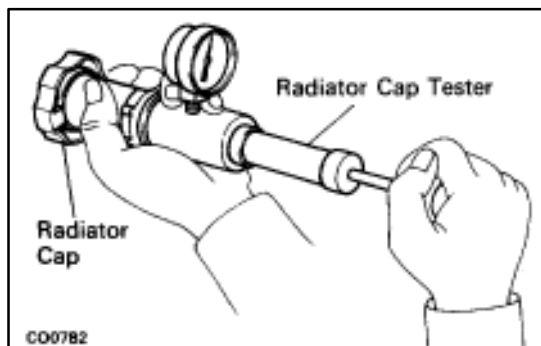


## RADIATOR

### CLEANING OF RADIATOR

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/cm<sup>2</sup>, 427–498 psi), keep a distance at least 40–50 cm (15.75–19.69 in.) between the radiator core and cleaner nozzle.



### INSPECTION OF RADIATOR

1. REMOVE RADIATOR CAP FROM RESERVOIR TANK
2. INSPECT RADIATOR CAP

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

**Standard opening pressure:**

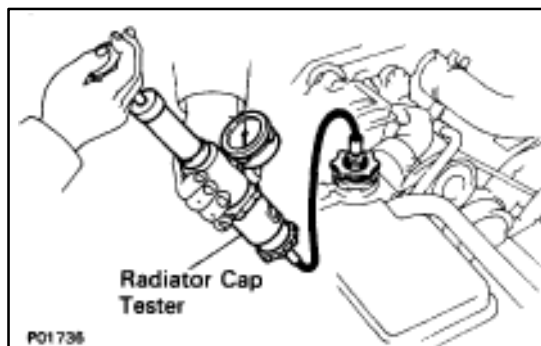
74–103 kPa

(0.75–1.05 kgf/cm, 10.7–14.9 psi)

**Minimum opening pressure:**

59 kPa (0.6 kgf/cm, 8.5 psi)

