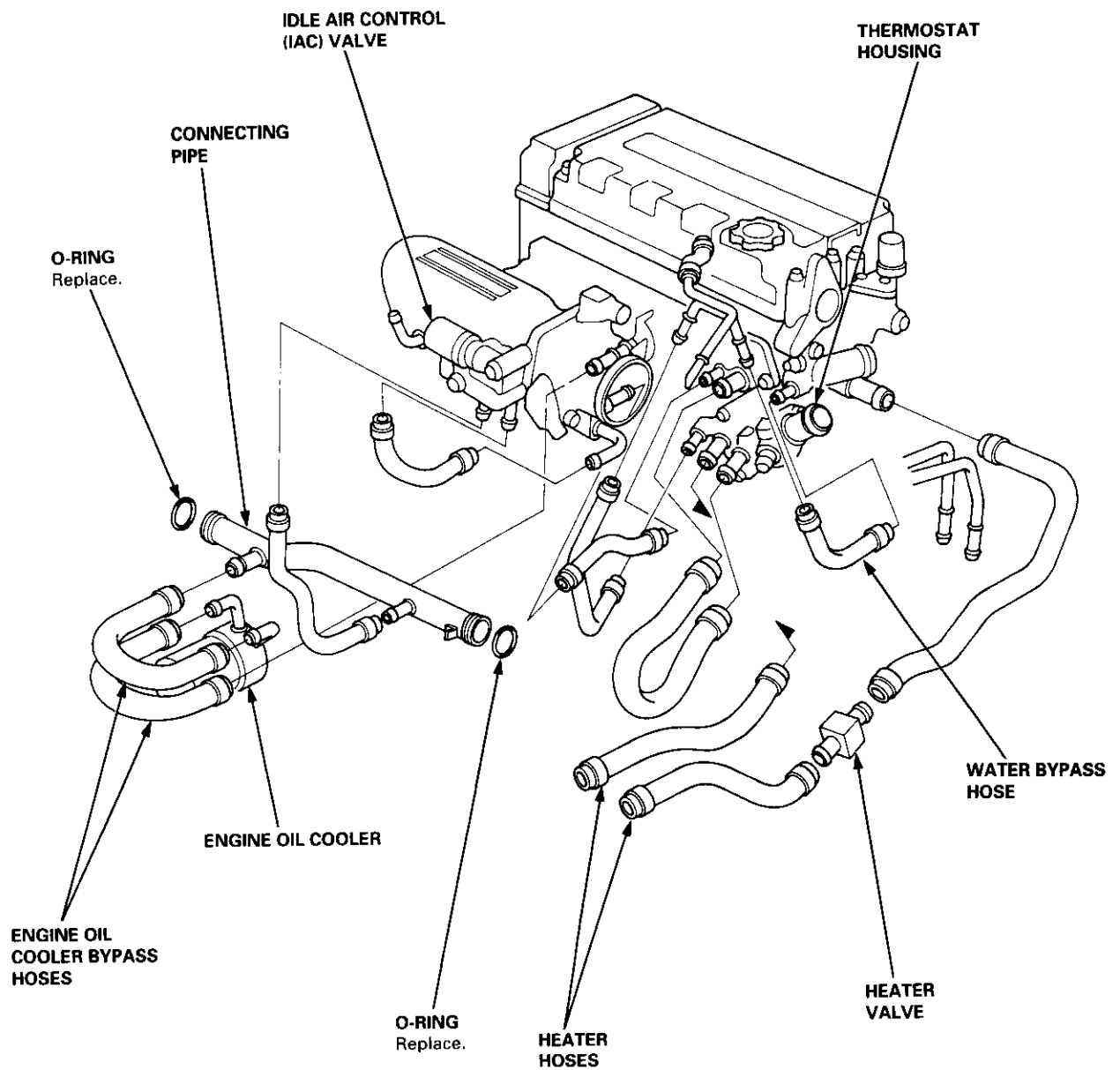
Engine Hose Connections:

D16Y5, D16Y8 engines:





