

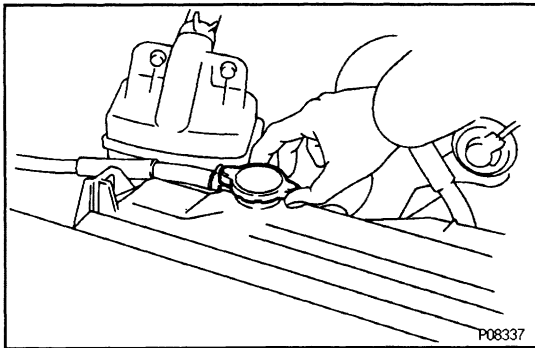
RADIATOR

RADIATOR CLEANING

EG074-01

Using water or a steam cleaner, remove any mud and dirt from the radiator core.

NOTICE: If using a high pressure type cleaner, be careful not to deform the fins of the radiator core. If the cleaner nozzle pressure is 2,942 – 3,432 kPa (30 – 35 kgf/cm², 427 – 498 psi), keep a distance of at least 40 – 50 cm (15.75 – 19.69 in.) between the radiator core and cleaner nozzle.

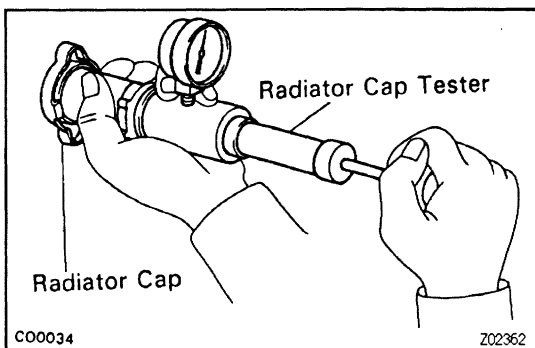


RADIATOR INSPECTION

EG1J6-01

1. REMOVE RADIATOR CAP

CAUTION: To avoid the danger of being burned, do not remove it while the engine and radiator are still hot, as fluid and steam can be blown out under pressure.



2. INSPECT RADIATOR CAP

Using a radiator cap tester, pump the tester and measure the relief valve opening pressure.

Standard opening pressure:

74 – 103 kPa

(0.75 – 1.05 kgf/cm², 10.7 – 14.9 psi)

Minimum opening pressure:

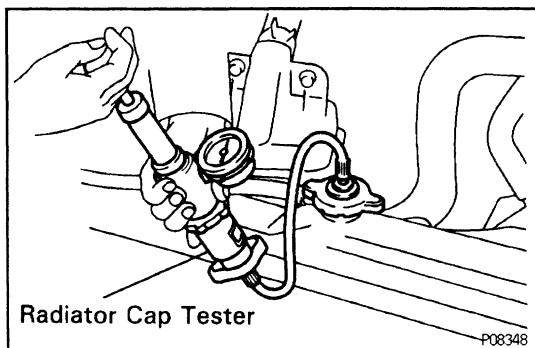
59 kPa (0.6 kgf/cm², 8.5 psi)

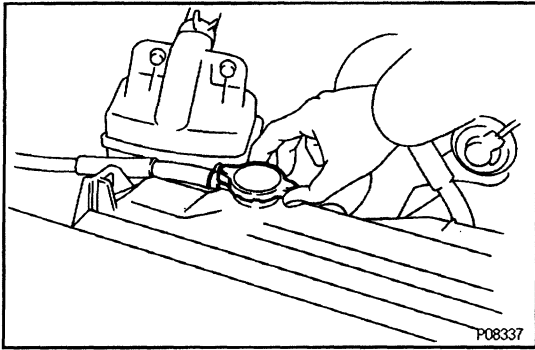
If the opening pressure is less than minimum, replace the radiator cap.

3. INSPECT COOLING SYSTEM FOR LEAKS

- Fill the radiator with coolant and attach a radiator cap tester.
- Warm up the engine.
- Pump it to 118 kPa (1.2 kgf/cm², 17.1 psi), and check that the pressure does not drop.

If the pressure drops, check the hoses, radiator or water pump for leaks. If no external leaks are found, check the heater core, cylinder block and head.