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



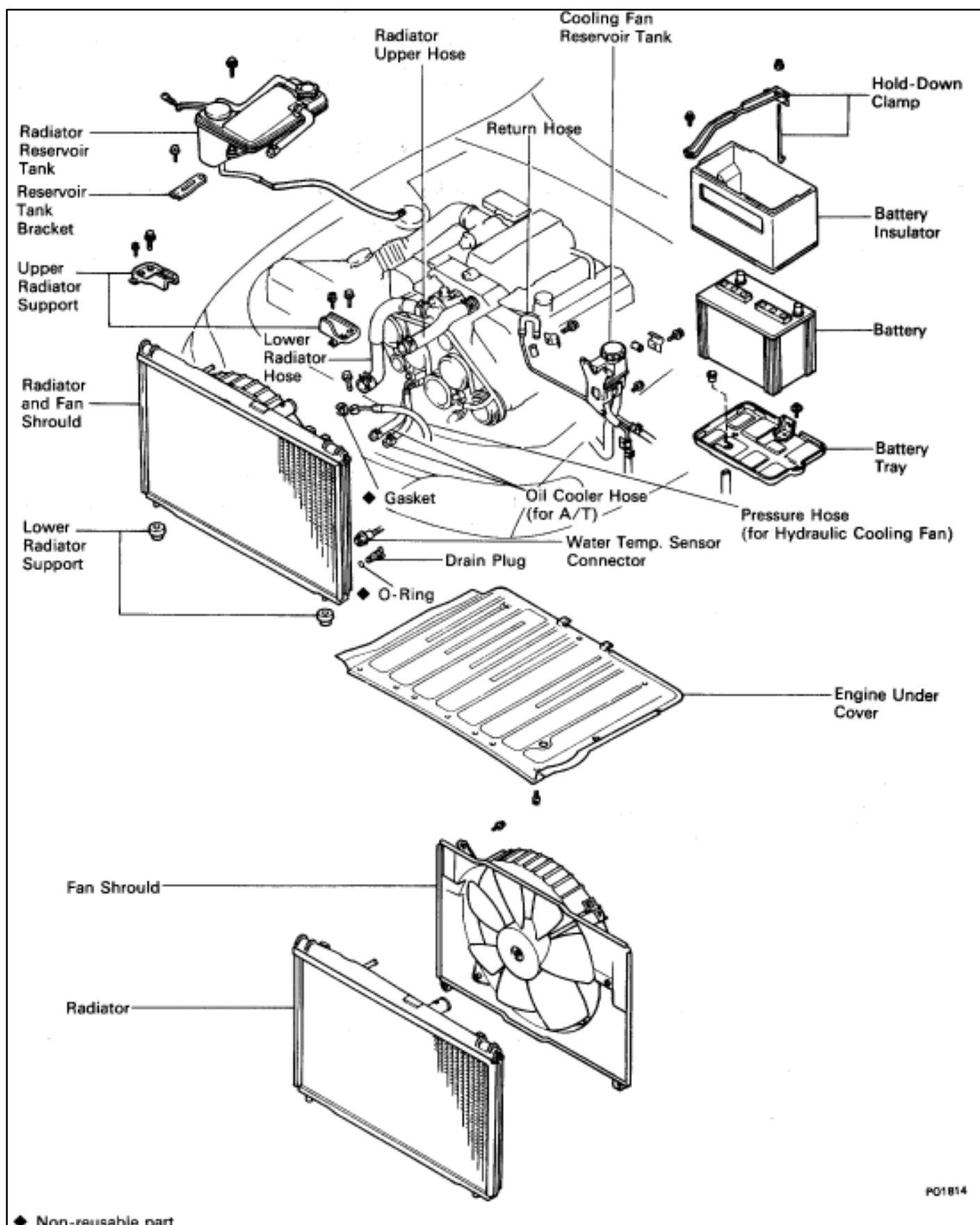
3. INSPECT COOLING SYSTEM FOR LEAKS

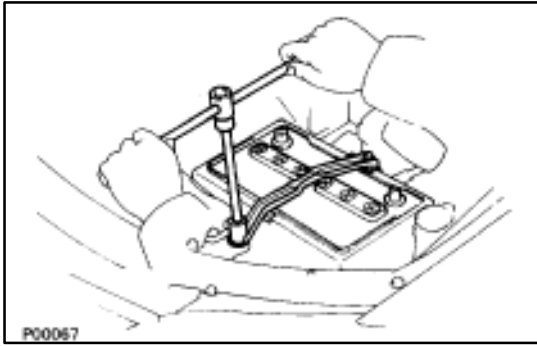
- (a) Fill the radiator with coolant and attach a radiator cap tester to the reservoir tank.
- (b) Warm up the engine.
- (c) Pump it to 118 kPa (1.2 kgf/cm<sup>2</sup>, 17.1 psi), check that pressure does not drop.

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

4. REINSTALL RADIATOR CAP

## COMPONENTS FOR REMOVAL AND INSTALLATION





## REMOVAL OF RADIATOR

(See Components on page [CO-15](#))

### 1. REMOVE BATTERY

CAUTION: Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (–) terminal cable is disconnected from the battery.

### 2. REMOVE ENGINE UNDER COVERS

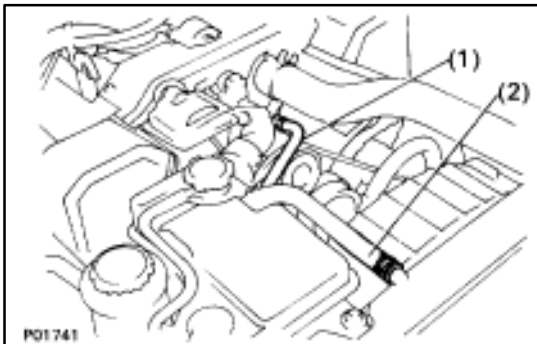
### 3. DRAIN ENGINE COOLANT (See page [CO-6](#))

### 4. REMOVE RADIATOR RESERVOIR TANK

(a) Disconnect the coolant level sensor connector.

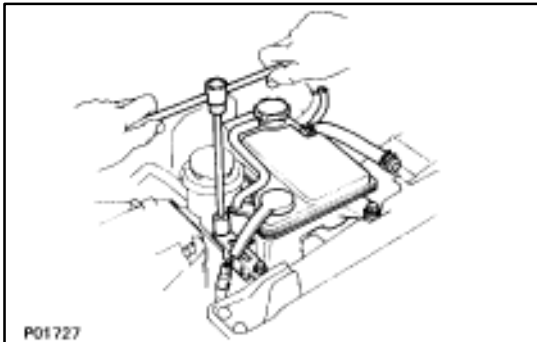
(b) Disconnect the following hoses:

- (1) Reservoir hose from water inlet housing
- (2) Reservoir hose from radiator



(c) Remove the two bolts and reservoir tank bracket.

(d) Disconnect the reservoir tank from the reservoir tank bracket, and remove the reservoir tank.



