

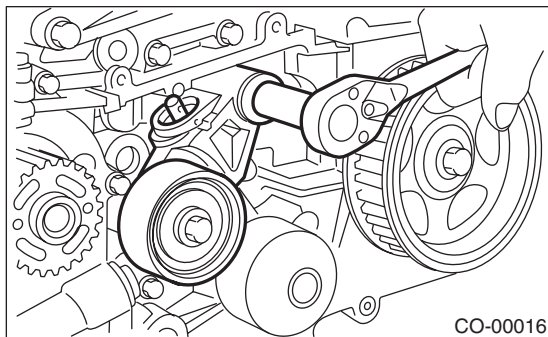
Water Pump

COOLING

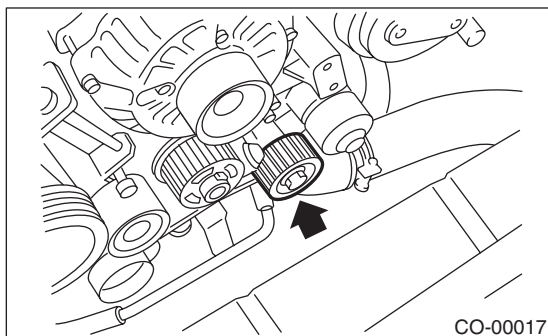
4. Water Pump

A: REMOVAL

- 1) Remove the radiator. <Ref. to CO(H4SO)-19, REMOVAL, Radiator.>
- 2) Remove the V-belts. <Ref. to ME(H4SO)-36, REMOVAL, V-belt.>
- 3) Remove the crank pulley. <Ref. to ME(H4SO)-38, REMOVAL, Crank Pulley.>
- 4) Remove the timing belt. <Ref. to ME(H4SO)-40, TIMING BELT, REMOVAL, Timing Belt.>
- 5) Remove the automatic belt tension adjuster.

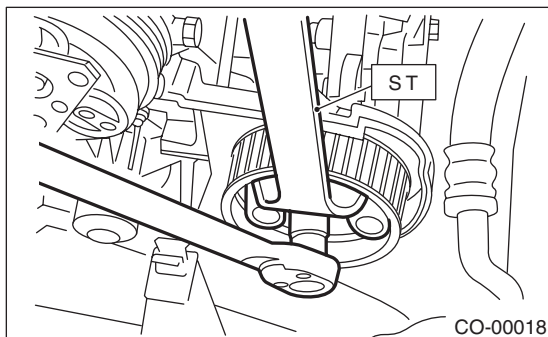


- 6) Remove the belt idler No. 2.

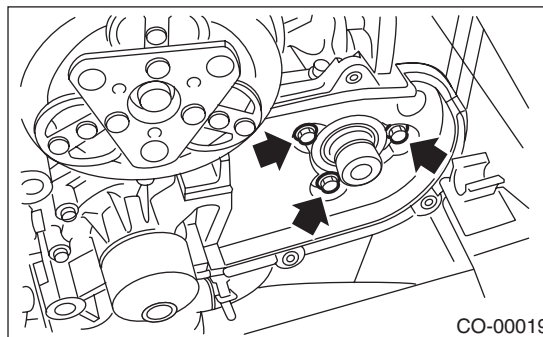


- 7) Remove the cam sprocket (LH) using ST.
ST 18231AA010 CAM SPROCKET WRENCH

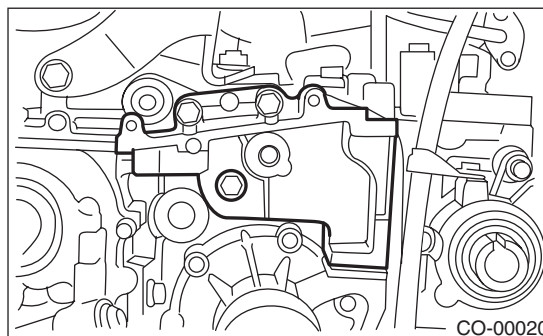
NOTE:
CAMSHAFT SPROCKET WRENCH (499207100)
can also be used.



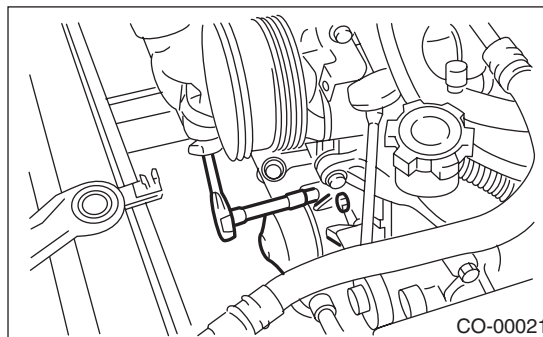
- 8) Remove the belt cover (LH) No. 2.



- 9) Remove the tensioner bracket.



- 10) Disconnect the hose from water pump.
- 11) Remove the water pump.



B: INSTALLATION

1) Install the water pump onto cylinder block (LH).

NOTE:

- Use a new gasket.
- When installing the water pump, tighten the bolts in two stages in alphabetical sequence as shown in figure.