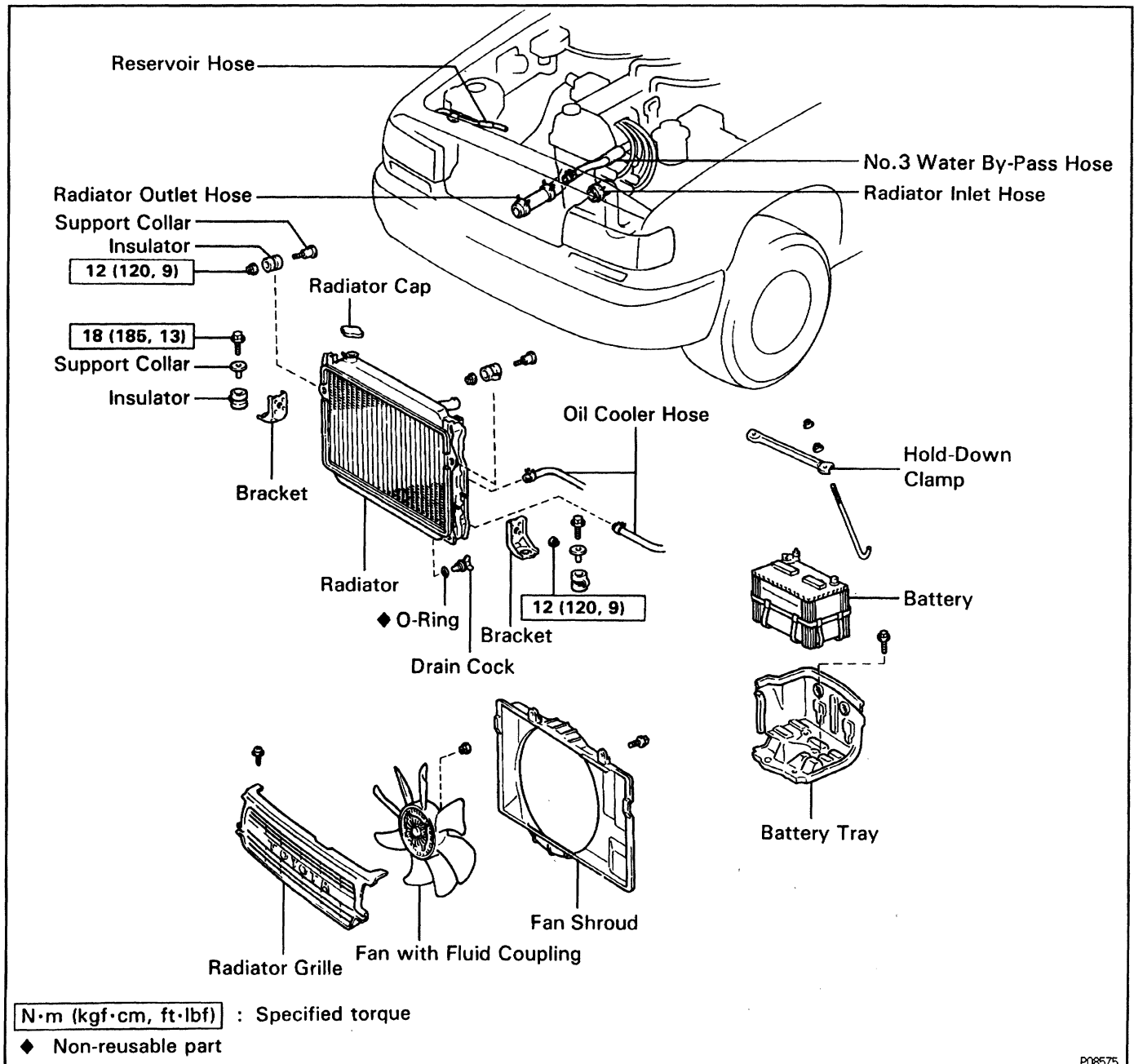


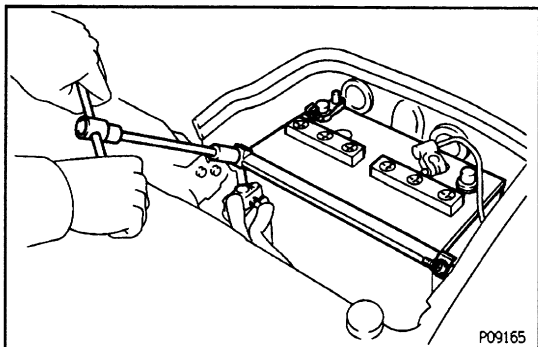


4. REINSTALL RADIATOR CAP

COMPONENTS FOR REMOVAL AND INSTALLATION

E01J6-01





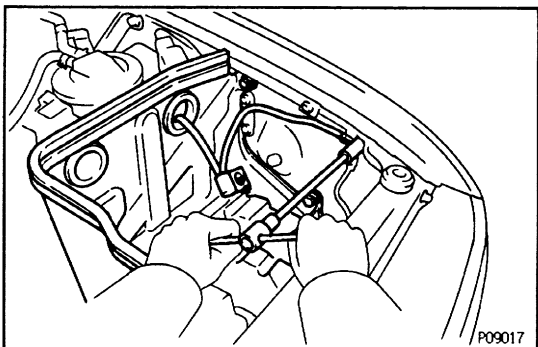
RADIATOR REMOVAL

(See Components for Removal and Installation)

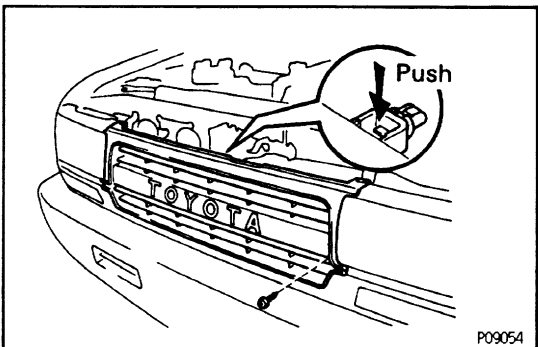
1. DRAIN ENGINE COOLANT

2. REMOVE BATTERY AND BATTERY TRAY

- (a) Disconnect the battery cables.
- (b) Remove the nuts, hold-down clamp and battery.

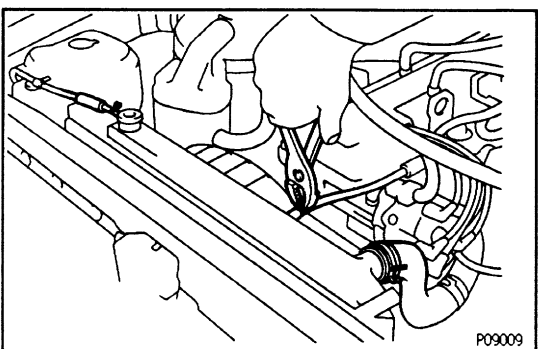


- (c) Remove the bolt and disconnect the ground strap.
- (d) Remove the five bolts and battery tray.



3. REMOVE RADIATOR GRILLE

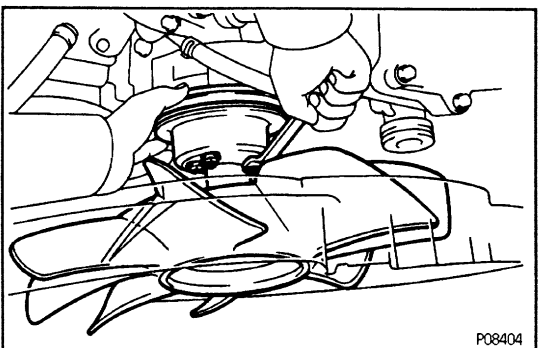
Remove the five screws, clip and radiator grille.