### 5. DISCONNECT HOSES

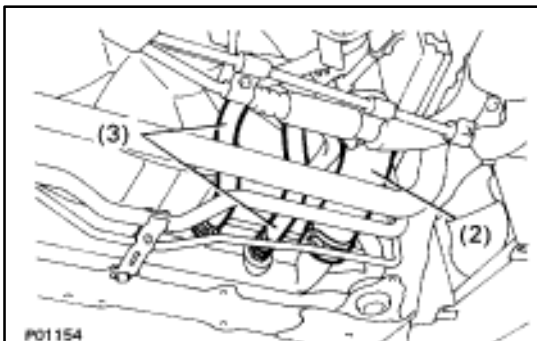
Disconnect the following hoses:

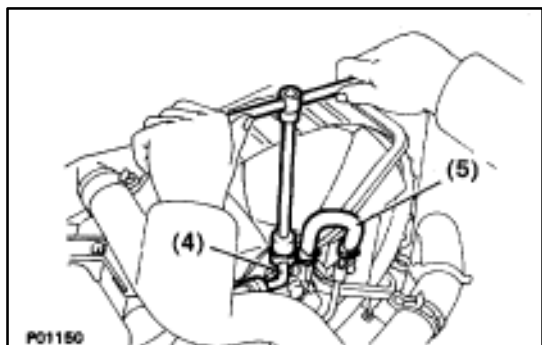
- (1) Upper radiator hose from radiator



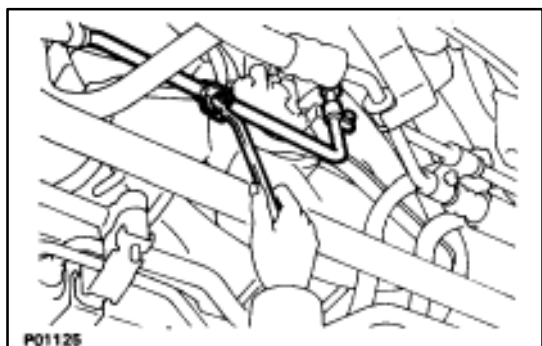
- (2) Lower radiator hose from radiator

- (3) Two oil cooler hoses (for A/T) from radiator. Plug hose end.



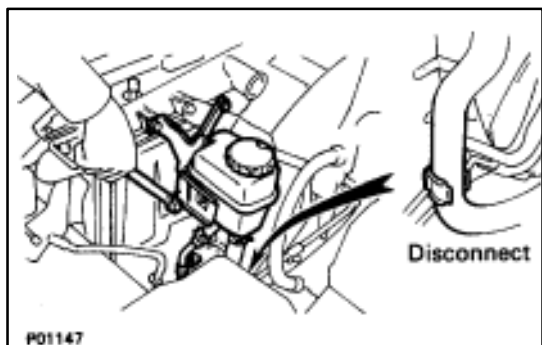


- (4) Pressure hose from hydraulic motor
- (5) Return hose from hydraulic motor



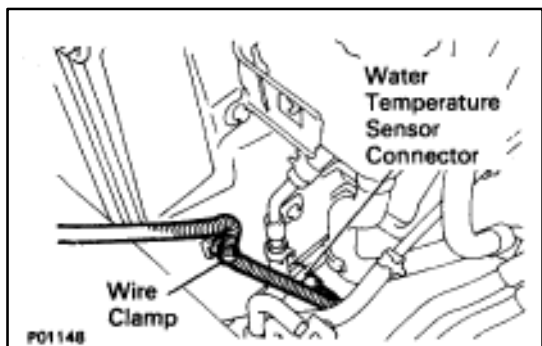
**6. DISCONNECT COOLING FAN INLET PIPE FROM FAN SHROULD**

Remove the two bolts, brackets and bushings, and disconnect the inlet pipe.



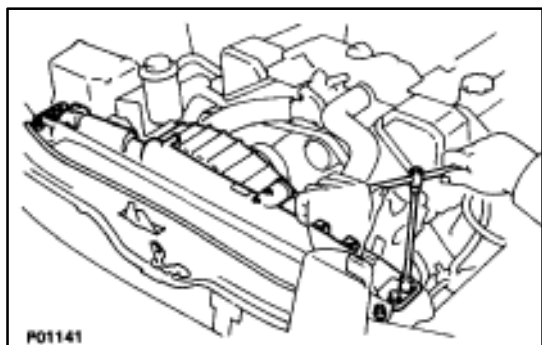
**7. DISCONNECT COOLING FAN RESERVOIR TANK FROM FAN SHROULD**

- (a) Disconnect the suction hose from the clamp on the fan shroud.
- (b) Remove the four bolts, and disconnect the reservoir tank.



