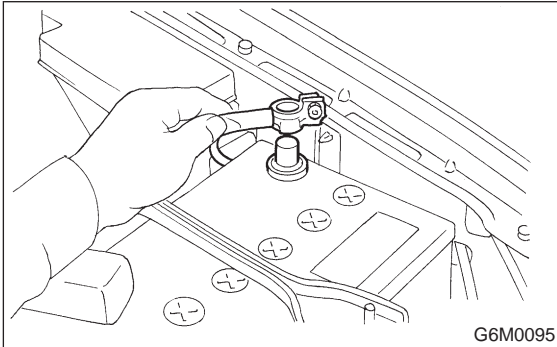


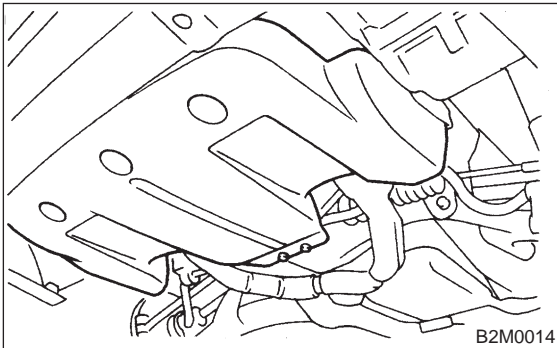
2. Water Pump

A: REMOVAL AND INSTALLATION

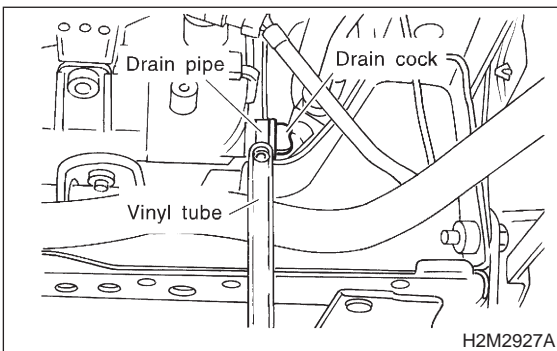
- 1) Disconnect ground cable from battery.



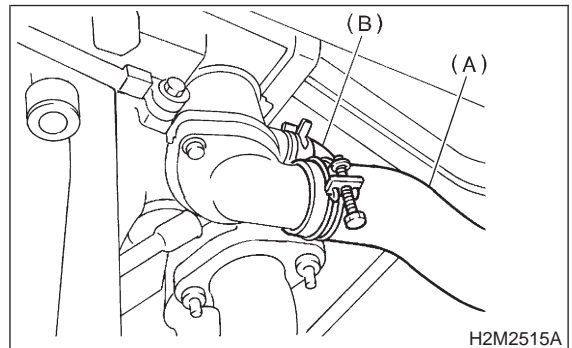
- 2) Lift-up the vehicle.
- 3) Remove under cover.



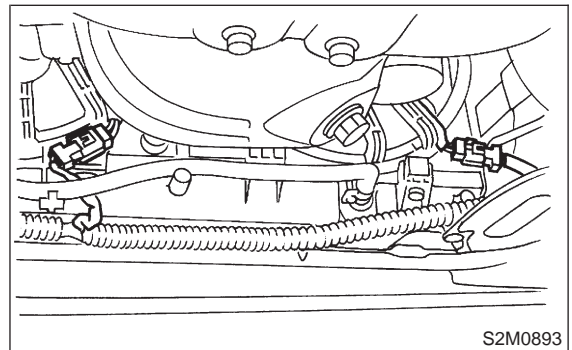
- 4) Drain engine coolant completely. <Ref. to 2-5 [W1A0].>



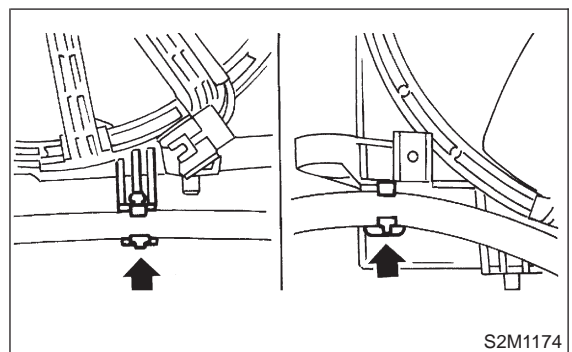
- 5) Disconnect radiator outlet hose (A) and heater by-pass hose (B) from water pump.



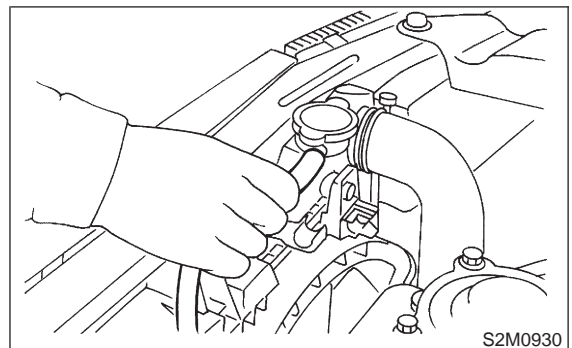
- 6) Disconnect connectors from radiator main fan (A) and sub fan (B) motors.



