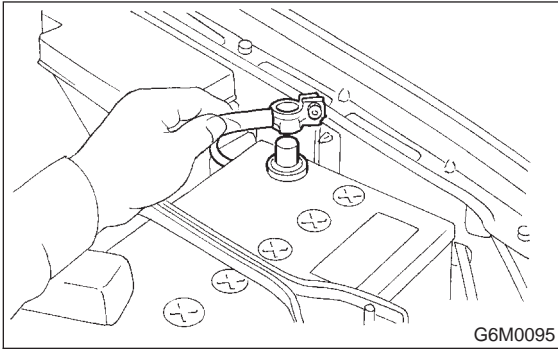


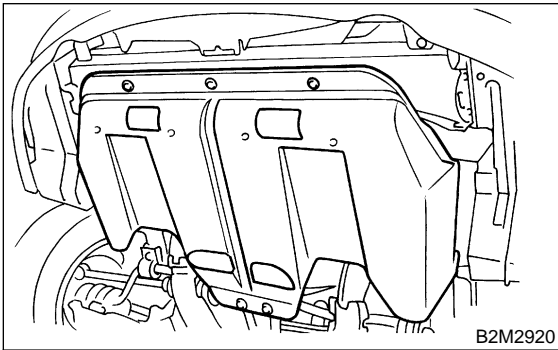
1. Water Pump

A: REMOVAL

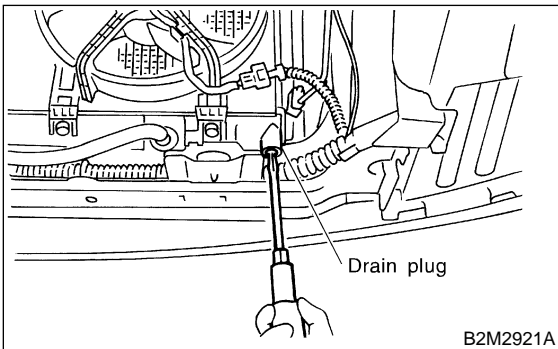
1) Disconnect ground cable from the battery.



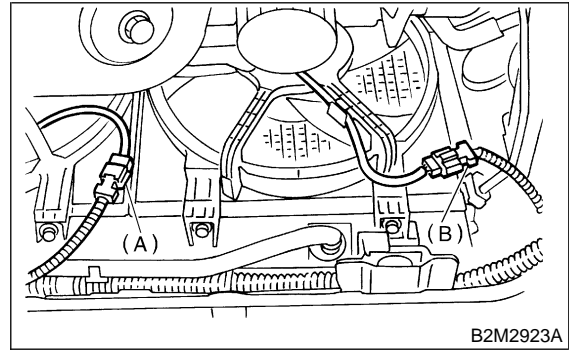
2) Lift-up the vehicle.
3) Remove under cover.



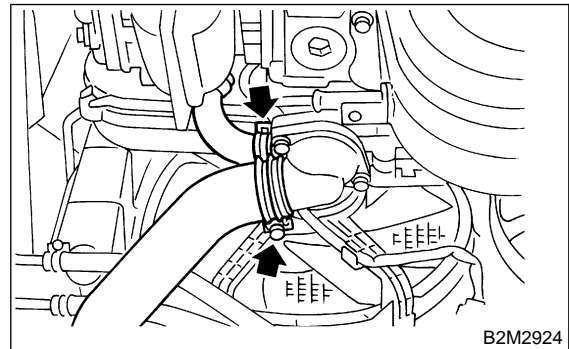
4) Drain engine coolant completely.
<Ref. to 2-5 [W9A0].>



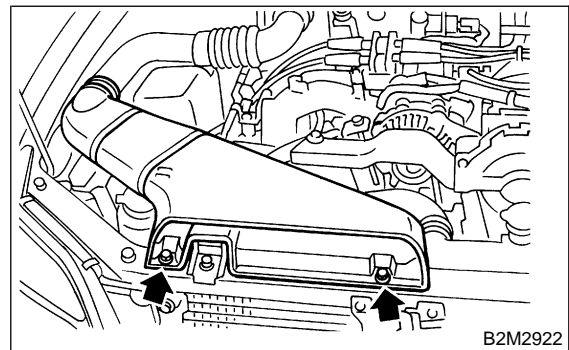
5) Disconnect connectors from radiator main fan (A) and sub fan (B) motors.