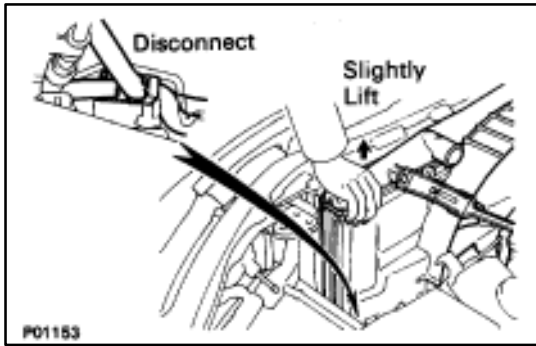
**8. DISCONNECT WATER TEMPERATURE SENSOR CONNECTOR**

- (a) Disconnect the water temperature sensor connector.
- (b) Disconnect the wire clamp from the radiator fan shroud.

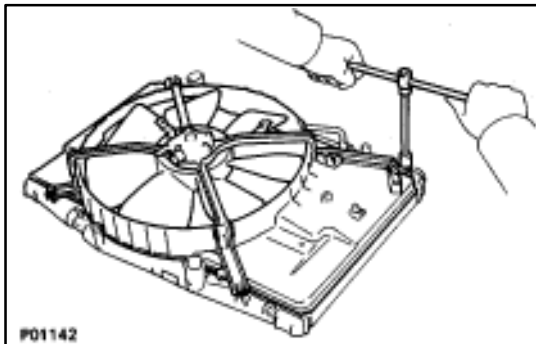


**9. REMOVE RADIATOR**

- (a) Remove the two bolts, screw and upper radiator support. Remove the two upper radiator supports.

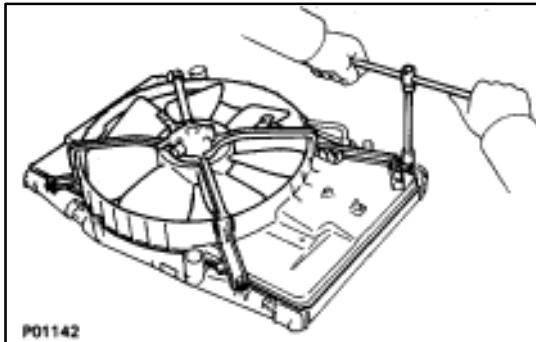


- (b) Slightly lift the radiator, and disconnect the two oil cooler hoses (for cooling fan) from the hose clamp on the radiator fan shroud.
- (c) Remove the radiator.
- (d) Remove the two lower radiator supports.



## 10. REMOVE FAN SHROULD FROM RADIATOR

Remove the four bolts and fan shroud.



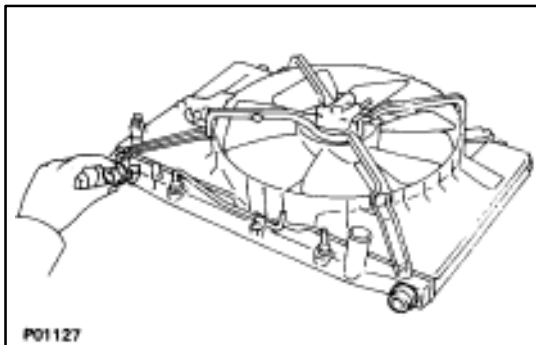
## INSTALLATION OF RADIATOR

(See Components on page [CO-15](#))

### 1. INSTALL FAN SHROULD TO RADIATOR

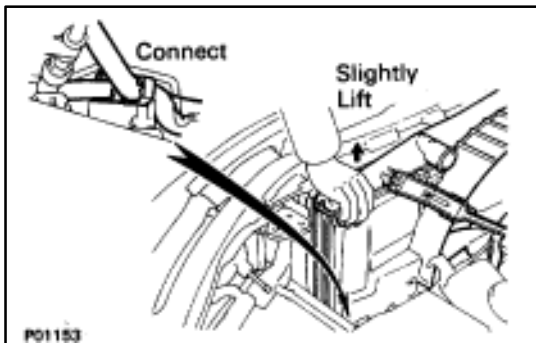
Install the fan shroud with the four bolts.

