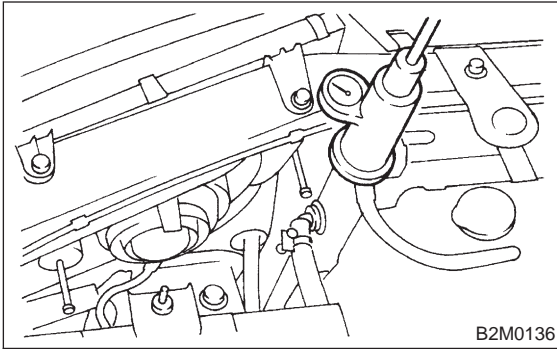


## C: CHECKING OF COOLING SYSTEM

1) Remove radiator cap, top off radiator, and attach tester to radiator in place of cap.



2) Apply a pressure of 157 kPa (1.6 kg/cm<sup>2</sup>, 23 psi) to radiator to check if:

- (1) Engine coolant leaks at/around radiator.
- (2) Engine coolant leaks at/around hoses or connections.

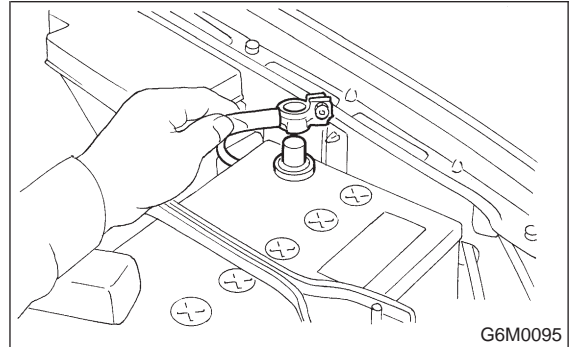
### CAUTION:

- Engine should be off.
- Wipe engine coolant from check points in advance.
- Be careful to prevent engine coolant from spurting out when removing tester.
- Be careful also not to deform filler neck of radiator when installing or removing tester.

## 2. Water Pump

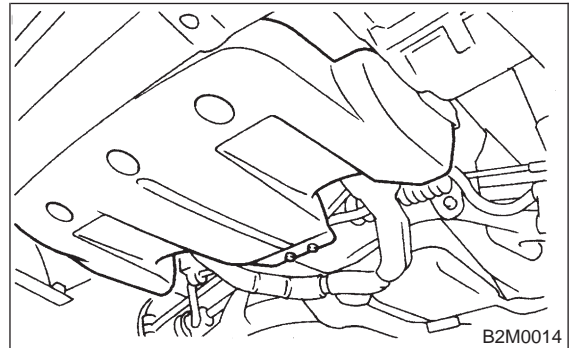
### A: REMOVAL

1) Disconnect ground cable from the battery.

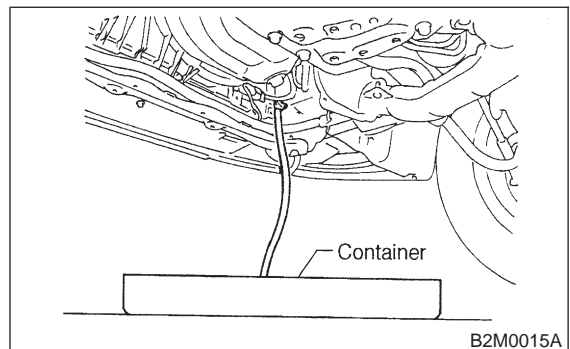


2) Lift-up the vehicle.

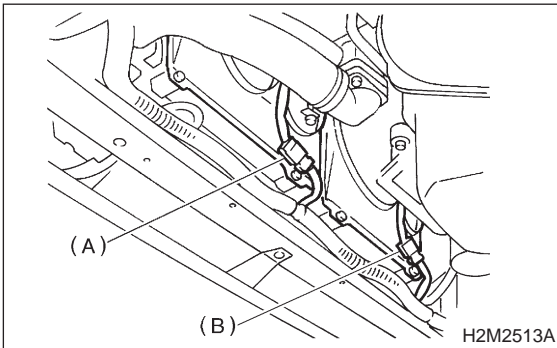
3) Remove under cover.



