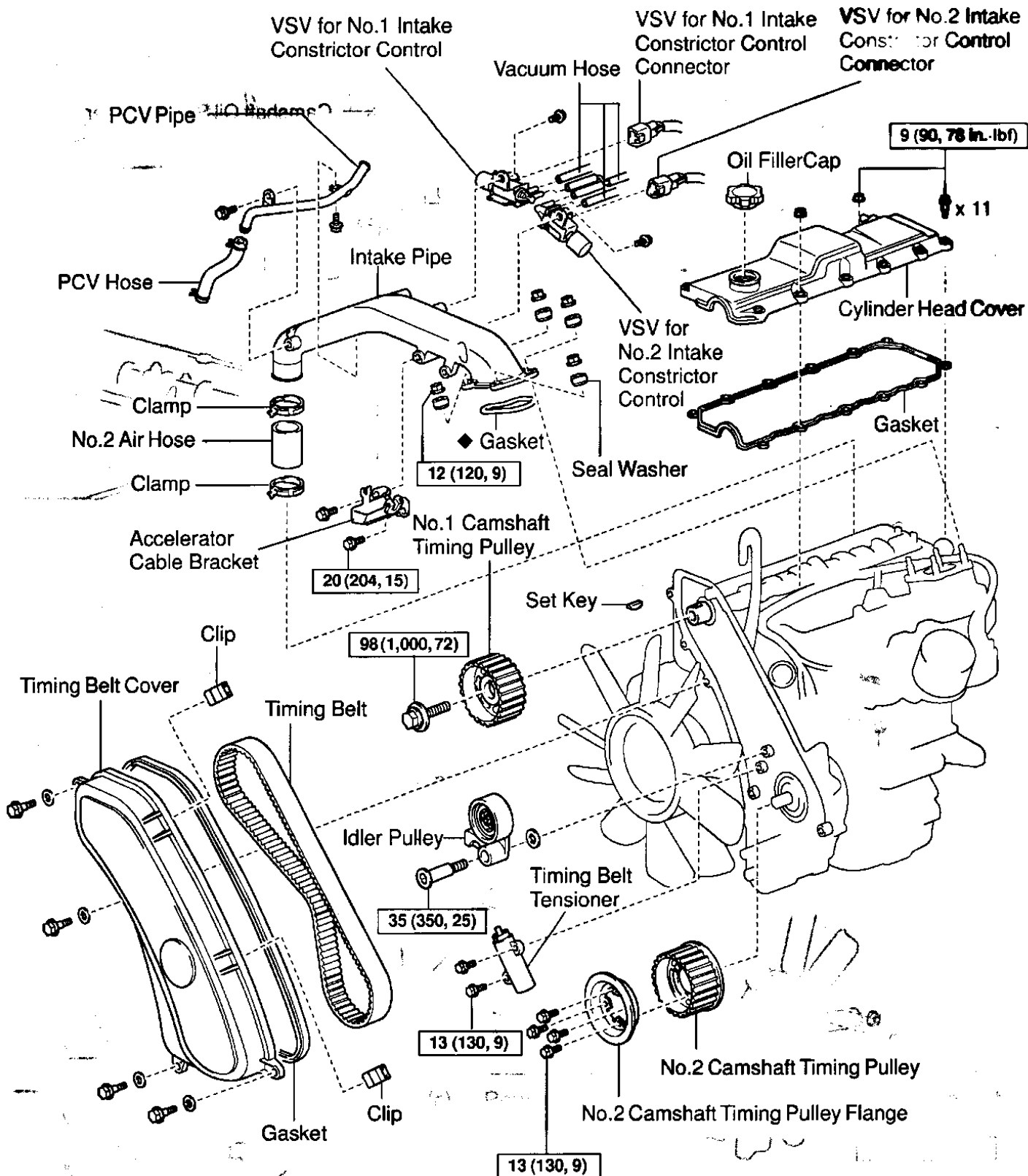
