



## REMOVAL

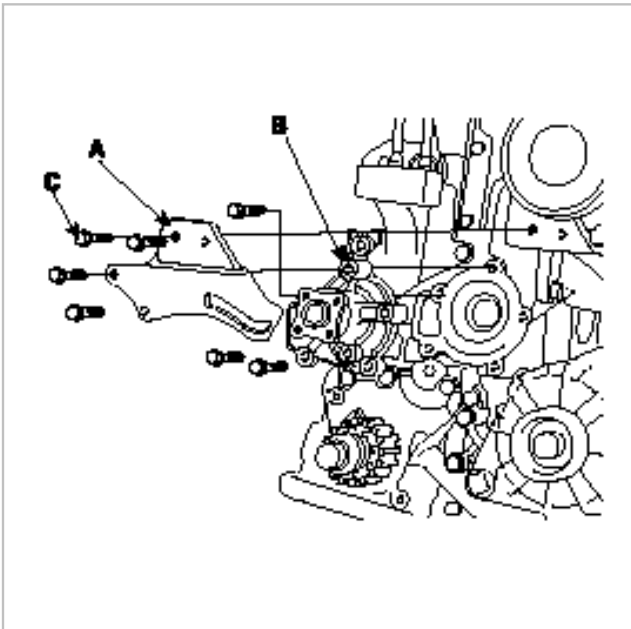
### WATER PUMP

1. Drain the engine coolant.

#### 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.

2. Remove drive belts.
3. Remove the timing belt. (see page EM-25)
4. Remove the timing belt idler. (see page EM-28 )
5. Remove the water pump.
  - (1) Remove the 4 bolts and pump pulley.
  - (2) Remove the 2 bolts, then remove the alternator brace (A).
  - (3) Remove the water pump (B) and gasket.



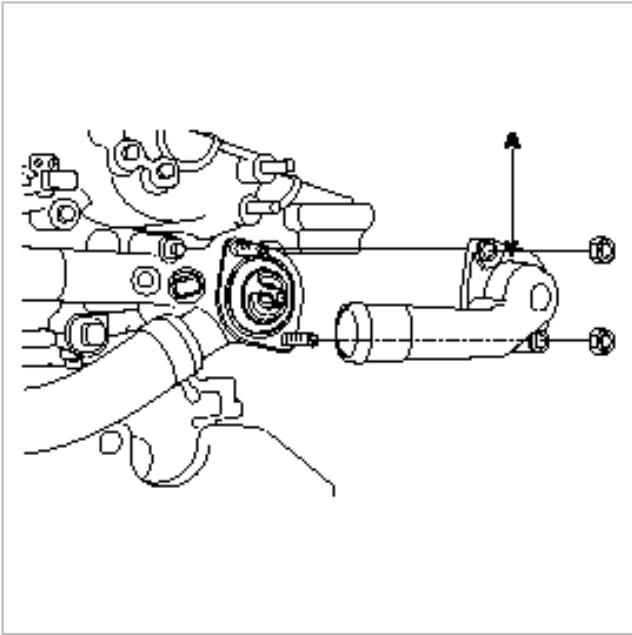
### THERMOSTAT

#### NOTE

Removal of the thermostat would have an adverse effect, causing a lowering of cooling efficiency. Do not remove the thermostat, even if the engine tends to overheat.

