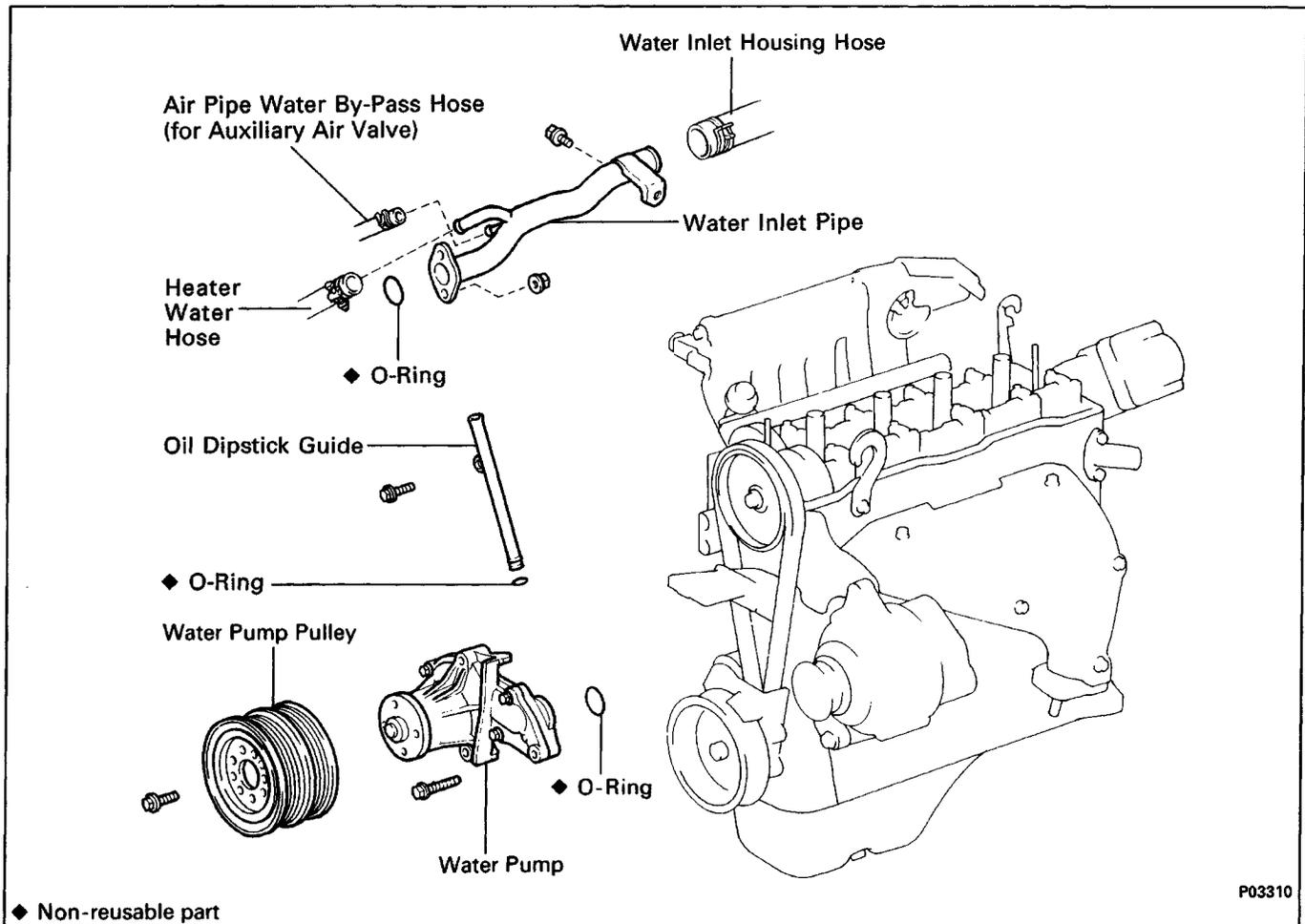


WATER PUMP (4A-FE) COMPONENTS

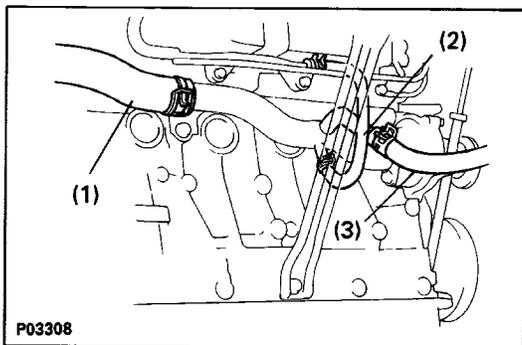


REMOVAL OF WATER PUMP

1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

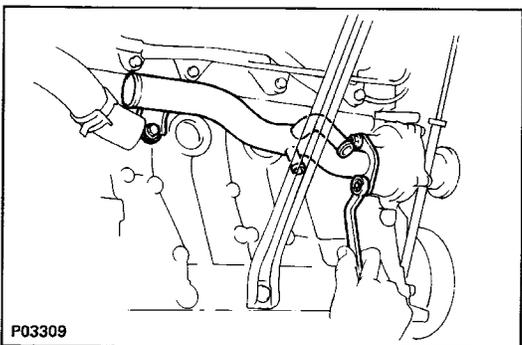
CAUTION: Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

2. DRAIN ENGINE COOLANT (See page [CO-6](#))
3. REMOVE NO.3 AND NO.2 TIMING BELT COVERS (See steps 2 to 13 on pages [EM-33](#) to 35)
4. REMOVE PS DRIVE BELT ADJUSTING STRUT (See step 29 on page [EM-87](#))

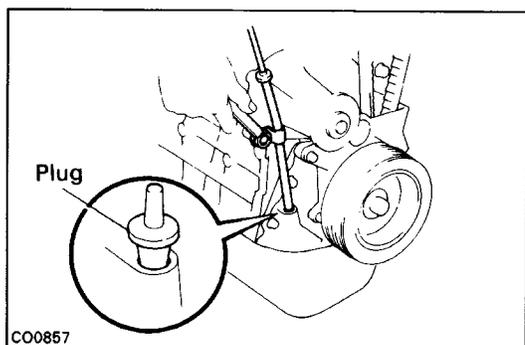


5. REMOVE WATER INLET PIPE

- (a) Disconnect the following hoses:
- (1) Water inlet housing hose
 - (2) Heater water hose
