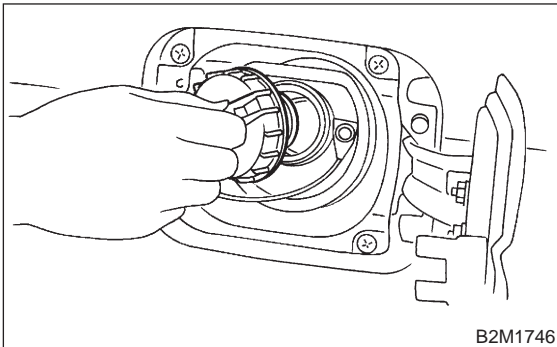


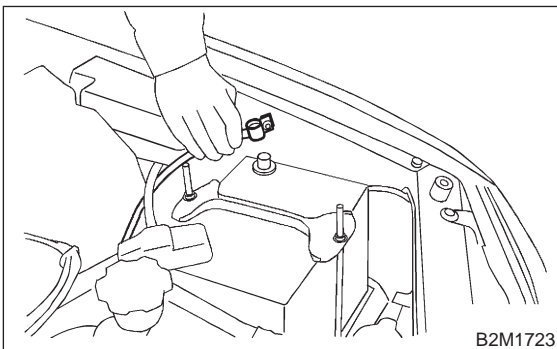
4. Intake Manifold

A: REMOVAL

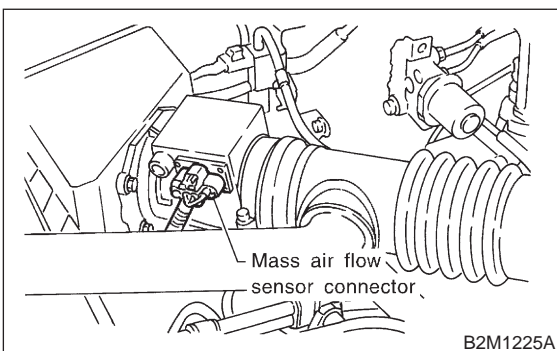
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Remove fuel filler cap.



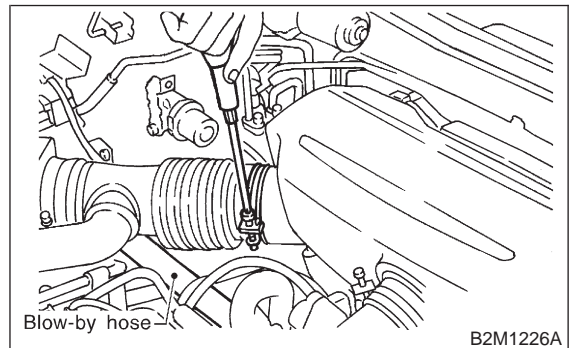
- 3) Disconnect battery ground cable.



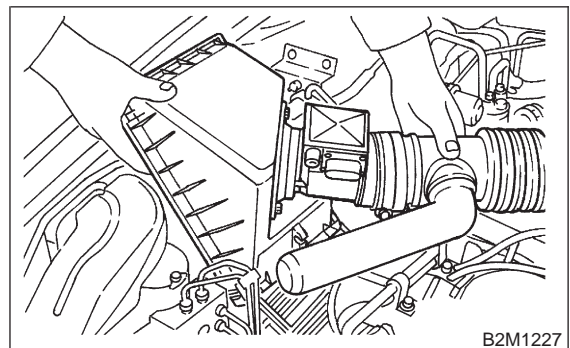
- 4) Disconnect connector from mass air flow sensor.



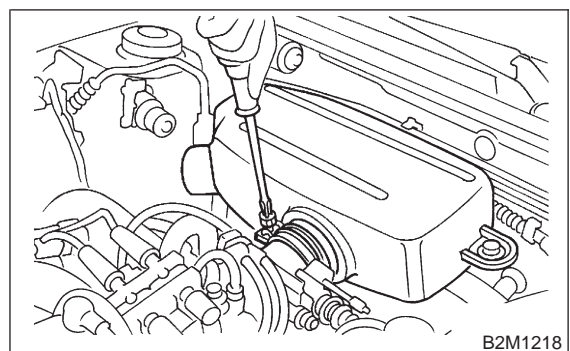
- 5) Loosen clamp which connects air intake duct to air intake chamber.



- 6) Remove two clips of air cleaner upper cover.
- 7) Disconnect blow-by hose from air intake duct.
- 8) Remove air intake duct and air cleaner upper cover as a unit.



- 9) Remove air cleaner element.
- 10) Loosen clamp which connects air intake chamber to throttle body.