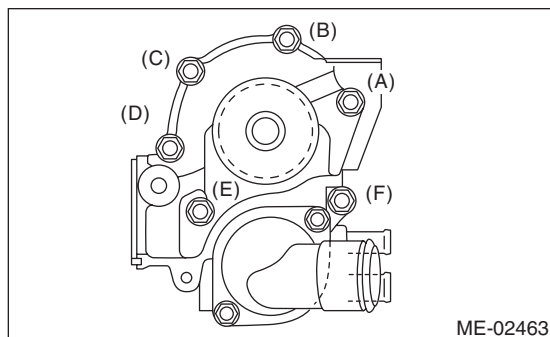
Tightening torque:

First:

12 N·m (1.2 kgf·m, 8.9 ft·lb)

Second:

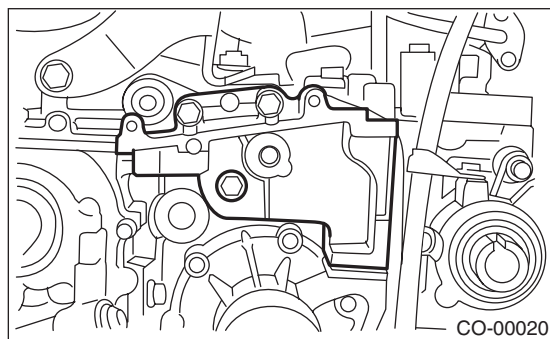
12 N·m (1.2 kgf·m, 8.9 ft·lb)



- 2) Install the hose to water pump.
3) Install the tensioner bracket.

Tightening torque:

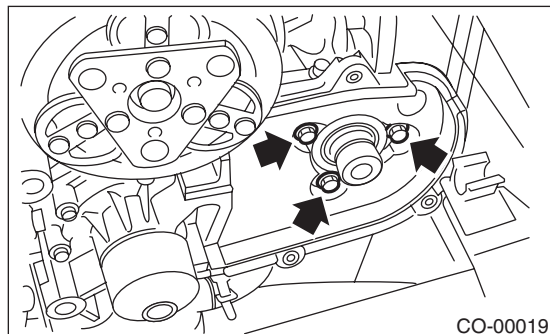
24.5 N·m (2.5 kgf·m, 18.1 ft·lb)



4) Install the belt cover No. 2 (LH).

Tightening torque:

5 N·m (0.5 kgf·m, 3.6 ft·lb)



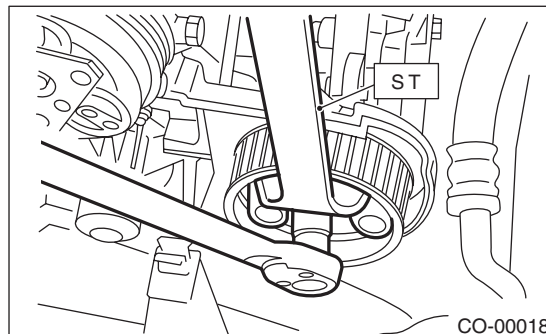
5) Install the cam sprocket (LH) using ST.
ST 18231AA010 CAM SPROCKET WRENCH

NOTE:

CAMSHAFT SPROCKET WRENCH (499207100) can also be used.

Tightening torque:

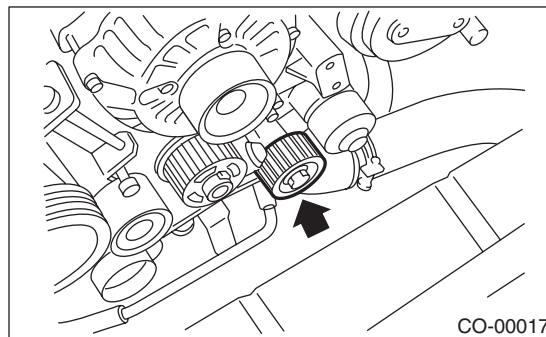
78 N·m (8.0 kgf·m, 57.9 ft·lb)



6) Install the belt idler No. 2.

Tightening torque:

39 N·m (4.0 kgf·m, 28.9 ft·lb)



7) Install an automatic belt tension adjuster with the tension rod held by a pin. <Ref. to ME(H4SO)-41, AUTOMATIC BELT TENSION ADJUSTER ASSEMBLY AND BELT IDLER, INSTALLATION, Timing Belt.>

8) Install the timing belt. <Ref. to ME(H4SO)-42, TIMING BELT, INSTALLATION, Timing Belt.>

9) Install the crank pulley. <Ref. to ME(H4SO)-38, INSTALLATION, Crank Pulley.>

10) Install the V-belts. <Ref. to ME(H4SO)-36, INSTALLATION, V-belt.>

11) Install the radiator. <Ref. to CO(H4SO)-20, INSTALLATION, Radiator.>

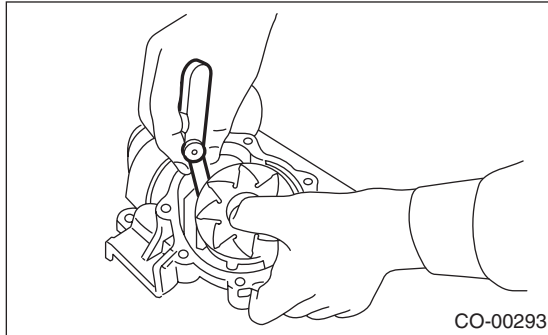
C: INSPECTION

- 1) Check the water pump bearing for smooth rotation.
- 2) Check the water pump pulley for abnormalities.
- 3) Make sure the impeller is not deformed or damaged.
- 4) Inspect the clearance between impeller and pump case.

Clearance between impeller and pump case:

Standard

0.4 — 1.6 mm (0.016 — 0.063 in)



- 5) After water pump installation, check pulley shaft for engine coolant leaks. If leaks are noted, replace the water pump assembly.