 - (3) Air pipe water by-pass hose

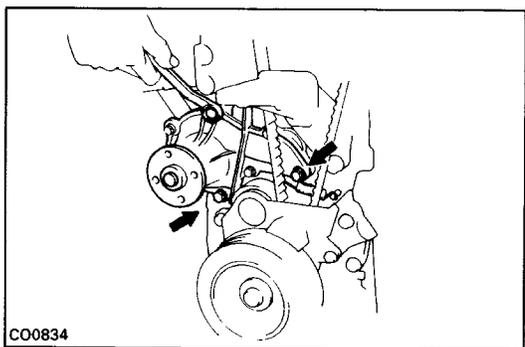


- (b) Remove the bolt, two nuts, inlet pipe and O-ring.



6. REMOVE OIL DIPSTICK AND DIPSTICK GUIDE

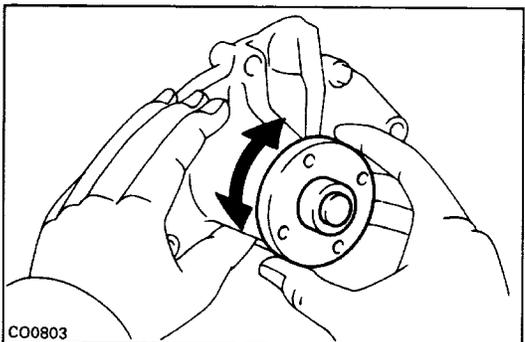
- (a) Remove the dipstick.
 (b) Remove the bolt, and pull out the dipstick guide.
 Plug the guide installation hole of the oil pump.
 (c) Remove the O-ring from the dipstick guide.



7. REMOVE WATER PUMP

- (a) Remove the three bolts holding the water pump to the cylinder block.
 (b) Remove the water pump together with the pulley.
 Remove the O-ring.

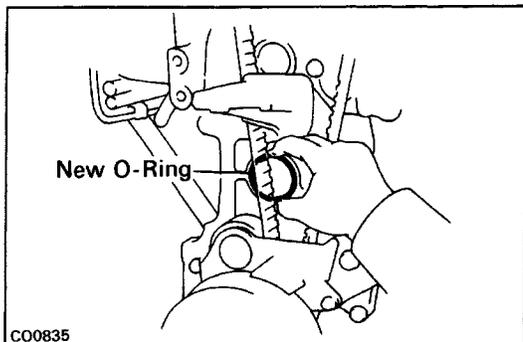
NOTICE: Be careful not to get coolant on the timing belt.



