COOLANT

CO09W-05

INSPECTION

HINT:

Check the coolant level when the engine is cold.

1. CHECK ENGINE COOLANT LEVEL AT RESERVOIR

The engine coolant should be between the LOW and FULL lines when the engine is cold.

If low, check for leakge and add Toyota Super Long Life Coolant or similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology up to the FULL line.

2. CHECK ENGINE COOLANT QUALITY

(a) Remove the radiator cap.

CAUTION:

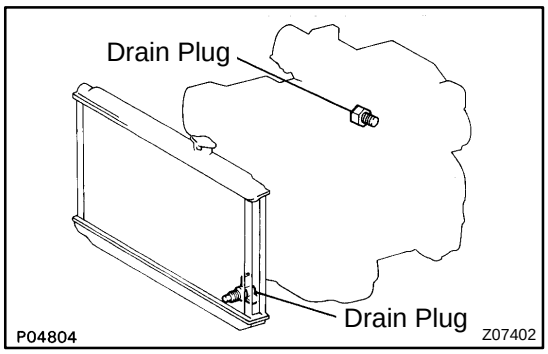
To avoid the danger of being burned, do not remove the radiator cap while the engine and radiator are still hot. Thermal expansion will cause hot engine coolant and steam to blow out from the radiator.

(b) Check for any excessive deposits of rust or scale around the radiator cap and radiator filler hole; the coolant should be free of oil.

If excessively dirty, replace the coolant.

(c) Reinstall the radiator cap.

CO09X-08



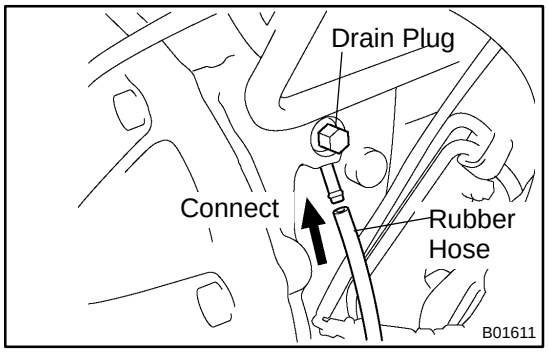
REPLACEMENT

1. DRAIN ENGINE COOLANT

CAUTION:

To avoid the danger of being burned, do not remove the radiator cap while the engine and radiator are still hot. Thermal expansion will cause hot engine coolant and steam to blow out from the radiator.

(a) Loosen the 2 drain plugs (for the engine and radiator).



HINT:

To prevent the coolant from spraying over the cylinder block, connect the rubber hose (inside diameter 6 - 8 mm (0.24 - 0.31 in.)) in the market to the union pipe under the drain plug.

(b) Remove the radiator cap and drain the coolant.

(c) Close the 2 drain plugs.

Torque: 30 N·m (300 kgf·cm, 22 ft·lbf) for engine

2. ADD ENGINE COOLANT

(a) Pour coolant into the radiator until it overflows.

Capacity (w/ Heater):

7.5 liters (7.9 US qts, 6.6 lmp. qts)

HINT:

- Use of improper coolants may damage the engine cooling system.
- Only use Toyota Super Long Life Coolant or similar high quality ethlene glycol based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology (coolant with long-life hybrid organic acid technology consists of a combination of low phosphates and organic acids).
- New Toyota vehicles are filled with Toyota Super Long Life Coolant. When replacing the coolant, Toyota Super Long Life Coolant (color is pink, premixed ethyleneglycol concentration is approximately 50 % and freezing temperature is -35˚C (-31˚F)) is recommended.

NOTICE:

Do not substitute plain water for engine coolant.

(b) Check the coolant level inside the radiator by squeezing the inlet and outlet radiator hoses several times by hand. If the coolant level goes down, add coolant.

(c) Install the radiator cap securely.

(d) Slowly pour coolant into the radiator reservoir until it reaches the FULL line.

(e) Warm up the engine until the cooling fan operates.

- Set the air conditioning as follows while warming up the engine.

	Automatic air conditioning system
Set control as follows	Fan speed - Any setting except OFF Temperature - To the highest temperature Air condition switch OFF AUTO switch OFF

- Maintain the engine speed at 2,000 to 2,500 rpm and warm up the engine until the cooling fan operates.

(f) Squeeze the inlet and outlet radiator hoses several times by hand while warning up the engine.

(g) Stop the engine and wait until the coolant cools down.

(h) Remove the radiator cap and check the coolant level inside the radiator.
(i) If the coolant level is below the full level, perform the steps from (a) through (h) and repeat the operation until the coolant level remains the full level.
(j) Recheck the coolant level inside the radiator reservoir tank. If it is below the full level, add coolant.

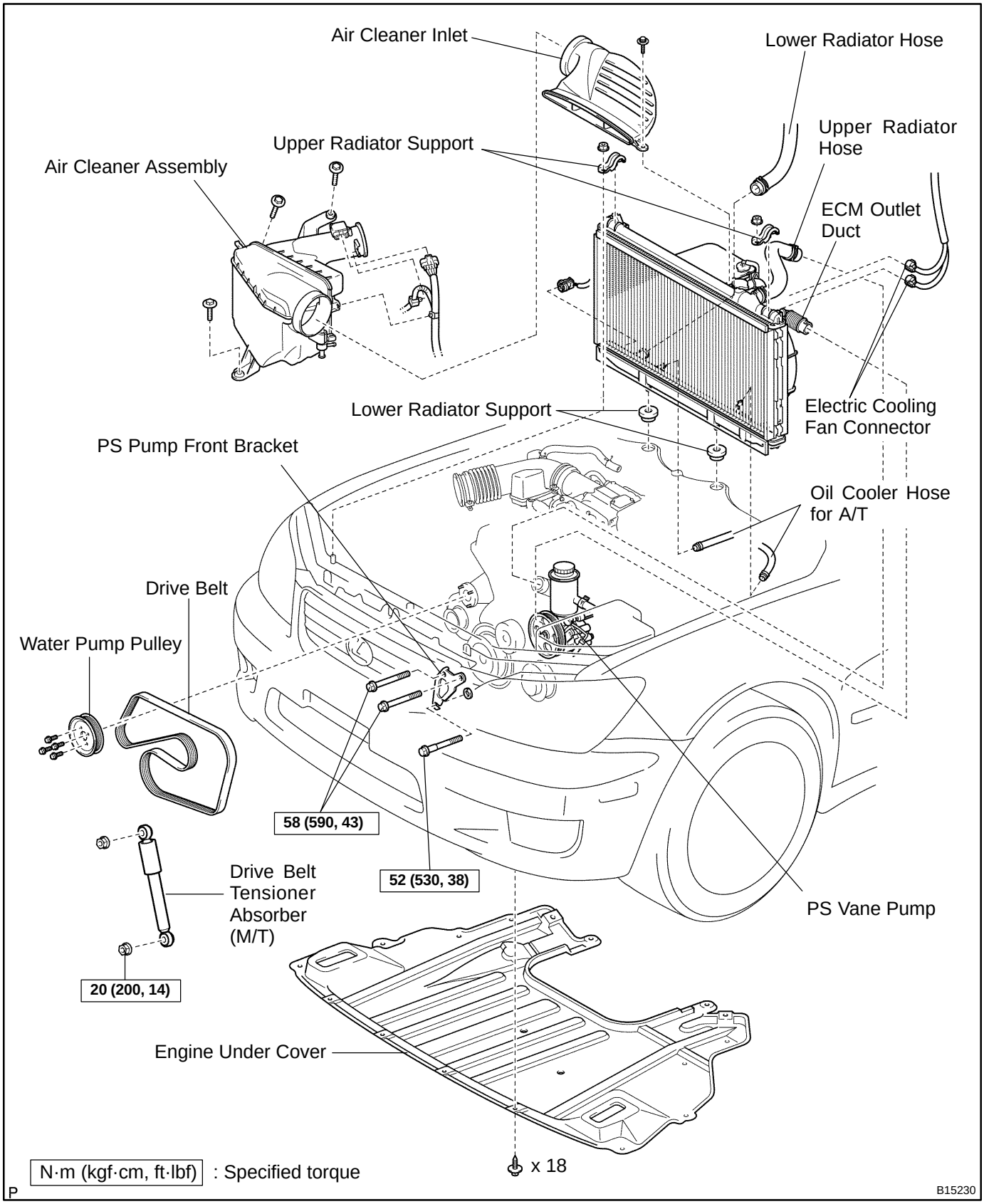
3. CHECK FOR ENGINE COOLANT LEAKS

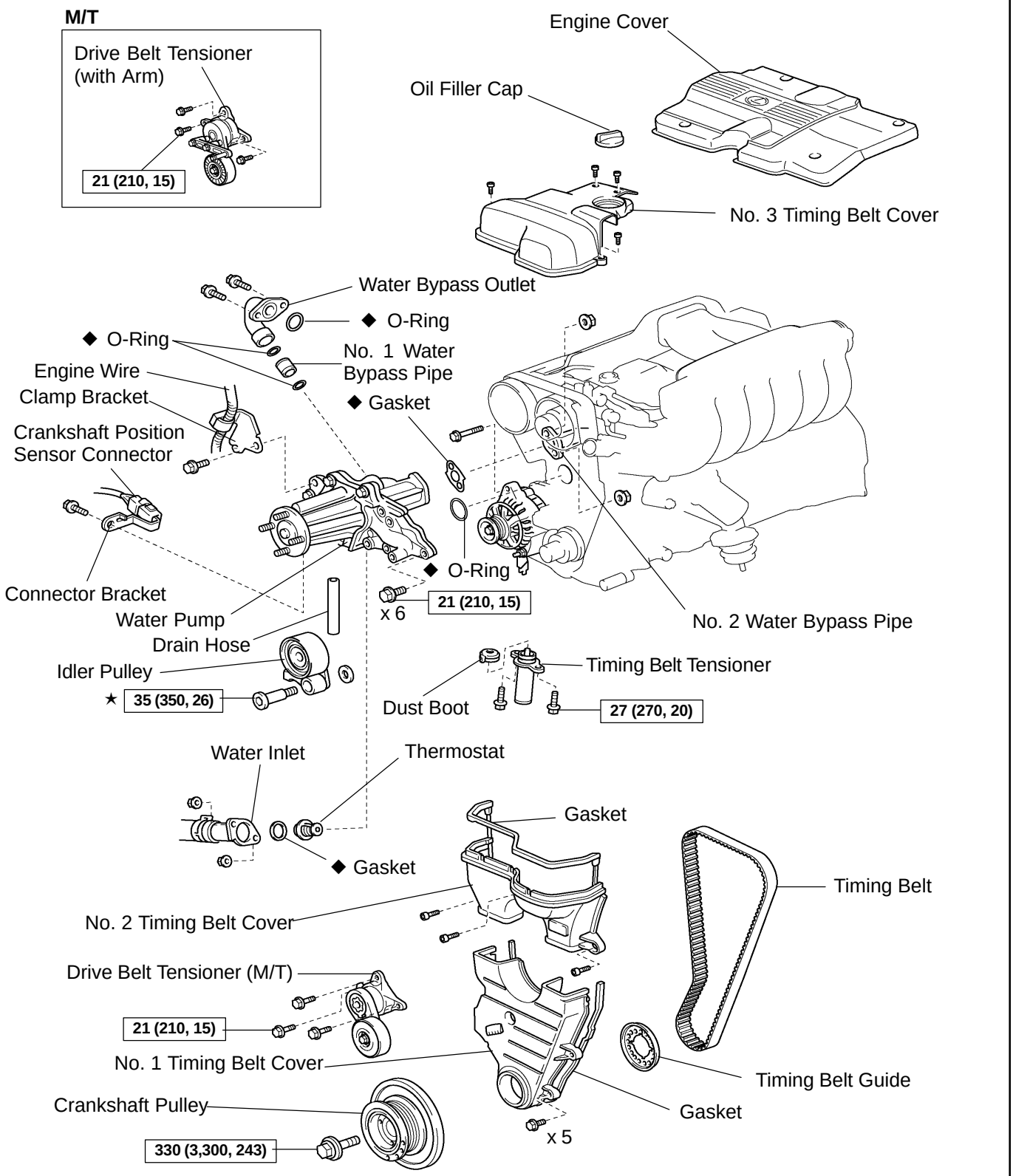
(a) Fill the radiator with engine coolant and attach a radiator cap tester.
(b) Pump it to 177 kPa (1.8 kgf/cm^2, 26 psi) and check for leakage.