4. DISCONNECT NO.3 WATER BY- PASS HOSE

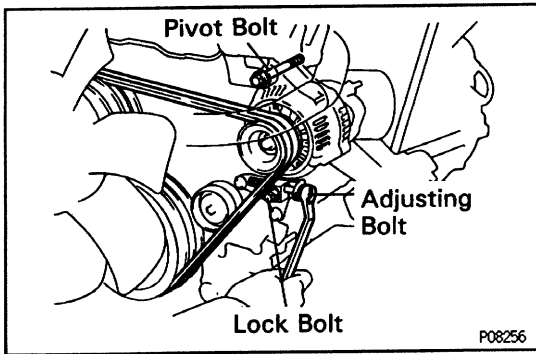
5. DISCONNECT RADIATOR INLET HOSE

6. DISCONNECT RADIATOR RESERVOIR HOSE

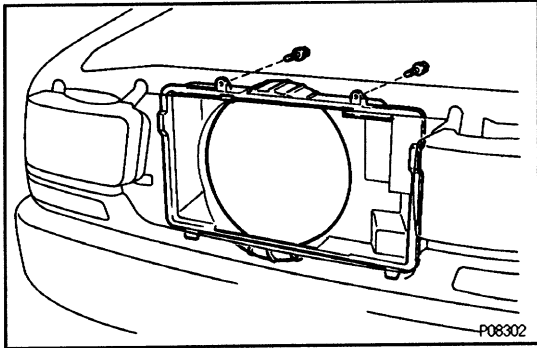


7. REMOVE RADIATOR

- (a) Stretch the belts and loosen the water pump pulley mounting nuts.



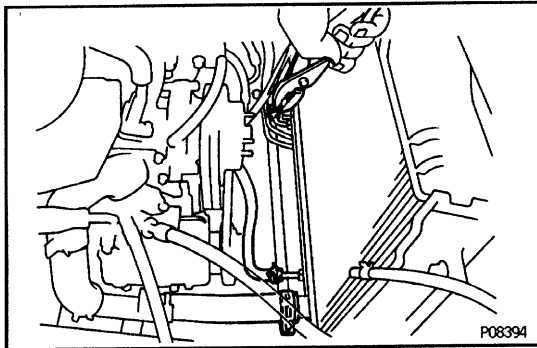
- (b) Loosen the lock, pivot and adjusting bolts of the generator, and remove the drive belts.



- (c) Remove the two bolts holding the fan shroud to the radiator.

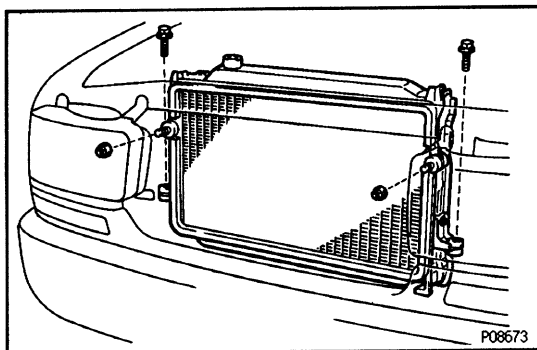
- (d) Remove the four water pump pulley mounting nuts.

- (e) Pull out the fan with fluid coupling, water pump pulley and fan shroud.