**Engine Hose Connections:  
B16A2 engine:**



# Radiator

## Replacement

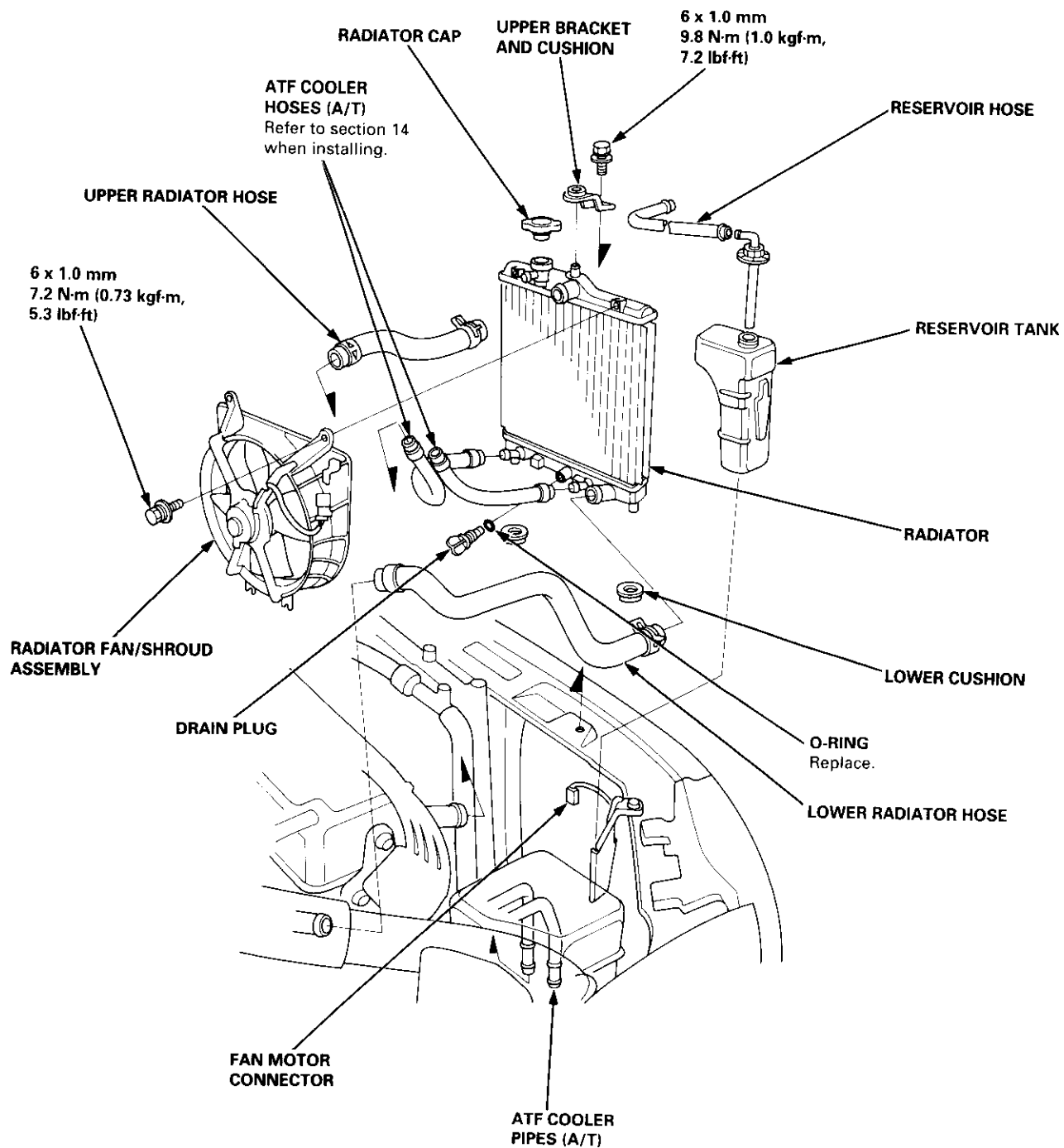
1. Drain the engine coolant.
2. Remove the upper and lower radiator hoses, and ATF cooler hoses.
3. Disconnect the fan motor connector.
4. Remove the radiator upper bracket, then pull up the radiator.

5. Remove the fan shroud assemblies and other parts from the radiator.

Install the radiator in the reverse order of removal:

### NOTE:

- Set the upper and lower cushions securely.
- Fill the radiator with engine coolant and bleed the air.

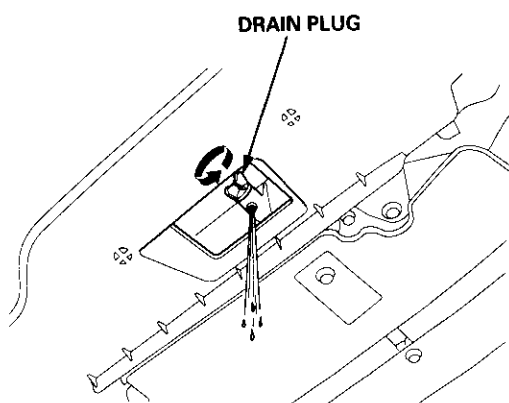




## Engine Coolant Refilling and Bleeding

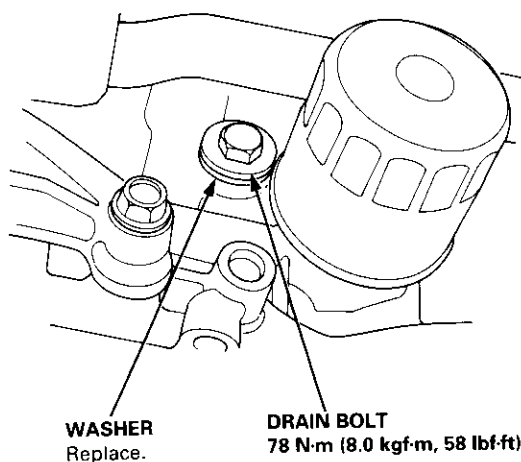
**CAUTION:** When pouring engine coolant, be sure to shut the relay box lid and not to let coolant spill on the electrical parts or the paint. If any coolant spills, rinse it off immediately.