WATER PUMP

COMPONENTS

CO09Y-08





Y N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non-reusable part
★ Precoated part

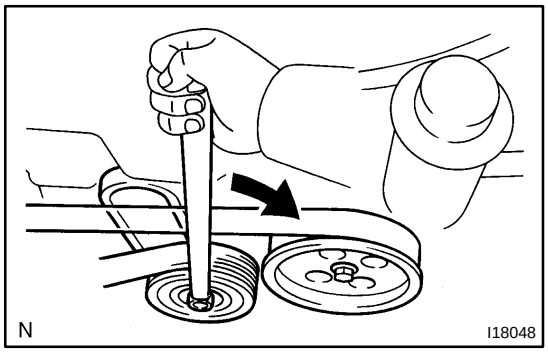
B15232

CO09Z-07

REMOVAL

1. **REMOVE RADIATOR ASSEMBLY (See page CO-19)**
2. **M/T:**
   REMOVE DRIVE BELT TENSIONER ABSORBER

Remove the 2 nuts and absorber.



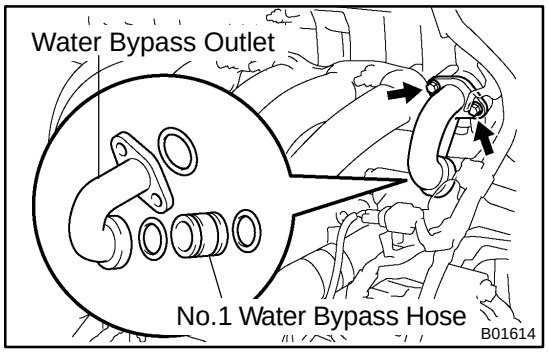
3. **REMOVE DRIVE BELT AND WATER PUMP PULLEY**

(a) Loosen the 4 nuts holding the water pump pulley to the water pump.

(b) Using SST, loosen the drive belt tension by turning the drive belt tensioner clockwise, and remove the drive belt.
SST 09216-00041

(c) Remove the 4 nuts and water pump pulley.

4. **REMOVE TIMING BELT AND IDLER PULLEY (See page EM-17)**

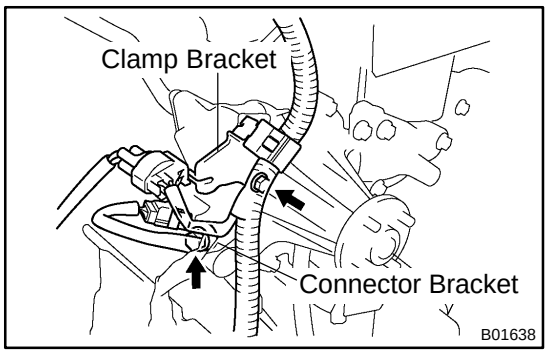


5. **REMOVE WATER BYPASS OUTLET AND NO. 1 WATER BYPASS PIPE**

(a) Remove the 2 bolts, water bypass outlet and No. 1 water bypass pipe.

(b) Remove the 3 O-rings from the water bypass outlet and No. 1 water bypass pipe.

6. **REMOVE WATER INLET AND THERMOSTAT (See page CO-12)**

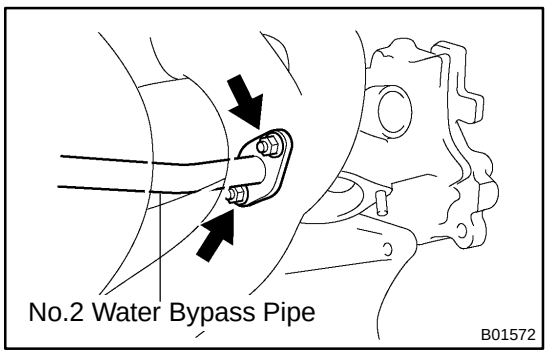


7. **REMOVE WATER PUMP**

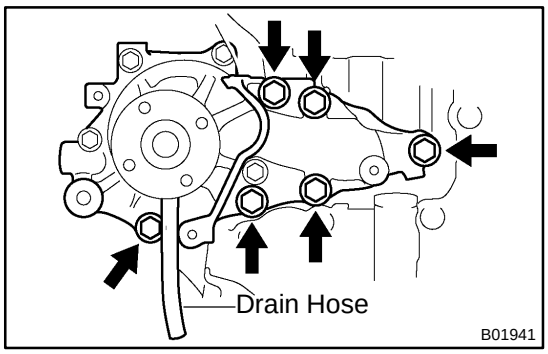
(a) Loosen the nut and remove the bolt, slide the generator away from the water pump.

(b) Remove the bolt, and disconnect the clamp bracket (for engine wire).

(c) Remove the bolt, and disconnect the connector bracket (for crankshaft position sensor connector).

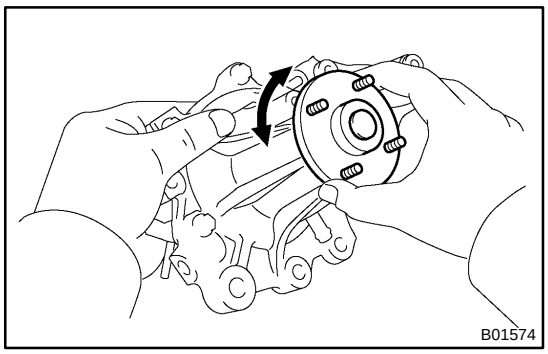


(d) Remove the 2 nuts, and disconnect the No. 2 water bypass pipe from the water pump.



(e) Remove the 6 bolts, water pump and gasket.
(f) Remove the drain hose.
(g) Remove the O-ring from the cylinder block.

CO0A0-06



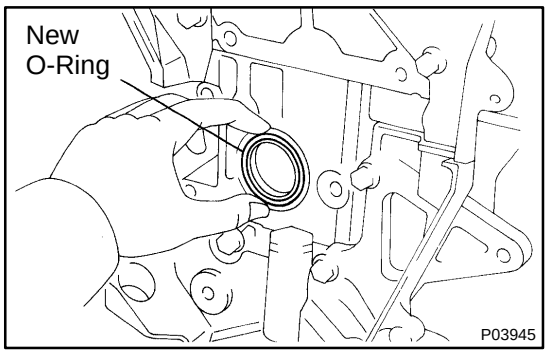
INSPECTION

INSPECT WATER PUMP

Turn the pulley seat, and check that the water pump bearing is not rough or noisy.

If necessary, replace the water pump.

CO0A1-06

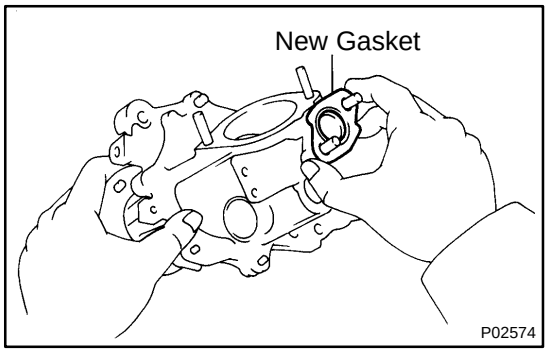


INSTALLATION

1. INSTALL WATER PUMP

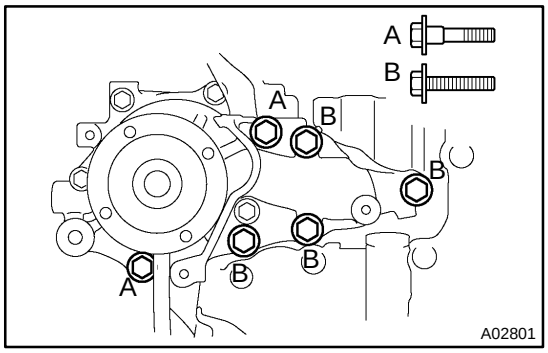
(a) Install a new O-ring to the cylinder block.

(b) Install the drain hose.



(c) Install a new gasket to the water pump.

(d) Connect the water pump to the water bypass pipe. Do not install the nut yet.



(e) Install the water pump with the 2 bolts (A) and 4 bolts (B).
Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

HINT:

Hand tighten the (A) bolts first.

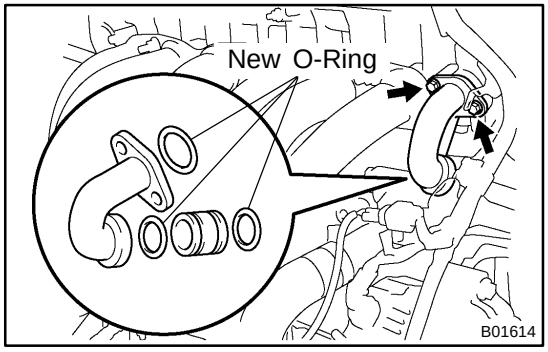
(f) Install the 2 nuts holding the No. 2 water bypass pipe to the water pump.
Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

(g) Install the connector bracket (for crankshaft position sensor connector) with the bolt.

(h) Install the clamp bracket (for engine wire) with the bolt.

(i) Install the generator with the bolt and nut.
Torque: 40 N·m (400 kgf·cm, 30 ft·lbf)

2. INSTALL THERMOSTAT AND WATER INLET (See page CO-14)



3. INSTALL NO. 1 WATER BYPASS PIPE AND WATER BYPASS OUTLET

(a) Install 2 new O-rings to the No. 1 water bypass pipe.