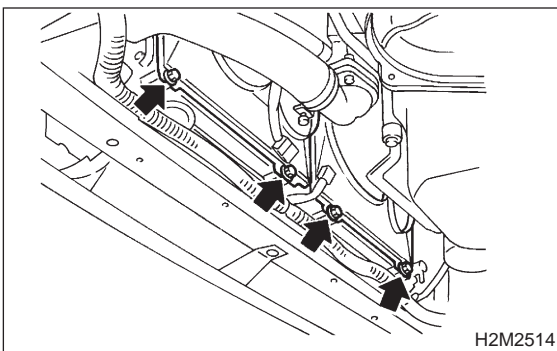
4) Drain engine coolant completely.  
<Ref. to 2-5 [W1A0].>



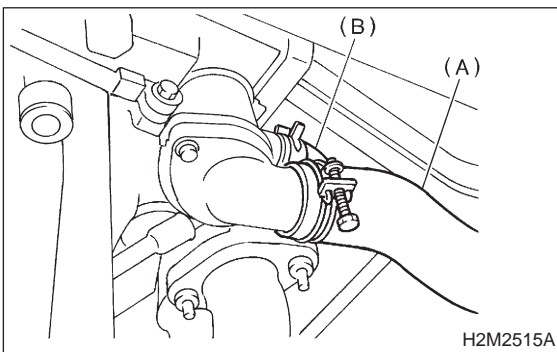
5) Disconnect connectors from radiator main fan (A) and sub fan (B) motors.



6) Loosen bolts which hold lower side of radiator main fan and sub fan shrouds.

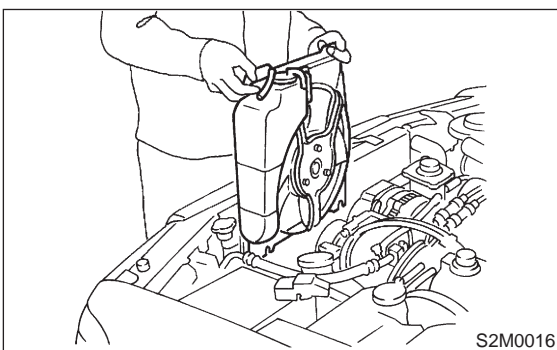


7) Disconnect radiator outlet hose (A) and heater hose (B) from water pump.

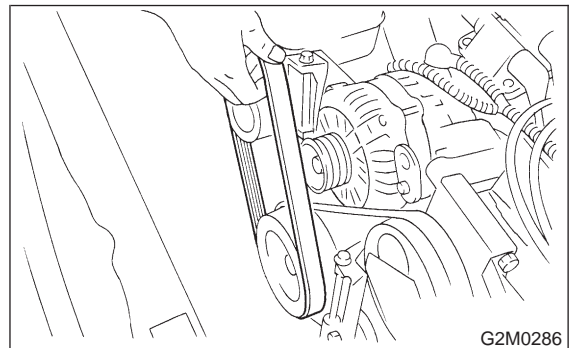


8) Lower the vehicle.

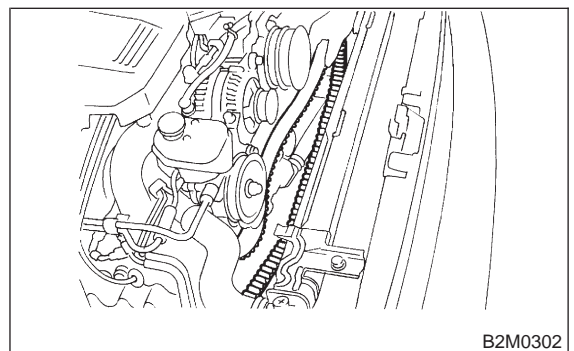
9) Remove radiator main fan and sub fan assemblies. <Ref. to 2-5 [W6A0].> and <Ref. to 2-5 [W7A0].>