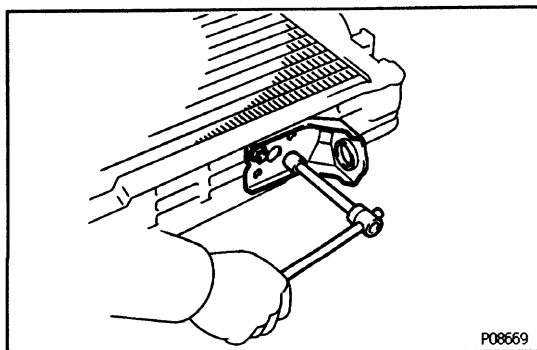
8. DISCONNECT A/T OIL COOLER HOSES

9. DISCONNECT RADIATOR OUTLET HOSE



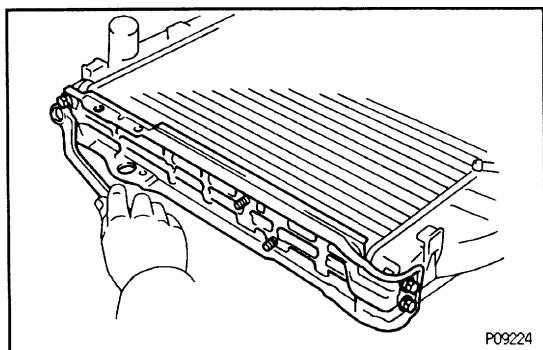
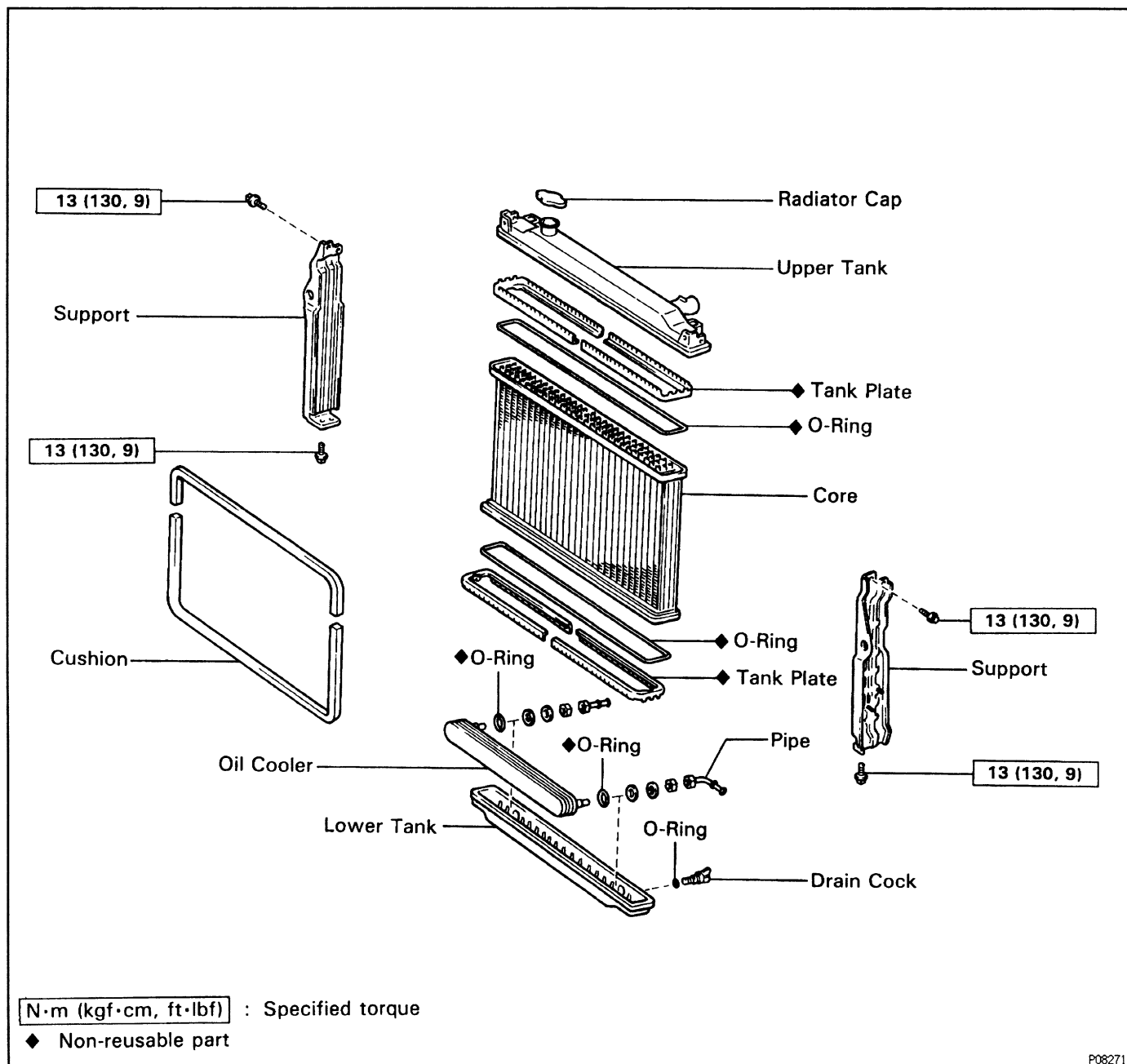
10. REMOVE RADIATOR

- (a) Remove the two bolts, two nuts and radiator.



- (b) Remove the four nuts and two radiator brackets.

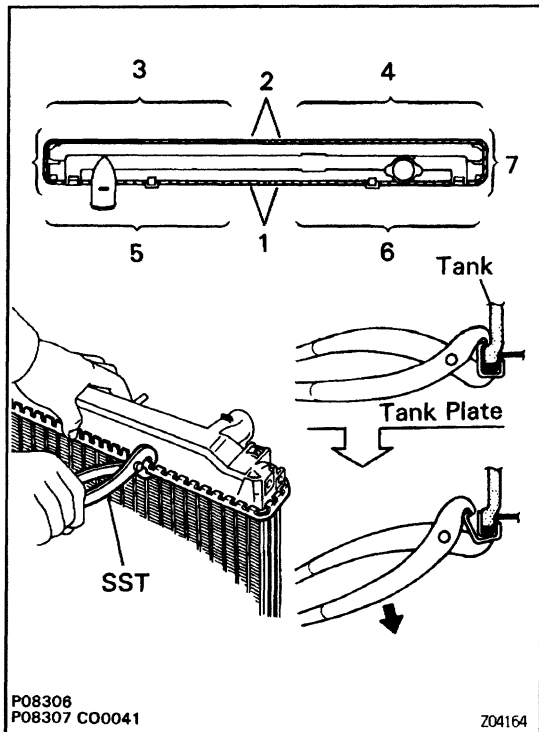
COMPONENTS FOR DISASSEMBLY AND ASSEMBLY



RADIATOR DISASSEMBLY

1. REMOVE SUPPORTS

Remove the eight bolts and two supports.



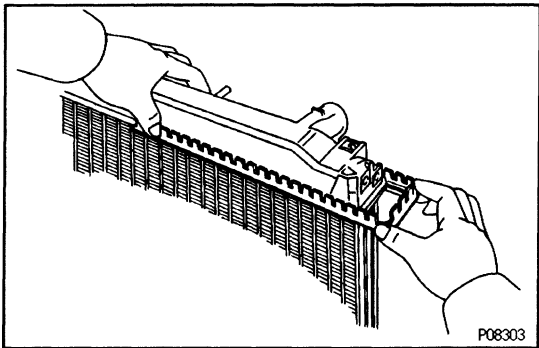
2. REMOVE TANK PLATE

- (a) Raise the claws of the tank plates with SST in the numerical order shown in the illustration.

SST 09230-00010

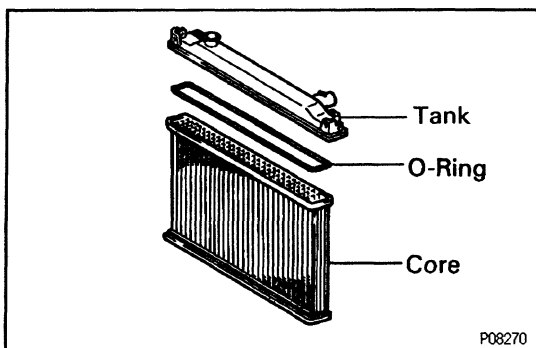
NOTICE: Be careful not to damage the core plate.