(b) Install a new O-ring and the water bypass outlet with the 2 bolts.
Torque: 9.0 N·m (90 kgf·cm, 80 in.·lbf)

4. INSTALL IDLER PULLEY AND TIMING BELT (See page EM-24)

5. INSTALL WATER PUMP PULLEY AND DRIVE BELT
Torque: 14 N·m (140 kgf·cm, 10 ft·lbf)

6. **M/T:**
   INSTALL DRIVE BELT TENSIONER ABSORBER

Install the absorber with the 2 nuts.

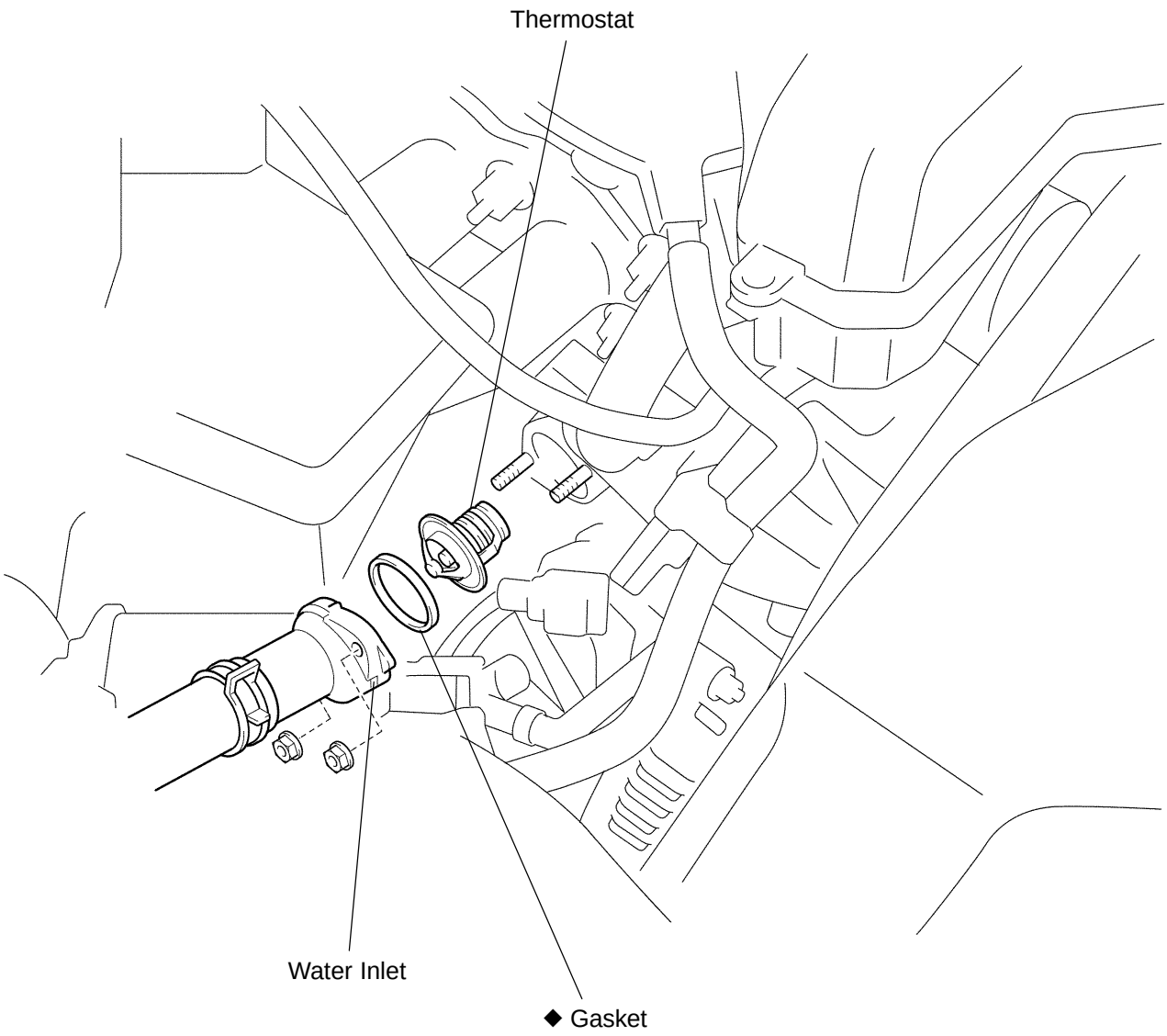
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

7. **INSTALL RADIATOR ASSEMBLY (See page CO-24)**

THERMOSTAT

COMPONENTS

CO0A2-05



P ◆ Non-reusable part

B11922

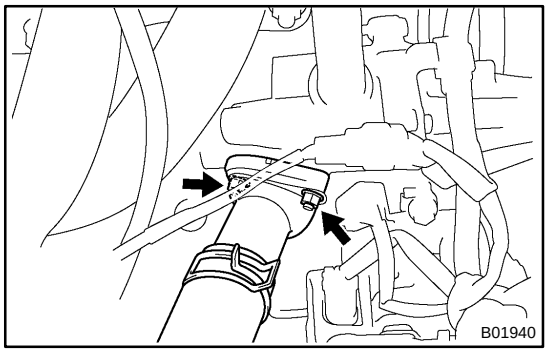
CO0A3-07

REMOVAL

HINT:

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



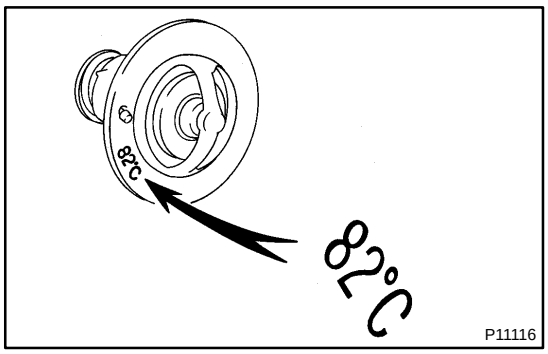
2. REMOVE THERMOSTAT

(a) Remove the 2 nuts holding the water inlet to the water pump, and disconnect the water inlet from the water pump.

(b) Remove the thermostat.

(c) Remove the gasket from the thermostat.

CO0A4-07

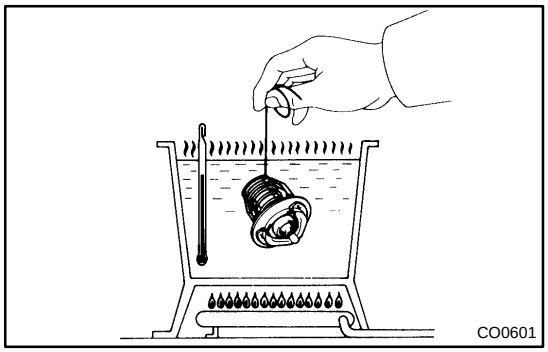


INSPECTION

INSPECT THERMOSTAT

HINT:

The thermostat is numbered with the valve opening temperature.

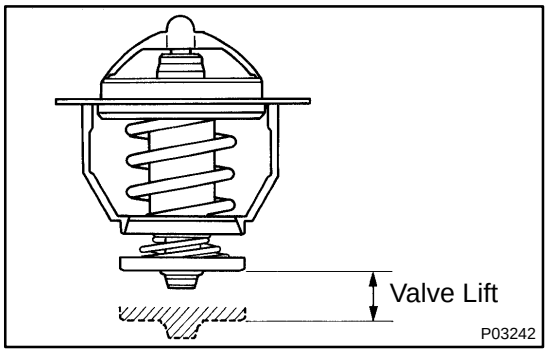


(a) Immerse the thermostat in water and gradually heat the water.

(b) Check the valve opening temperature.

Valve opening temperature: 80 - 84˚C (176 - 183˚F)

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



(c) Check the valve lift.

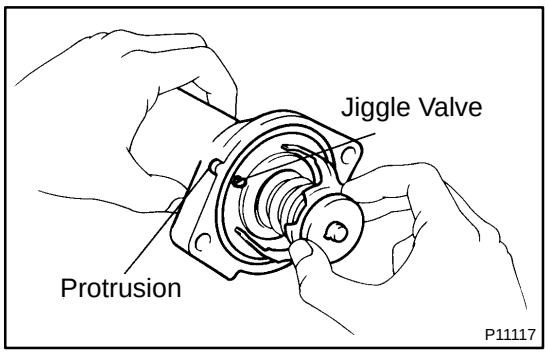
Valve lift: 8.5 mm (0.335 in.) or more at 95˚C (203˚F)

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

(d) Check that the valve is fully closed when the thermostat is at low temperatures (below 40˚C (104˚F)).

If not closed, replace the thermostat.

CO0A5-06



INSTALLATION

1. PLACE THERMOSTAT IN WATER INLET

(a) Install a new gasket to the thermostat.

(b) Align the jiggle valve of the thermostat with the protrusion of the water inlet.

2. INSTALL WATER INLET

Install the water inlet with the 2 nuts.

Torque: 9.0 N·m (90 kgf·cm, 80 in.·lbf)

3. FILL WITH ENGINE COOLANT

4. START ENGINE AND CHECK FOR COOLANT LEAKS

RADIATOR

CO0A6-01

ON-VEHICLE CLEANING

CLEAN RADIATOR

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

NOTICE:

If using a high pressure type cleaner, be careful not to deform the fins of the radiator core. (i.e. Maintain a distance between the cleaner nozzle and radiator core.)

CO0A7-06

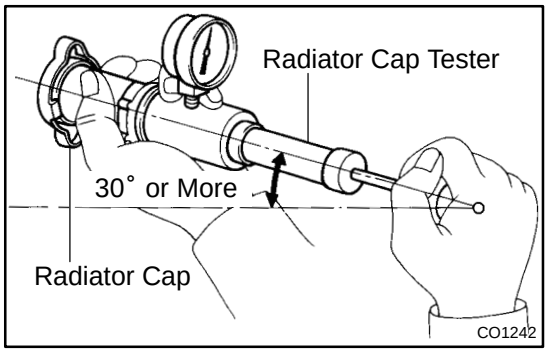
ON-VEHICLE INSPECTION

1. REMOVE RADIATOR CAP

Remove the radiator cap from the radiator.

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. 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 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 radiator cap 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:

93 - 123 kPa (0.95 - 1.25 kgf/cm^2, 13.5 - 17.8 psi)

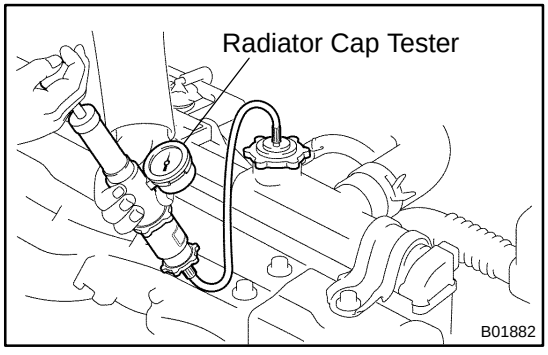
Minimum opening pressure:

78 kPa (0.8 kgf/cm^2, 11.4 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. INSPECT COOLING SYSTEM FOR LEAKS

(a) Fill the radiator with coolant and attach a radiator cap tester.