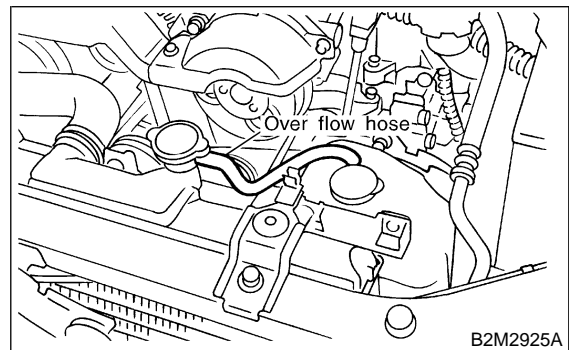
6) Disconnect radiator outlet hose and heater hose from water pump.



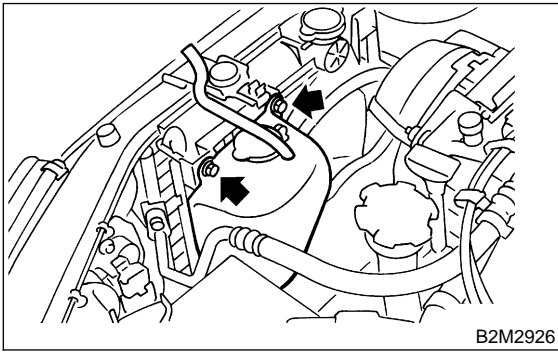
7) Lower the vehicle.
8) Remove air intake duct.



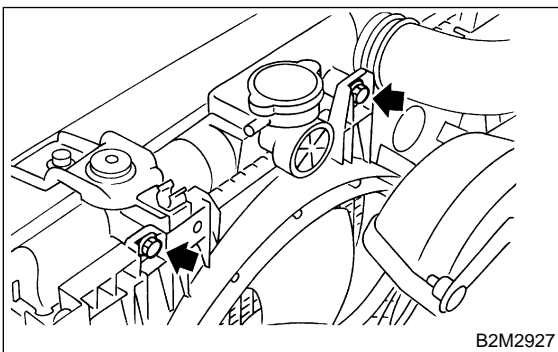
9) Disconnect over flow hose.



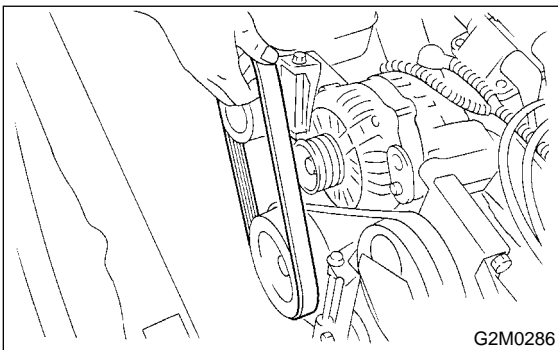
10) Remove reservoir tank.



11) Remove radiator main fan and sub fan assemblies. <Ref. to 2-5 [W5A0].> and <Ref. to 2-5 [W6A0].>