- (b) Pull the tank plates outward.



3. REMOVE TANK

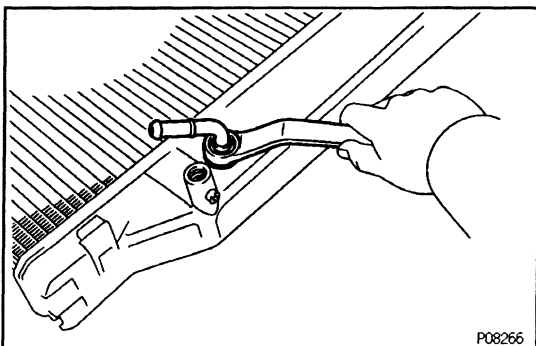
- (a) Pull the tank upward.
(b) Remove the O-ring.

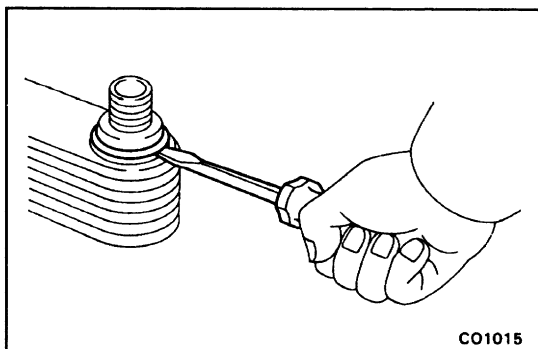


4. REMOVE OIL COOLER FROM LOWER TANK

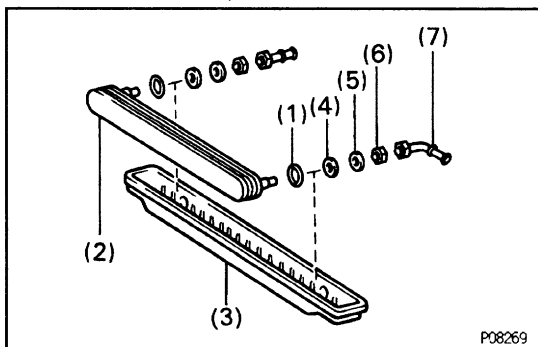
- (a) Remove the pipes.

HINT: Make a note of the direction the pipes face.





- (b) Remove the nuts, spring washers, plate washers and oil cooler.
- (c) Remove the O-ring from the oil cooler.



RADIATOR ASSEMBLY

E01JA-01

(See Components for Disassembly and Assembly)

1. INSTALL OIL COOLER TO LOWER TANK

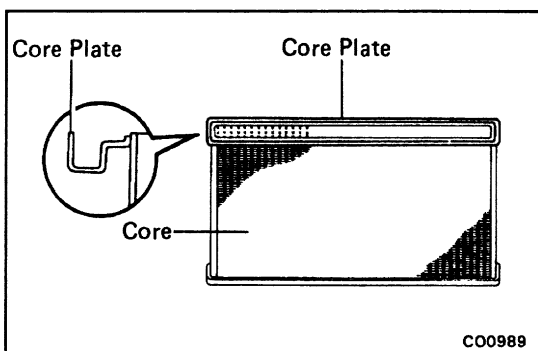
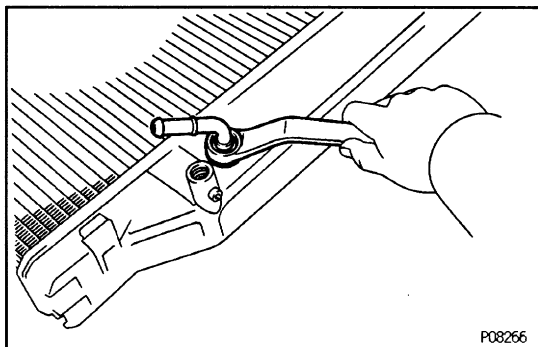
- (a) Clean the O-ring contact surface of the lower tank and oil cooler.
- (b) Install new O-rings (1) to the oil cooler (2).
- (c) Install the oil cooler (2) to the lower tank (3).
- (d) Install the plate washers (4), spring washers (5) and nuts (6). Torque the nuts.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

- (e) Install the pipes (7).

Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)

HINT: Face the pipes in the same direction as they were before disassembly.



2. CHECK CORE PLATE FOR DAMAGE

HINT:

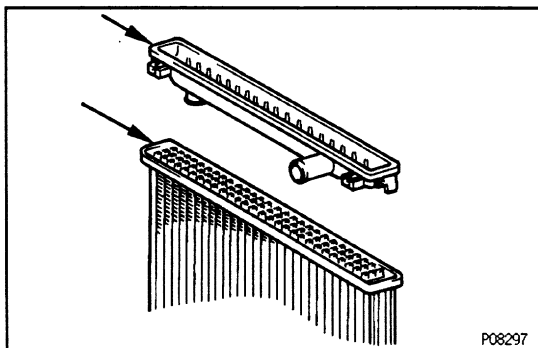
- If the sides of the core plate groove are deformed, reassembly of the tank will be impossible. Therefore, first correct any deformation with pliers.
- Water leakage will result if the bottom of the core plate groove is damaged or dented. Therefore, repair or replace if necessary.

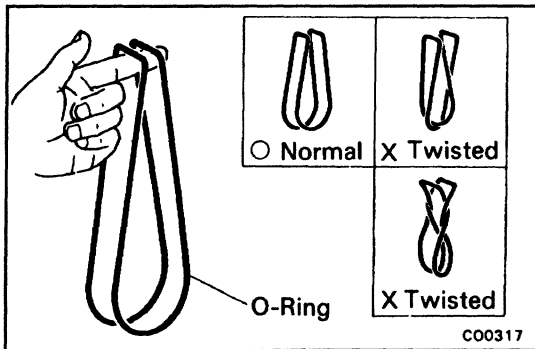
3. INSTALL TANK

Install a new O-ring and the tank.