Torque: 4.9 N·m (50 kgf·cm, 43 in·lbf)

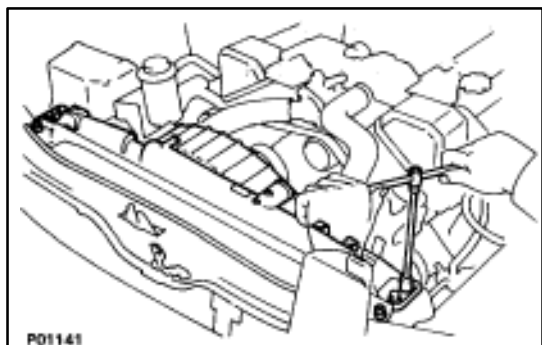


### 2. INSTALL RADIATOR

- (a) Install the two lower radiator supports to the radiator.

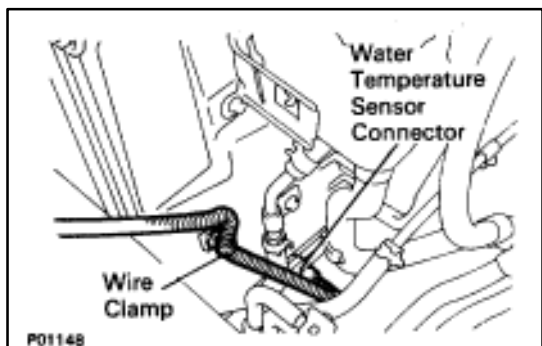


- (b) Place the radiator on the body bracket.
- (c) Slightly lift the radiator, and connect the two oil cooler hoses (for cooling fan) to the hose clamp on the radiator fan shroud.



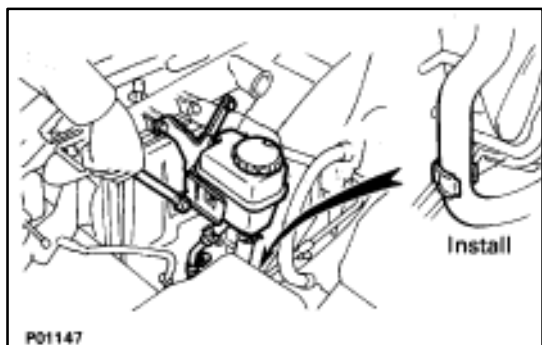
- (d) Install the upper radiator support with the two bolts and screw. Install the two upper radiator supports.

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



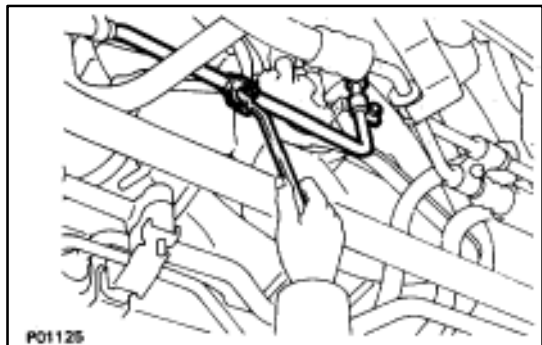
### 3. CONNECT WATER TEMPERATURE SENSOR CONNECTOR

- (a) Connect the water temperature sensor connector.  
(b) Install the wire clamp to the radiator fan shroud.



### 4. INSTALL COOLING FAN RESERVOIR TANK TO FAN SHROULD

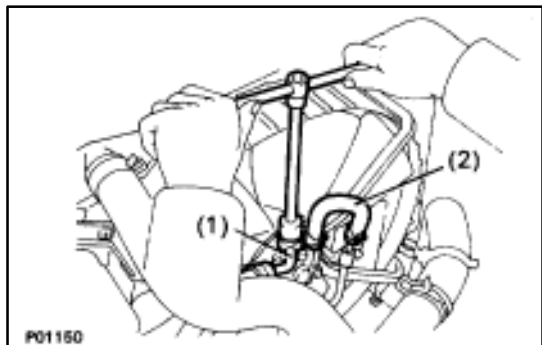
- (a) Install the reservoir tank with the four bolts.  
**Torque: 4.9 N·m (50 kgf·cm, 43 in·lbf)**  
(b) Install the suction hose to the clamp on the fan shroud.



### 5. INSTALL COOLING FAN INLET PIPE TO FAN SHROULD

Install the inlet pipe with the two bushings, brackets and bolts.