1. Slide the heater temperature control lever to maximum heat. Make sure the engine and radiator are cool to the touch.
2. Remove the radiator cap.
3. Loosen the drain plug, and drain the coolant.

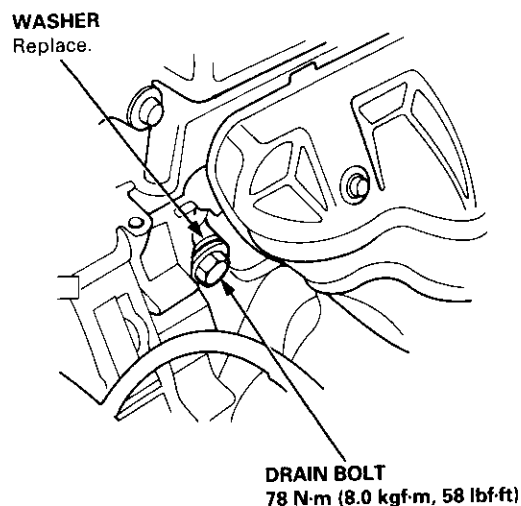


4. Remove the drain bolt from the cylinder block.

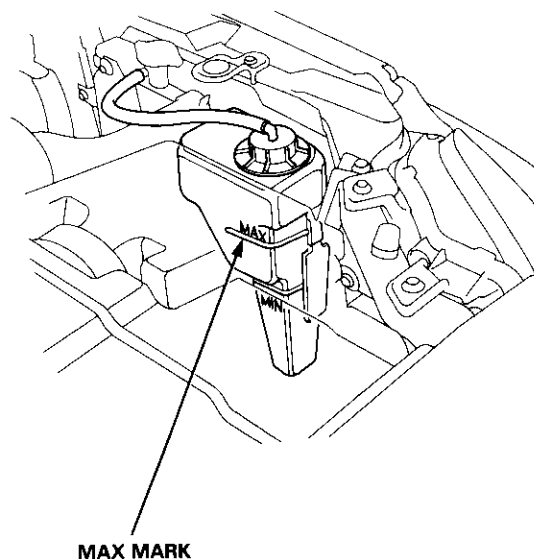
**D16Y5, D16Y7, D16Y8 engines:**



**B16A2 engine:**



5. Apply liquid gasket to the drain bolt threads, then reinstall the bolt with a new washer and tighten it securely.
6. Tighten the radiator drain plug securely.
7. Remove, drain and reinstall the reservoir. Fill the tank halfway to the MAX mark with water, then up to the MAX mark with antifreeze.



(cont'd)

# Radiator

## Engine Coolant Refilling and Bleeding (cont'd)

8. Mix the recommended antifreeze with an equal amount of water in a clean container.

### NOTE:

- Use only genuine Honda antifreeze/coolant.
- For best corrosion protection, the coolant concentration must be maintained year-round at 50% minimum. Coolant concentrations less than 50% may not provide sufficient protection against corrosion or freezing.
- Coolant concentrations greater than 60% will impair cooling efficiency and are not recommended.

### CAUTION:

- Do not mix different brands of antifreeze/coolants.
- Do not use additional rust inhibitors or anti-rust products; they may not be compatible with the coolant.

**Engine Coolant Refill Capacity [including reservoir (0.4 ℓ (0.42 US qt, 0.35 Imp qt))]:**

M/T	3.8 ℓ (4.0 US qt, 3.3 Imp qt)* <sup>1</sup> 4.5 ℓ (4.8 US qt, 4.0 Imp qt)* <sup>2</sup>
A/T	3.7 ℓ (3.9 US qt, 3.3 Imp qt)* <sup>3</sup> 3.9 ℓ (4.1 US qt, 3.4 Imp qt)* <sup>4</sup>
CVT	3.9 ℓ (4.1 US qt, 3.4 Imp qt)