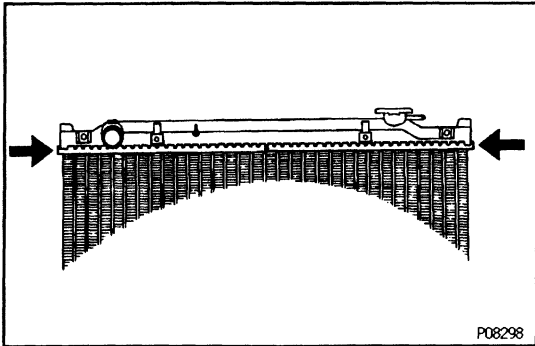
HINT:

- Clean the tank and core plate.



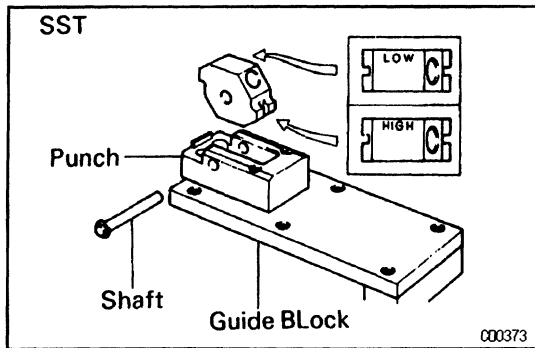


- Take out any twists.



4. INSTALL TANK PLATE

Insert new tank plates from both ends in the direction of the arrows. Firmly set the tank plates in the core plate.

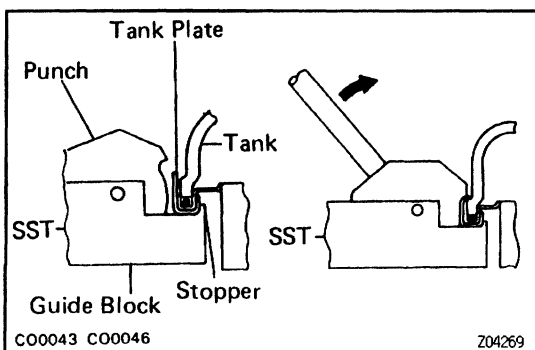
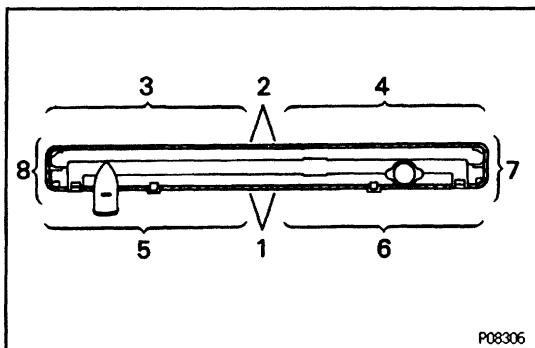


5. STAKE CLAWS OF TANK PLATES

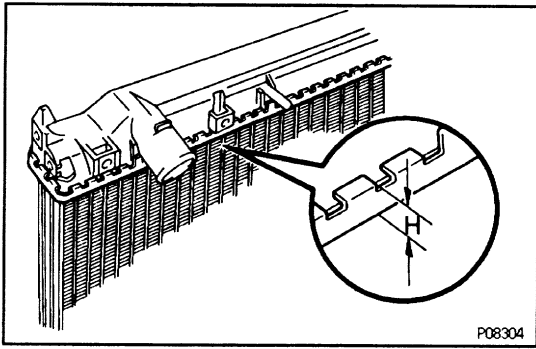
- (a) Set the punch of SST to "LOW".

SST 09230 - 00010

- (b) Stake the claws of the tank plates with SST in the numerical order shown in the illustration.



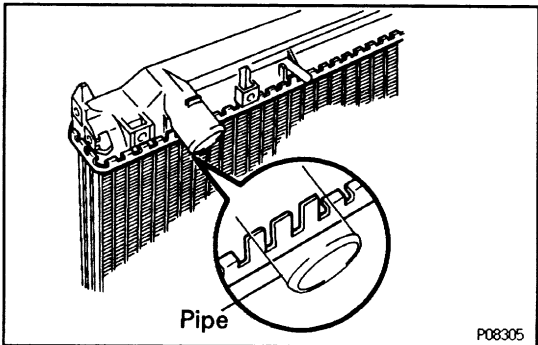
NOTICE: If the bottom of the core plate is staked with the SST on the guide block stopper, it may result in water leakage.

**HINT:**

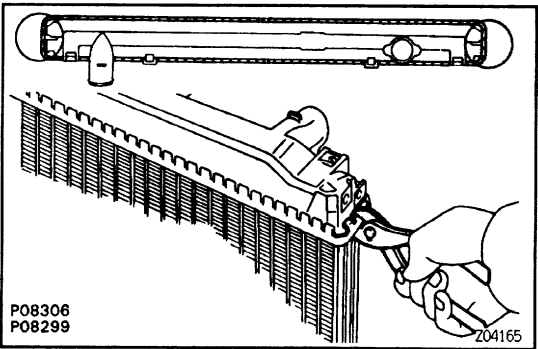
- Stake with just enough pressure to leave a mark on the claw. The staked plate height (H) should be as follows:

Plate height (H):

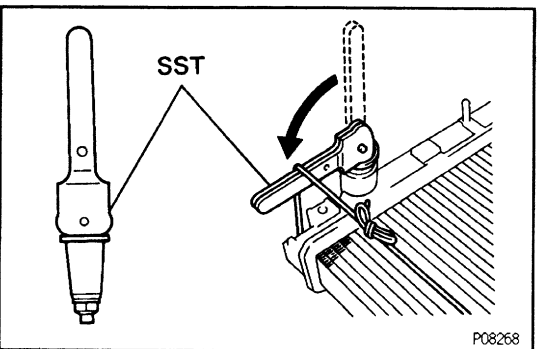
8.2 – 9.6 mm (0.362 – 0.378 in.)