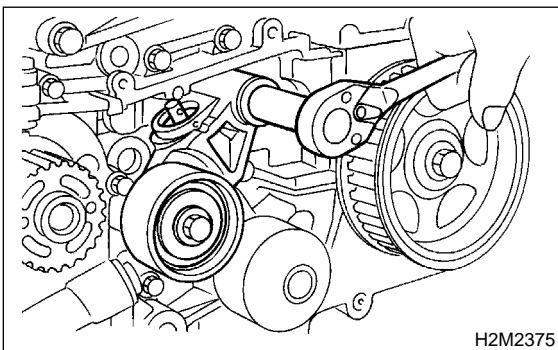


12) Remove V-belts.
<Ref. to 1-5 [G1B0].>

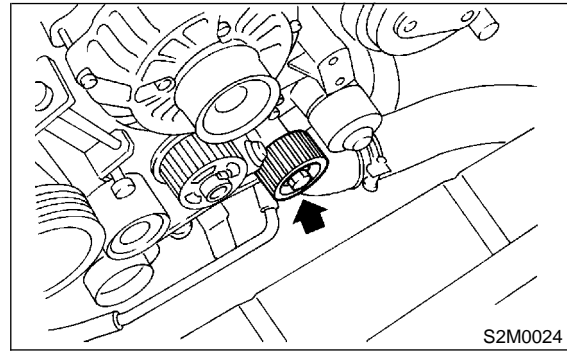


13) Remove timing belt.
<Ref. to 2-3 [W2A0].>

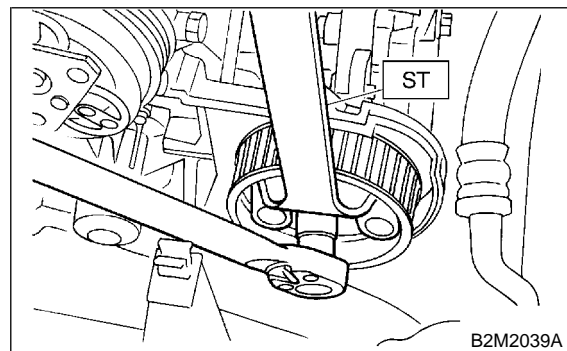
14) Remove automatic belt tension adjuster.



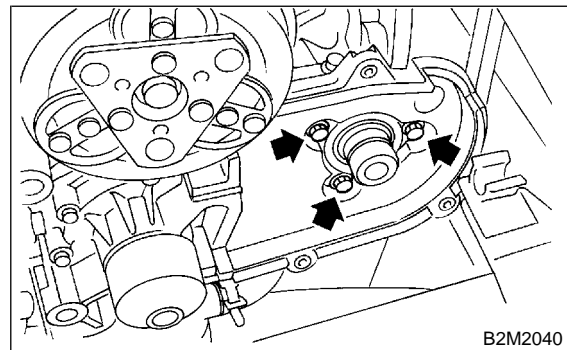
15) Remove belt idler No. 2.



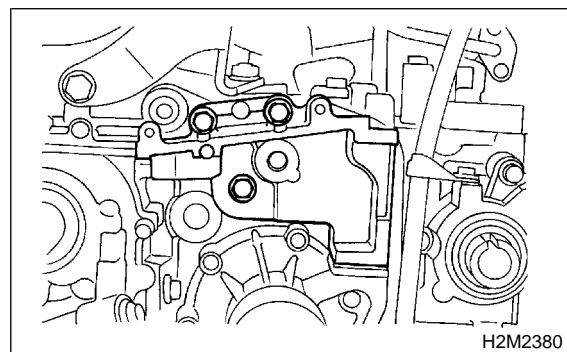
16) Remove left-hand camshaft sprocket by using ST.
ST 499207100 CAMSHAFT SPROCKET WRENCH



17) Remove left-hand belt cover No. 2.

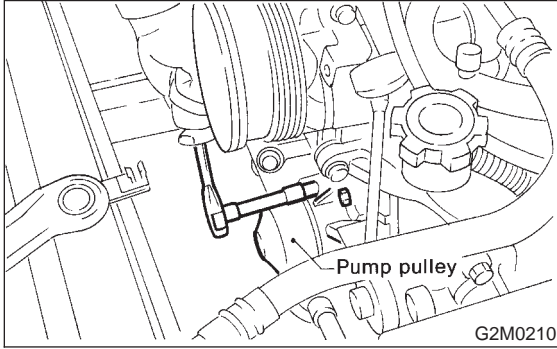


18) Remove tensioner bracket.



19) Disconnect heater hose from water pump.

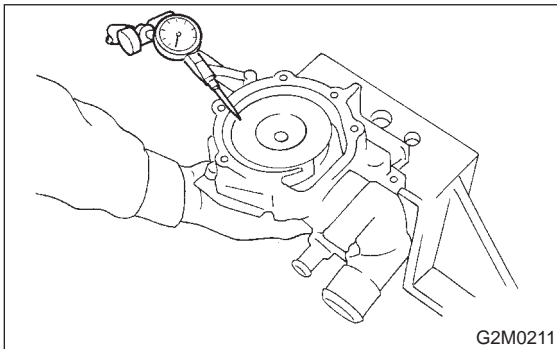
20) Remove water pump.