(b) Warm up the engine.

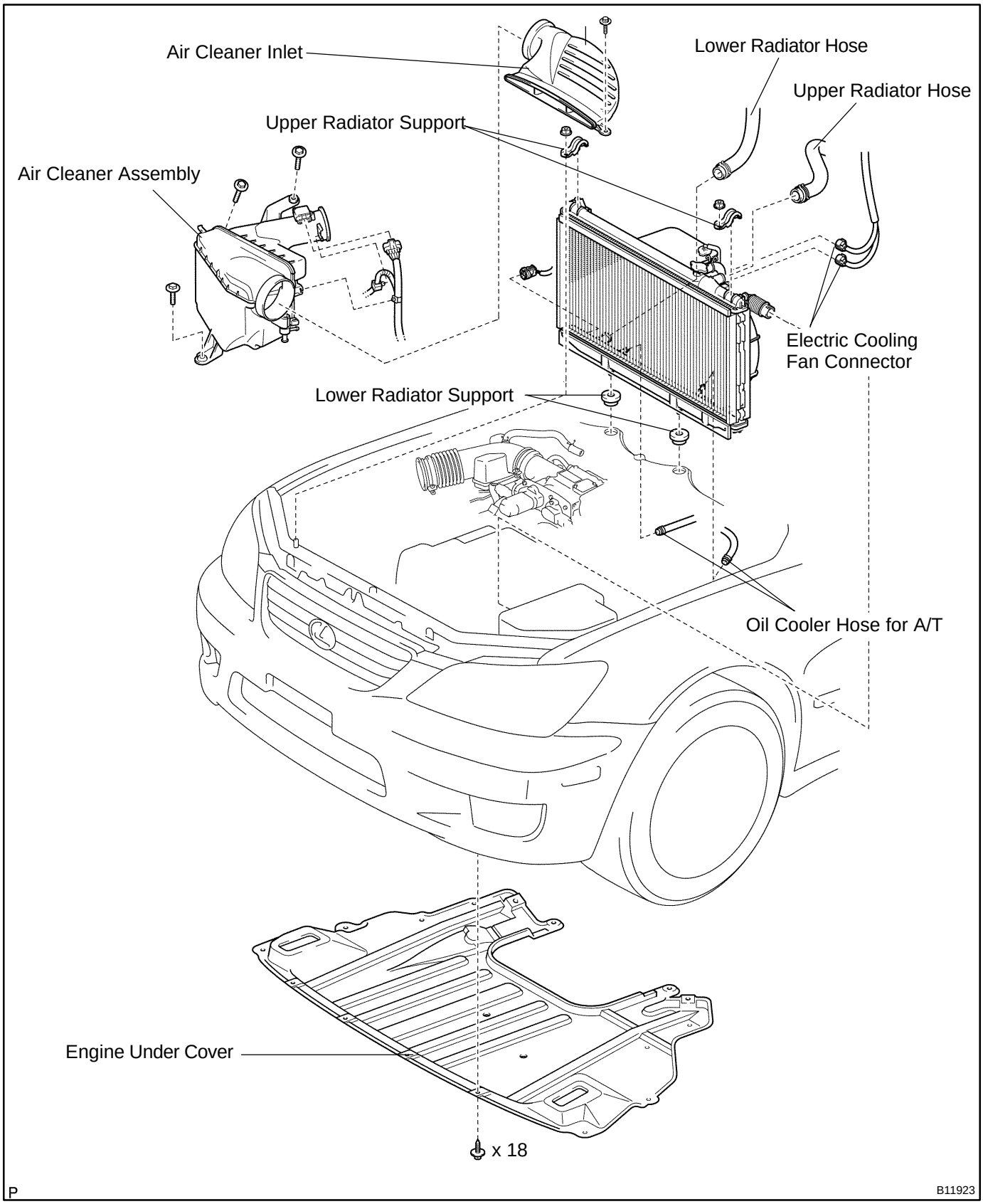
(c) Pump it to 118 kPa (1.2 kgf/cm^2, 17.1 psi), and check that the pressure does not drop.

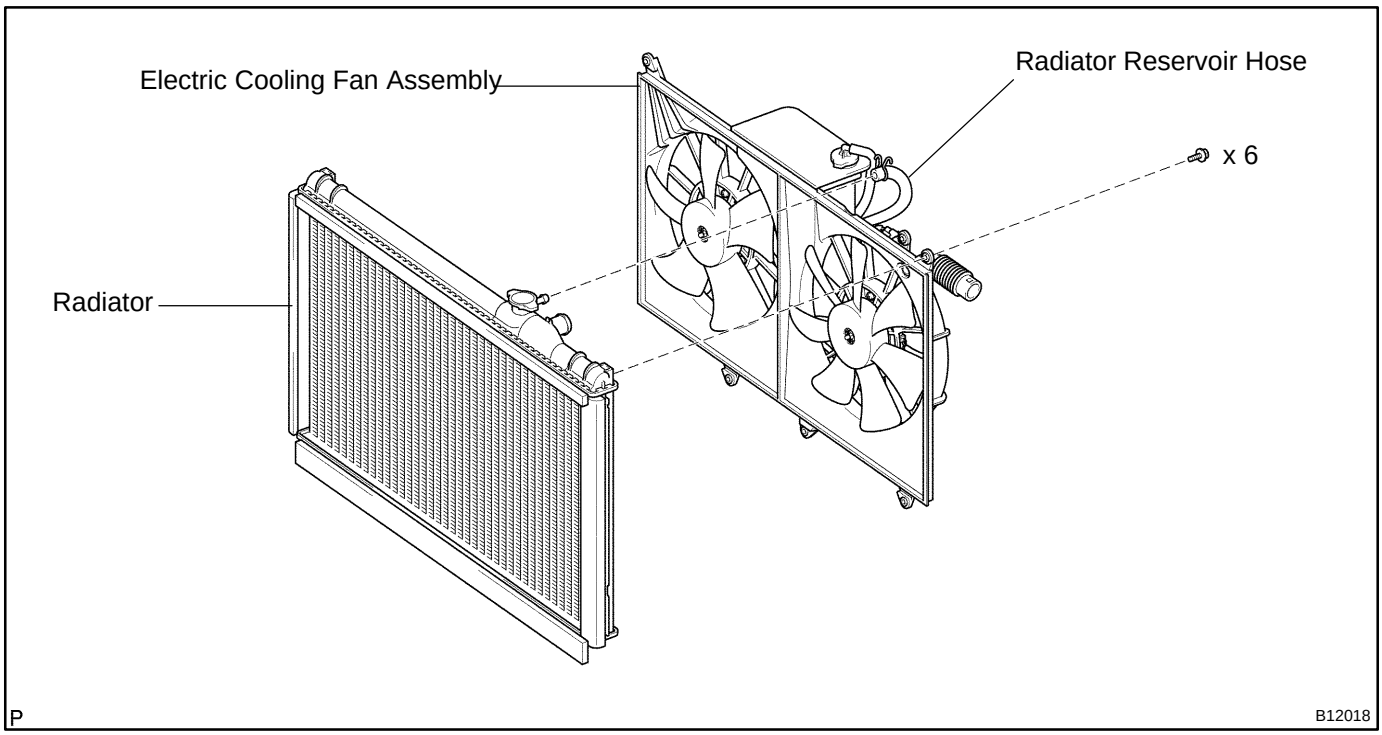
If the pressure drops, check the hoses, radiator or water pump for leaks. If no external leaks are found, check the heater core, cylinder block and head.

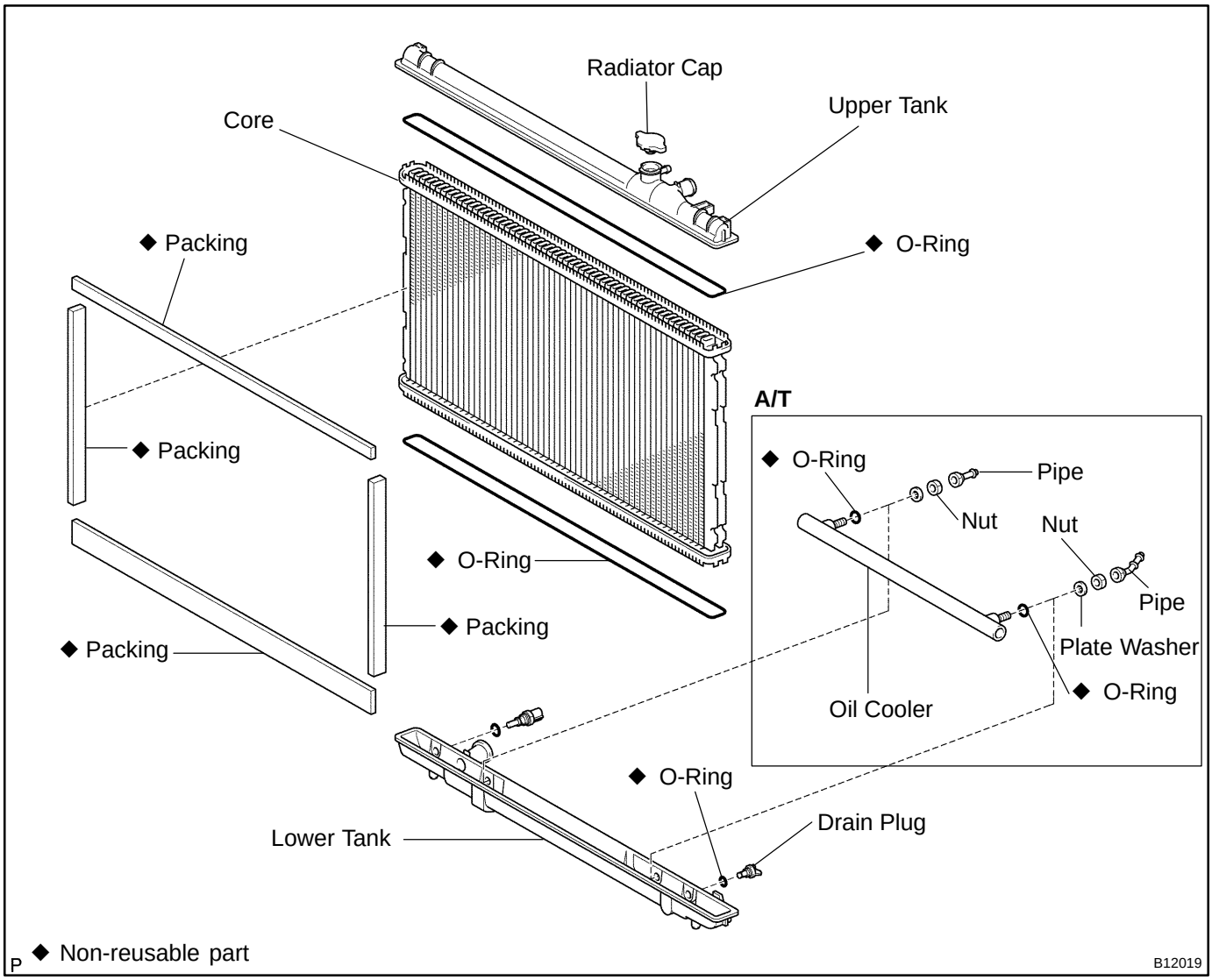
4. REINSTALL RADIATOR CAP

CO0A8-07

COMPONENTS




Electric Cooling Fan Assembly
Radiator Reservoir Hose
x 6
Radiator
P
B12018


Radiator Cap
Upper Tank
Core
◆ Packing
◆ O-Ring
A/T
◆ O-Ring
Pipe
Nut
Nut
Pipe
Plate Washer
◆ O-Ring
Oil Cooler
◆ Packing
◆ O-Ring
◆ Packing
◆ Packing
◆ O-Ring
Drain Plug
Lower Tank
P
◆ Non-reusable part
B12019