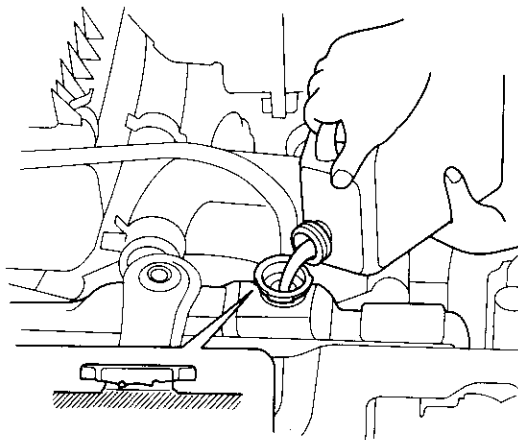
\*1: D16Y5, D16Y7, D16Y8 engines

\*2: B16A2 engine

\*3: D16Y7 engine

\*4: D16Y8 engine

9. Pour coolant into the radiator up to the base of the filler neck, and install the radiator cap loosely.



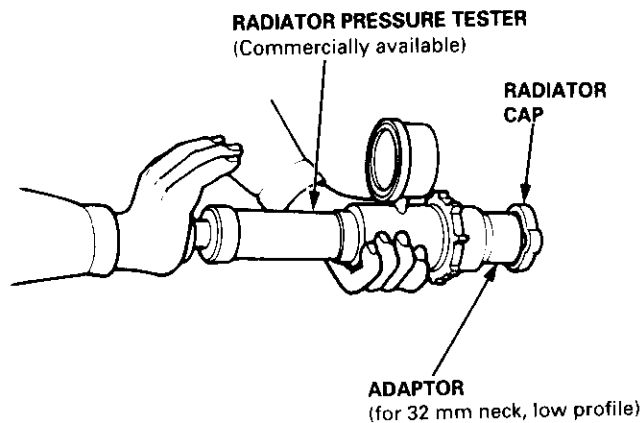
10. Start the engine and let it run until it warms up (the radiator fan comes on at least twice).
11. Turn off the engine. Check the level in the radiator, add coolant if needed.
12. Put the radiator cap on tightly, then run the engine again and check for leaks.





## Cap Testing

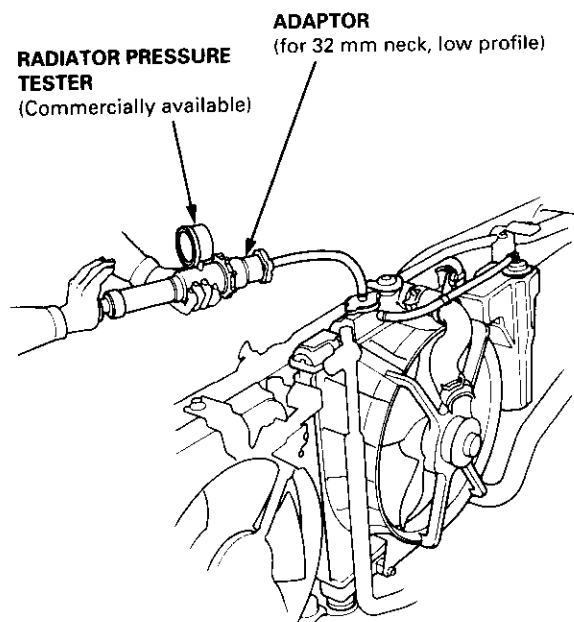
1. Remove the radiator cap, wet its seal with engine coolant, then install it on the pressure tester.



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

## Testing

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 the pressure tester to the radiator and apply a pressure of 93 – 123 kPa (0.95 – 1.25 kgf/cm<sup>2</sup>, 14 – 18 psi).