INSPECTION OF WATER PUMP

INSPECT WATER PUMP

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

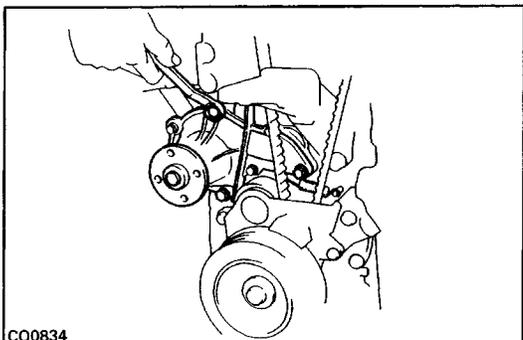


INSTALLATION OF WATER PUMP

(See page CO-7)

1. INSTALL WATER PUMP

- (a) Place a new O-ring in position on the cylinder block.

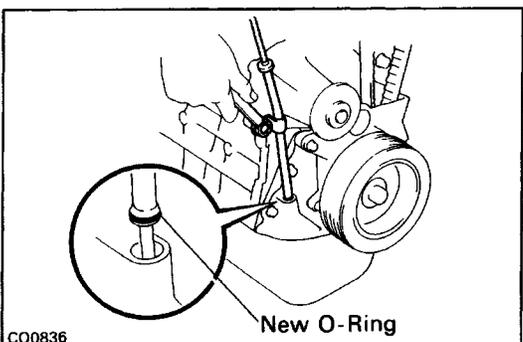


- (b) Place the pulley on the water pump, and place the water pump together with the pulley on the cylinder block.

HINT: If the pulley is not placed on the water pump first, the pump cannot be installed later.

- (c) Install the water pump with the three bolts.

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



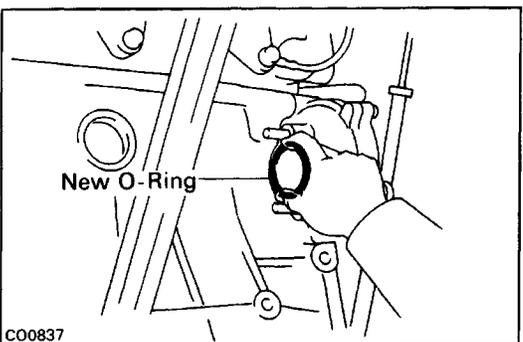
2. INSTALL OIL DIPSTICK GUIDE AND DIPSTICK

- (a) Install a new O-ring to the dipstick guide.

- (b) Apply soapy water to the O-ring.

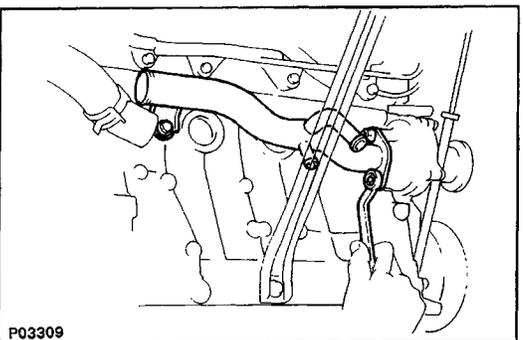
- (c) Push in the dipstick guide, and install it with the bolt.

Torque: 9.3 N-m (95 kgf-cm, 82in.-lbf)



3. INSTALL WATER INLET PIPE

- (a) Place a new O-ring in position on the water pump.



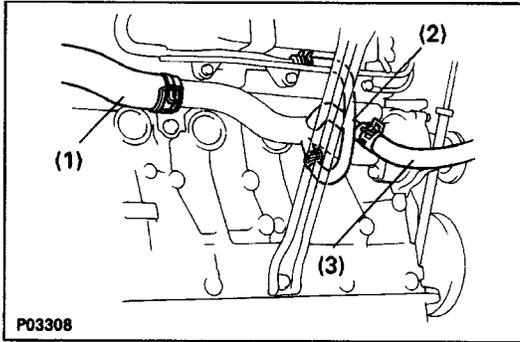
- (b) Temporarily install water pump with the two nuts and bolt.

- (c) Tighten the two nuts.

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

- (d) Tighten the bolt.

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



(e) Connect the following hoses:

- (1) Water inlet housing hose
- (2) Heater water by-pass hose
- (3) Air pipe water by-pass hose

4. INSTALL PS DRIVE BELT ADJUSTING STRUT

(See step 5 on page [EM-108](#))

5. INSTALL NO.3 AND NO.2 TIMING BELT COVERS

(See steps 12 to 24 on pages [EM-43](#) to 45)

6. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

7. FILL WITH ENGINE COOLANT (See page [CO-6](#))