CO0A9-07

REMOVAL

1. REMOVE ENGINE UNDER COVER

2. DRAIN ENGINE COOLANT

3. REMOVE AIR CLEANER INLET

4. REMOVE AIR CLEANER AND MAF METER ASSEMBLY

5. REMOVE RADIATOR AND ELECTRIC COOLING FAN ASSEMBLY

(a) Disconnect the upper radiator hose from the radiator.

(b) Disconnect the lower radiator hose from the radiator.

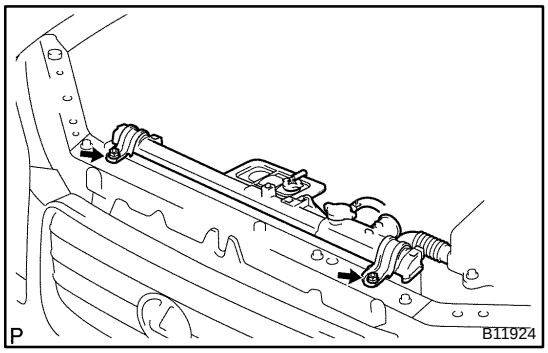
(c) Disconnect the ECM outlet duct from the ECM box.

(d) Disconnect the wire for electric cooling fan from the clamp on the electric cooling fan.

(e) Disconnect the 2 electric cooling fan connectors.

(f) Disconnect the ECT switch connector for electric cooling fan.

(g) A/T:
Disconnect the 2 oil cooler hoses for A/T from the radiator.



(h) Remove the 2 nuts and 2 upper radiator supports.

(i) Lift out the radiator and cooling fan assembly.

(j) Remove the 2 lower radiator supports.

6. REMOVE ELECTRIC COOLING FAN FROM RADIATOR

(a) Disconnect the radiator reservoir hose from the radiator.

(b) Remove the 6 bolts and electric cooling fan.

CO0AA-08

DISASSEMBLY

1. REMOVE PACKINGS

2. REMOVE RADIATOR CAP

3. REMOVE DRAIN PLUG

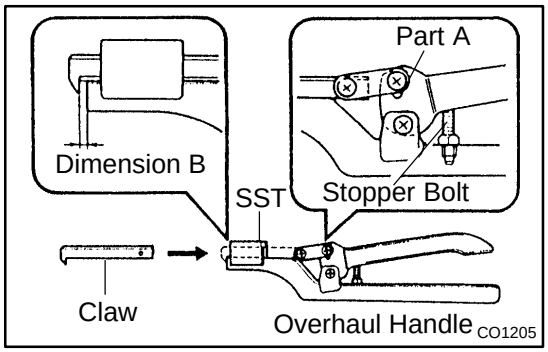
(a) Remove the drain plug.

(b) Remove the O-ring.

4. REMOVE ECT SWITCH

(a) Remove the ECT switch.

(b) Remove the O-ring.



5. ASSEMBLE SST

SST 09230-01010

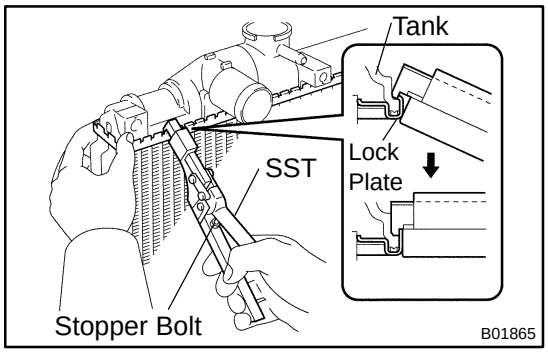
(a) Install the claw to the overhaul handle, inserting it in the hole in part A as shown in the diagram.

(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:

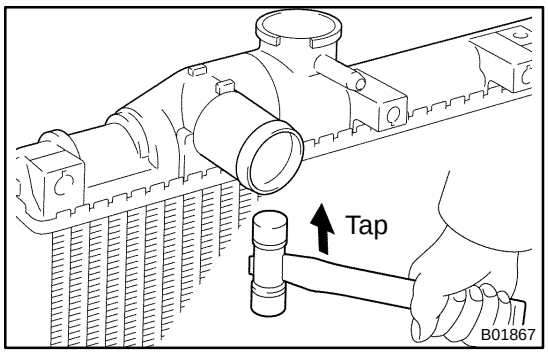
If this adjustment is not done the claw may be damaged.



6. UNCAULK LOCK PLATES

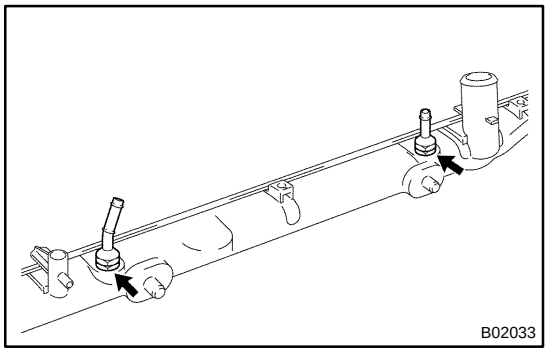
Using SST to release the caulking, squeeze the handle until stopped by the stopper bolt.

SST 09230-01010



7. 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.



8. A/T:

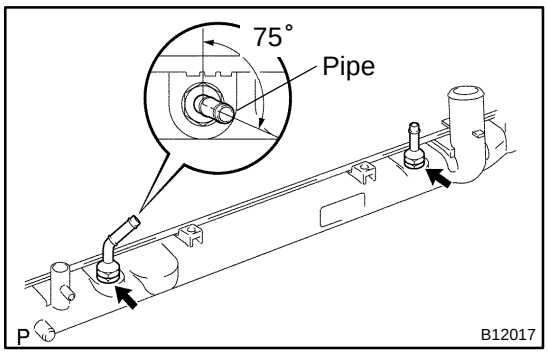
REMOVE OIL COOLER FROM LOWER TANK

(a) Loosen the nut, and remove the cooler pipe. Remove the 2 cooler pipes.

(b) Remove the 2 nuts and 2 plate washers.

(c) Remove the oil cooler and 2 O-rings.

CO0AB-06



REASSEMBLY

1. A/T:

INSTALL OIL COOLER TO LOWER TANK

(a) Install 2 new O-rings to the oil cooler.

(b) Install the oil cooler to the lower tank with the 2 plate washers and 2 nuts.

Torque: 8.3 N·m (85 kgf·cm, 74 in.·lbf)

(c) Install the cooler pipes in the direction indicated in the illustration.

Torque: 14.7 N·m (150 kgf·cm, 11 ft·lbf)

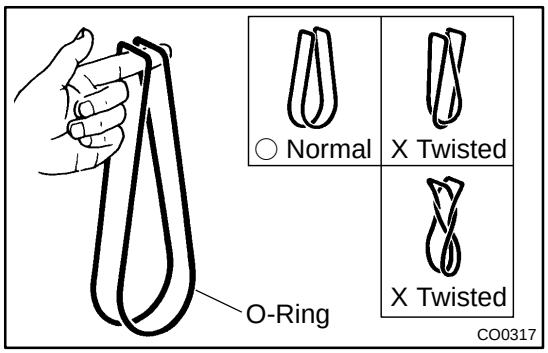
2. INSPECT LOCK PLATE FOR DAMAGE

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.

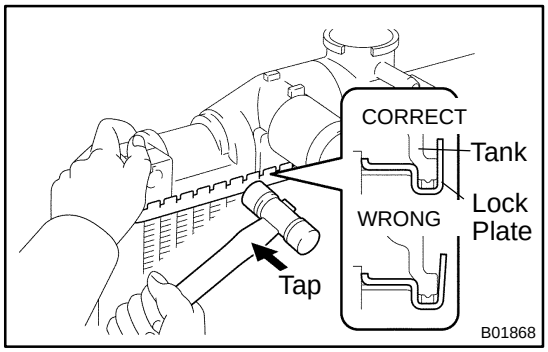


3. INSTALL NEW O-RINGS AND TANKS

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

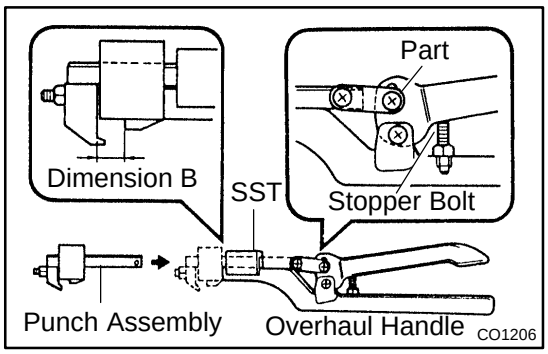
HINT:

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.



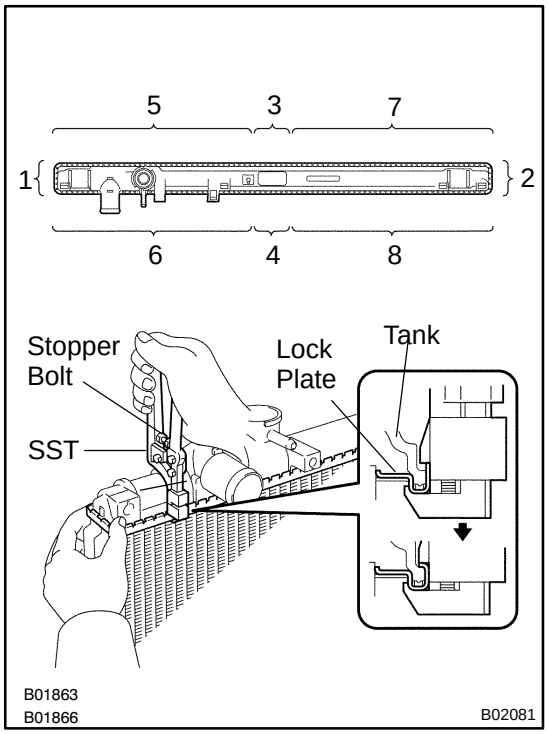
4. ASSEMBLE SST

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.