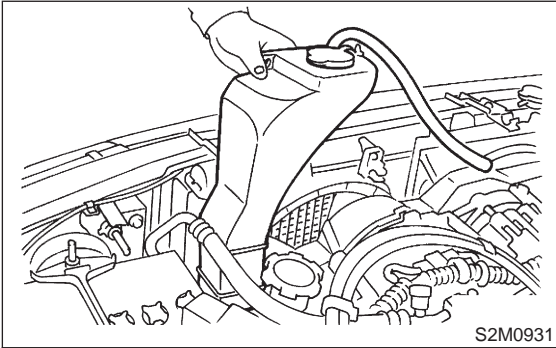
- 7) Detach ATF cooler hose attached to 2 clips under the radiator main fan shroud.



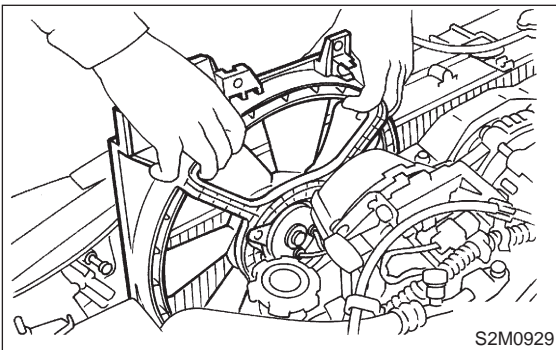
- 8) Lower the vehicles.
- 9) Disconnect over flow hose.



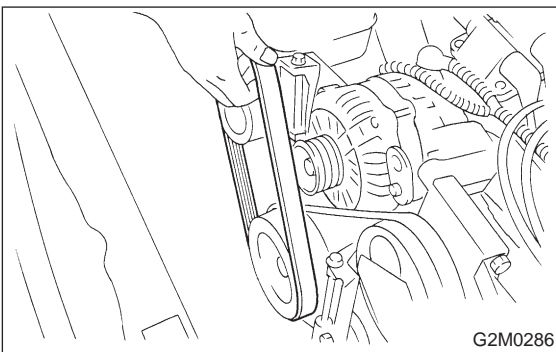
10) Remove reservoir tank.



11) Remove radiator main fan and sub fan motor assembly.
<Ref. to 2-5 [W6A0].> and <Ref. to 2-5 [W7A0].>

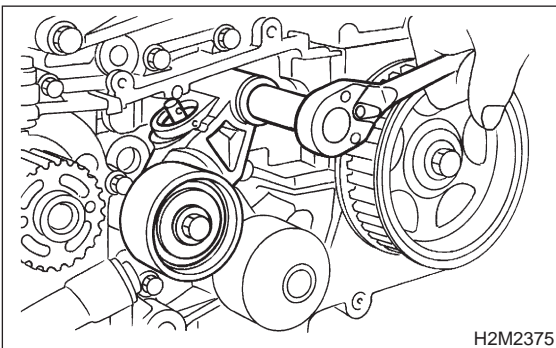


12) Remove V-belts.
<Ref. to 1-5 [G200].>

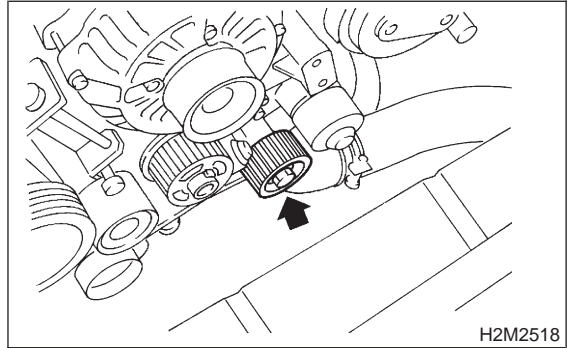


13) Remove timing belt.
<Ref. to 2-3 [W2A0].>

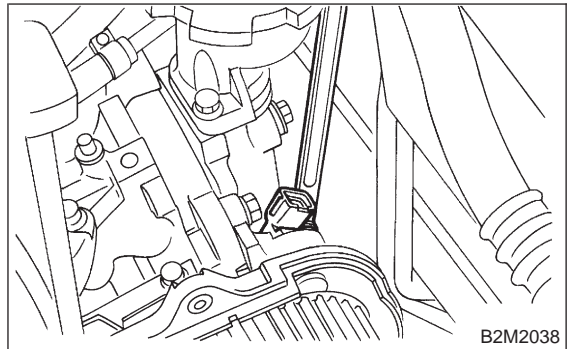
14) Remove automatic belt tension adjuster.



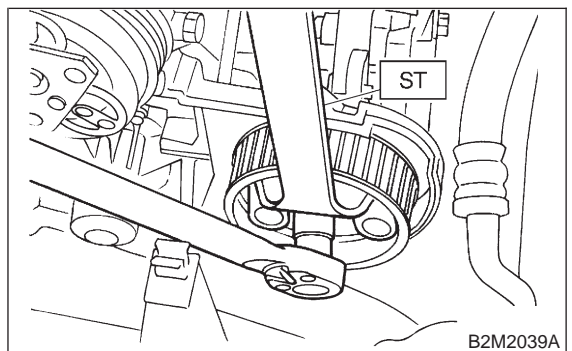
15) Remove belt idler No. 2.