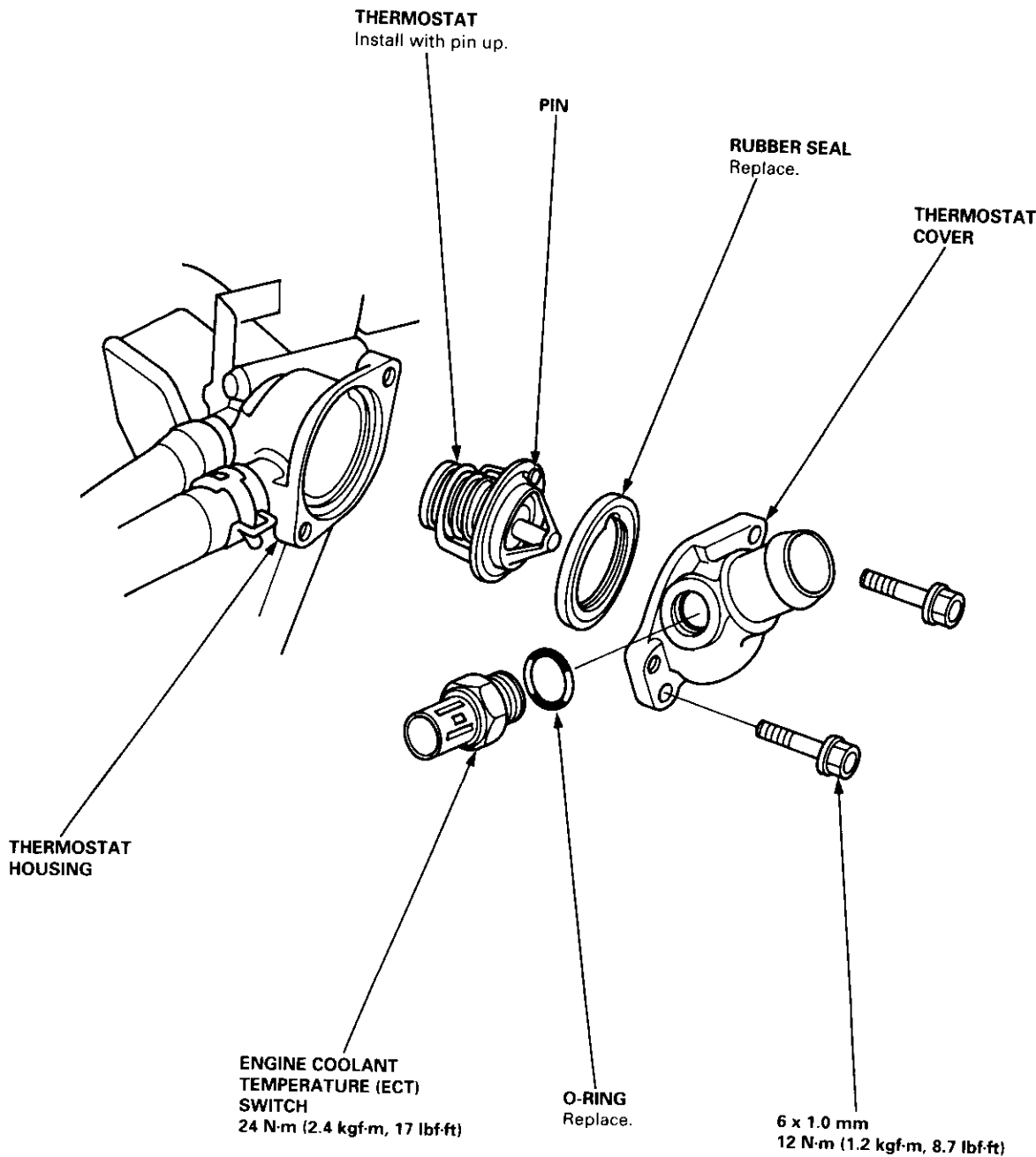
3. Inspect for engine coolant leaks and a drop in pressure.
4. Remove the tester and reinstall the radiator cap.

**NOTE:** Check for engine oil in the coolant and/or coolant in the engine oil.

# Thermostat

## Replacement

NOTE: Use a new O-ring when reassembling.



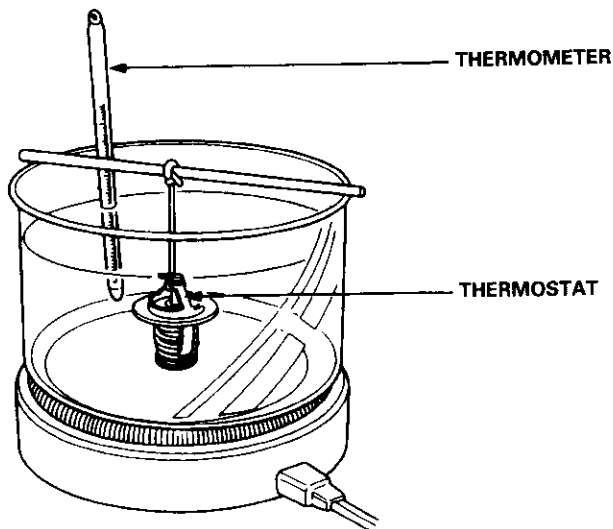


## Testing

Replace the thermostat if it is open at room temperature.

To test a closed thermostat:

1. Suspend the thermostat in a container of water as shown.



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.

**CAUTION:** Do not let the thermometer touch the bottom of the hot container.

3. Measure lift height of the thermostat when fully open.

### STANDARD THERMOSTAT

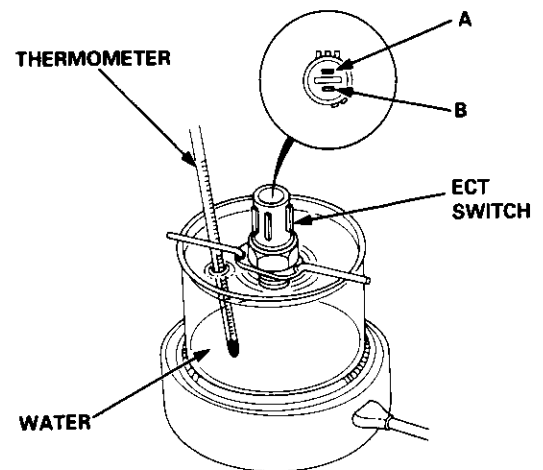
Lift height: above 8.0 mm (0.31 in)  
Starts opening: 169° – 176°F (76° – 80°C)  
Fully open: 194°F (90°C)

## Testing

**WARNING** Removing the ECT switch while the engine is hot can cause the coolant to spray out, seriously scalding you. Always let the engine and radiator cool down before removing the ECT switch.