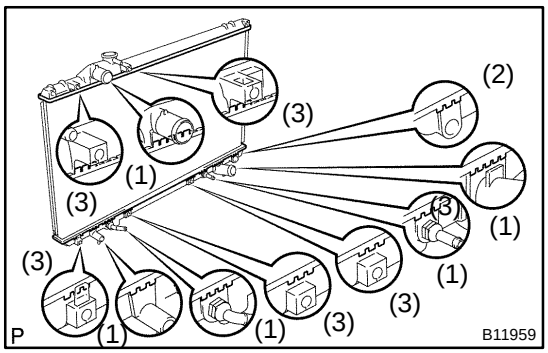
Dimension B: 8.4 mm (0.331 in.)



5. CAULK LOCK PLATE

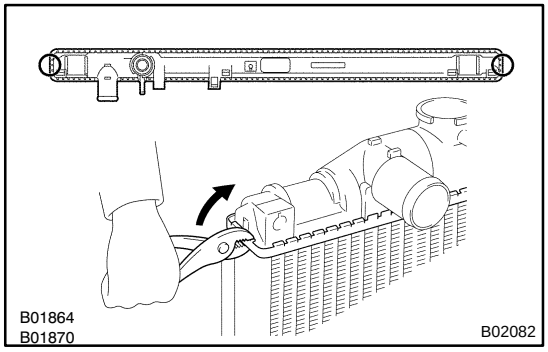
(a) Lightly press SST against the lock plate in the order shown in the illustration. After repeating this a few times, fully caulk the lock plate by squeezing the handle until stopped by the stopper plate.

SST 09230-01010

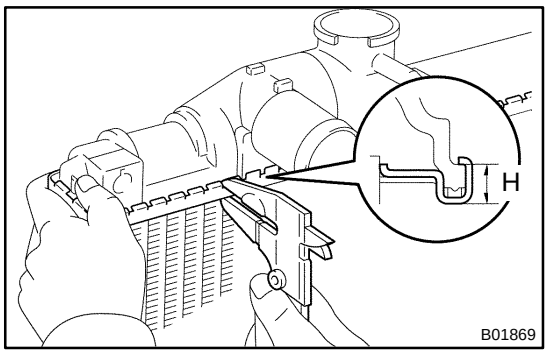


HINT:

- 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.

6. INSTALL ECT SWITCH

(a) Install a new O-ring to the ECT switch.

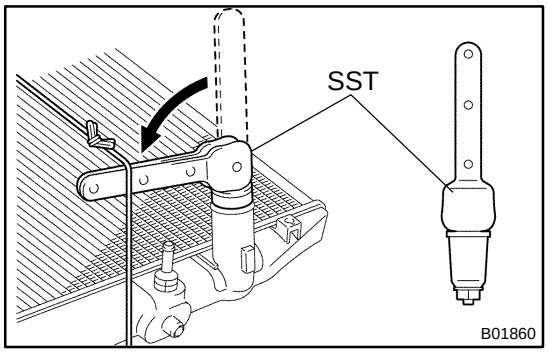
(b) Install the ECT switch.

7. INSTALL DRAIN PLUG

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

(b) Install the drain plug.

8. INSTALL RADIATOR CAP



9. INSPECT FOR WATER LEAKS

(a) Tighten the drain plug.

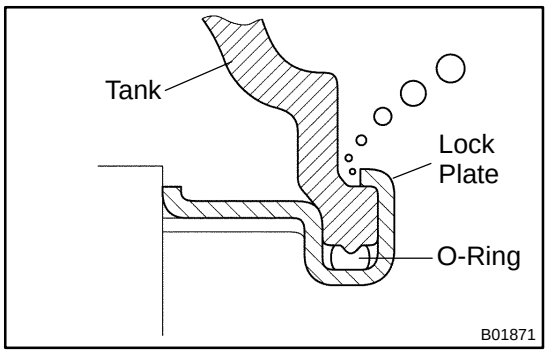
(b) Plug the inlet pipes of the radiator with SST.

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.

10. INSTALL NEW PACKINGS

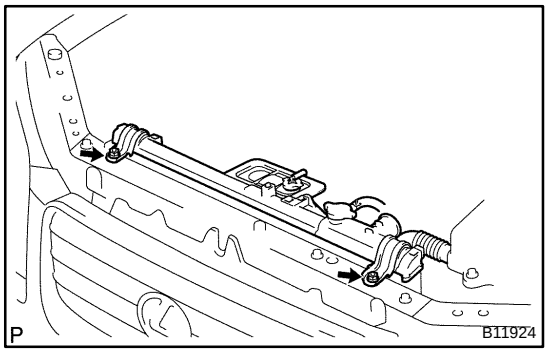
CO0AC-06

INSTALLATION

1. INSTALL ELECTRIC COOLING FAN TO RADIATOR

(a) Install the electric cooling fan with the 6 bolts.
Torque: 5.0 N·m (50 kgf·cm, 44 in.·lbf)

(b) Connect the radiator reservoir hose to the radiator.



2. INSTALL RADIATOR AND ELECTRIC COOLING FAN ASSEMBLY

(a) Install the 2 lower radiator supports to the radiator.

(b) Attach the 2 lower radiator supports on the radiator to the body bracket.

(c) Install the radiator and electric cooling fan assembly with the 2 upper radiator supports and 2 nuts.
Torque: 13.5 N·m (135 kgf·cm, 10 ft·lbf)

(d) Connect the upper radiator hose to the radiator.

(e) Connect the lower radiator hose to the radiator.

(f) Connect the ECM outlet duct to the ECM box.

(g) Connect the wire for electric cooling fan to the clamp on the electric cooling fan.

(h) Connect the 2 electric cooling fan connectors.

(i) Connect the ECT switch connector for electric cooling fan.

(j) A/T:
Connect the 2 oil cooler hoses for A/T to the radiator.

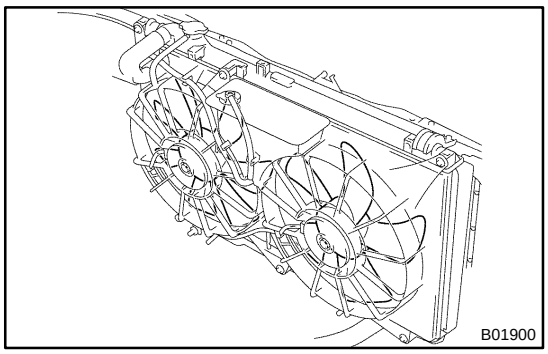
3. INSTALL AIR CLEANER AND MAF METER ASSEMBLY

4. INSTALL AIR CLEANER INLET

5. FILL WITH ENGINE COOLANT

6. START ENGINE AND CHECK FOR ENGINE COOLANT AND A/T FLUID LEAKS

7. INSTALL ENGINE UNDER COVER



ELECTRIC COOLING FAN

CO0AD-09

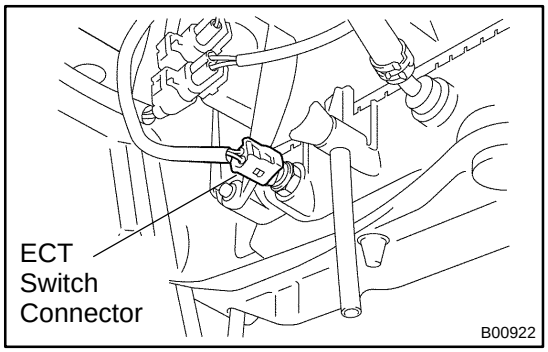
ON-VEHICLE INSPECTION

1. CHECK COOLING FAN OPERATION WITH LOW TEMPERATURE (Below 83˚C (181˚F))

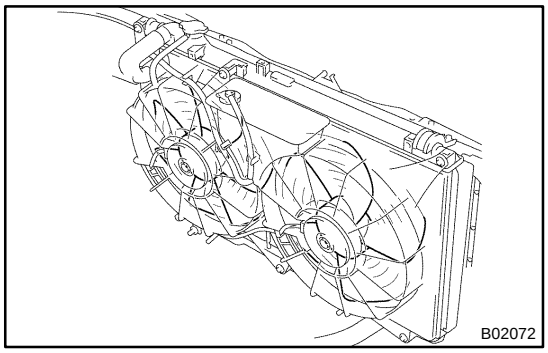
(a) Turn the ignition switch ON.

(b) Check that the cooling fan stops.

If not, check the cooling fan relay and ECT switch, and check for a separated connector or severed wire between the cooling fan relay and ECT switch.



(c) Disconnect the ECT switch connector.



(d) Check that the cooling fan rotates.

If not, check the fuses, radiator fan main relay, cooling fan relay, cooling fan, and check for a short circuit between the cooling fan relay and ECT switch.

(e) Reconnect the ECT switch connector.

2. CHECK COOLING FAN OPERATION WITH HIGH TEMPERATURE (Above 93˚C (199˚F))

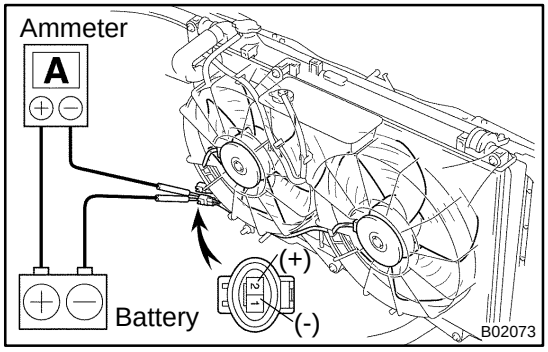
(a) Start the engine, and raise coolant temperature to above 93˚C (199˚F).

HINT:

Coolant temperature is the detected value by the ECT switch on the radiator lower tank.

(b) Check that the cooling fan rotates.

If not, replace the ECT switch.



3. INSPECT COOLING FANS

(a) Disconnect the cooling fan connector.

(b) Connect battery and ammeter to the cooling fan connector.

