RADIATOR

ON–VEHICLE INSPECTION

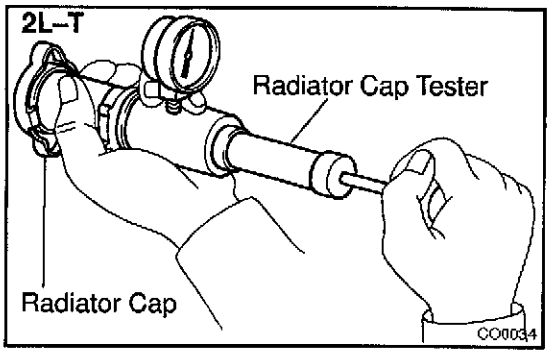
CO048-01

1. REMOVE RADIATOR CAP

Remove the radiator cap from the water outlet (2L–T) or radiator (2L, 3L, 5L).

CAUTION:

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



2. 2L–T:

INSPECT RADIATOR CAP

NOTICE:

- **If the radiator cap has contaminations, always rinse it with water.**
- **Before using a radiator cap tester, wet the relief valve and pressure valve with engine coolant or water.**

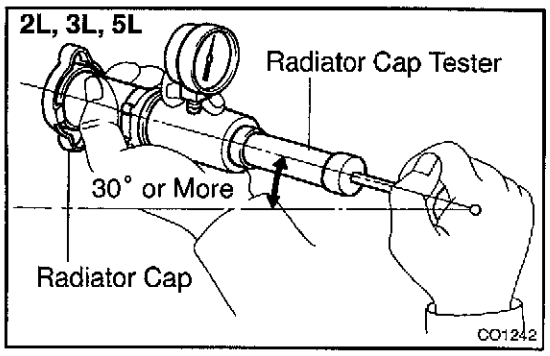
Using a radiator cap tester, pump the tester and measure the relief valve opening pressure.

Standard opening pressure:
93 – 123 kPa (0.95 – 1.25 kgf/cm^2, 13.5 – 17.1 psi)
Minimum opening pressure:
59 kPa (0.6 kgf/cm^2, 8.5 psi)

HINT:

Use the tester's maximum reading as the opening pressure.

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



3. 2L, 3L, 5L:

INSPECT RADIATOR CAP

NOTICE:

- **If the radiator cap has contaminations, always rinse it with water.**
- **Before using a radiator cap tester, wet the relief valve and pressure valve with engine coolant or water.**
- **When performing steps (a) and (b) below, keep the radiator cap tester at an angle of over 30° above the horizontal.**

(a) Using a radiator cap tester, slowly pump the tester and check that air is coming from the vacuum valve.

Pump speed: 1 push/(3 seconds or more)

NOTICE:

Push the pump at a constant speed.

If air is not coming from the vacuum valve, replace the radiator cap.

(b) Pump the tester and measure the relief valve opening pressure.

Pump speed: 1 push within 1 second

NOTICE:
This pump speed is for the first pump only (in order to close the vacuum valve). After this, the pump speed can be reduced.