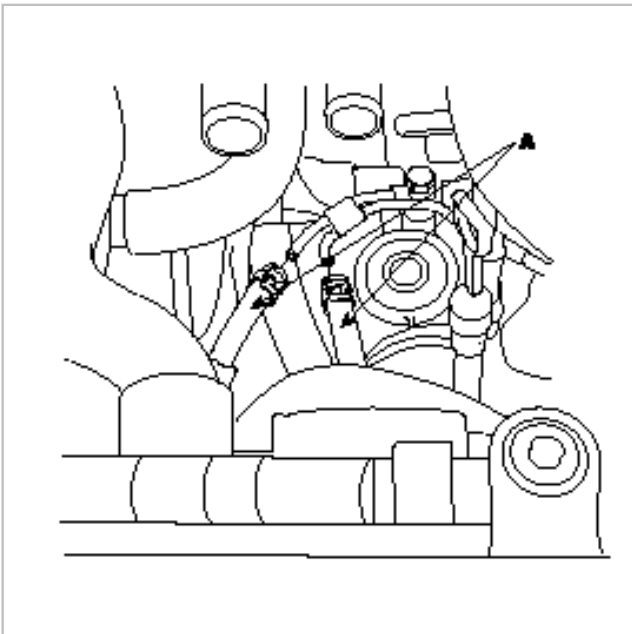
1. Drain engine coolant so its level is below thermostat.

2. Remove water inlet (A), gasket and thermostat.

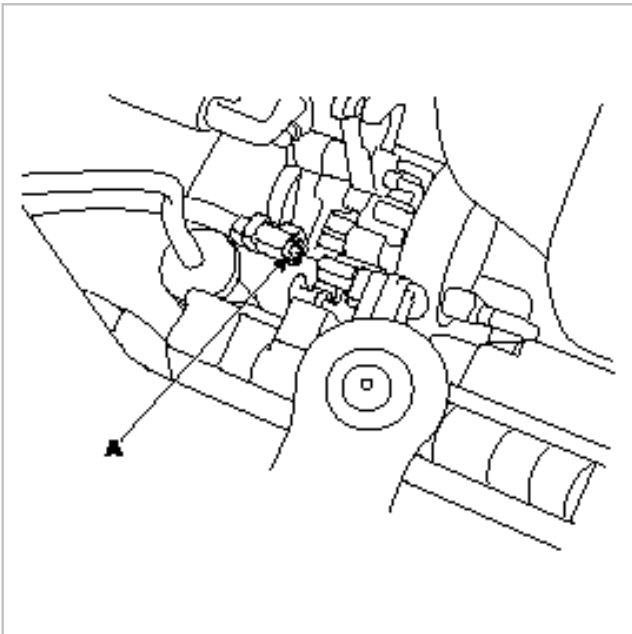
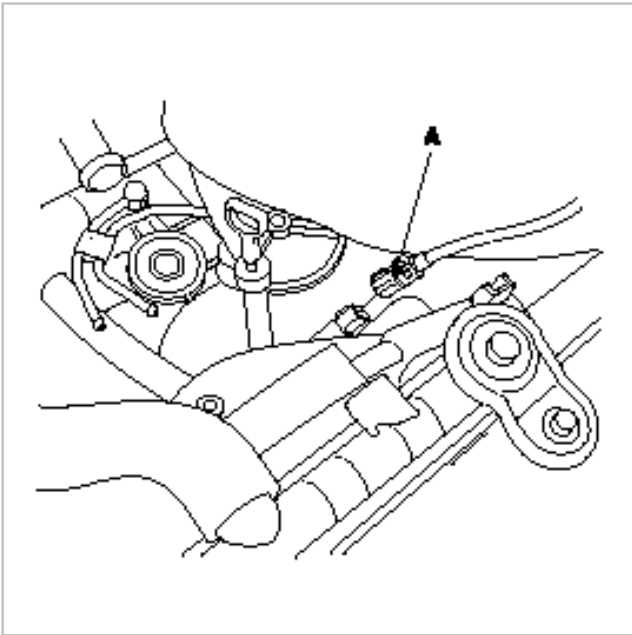