B: INSPECTION

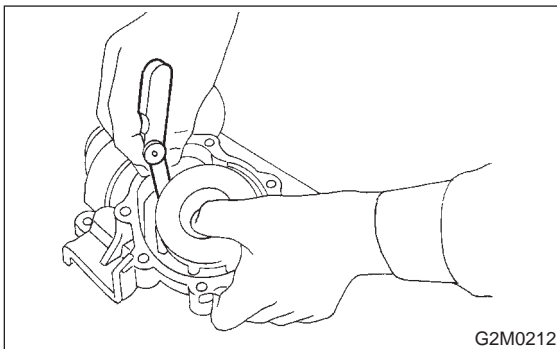
- 1) Check water pump bearing for smooth rotation.
- 2) Check water pump pulley for abnormalities.
- 3) Using a dial gauge, measure impeller runout in thrust direction while rotating the pulley.

“Thrust” runout limit:
0.5 mm (0.020 in)



- 4) Check clearance between impeller and pump case.

Clearance between impeller and pump case:
Standard
0.5 — 0.7 mm (0.020 — 0.028 in)
Limit
1.0 mm (0.039 in)



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

C: INSTALLATION

- 1) Install water pump onto left-hand cylinder head.

CAUTION:

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

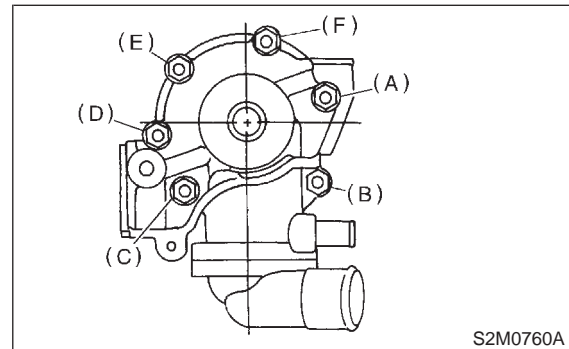
Tightening torque:

First:

12±2 N·m (1.2±0.2 kg·m, 8.7±1.4 ft·lb)

Second:

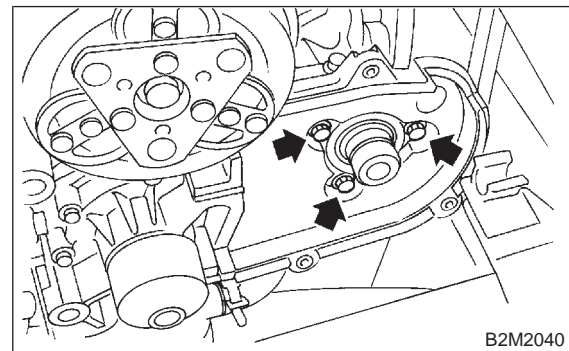
12±2 N·m (1.2±0.2 kg·m, 8.7±1.4 ft·lb)



- 2) Install left-hand belt cover No. 2.

Tightening torque:

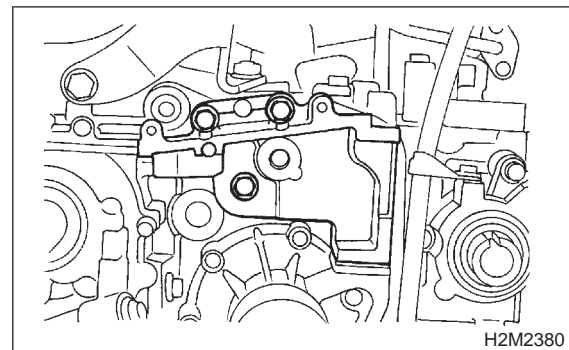
5±1 N·m (0.5±0.1 kg·m, 3.6±0.7 ft·lb)



- 3) Install tensioner bracket.