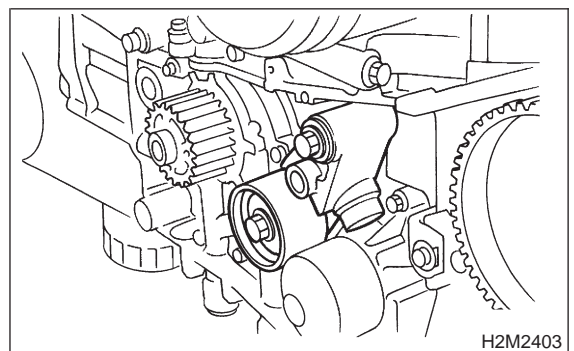
10) Remove V-belts.  
<Ref. to 1-5 [G1B0].>



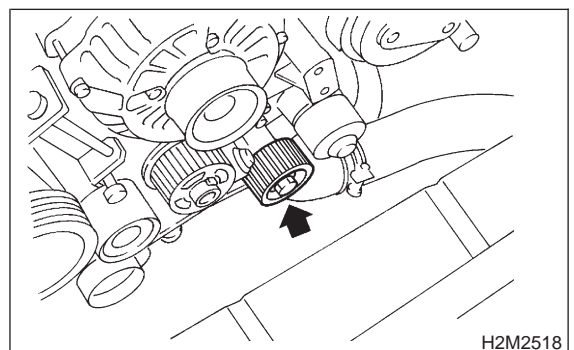
11) Remove timing belt.  
<Ref. to 2-3a [W2A0].> and <Ref. to 2-3b [W2A0].>



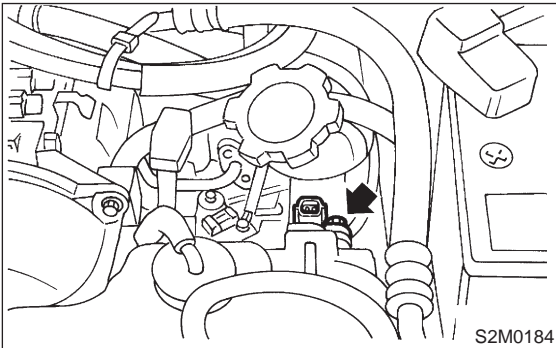
12) Remove automatic belt tension adjuster.



13) Remove belt idler No. 2.



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



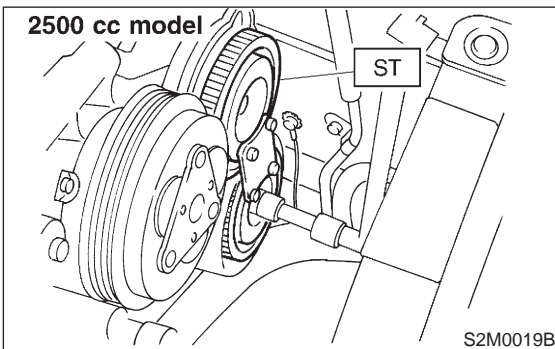
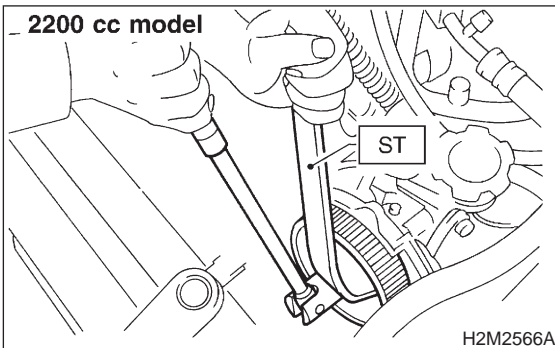
15) Remove left-hand camshaft sprockets by using ST.