- Do not stake the areas protruding around the pipes.



- The points shown in the illustration cannot be staked with the SST. Use pliers and be careful not to damage the core plates.

**6. CHECK FOR WATER LEAKS**

- Tighten the drain plug.
- Plug the inlet and outlet pipes of the radiator with SST.

SST 09231 -00060

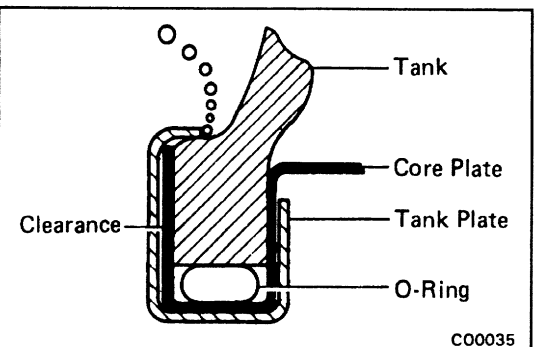
- Using a radiator cap tester, apply pressure to the radiator.

Test pressure:

147 kPa (1.5 kgf/cm², 21 psi)

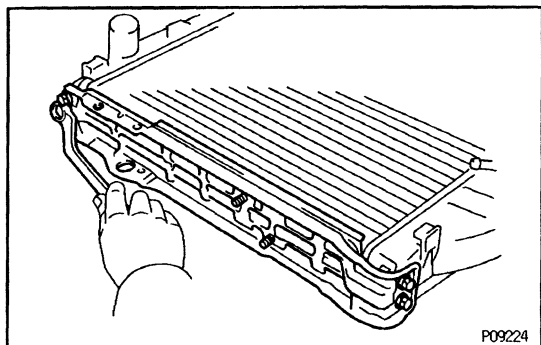
- Check for water leaks.

HINT: On radiators with resin tanks, there is a clearance between the core plate and tank plate where a minute amount of air will remain, giving the appearance of an air leak when the radiator is submerged in water. Therefore, before performing the water leak test, first swirl the radiator around in the water until all air bubbles disappear.



7. PAINT TANK PLATE

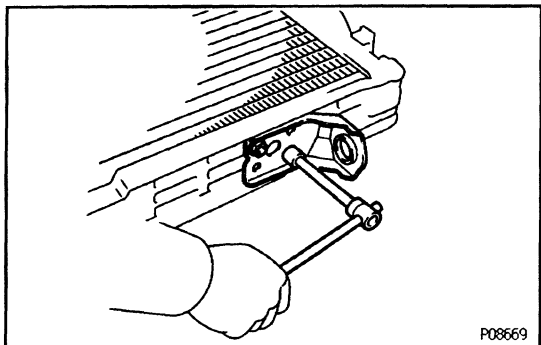
HINT: If the water leak test checks out okay, allow the radiator to completely dry and– then paint the tank plate.



8. INSTALL SUPPORTS

Install the two supports with the eight bolts.

Torque: 13 N-m (130 kgf-cm, 9 ft-lbf)



RADIATOR INSTALLATION

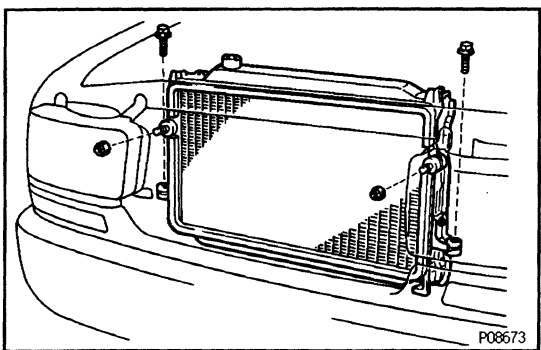
EG1JB-01

(See Components for Removal and Installation)

1. INSTALL RADIATOR

(a) Install the two radiator brackets with the four nuts.

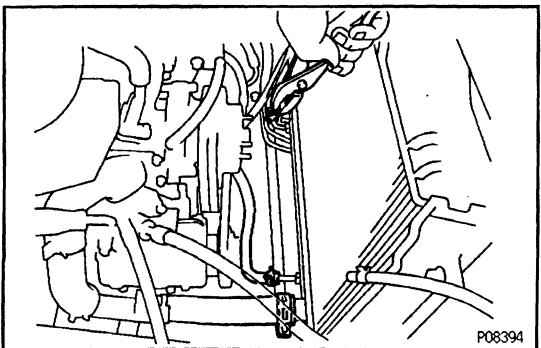
Torque: 12 N-m (120 kgf-cm, 9 ft-lbf)



(b) Install the radiator with the two bolts and two nuts.

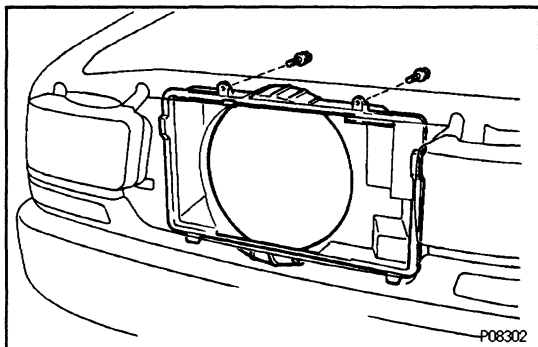
Torque: 18 N-m (185 kgf-cm, 13 ft-lbf) for Bolt