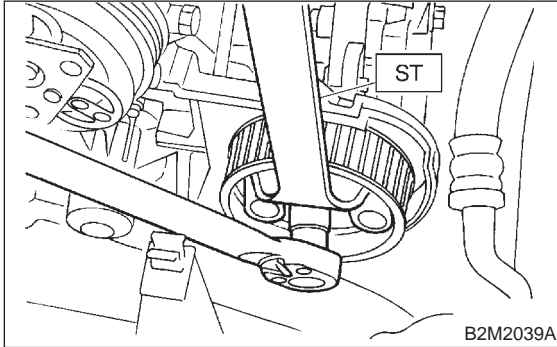
Tightening torque:

25±3 N·m (2.5±0.3 kg·m, 18.1±2.2 ft·lb)



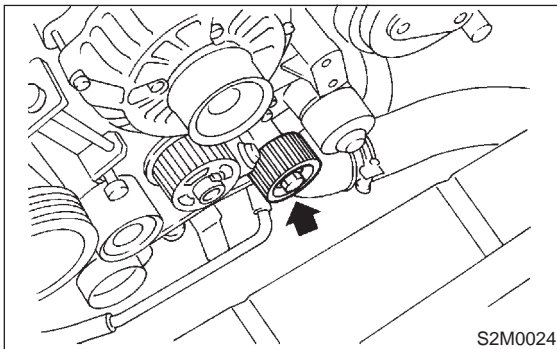
- 4) Install left-hand camshaft sprockets by using ST.
ST 4992707100 CAMSHAFT SPROCKET WRENCH

Tightening torque:
78±5 N·m (8.0±0.5 kg·m, 57.9±3.6 ft·lb)

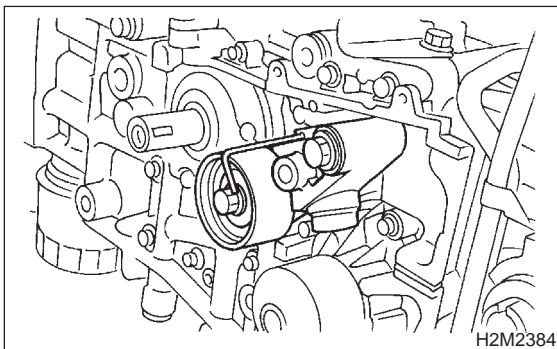


- 5) Install belt idler No. 2.

Tightening torque:
39±4 N·m (4.0±0.4 kg·m, 28.9±2.9 ft·lb)

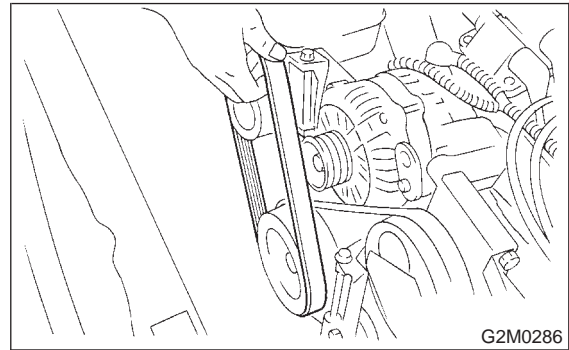


- 6) Install automatic belt tension adjuster which tension rod is held with pin. <Ref. to 2-3 [W3C2].>

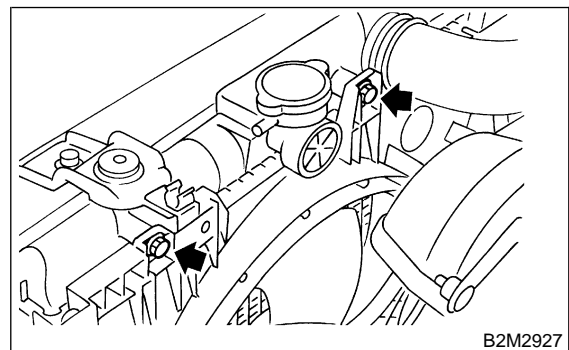


- 7) Install timing belt. <Ref. to 2-3 [W2C0].>

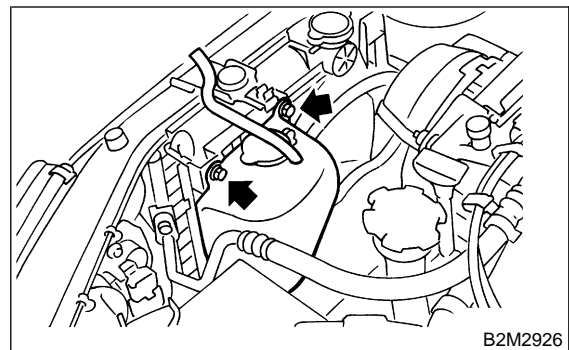
- 8) Install V-belts. <Ref. to 1-5 [G1B0].>