## RADIATOR

1. Drain the engine coolant.
2. Remove the upper and lower radiator hoses(A), and ATF cooler hoses.

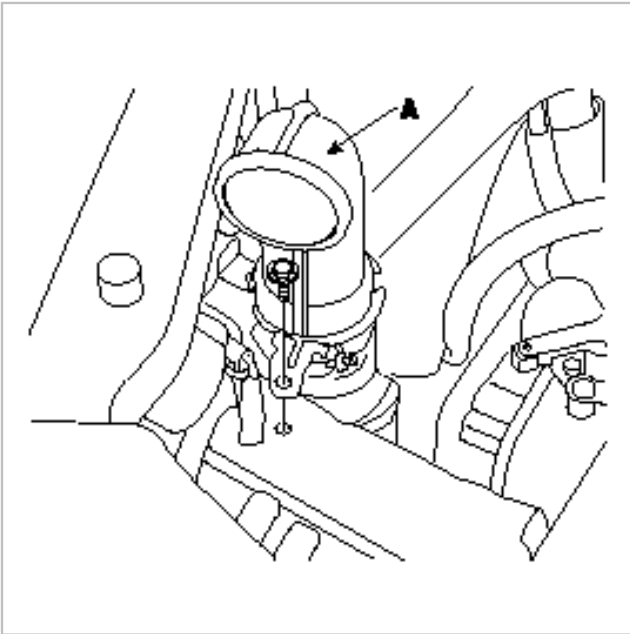


3. Disconnect the fan motor connector.

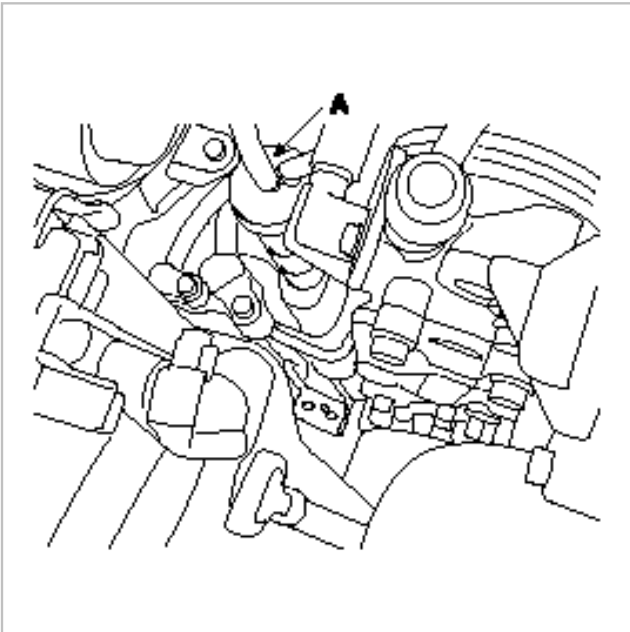


4. Separate the air conditioner condenser with radiator.

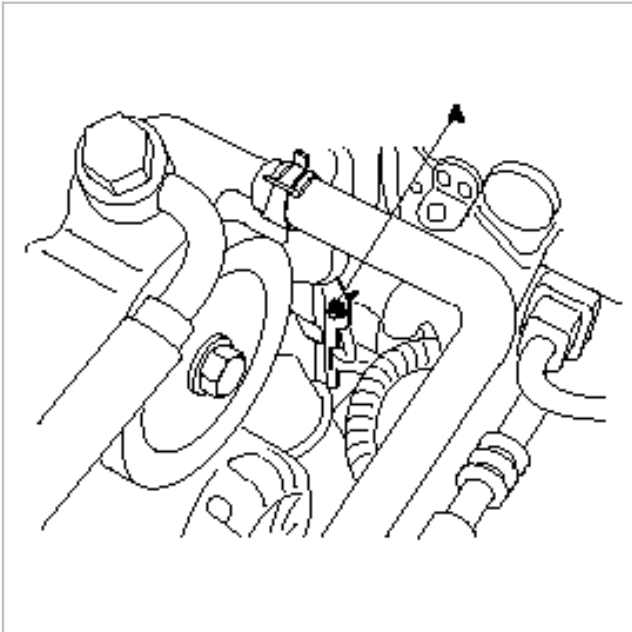
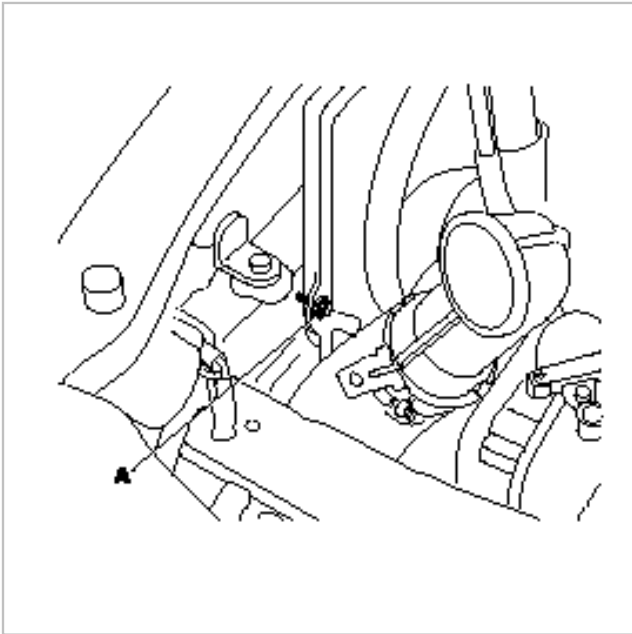
- (1) Remove the heat shield.
- (2) Remove the battery and battery tray.
- (3) Remove the air duct (A) and make the task space.