Torque: 12 N-m (120 kgf-cm, 9 ft-lbf) for Nut



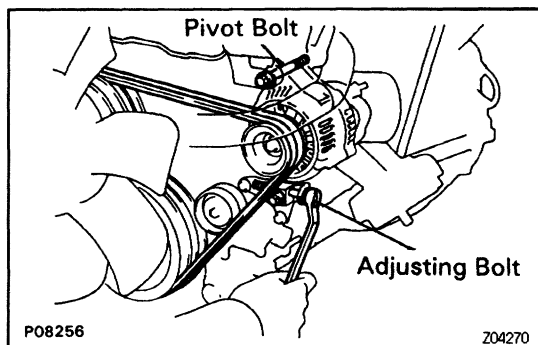
2. CONNECT A/T OIL COOLER HOSES

3. CONNECT RADIATOR OUTLET HOSE

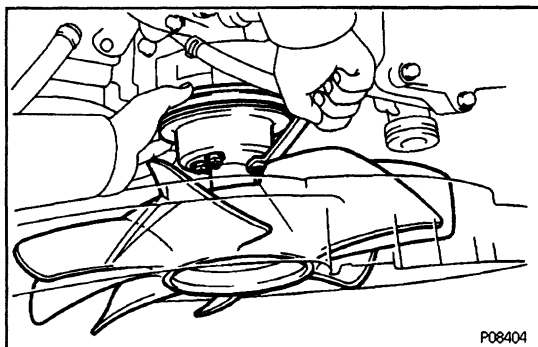


4. INSTALL WATER PUMP PULLEY, FAN SHROUD, FAN WITH FLUID COUPLING AND DRIVE BELTS

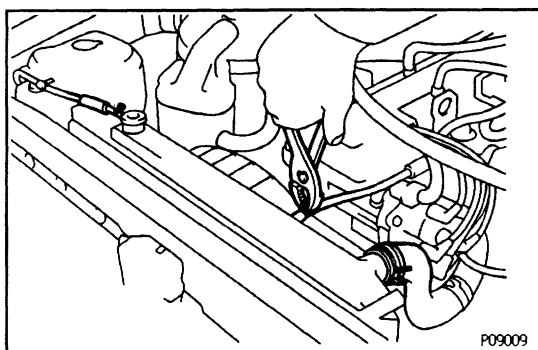
- (a) Place the fan with fluid coupling, water pump pulley and fan shroud in position.
- (b) Temporarily install the fan pulley mounting nuts.
- (c) Install the fan shroud with the two bolts.



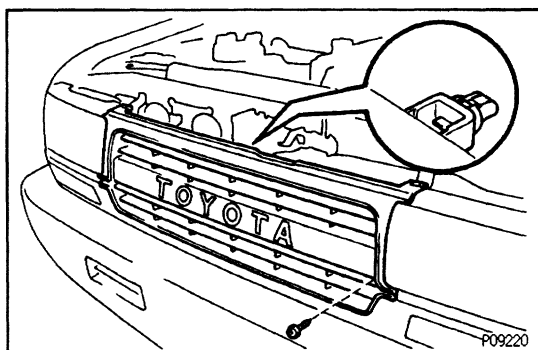
- (d) Install the drive belts with the adjusting bolt and pivot bolt.



- (e) Stretch the belts tight and tighten the four water pump pulley mounting nuts.
- (f) Adjust the drive belts.
(See CH section)

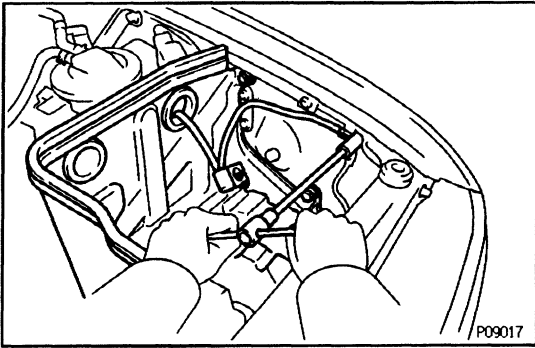


- 5. CONNECT RADIATOR RESERVOIR HOSE
- 6. CONNECT RADIATOR INLET HOSE
- 7. CONNECT NO.3 WATER BY-PASS HOSE

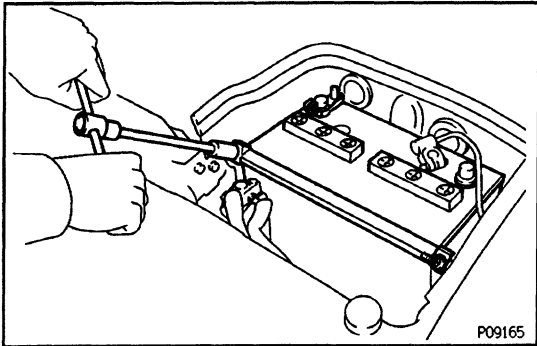


8. INSTALL RADIATOR GRILLE

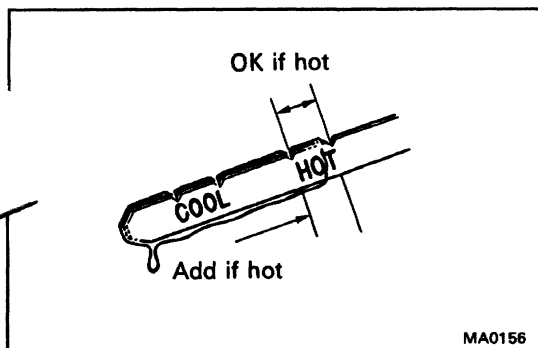
Install the radiator grille with the five screws and clip.

**9. INSTALL BATTERY AND BATTERY TRAY**

- (a) Install the battery tray with the five bolts.
- (b) Connect the ground strap with the bolt.



- (c) Install the battery with the hold-down clamp and nuts.
- (d) Connect the battery cables.

10. FILL WITH ENGINE COOLANT**11. START ENGINE AND CHECK FOR LEAKS****12. CHECK AUTOMATIC TRANSMISSION FLUID LEVEL**

Fluid type:

ATF DEXRON® II

NOTICE: Do not overfill.