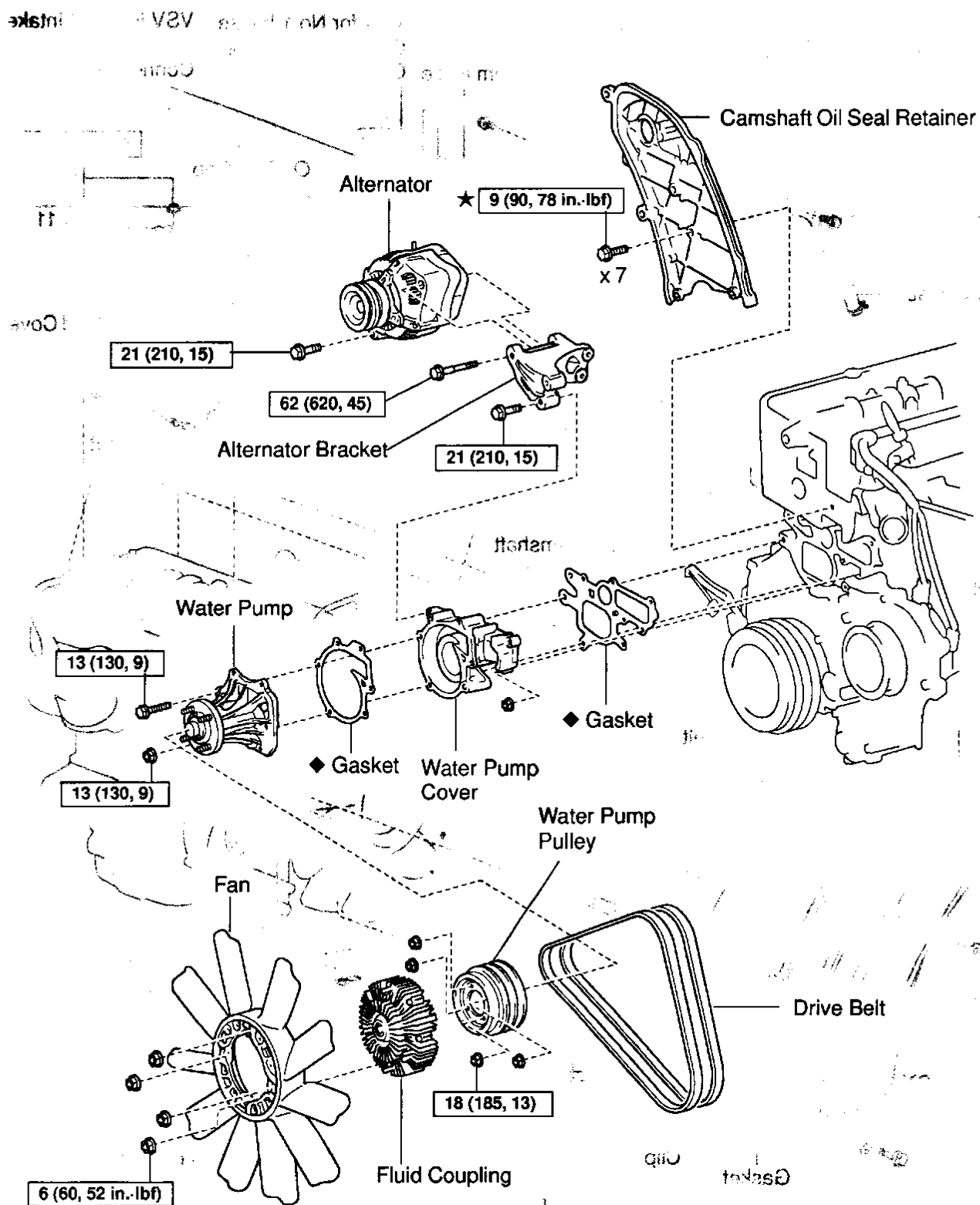