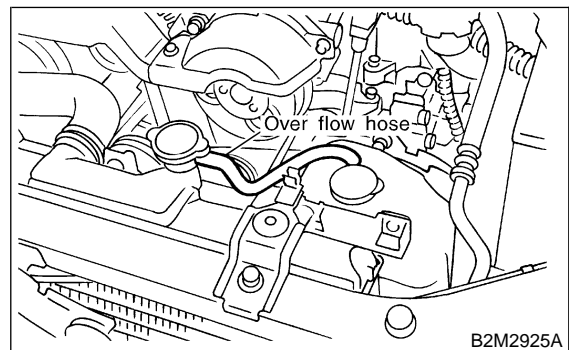
- 9) Install radiator main fan and sub fan motor assemblies. <Ref. to 2-5 [W5A0].> and <Ref. to 2-5 [W6A0].>



- 10) Install reservoir tank.

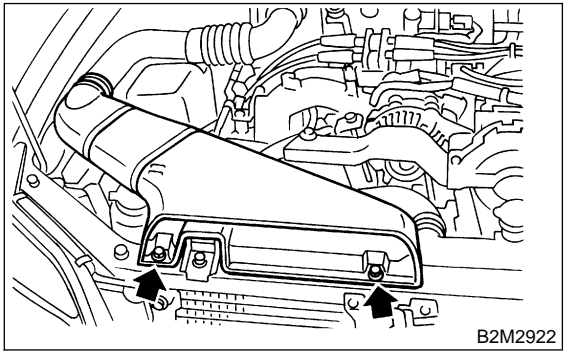


- 11) Connect over flow hose.



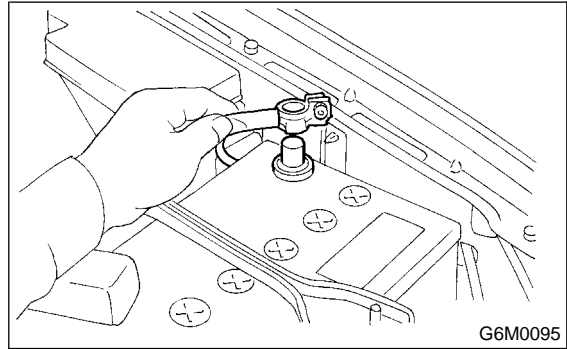
1. Water Pump

12) Install air intake duct.



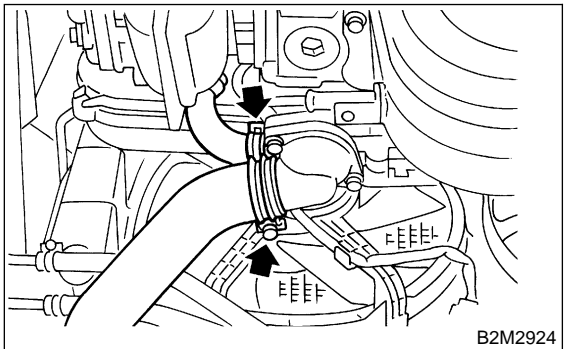
17) Lower the vehicle.

18) Connect battery ground cable.



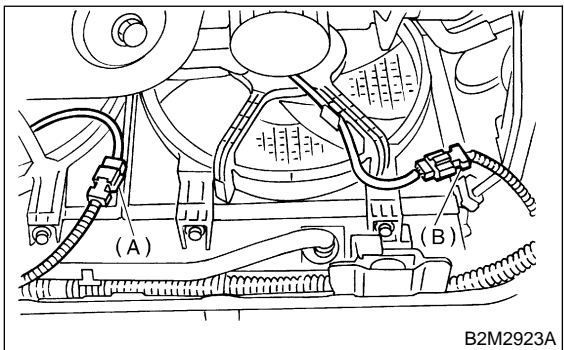
13) Lift-up the vehicle.

14) Connect radiator outlet hose and heater hose to water pump.



19) Fill coolant. <Ref. to 2-5 [W9B0].>

15) Connect connectors to radiator main fan (A) and sub fan (B) motors.



16) Install under cover.