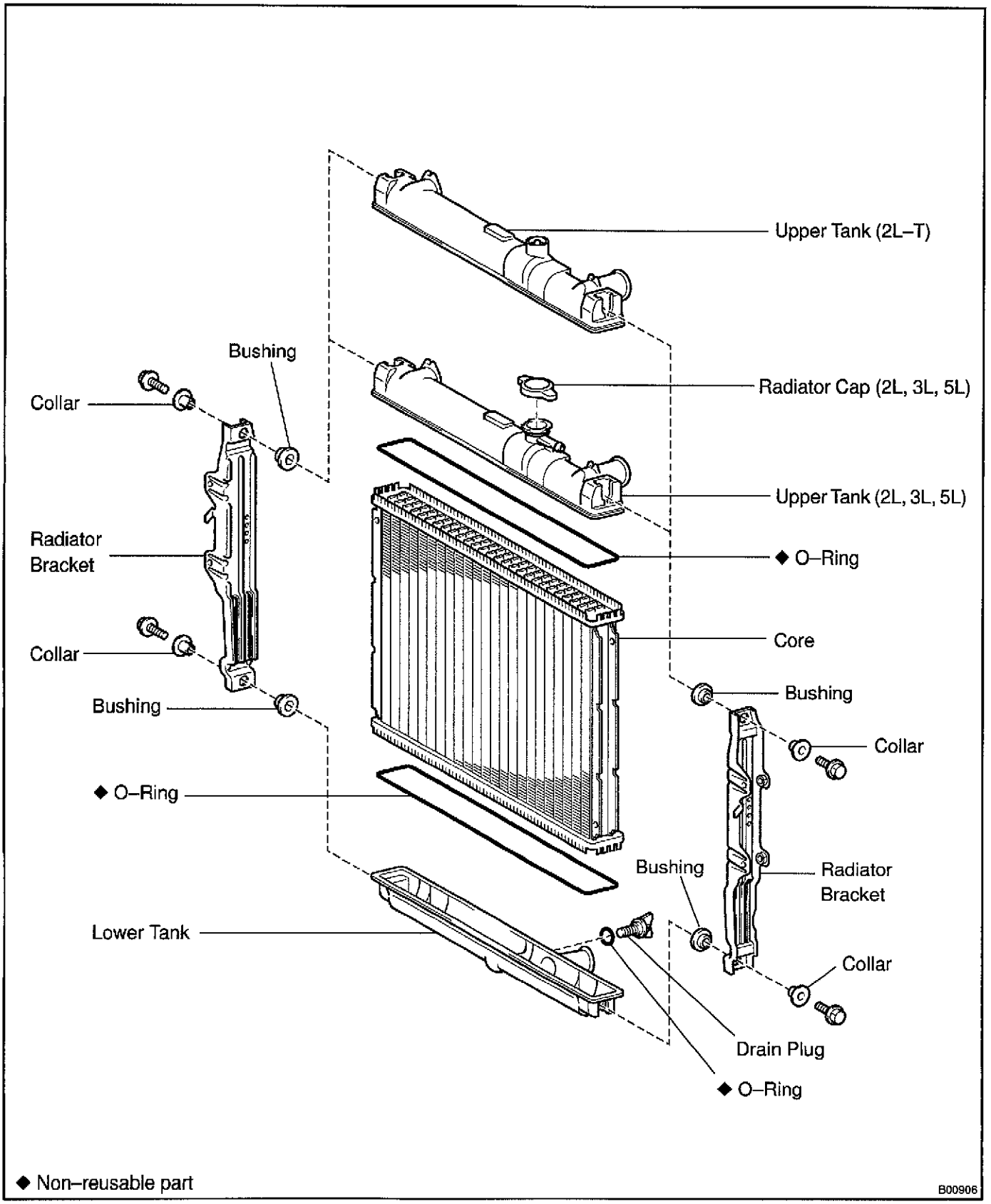
Standard opening pressure:
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HINT:
Use the tester's maximum reading as the opening pressure.
If the opening pressure is less than minimum, replace the radiator cap.

4. REINSTALL RADIATOR CAP

COMPONENTS

CO049–01



◆ Non–reusable part

B00906

CO4A–01

DISASSEMBLY

1. REMOVE RADIATOR BRACKETS

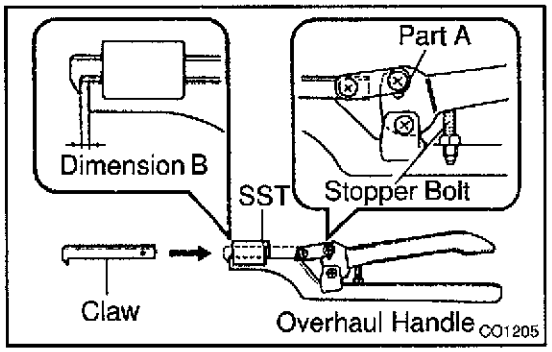
Remove the 4 bolts, 4 collars, 2 brackets and 4 bushings.