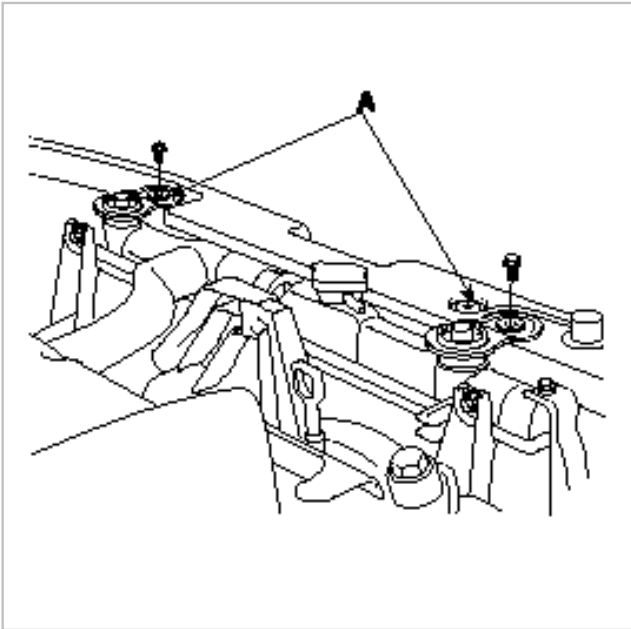
(4) Remove the reservoir tank (A) and make the task space.



(5) Remove the 10mm bolt.



5. Remove the radiator upper bracket(A), then pull up the radiator.

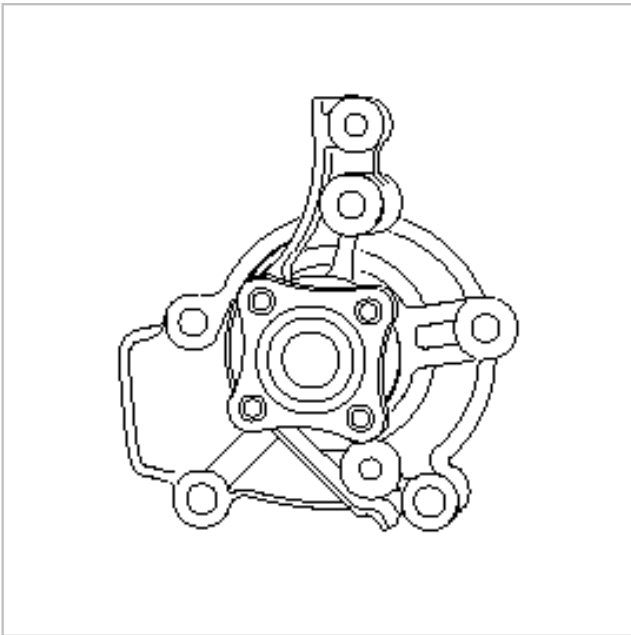


6. Remove the cooling fan from the radiator.

## INSPECTION

### WATER PUMP

1. Check each part for cracks, damage or wear, and replace the coolant pump assembly if necessary.
2. Check the bearing for damage, abnormal noise and sluggish rotation, and replace the coolant pump assembly if necessary.