WATER PUMP COMPONENTS



N·m (kgf·cm, ft·lbf) : Specified torque

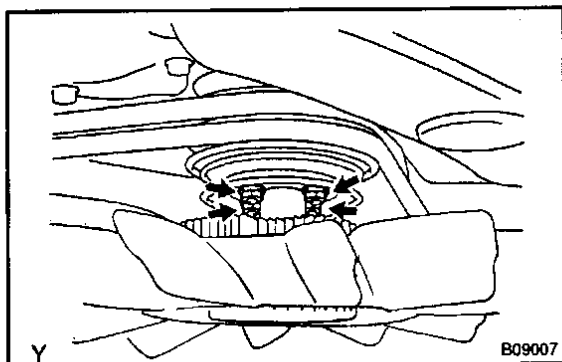
◆ Non-reusable part



N·m (kgf·cm, ft·lbf) : Specified torque

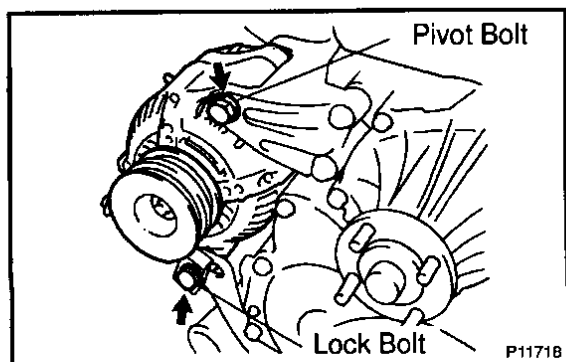
◆ Non-reusable part

★ Precoated part



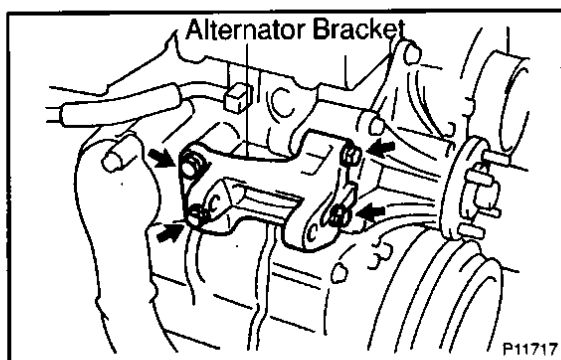
REMOVAL

1. **DRAIN ENGINE COOLANT**
2. **REMOVE DRIVE BELTAS, FAN AND WATER PUMP PULLEY**
 - (a) Stretch the belt tight and loosen the 4 pump pulley set nuts.
 - (b) Loosen the pivot bolt and adjusting lock bolt.
 - (c) Loosen the adjusting bolt, and remove the drive belt.
 - (d) Remove the 4 nuts, fan and fluid coupling assembly and pulley.
3. **REMOVE TIMING BELT AND IDLER PULLEY**
(See page EM-13)
4. **REMOVE NO.1 CAMSHAFT TIMING PULLEY**
(See page EM-13)
5. **REMOVE CAMSHAFT OIL SEAL RETAINER**
(See page EM-24)

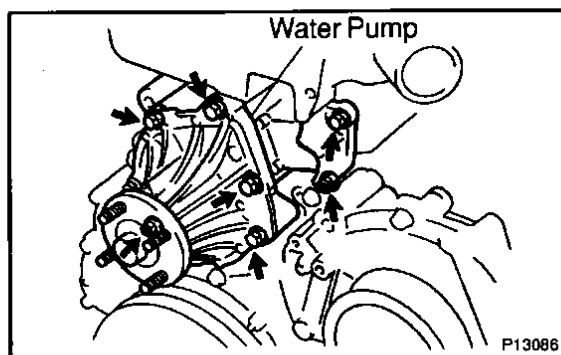


6. **REMOVE WATER PUMP**
 - (a) Remove the lock bolt, pivot bolt and alternator.

CO



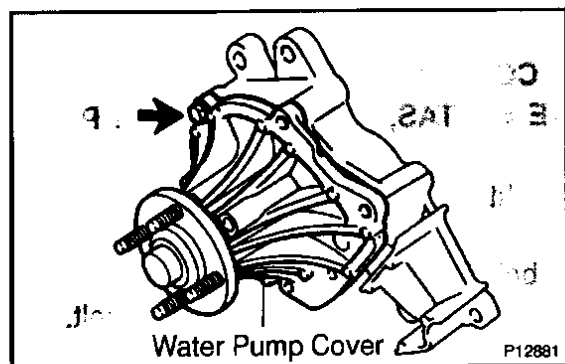
- (b) Remove the 4 bolts and alternator bracket.