● 2200 cc model

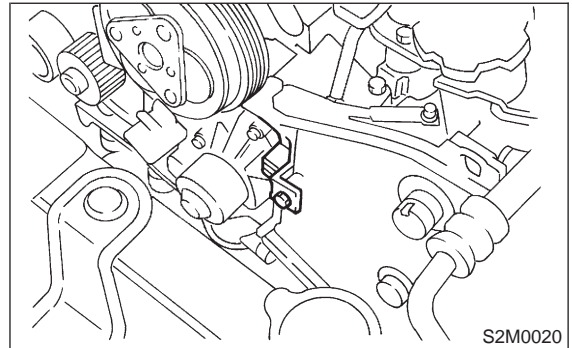
ST 499207100 CAMSHAFT SPROCKET WRENCH

● 2500 cc model

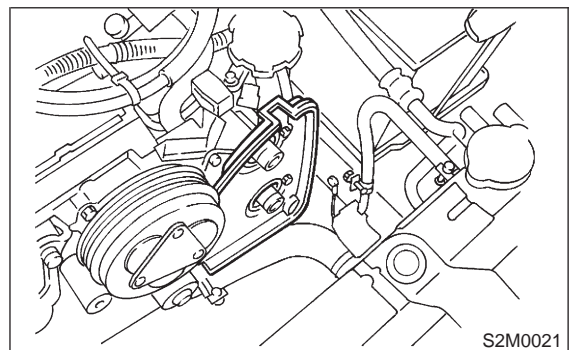
ST 499207300 CAMSHAFT SPROCKET WRENCH



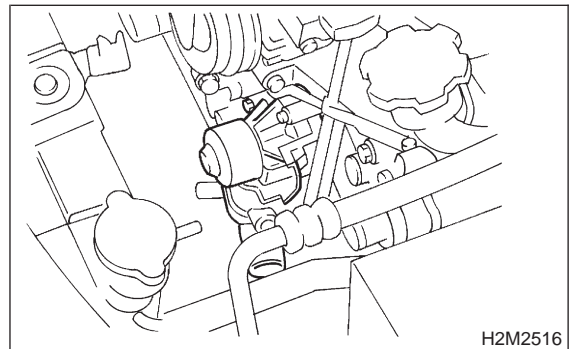
16) Remove tensioner bracket.



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



18) Remove water pump.

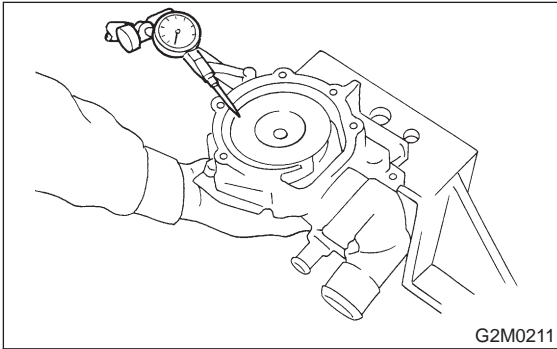


## B: INSPECTION

- 1) Check water pump bearing for smooth rotation.
- 2) Check water pump pulley for abnormalities.

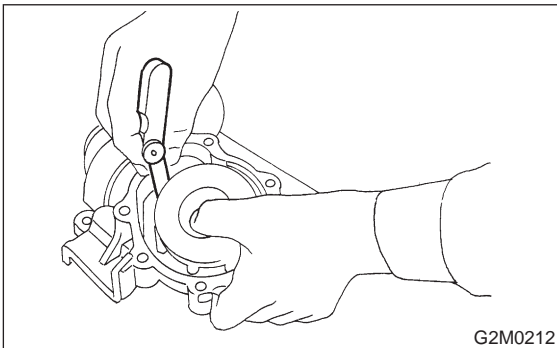
3) Using a dial gauge, measure impeller runout in thrust direction while rotating the pulley.