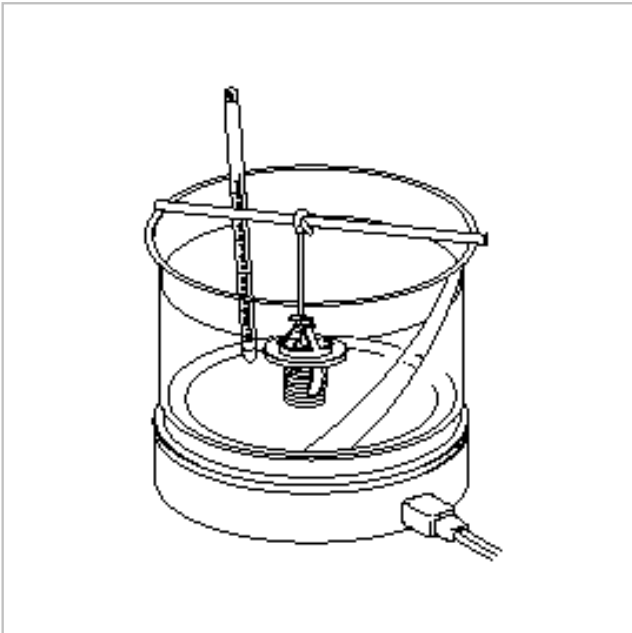
3. Check for coolant leakage. If coolant leaks from hole, the seal is defective. Replace the coolant pump assembly

#### NOTE

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

### THERMOSTAT

1. Immerse the thermostat in water and gradually heat the water.



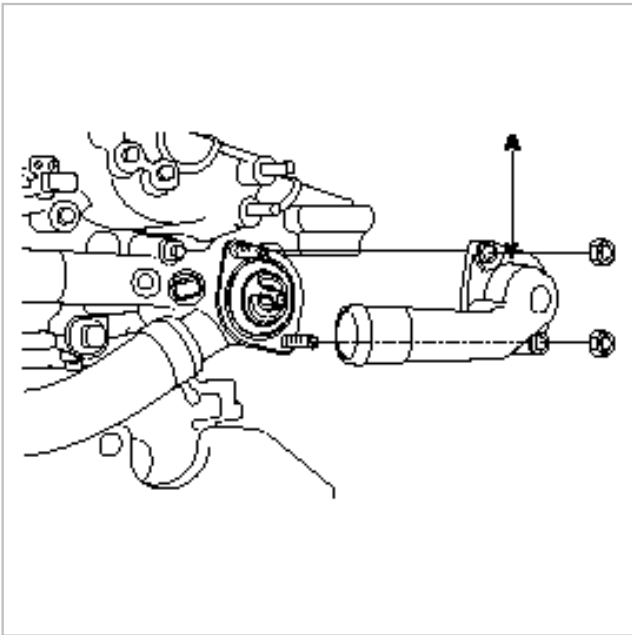
2. Check the valve opening temperature.

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Valve opening temperature : 82 °C(177 °F)

Full opening temperature : 95 °C(205 °F)

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If the valve opening temperature is not as specified, replace the thermostat.

3. Check the valve lift.

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Valve lift : 8mm(0.3in.) or more at 95 °C(205 °F)

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If the valve lift is not as specified, replace the thermostat.