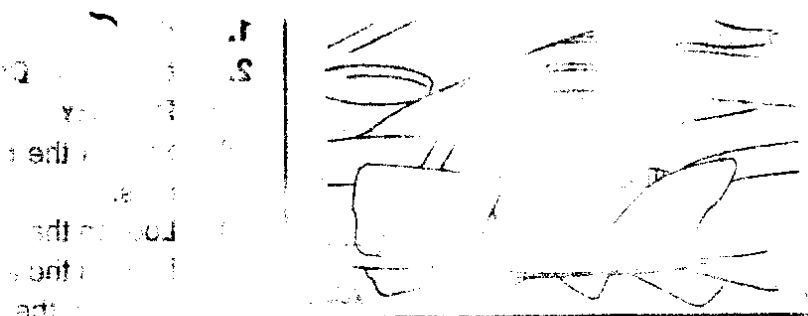
- (c) Remove the 5 bolts, 2 nuts, water pump and gasket.

CO-6

COOLING — WATER PUMP



(d) Remove the bolt, water pump cover and gasket.

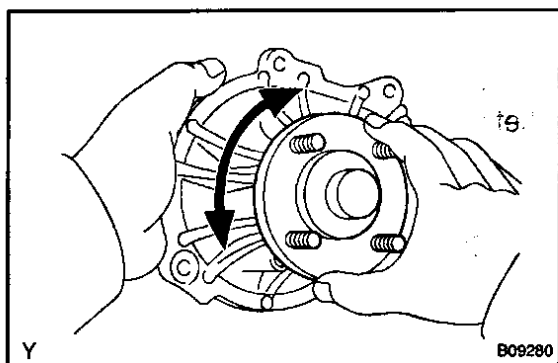


COOLING - WATER PUMP

INSPECTION.**1. INSPECT WATER PUMP**

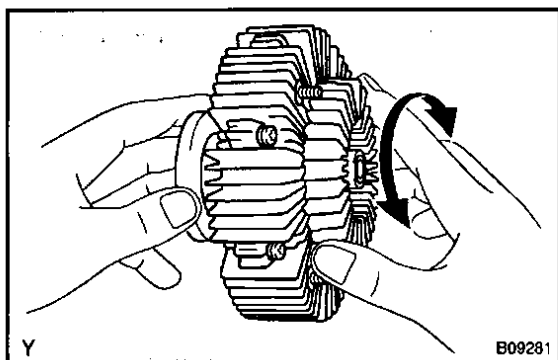
Turn the pulley and check that the water pump bearing moves smoothly and quietly.

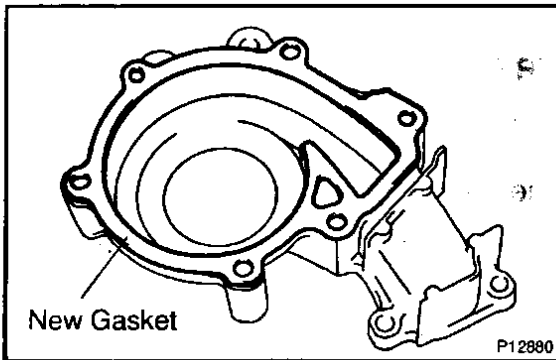
If necessary, replace the water pump.

**2. INSPECT FLUID COUPLING**

Check the fluid coupling for damage and silicon oil leakage.

If necessary, replace the fluid coupling.