**“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

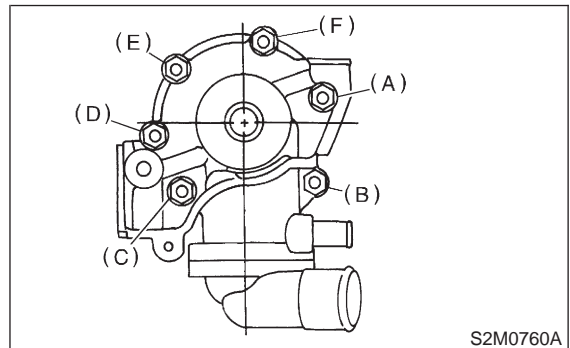
1) Install water pump onto left-hand cylinder head.

**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:**

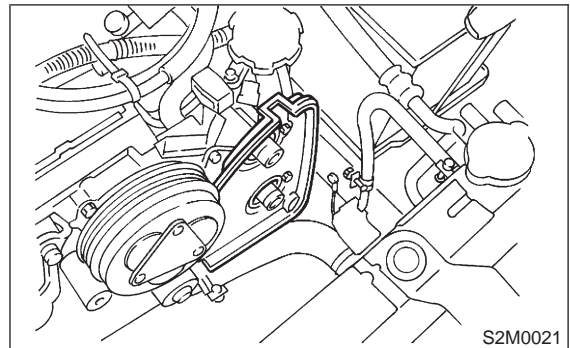
**$10^{+4}/_{-0}$  N·m ( $1.0^{+0.4}/_{-0}$  kg·m,  $7.2^{+2.9}/_{-0}$  ft·lb)**



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

**Tightening torque:**

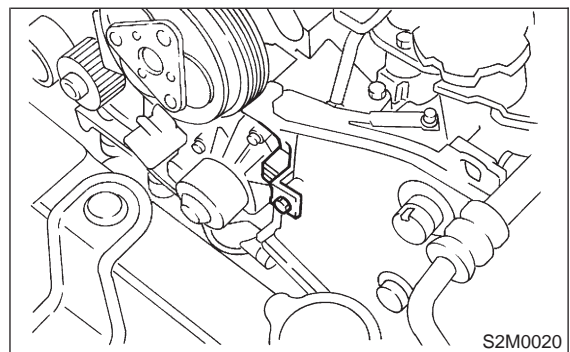
**$4.9\pm0.5$  N·m ( $0.5\pm0.05$  kg·m,  $3.6\pm0.4$  ft·lb)**



3) Install tensioner bracket.

**Tightening torque:**

**$25\pm2$  N·m ( $2.5\pm0.2$  kg·m,  $18.1\pm1.4$  ft·lb)**

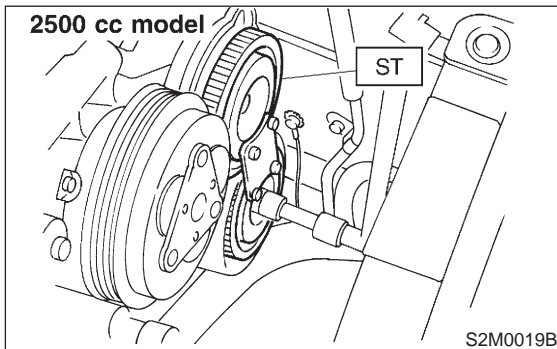
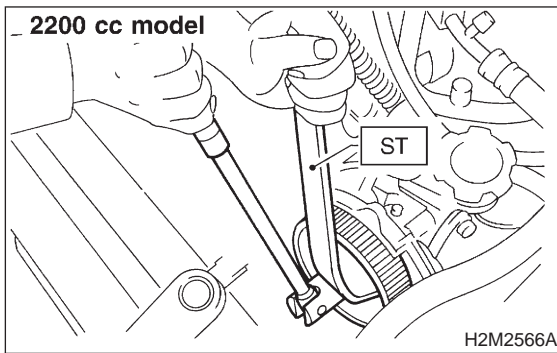


4) Install left-hand camshaft sprockets by using ST.