NOTE: Bleed air from the cooling system after installing the ECT switch (see page 10-7).

1. Remove the ECT switch from the thermostat housing (see page 10-10).
2. Suspend the ECT switch in a container of water as shown.



3. Heat the water, and check the temperature with a thermometer.

**CAUTION:** Do not let the thermometer touch the bottom of the hot container.

4. Measure the resistance between the A and B terminals according to the table.

		Terminal	
Operation		A	B
SWITCH	ON	196° – 203°F (91° – 95°C)	
	OFF	5° – 15°F (3° – 8°C) lower than the temperature when it goes on	

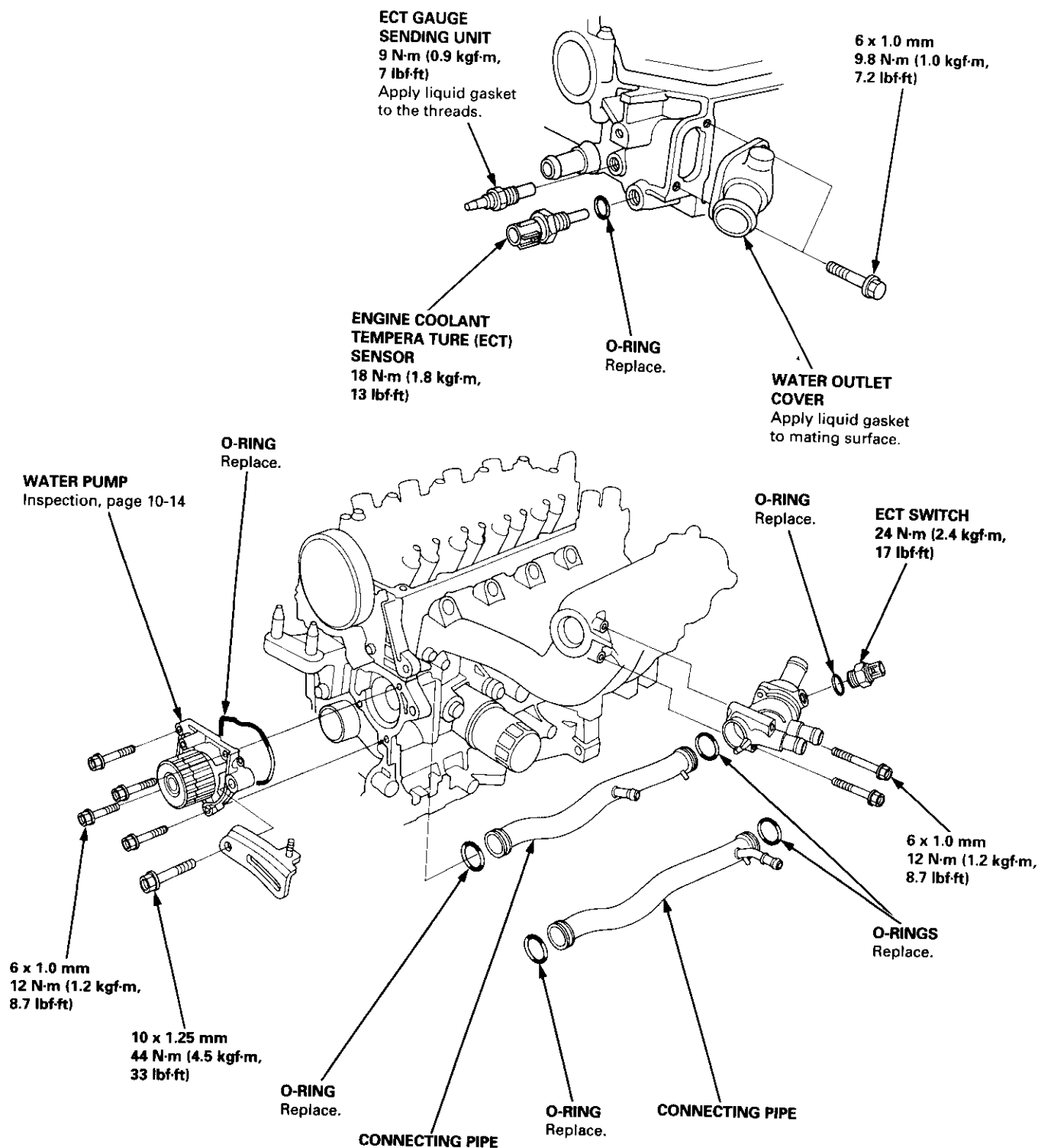
# Water Pump

## Illustrated Index

### NOTE:

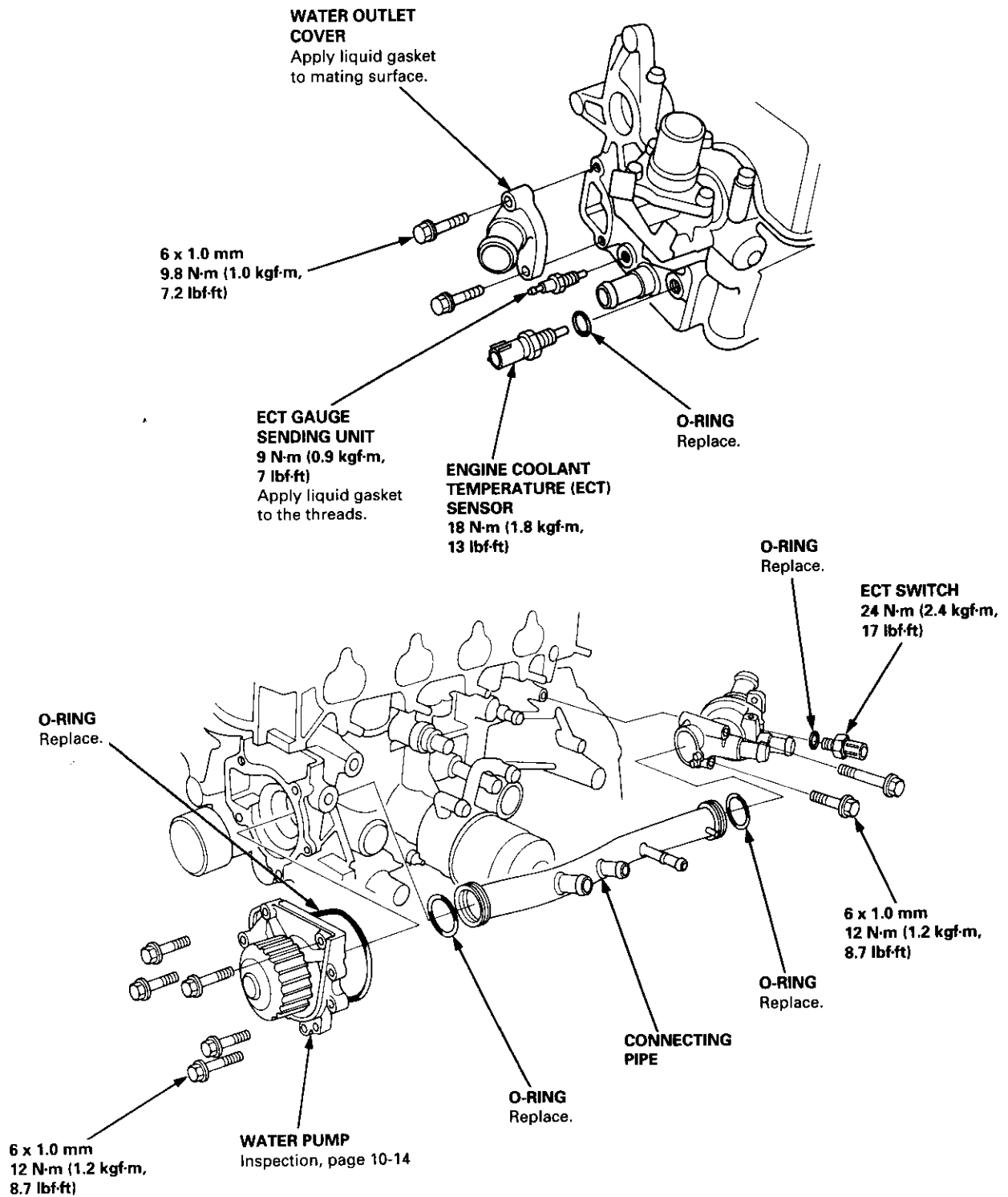
- Use new O-rings when reassembling.
- Use liquid gasket, Part No. 08718 - 0001 or 08718 - 0003.