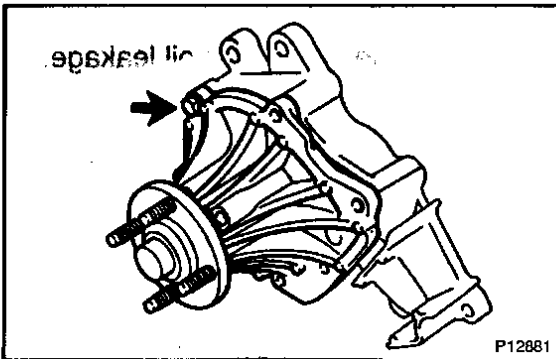




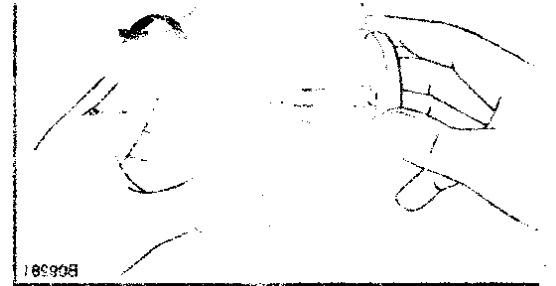
INSTALLATION

1. INSTALL WATER PUMP ASSEMBLY

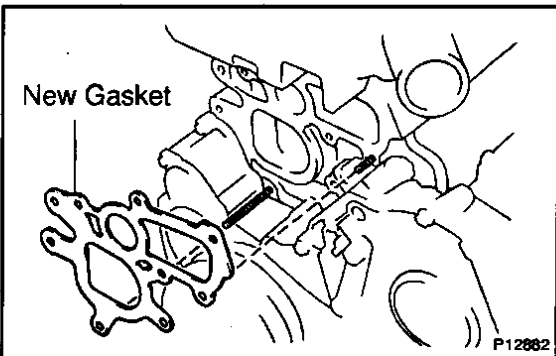
- (a) Install a new gasket to the water pump cover.



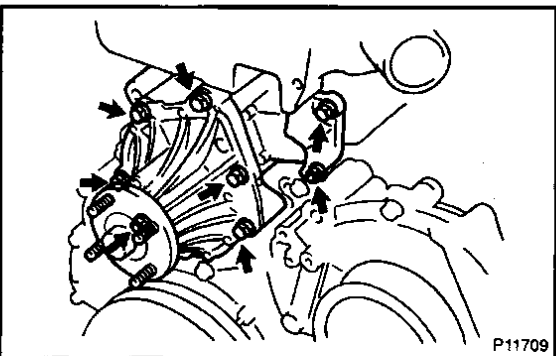
- (b) Temporarily install the water pump and water pump cover with the bolt.



CO



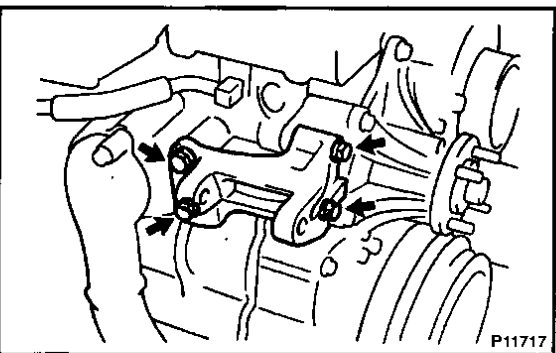
- (c) Place a new gasket in position on the cylinder head.



- (d) Temporarily install the water pump with the 5 bolts and 2 nuts.

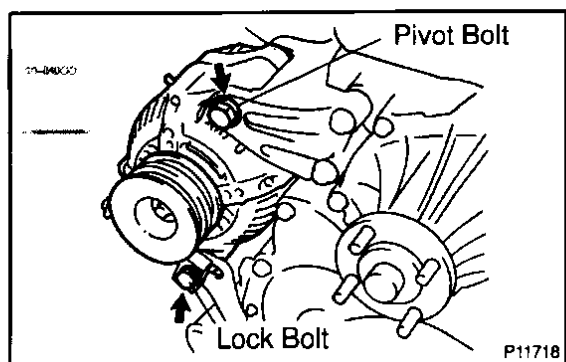
- (e) Tighten the bolts and nuts.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

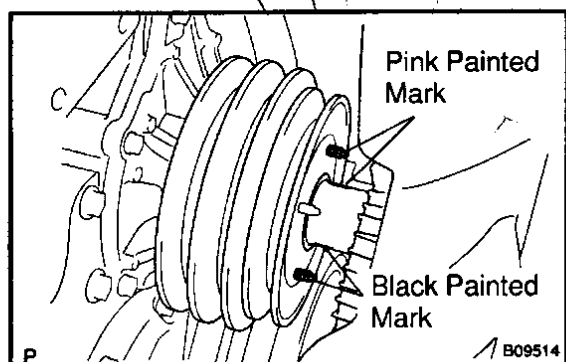


- (f) Install the alternator bracket with the 4 bolts.
Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