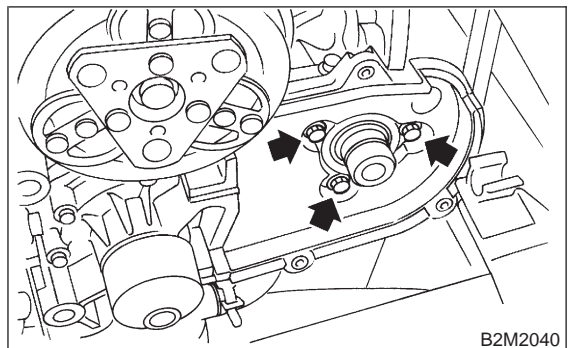
16) Remove camshaft position sensor.
<Ref. to 2-7 [W10A0].>



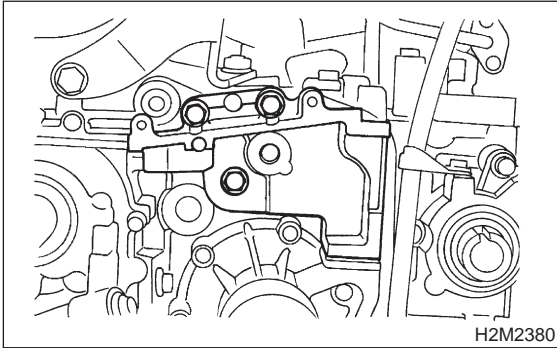
17) Remove left-hand camshaft sprocket by using ST.
ST 499207100 CAMSHAFT SPROCKET WRENCH



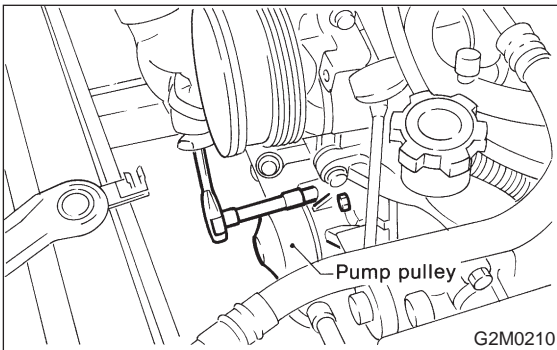
18) Remove left-hand belt cover No. 2.



19) Remove tensioner bracket.



- 20) Remove tensioner bracket.
- 21) Disconnect heater hose from water pump.
- 22) Remove water pump.



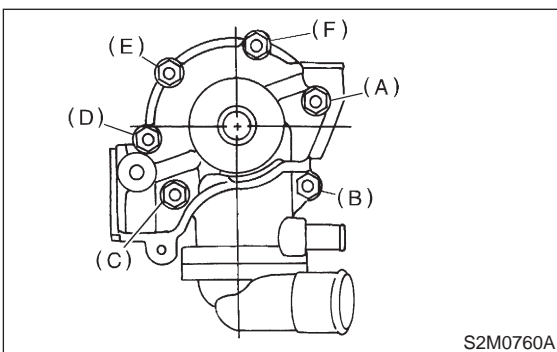
23) Installation is in the reverse order of removal.

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:

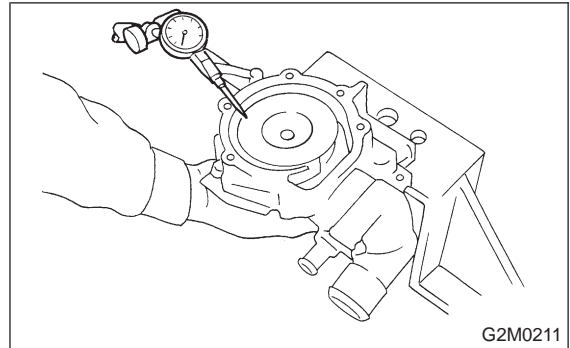
$10^{+4}/_{-0}$ N·m (1.0^{+0.4}/₋₀ kg·m, 7.2^{+2.9}/₋₀ ft·lb)



B: INSPECTION

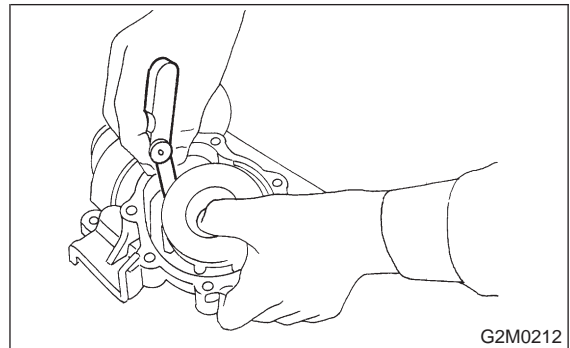
- 1) Check water pump bearing for smooth rotation.
- 2) Check water pump pulley for abnormalities.
- 3) Using a dial gauge, measure impeller runout in thrust direction while rotating the pulley.

**“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.