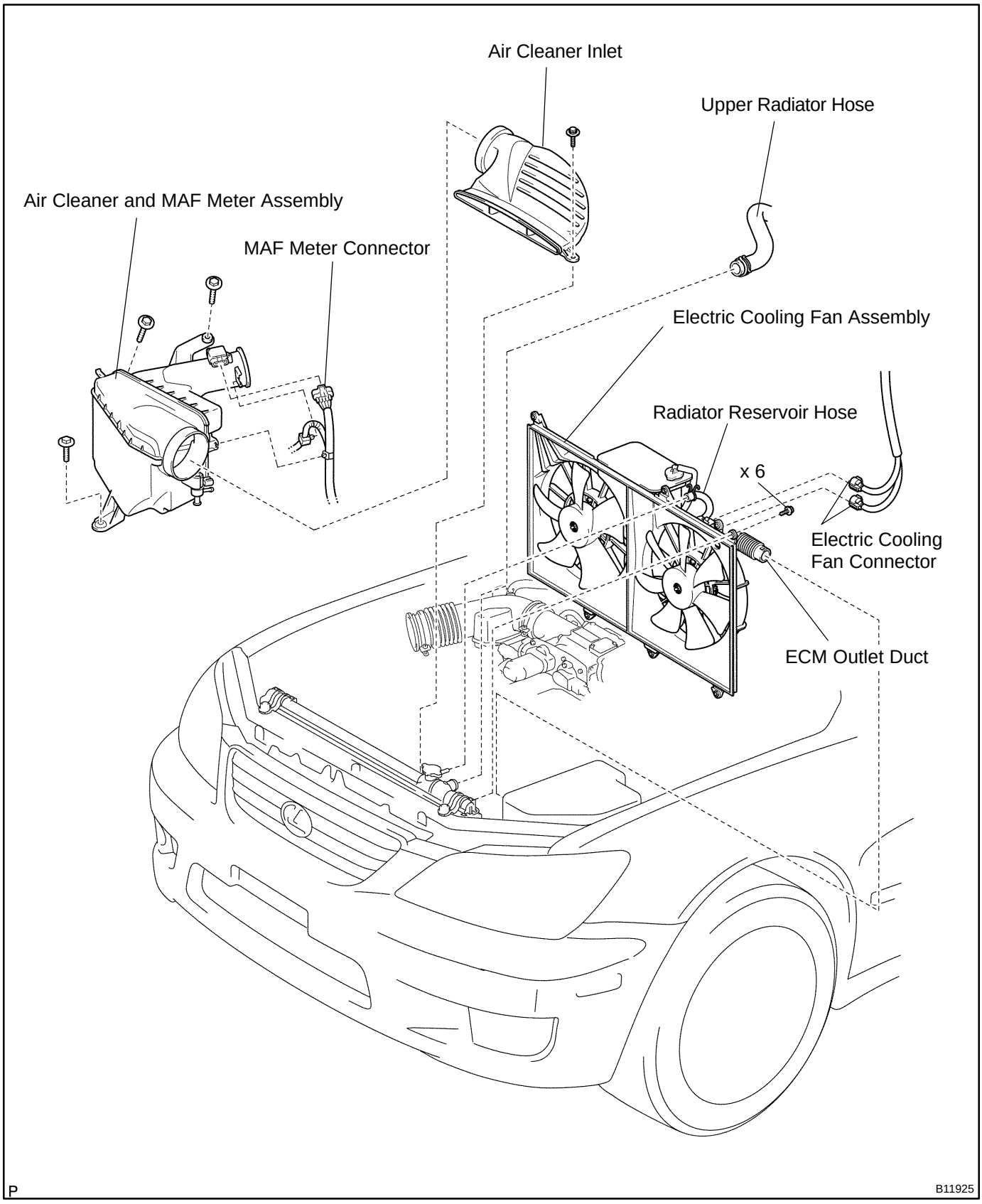
(c) Check that the cooling fan rotates smoothly, and check the reading on the ammeter.

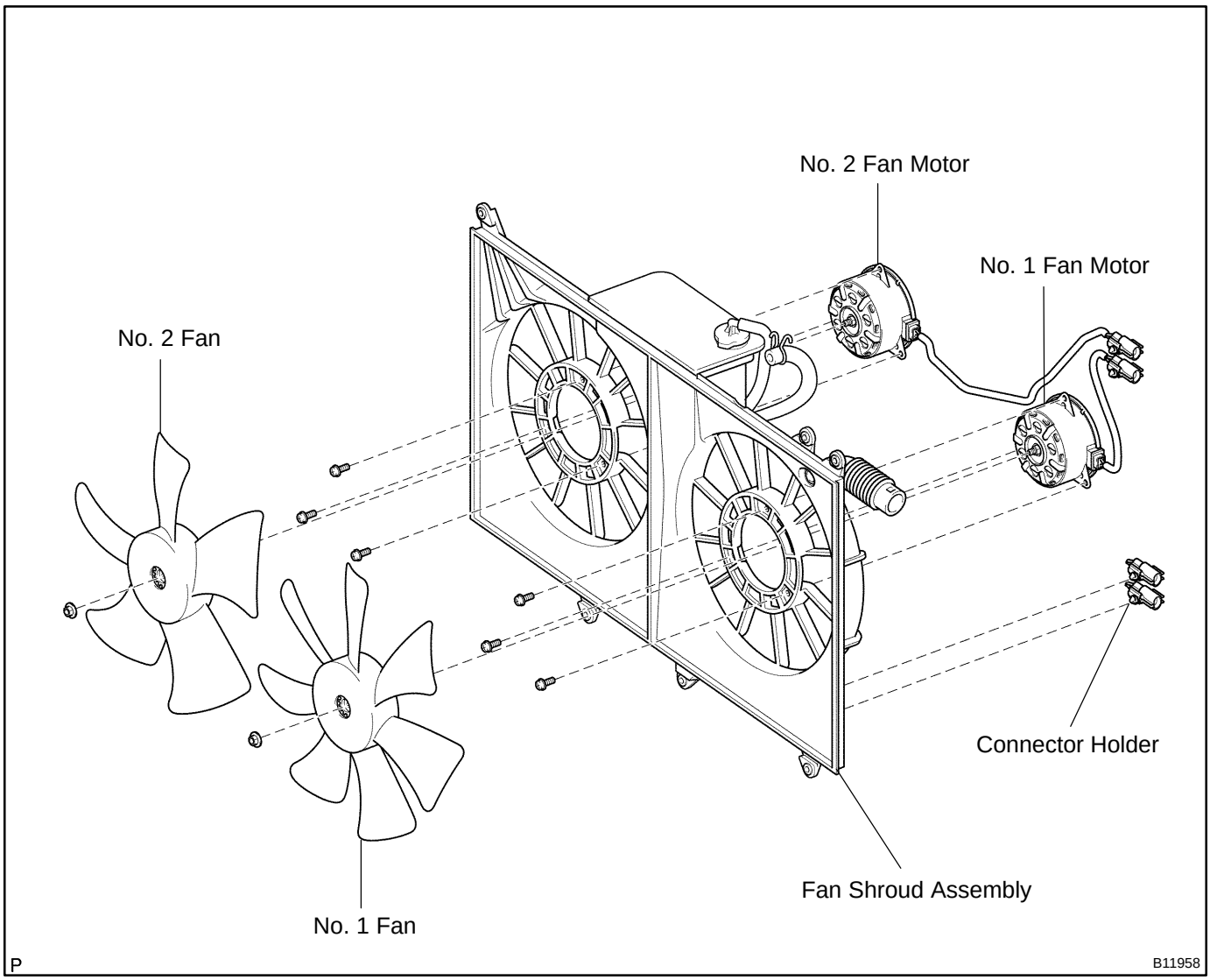
Standard amperage: 8.5 - 11.5 A at 20˚C (68˚F)

(d) Reconnect the cooling fan connector.

CO0AE-10

COMPONENTS




No. 2 Fan Motor
No. 1 Fan Motor
No. 2 Fan
Connector Holder
Fan Shroud Assembly
No. 1 Fan
P
B11958

CO0AF-10

REMOVAL

1. DRAIN ENGINE COOLANT

2. REMOVE AIR CLEANER INLET

3. REMOVE AIR CLEANER AND MAF METER ASSEMBLY

4. REMOVE ELECTRIC COOLING FAN

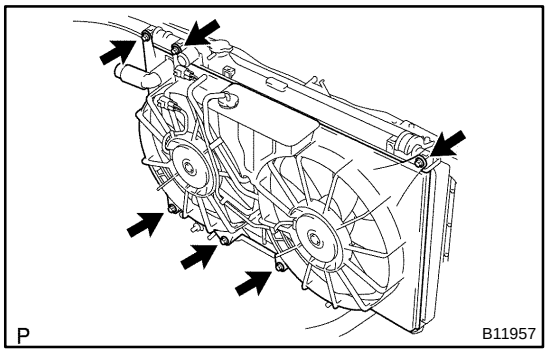
(a) Disconnect the upper radiator hose from the radiator.

(b) Disconnect the ECM outlet duct from the ECM box.

(c) Disconnect the wire for electric cooling fan from the clamp on the electric cooling fan.

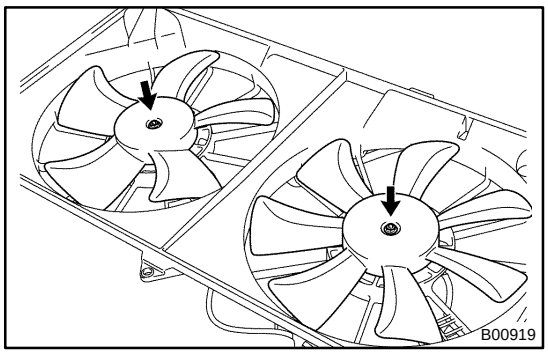
(d) Disconnect the 2 electric cooling fan connectors.

(e) Disconnect the radiator reservoir hose from the radiator.



(f) Remove the 6 bolts and electric cooling fan.

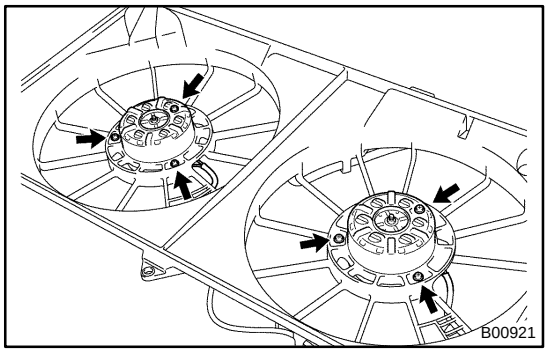
CO0AG-07



DISASSEMBLY

1. REMOVE FANS

Remove the nut and fan. Remove the 2 fans.



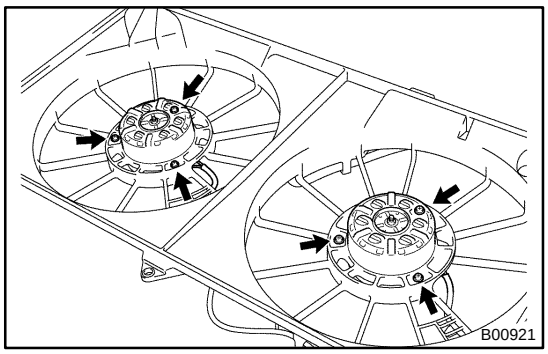
2. REMOVE FAN MOTORS

(a) Disconnect the wires and connector holders from the fan shroud.