**Torque: 4.9 N·m (50 kgf·cm, 43 in·lbf)**



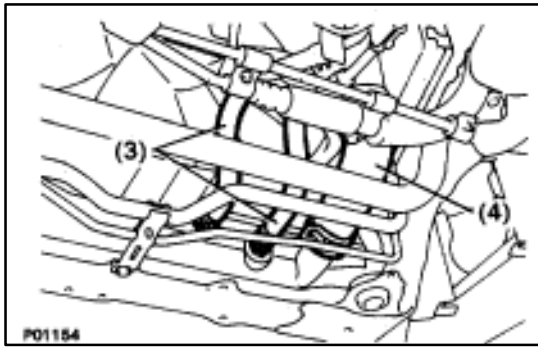
### 6. CONNECT HOSES

Connect the following hoses:

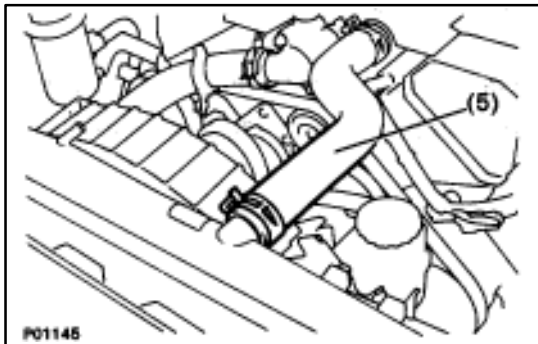
- (1) Pressure hose to hydraulic motor Connect the pressure hose with a new gasket and union bolt.

**Torque: 64 N·m (650 kgf·cm, 47 ft·lbf)**

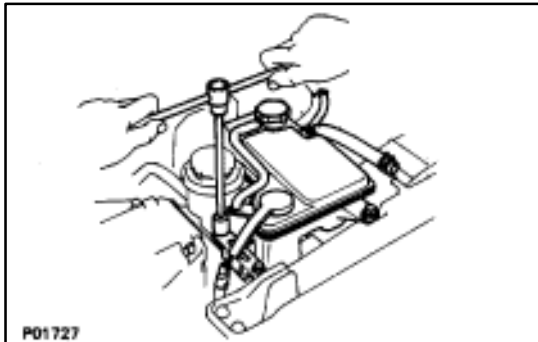
- (2) Return hose to hydraulic motor



- (3) Two oil cooler hoses (for A/T) to radiator.
- (4) Lower radiator hose to radiator



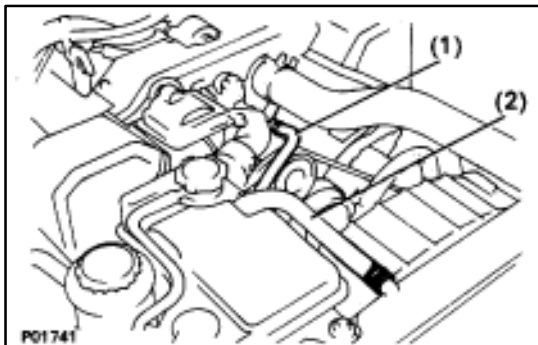
- (5) Upper radiator hose to radiator



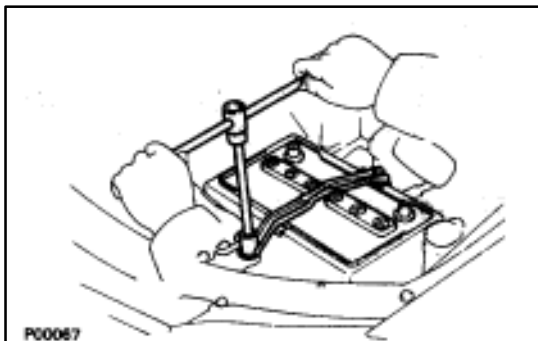
#### 7. INSTALL RADIATOR RESERVOIR TANK

- (a) Install the reservoir tank to the reservoir tank bracket.
- (b) Install the reservoir tank bracket with two bolts.

**Torque: 4.9 N·m (50 kgf·cm, 43 in·lbf)**



- (c) Connect the following hoses:
  - (1) Reservoir hose to water inlet housing
  - (2) Reservoir hose to radiator
- (d) Connect the coolant level sensor connector.



#### 8. INSTALL BATTERY

9. FILL ENGINE WITH COOLANT (See page [CO-7](#))
10. FILL COOLING FAN RESERVOIR TANK WITH FLUID  
(See pages [CO-23](#) and 24)
11. CHECK AUTOMATIC TRANSMISSION FLUID LEVEL  
(See page [MA-11](#))

NOTICE: Do not overfill.

12. START ENGINE AND CHECK FOR LEAKS
13. INSTALL ENGINE UNDER COVER