D16Y5, D16Y7, D16Y8 engines:





**B16A2 engine:**



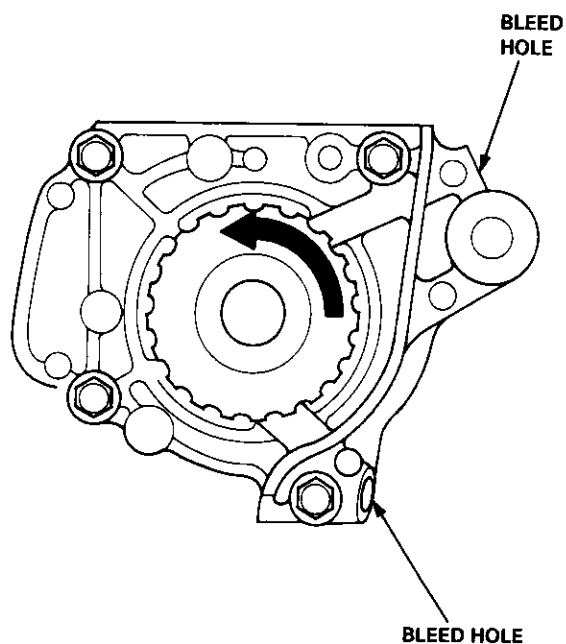
# Water Pump

## Inspection

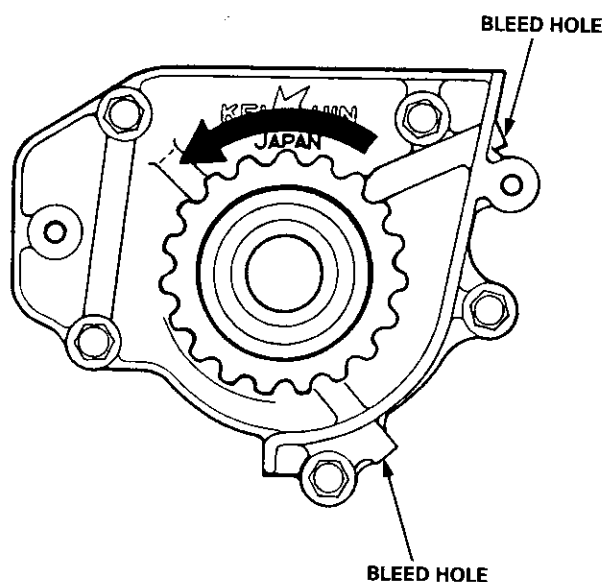
1. Remove the timing belt (see section 6).
2. Turn the water pump pulley counterclockwise. Check that it turns freely.
3. Check for signs of seal leakage.

NOTE: A small amount of "weeping" from the bleed hole is normal.

**D16Y5, D16Y7, D16Y8 engines:**



**B16A2 engine:**

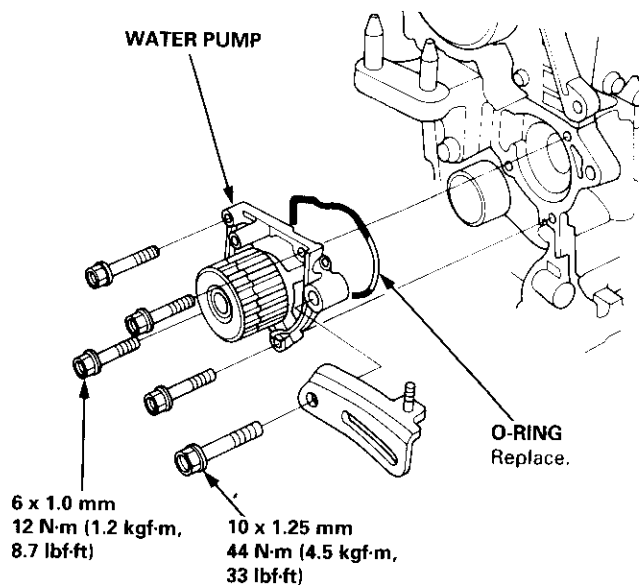


## Replacement

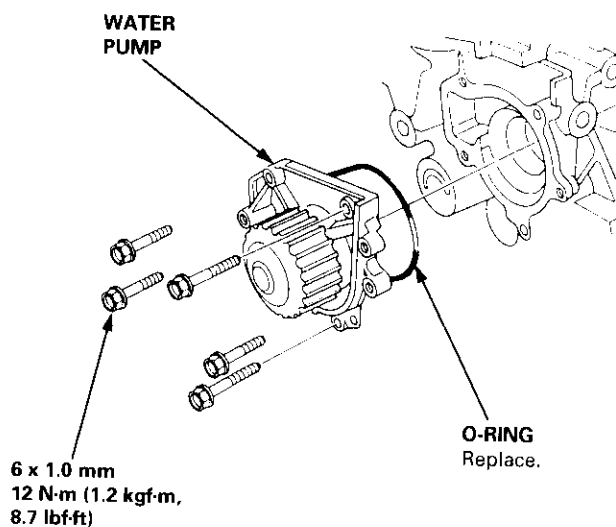
1. Remove the timing belt (see section 6).
2. Remove the water pump by removing five bolts.

NOTE: Inspect, repair and clean the O-ring groove and mating surface with the cylinder block.

**D16Y5, D16Y7, D16Y8 engines:**



**B16A2 engine:**



3. Install the water pump in the reverse order of removal.

NOTE:

- Keep the O-ring in position when installing.
- Clean the spilled engine coolant.