(b) Remove the 3 screws and fan motor. Remove the 2 fan motors.

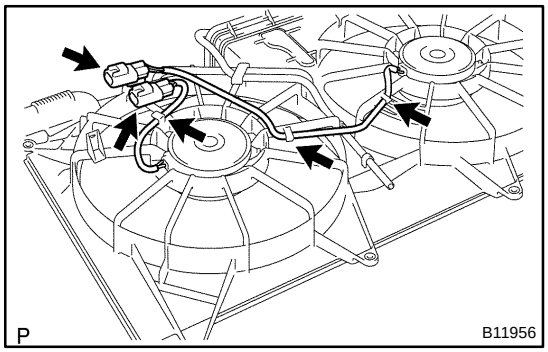
CO0AH-06

REASSEMBLY

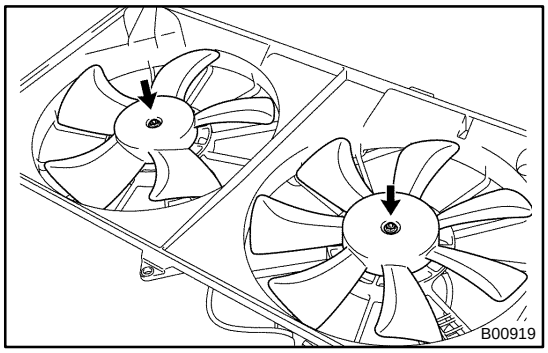


1. INSTALL FAN MOTORS

(a) Install the fan motor with the 3 screws. Install the 2 fan motors.



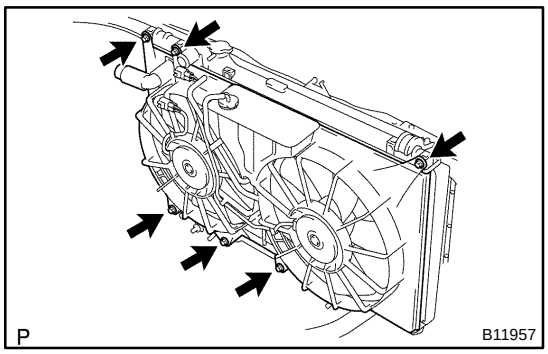
(b) Install the wires and connector holders to the fan shroud as shown in the illustration.



2. INSTALL FANS

Install the fan with the nut. Install the 2 fans.

CO0AI-08



INSTALLATION

1. INSTALL ELECTRIC COOLING FAN

(a) Install the electric cooling fan with the 6 bolts.
Torque: 5.0 N·m (50 kgf·cm, 44 in.·lbf)

(b) Connect the upper radiator hose to the radiator.

(c) Connect the ECM outlet duct to the ECM box.

(d) Connect the wire for electric cooling fan to clamp on the electric cooling fan.

(e) Connect the 2 electric cooling fan connectors.

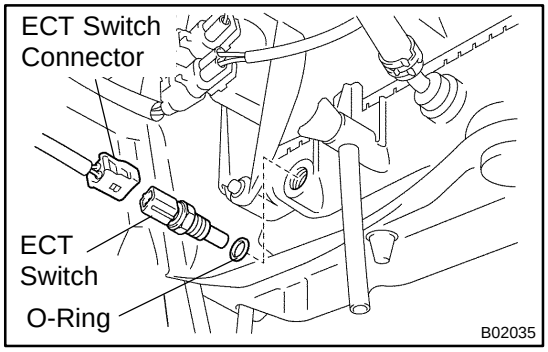
(f) Connect the radiator reservoir hose to the radiator.

2. INSTALL AIR CLEANER AND MAF METER ASSEMBLY

3. INSTALL AIR CLEANER INLET

4. FILL WITH ENGINE COOLANT

5. START ENGINE AND CHECK FOR COOLANT LEAKS



ENGINE COOLANT TEMPERATURE (ECT) SWITCH

CO0AJ-10

INSPECTION

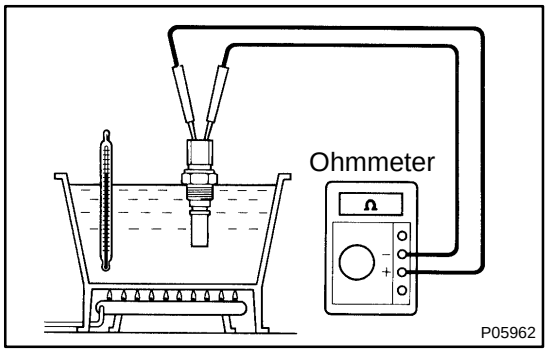
1. DRAIN ENGINE COOLANT

2. REMOVE ECT SWITCH

(a) Disconnect the connector.

(b) Remove the ECT switch.

(c) Remove the O-ring from the ECT switch.



3. INSPECT ECT SWITCH

(a) Using an ohmmeter, check that there is no continuity between the terminals when the coolant temperature is above 93˚C (199˚F).

If there is continuity, replace the switch.

(b) Using an ohmmeter, check that there is continuity between the terminals when the coolant temperature is below 83˚C (181˚F).

If there is no continuity, replace the switch.

4. REINSTALL ECT SWITCH

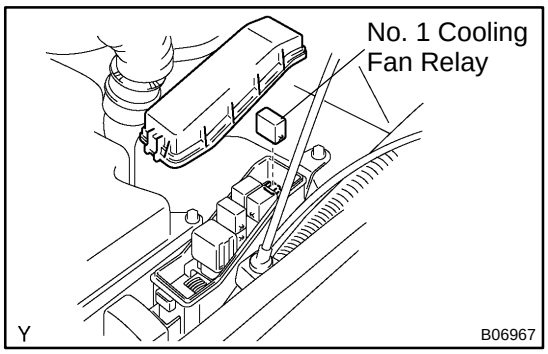
(a) Install a new O-ring to the ECT switch.

(b) Install the ECT switch.

(c) Connect the connector.

5. REFILL WITH ENGINE COOLANT

6. START ENGINE AND CHECK FOR COOLANT LEAKS



COOLING FAN RELAY

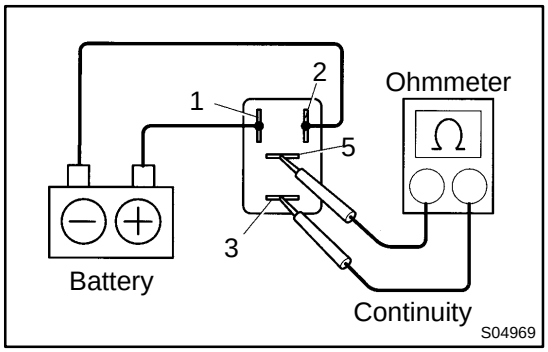
CO1DJ-01

INSPECTION

1. INSPECT NO. 1 COOLING FAN RELAY

(a) Remove the relay box cover.

(b) Remove the No. 1 cooling fan relay (Marking: FAN NO.1).



(c) Inspect the resistance.

(1) Using an ohmmeter, measure the resistance between the terminals.

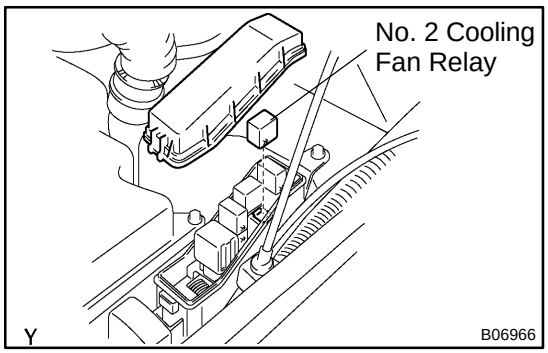
Standard:

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (Apply battery voltage to terminals 1 and 2)

If the resistance is not as specified, replace the relay.

(d) Reinstall the No. 1 cooling fan relay.

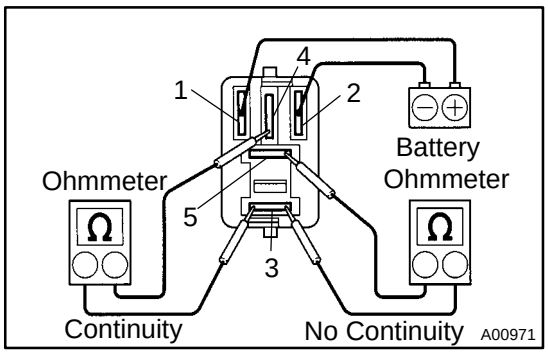
(e) Reinstall the relay box cover.



2. INSPECT NO. 2 COOLING FAN RELAY

(a) Remove the relay box cover.

(b) Remove the No. 2 cooling fan relay (Marking: FAN NO.2).



(c) Inspect the resistance.

(1) Using an ohmmeter, measure the resistance between the terminals.

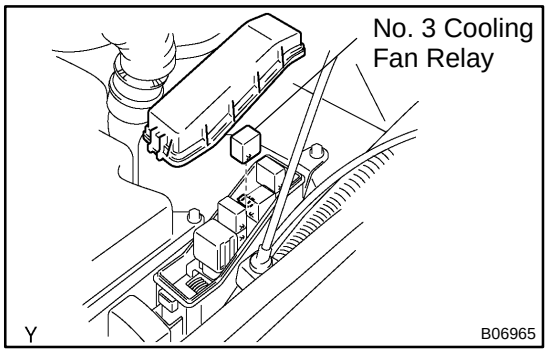
Standard:

Tester Connection	Specified Condition
3 - 4	Below 1 Ω
3 - 4	10 kΩ or higher (Apply battery voltage to terminals 1 and 2)
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (Apply battery voltage to terminals 1 and 2)

If the resistance is not as specified, replace the relay.

(d) Reinstall the No. 2 cooling fan relay.

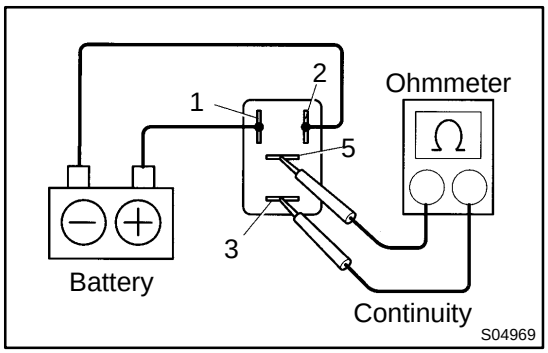
(e) Reinstall the relay box cover.



3. INSPECT NO. 3 COOLING FAN RELAY

(a) Remove the relay box cover.

(b) Remove the No. 3 cooling fan relay (Marking: FAN NO.3).



(c) Inspect the resistance.

(1) Using an ohmmeter, measure the resistance between the terminals.

If the resistance is not as specified, replace the relay.

(d) Reinstall the No. 3 cooling fan relay.

(e) Reinstall the relay box cover.