COOLING = WATER PUMP



- (g) Install the alternator with the pivot bolt and lock bolt. 11
- Torque:**
 21 N·m (210 kgf·cm, 15 ft·lbf) for Lock bolt
 62 N·m (620 kgf·cm, 45 ft·lbf) for Pivot bolt
2. INSTALL CAMSHAFT OIL SEAL RETAINER
(See page EM-34)
 3. INSTALL NO.1 CAMSHAFT TIMING PULLEY
(See page EM-18)
 4. INSTALL IDLER PULLEY AND TIMING BELT
(See page EM-18)
 5. INSTALL WATER PUMP PULLEY, FAN AND DRIVE BELT

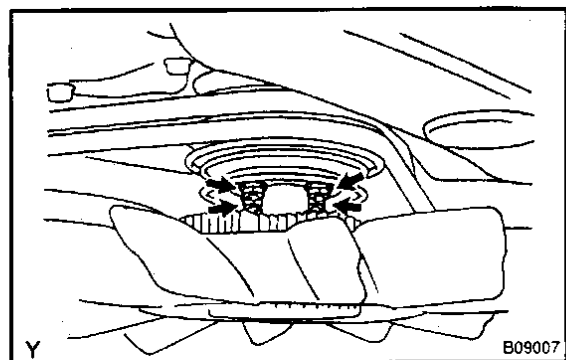


- (a) Install the pump pulley, the fluid, fan and coupling assembly with the 4 nuts.

HINT:

When installing the fluid coupling on the water pump, must install it by making the marking color of the bolt of the water pump and the marking color of the fluid coupling meet.

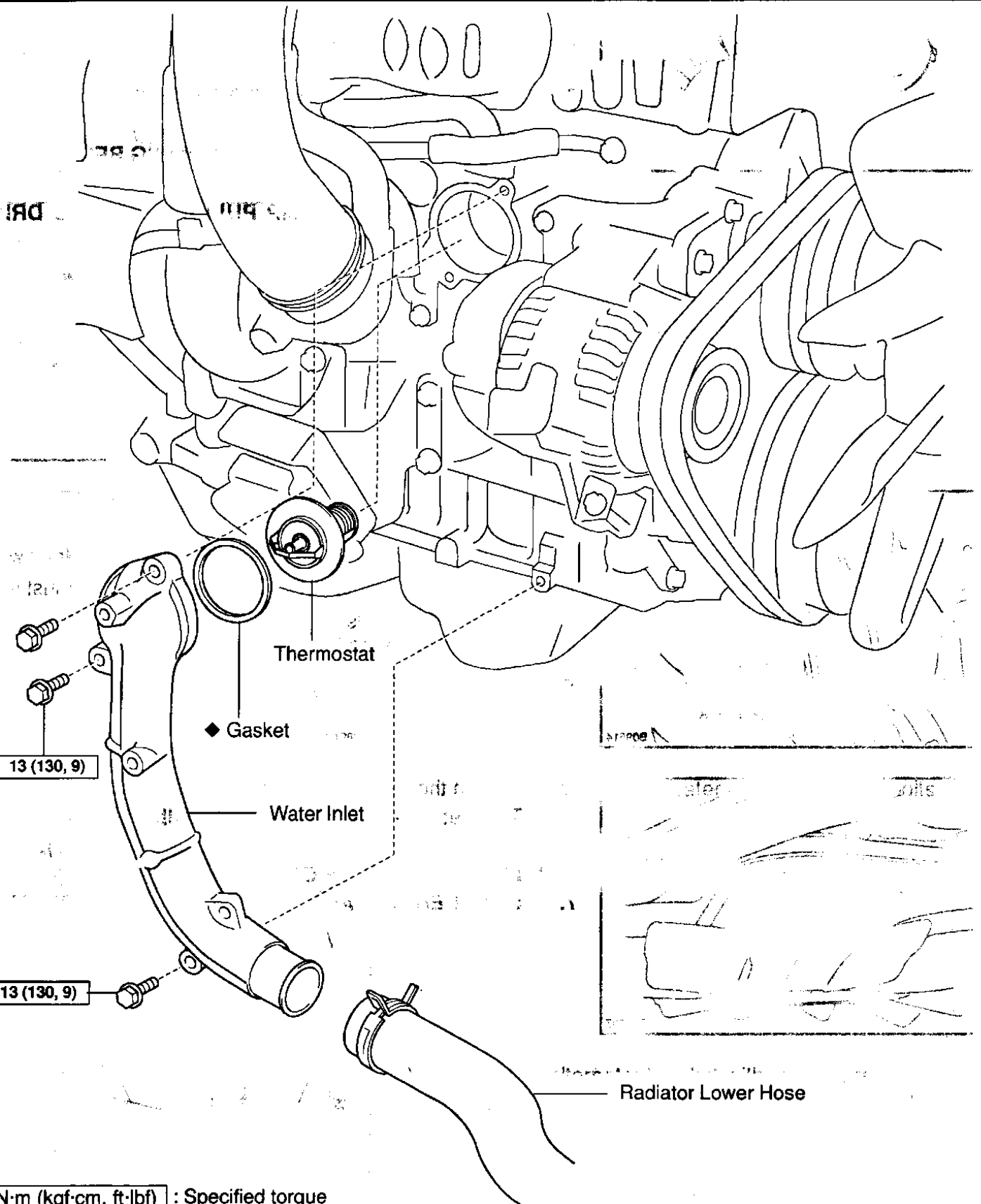
- (b) Place the drive belt on each pulley.