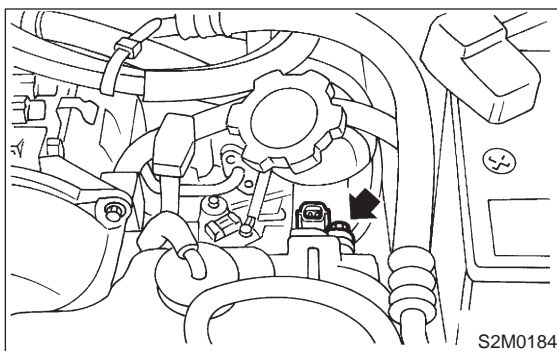
● 2200 cc model  
ST 499207100 CAMSHAFT SPROCKET WRENCH

● 2500 cc model  
ST 499207300 CAMSHAFT SPROCKET WRENCH

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

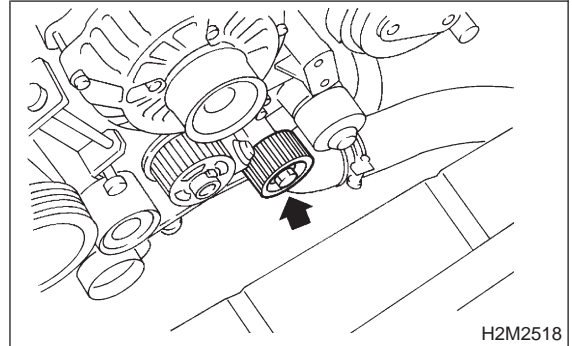


5) Install camshaft position sensor. <Ref. to 2-7 [W10A0].>

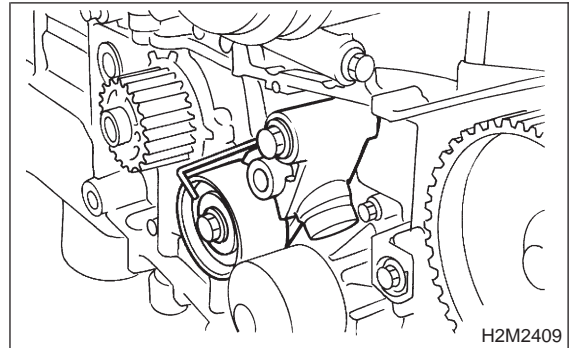


6) Install belt idler No. 2.

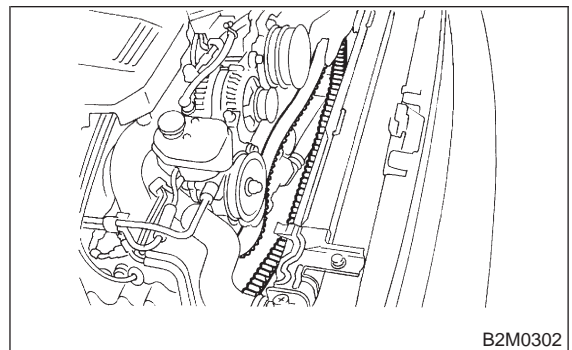
**Tightening torque:**  
**39±4 N·m (4.0±0.4 kg·m, 28.9±2.9 ft·lb)**



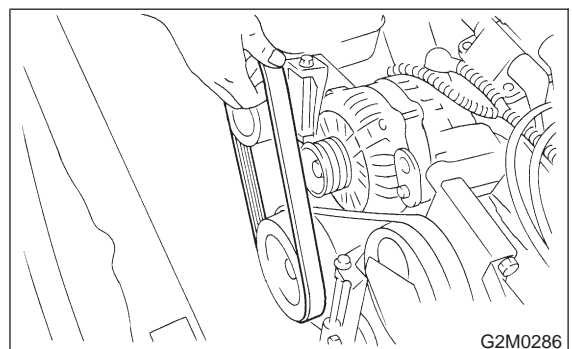
7) Install automatic belt tension adjuster which tension rod is held with pin.