2. 2L, 3L, 5L:
REMOVE RADIATOR CAP

3. REMOVE DRAIN PLUG

(a) Remove the drain plug.

(b) Remove the O–ring.



4. ASSEMBLE SST

SST 09230–01010

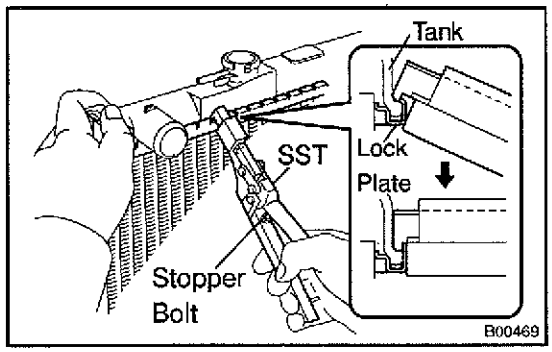
(a) Install the claw to the overhaul handle, inserting it in the hole in part A as shown in the diagram.

(b) While gripping the handle, adjust the stopper bolt so that dimension B is as shown in the illustration.

Dimension B: 0.2 – 0.3 mm (0.008 – 0.012 in.)

NOTICE:

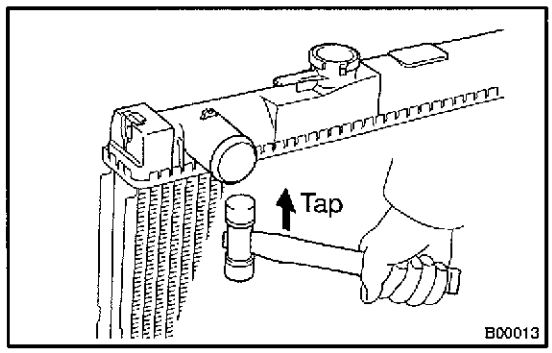
If this adjustment is not done the claw may be damaged.



5. UNCAULK LOCK PLATES

Using SST to release the caulking, squeeze the handle until stopped by the stopper bolt.

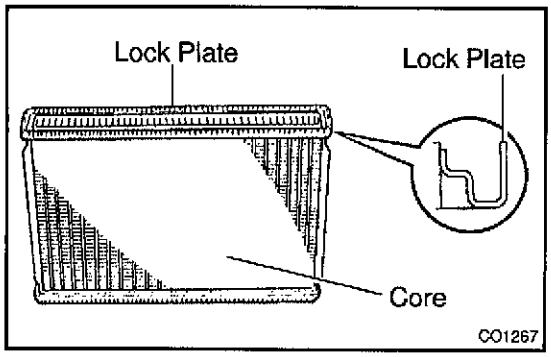
SST 09230–01010



6. REMOVE TANKS AND O–RINGS

Lightly tap the bracket of the radiator (or radiator inlet or outlet) with a soft–faced hammer, and remove the tank and the O–ring.

CO



CO04B–01

REASSEMBLY

1. INSPECT LOCK PLATE FOR DAMAGE

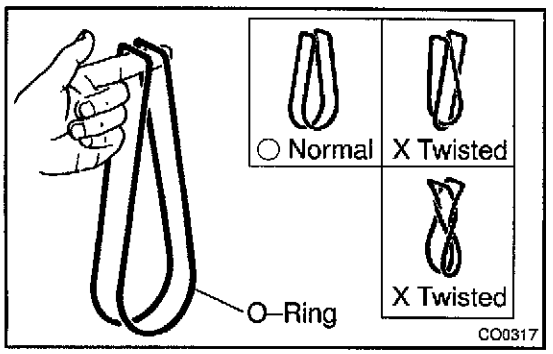
HINT:

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

NOTICE:

The radiator can only be recaulked 2 times. After the 2nd time, the radiator core must be replaced.