## INSTALLATION

### WATER PUMP

1. Install the water pump.

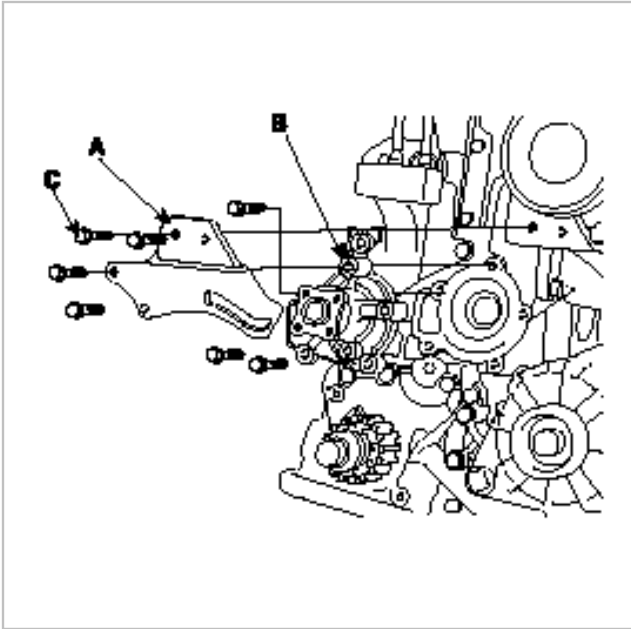
- (1) Install the water pump (A) and a new gasket with the 3 bolts.

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**Tightening torque**

20 ~ 27Nm (200 ~ 270kgf.cm, 15 ~ 20lb.ft)

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- (2) Install the alternator brace (A) with the 2 bolts.

- (3) Install the 4 bolts and pump pulley.

2. Install the timing belt idler.(see page- )

3. Install the timing belt.(see page- )

4. Install drive belts.

5. Fill with engine coolant.

6. Start engine and check for leaks.

7. Recheck engine coolant level.

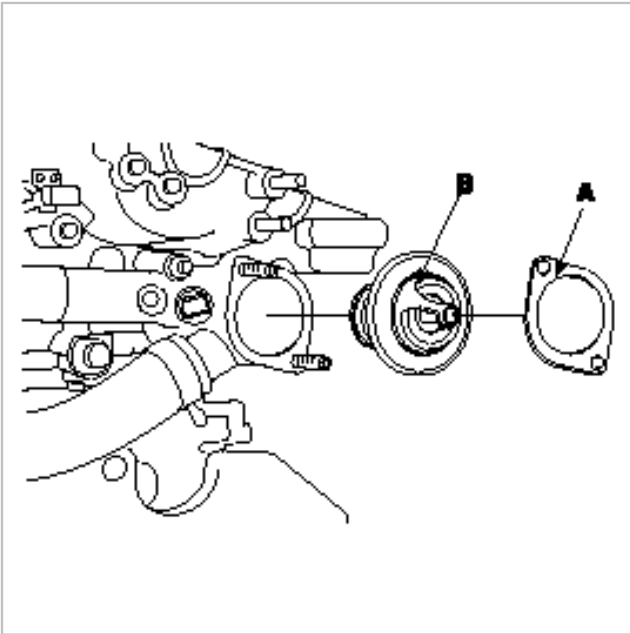
**THERMOSTAT**

1. Place thermostat in thermostat housing.

- (1) Install the thermostat with the jiggle valve upward.

- (2) Install a new gasket (A) to the thermostat (B).





2. Install water inlet (A).

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### **Tightening torque**

15 ~ 20Nm (150 ~ 200kf.cm, 9 ~ 14lb.ft)

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3. Fill with engine coolant.
4. Start engine and check for leaks.

## **RADIATOR**

1. Install the cooling fan to the radiator.
2. Install the radiator at the air conditioner condenser.  
Installation is in the reverse order of removal.
3. Connect the fan motor connector.
4. Install the upper and lower radiator hoses, and ATF cooler hoses.
5. Fill with engine coolant.
6. Start engine and check for leaks.