- (c) Stretch the belt tight and torque the 4 nuts.
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)
- (d) Adjust the drive belt deflection. (See page CH-2)
6. FILL WITH ENGINE COOLANT
 7. START ENGINE AND CHECK FOR COOLANT LEAKS

THERMOSTAT COMPONENTS

CO08-02



N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

Y

CO08-02

REMOVAL

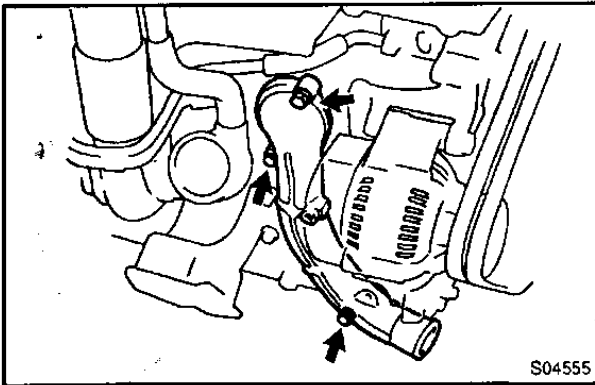
HINT:

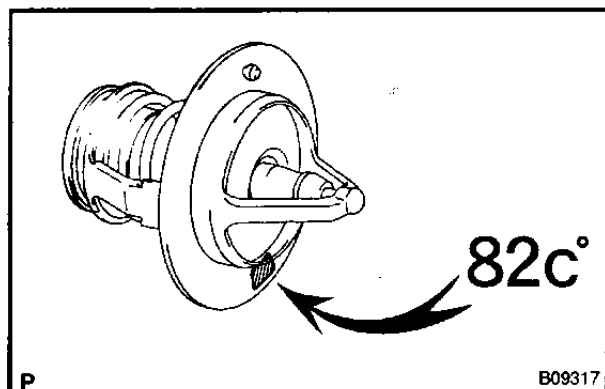
Removal of the thermostat would have an adverse effect, causing a lowering of cooling efficiency. Do not remove the thermostat, even if the engine tends to overheat.

1. **DRAIN ENGINE COOLANT**
2. **DISCONNECT RADIATOR LOWER HOSE**

3. REMOVE WATER INLET AND THERMOSTAT

- (a) Remove the 3 bolts and water inlet from the cylinder block.
- (b) Remove the thermostat.
- (c) Remove the gasket from the thermostat.



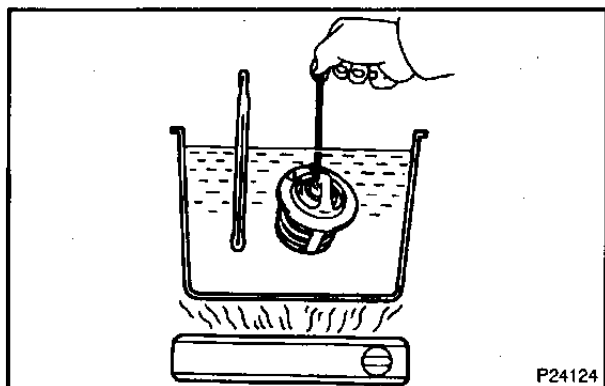


INSPECTION

INSPECT THERMOSTAT

HINT:

The thermostat is numbered with the valve opening temperature.