CO

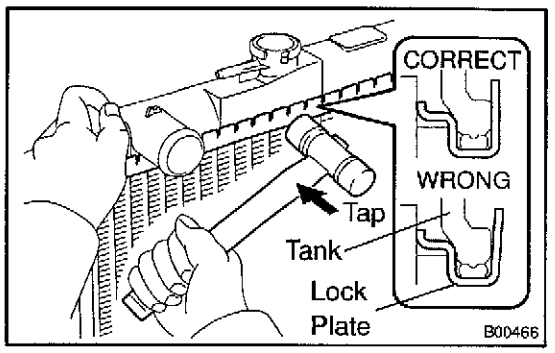


2. INSTALL NEW O–RINGS AND TANKS

(a) After checking that there are no foreign objects in the lock plate groove, install a new O–ring without twisting it.

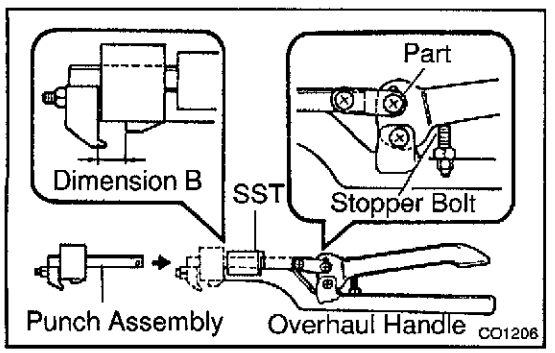
HINT:

When cleaning the lock plate groove, lightly rub it with sand paper without scratching it.



(b) Install the tank without damaging the O–ring.

(c) Tap the lock plate with a soft–faced hammer so that there is no gap between it and the tank.



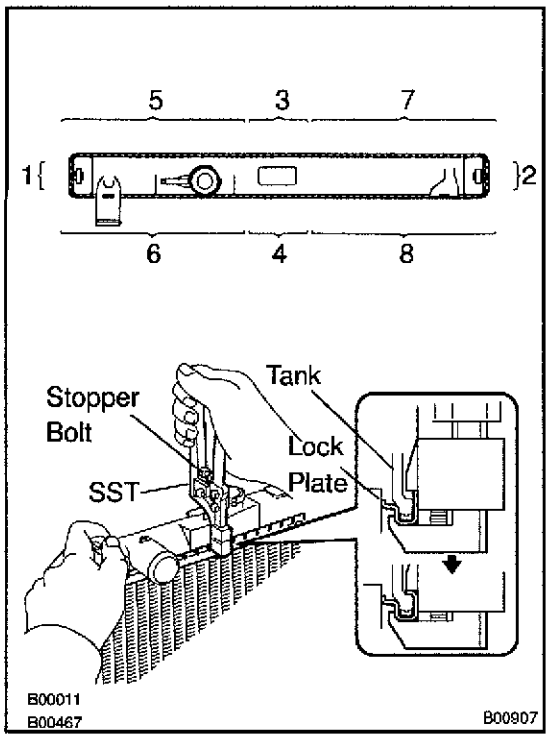
3. ASSEMBLE SST

SST 09230–01010, 09231–14010

(a) Install the punch assembly to the overhaul handle, inserting it in the hole in part A as shown in the illustration.

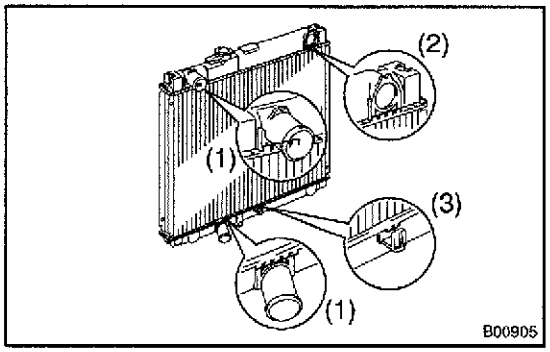
(b) While gripping the handle, adjust the stopper bolt so that dimension B is as shown in the illustration.

Dimension B: 8.4 mm (0.331 in.)