8) Install timing belt. <Ref. to 2-3a [W2C0].> and <Ref. to 2-3b [W2C0].>

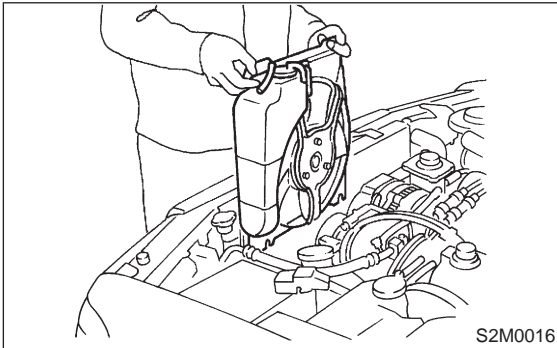


9) Install V-belts. <Ref. to 1-5 [G2B0].>

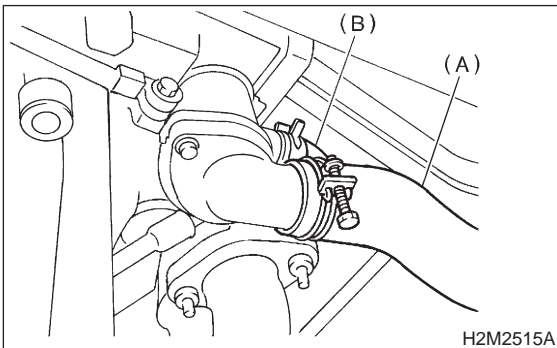




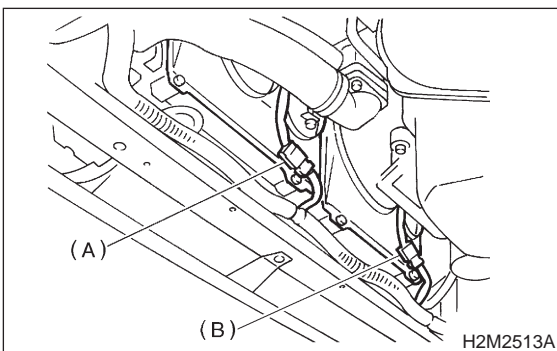
10) Install radiator main fan and sub fan motor assemblies. <Ref. to 2-5 [W6A0].> and <Ref. to 2-5 [W7A0].>



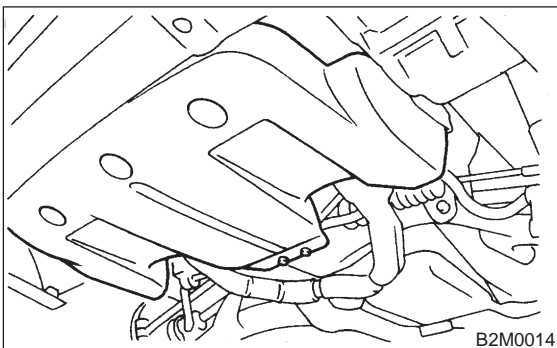
11) Connect radiator outlet hose (A) and heater hose (B) to water pump.



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

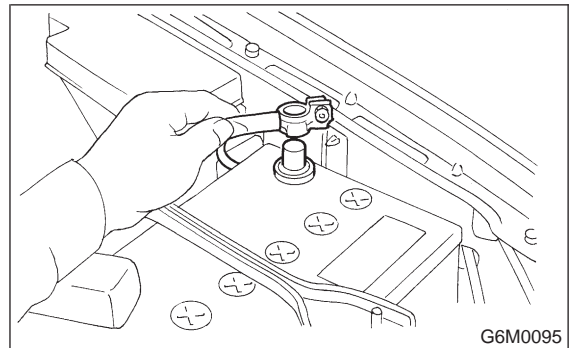


13) Install under cover.



14) Lower the vehicle.

15) Connect battery ground cable.



16) Fill coolant. <Ref. to 2-5 [W1B0].>