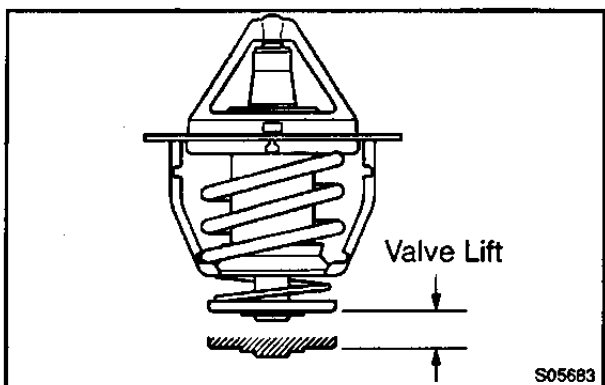


(a) Immerse the thermostat in water and gradually heat the water.

(b) Check the valve opening temperature.

Valve opening temperature: 80 – 84 °C (176 – 183 °F)

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



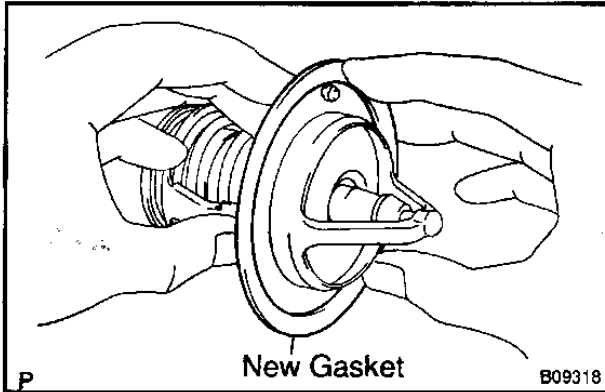
(c) Check the valve lift.

Valve lift: 10 mm (0.39 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.



INSTALLATION

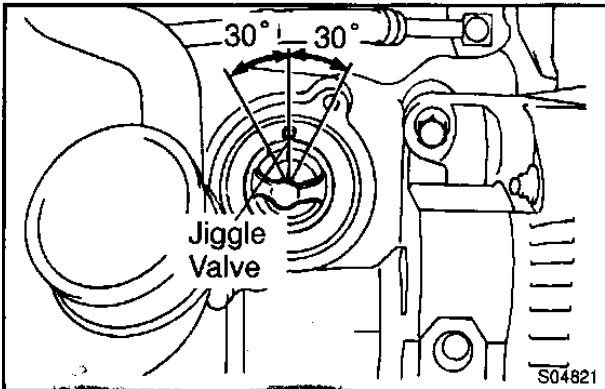
HOTAK

1. PLACE THERMOSTAT IN CYLINDER BLOCK

- (a) Install a new gasket to the thermostat.

NO

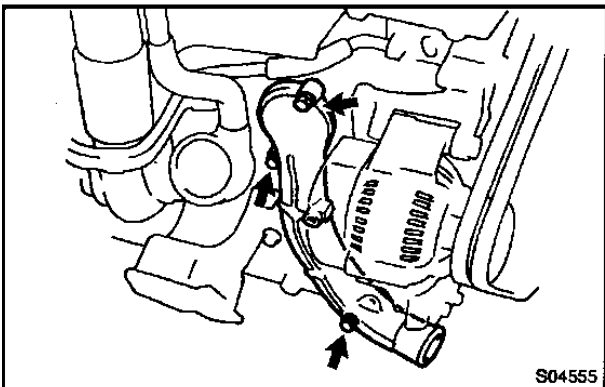
gasket
install



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

HINT:

The jiggle valve may be set within 30° of either side of the prescribed position.



2. INSTALL WATER INLET TO CYLINDER BLOCK

Install the water inlet with the 3 bolts.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

NOTICE:

Torque the 2 upper bolts first.

3. FILL WITH ENGINE COOLANT

4. START ENGINE AND CHECK FOR COOLANT LEAKS