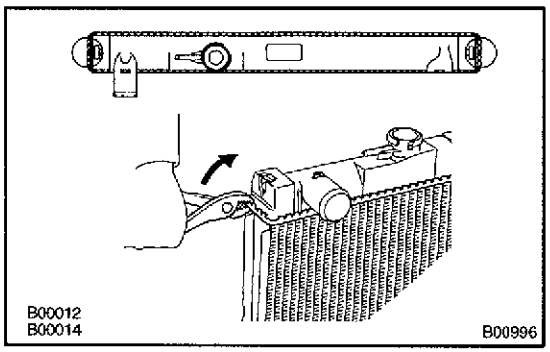
4. CAULK LOCK PLATE

(a) Lightly press SST against the lock plate in the order shown in the illustration. After repeating this a few times, fully caulk the lock plate by squeezing the handle until stopped by the stopper plate.
SST 09230–01010

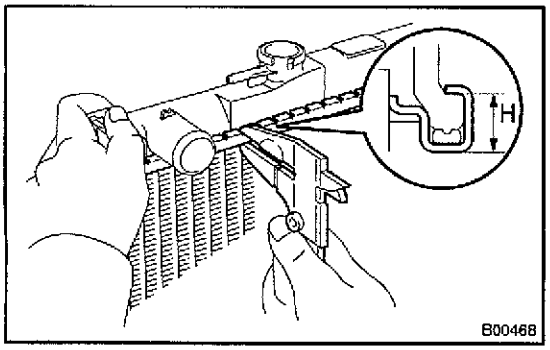


HINT:

- Do not stake the areas protruding around the ports (1), flange (2) and bracket (3).



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



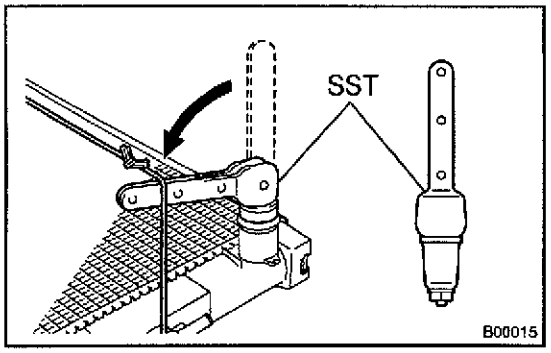
(b) Check the lock plate height (H) after completing the caulking.
Plate height (H): 7.40 – 7.80 mm (0.2913 – 0.3071 in.)
If not within the specified height, adjust the stopper bolt of the handle again and caulk again.

5. INSTALL DRAIN PLUG

(a) Install a new O–ring to the drain plug.
(b) Install the drain plug.

6. 2L, 3L, 5L:
INSTALL RADIATOR CAP

CO



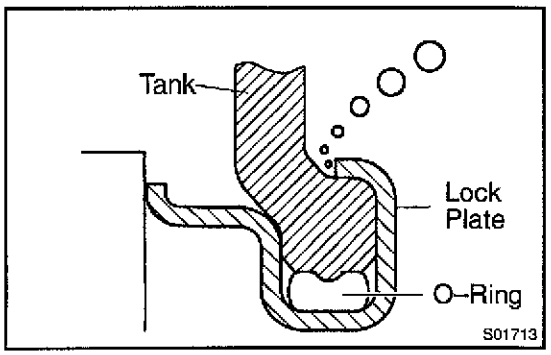
7. INSPECT FOR WATER LEAKS

(a) Tighten the drain plug.

(b) Plug the inlet pipes of the radiator with SST.
SST 09230–01010

(c) Using a radiator cap tester, apply pressure to the radiator.
Test pressure: 177 kPa (1.8 kgf/cm^2, 26 psi)

(d) Submerge the radiator in water.



(e) Inspect for leaks.

HINT:

On radiators with resin tanks, there is a clearance between the tank and lock 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 doing the water leak test, first swish the radiator around in the water until all air bubbles disappear.

8. INSTALL RADIATOR BRACKETS

(a) Install the 2 bushings and 2 collars to each bracket.

(b) Install the 2 brackets with the 4 bolts.
Torque: 13 N·m (130 kgf·cm, 10 ft·lbf)