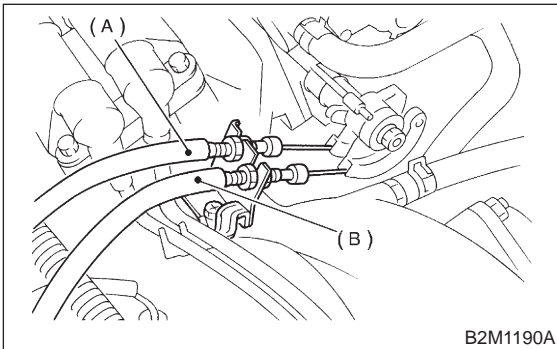


2-7 [W4A0]

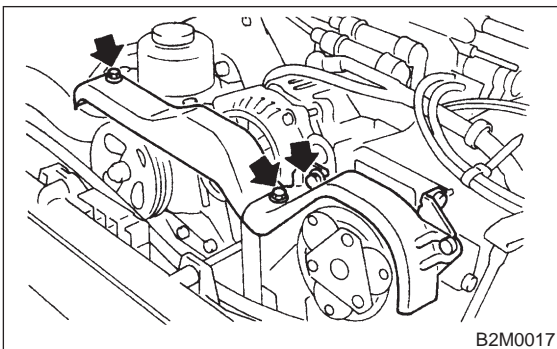
4. Intake Manifold

SERVICE PROCEDURE

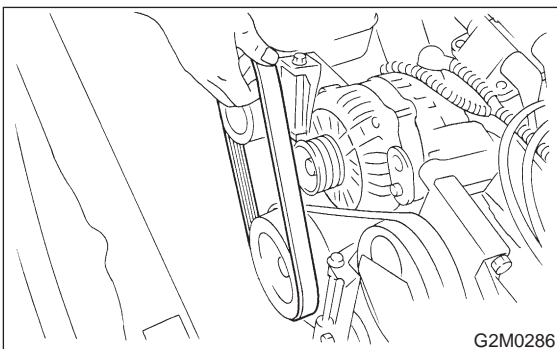
- 11) Disconnect air hoses, and remove air intake chamber.
- 12) Disconnect accelerator cable (A).
- 13) Disconnect cruise control cable (B). (With cruise control model)



- 14) Disconnect vacuum hoses from pressure sources switching solenoid valve.
- 15) Remove power steering pump from bracket.
 - (1) Remove V-belt cover.



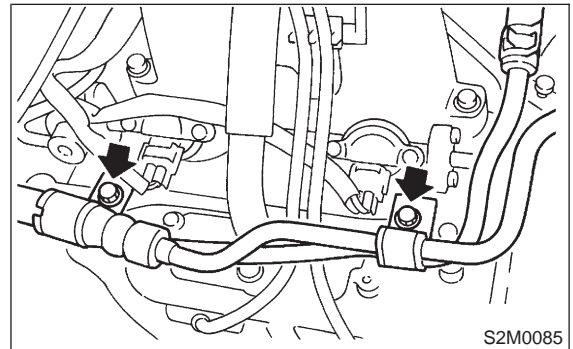
- (2) Loosen lock bolt and slider bolt, and remove power steering pump drive V-belt.



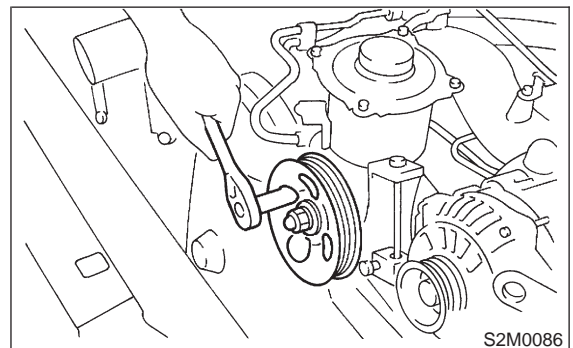
- (3) Remove bolts which secure power steering pipe brackets to intake manifold.

NOTE:

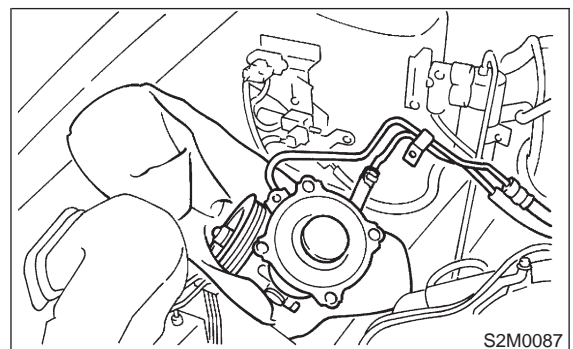
Do not disconnect power steering hose.



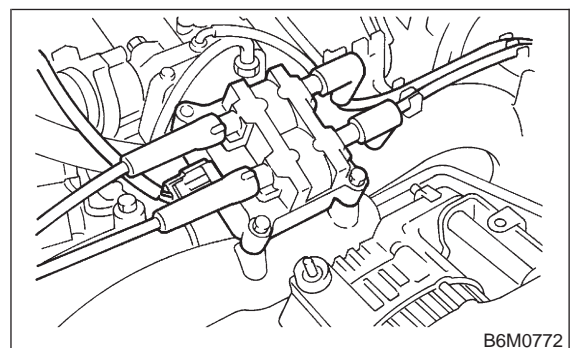
- (4) Remove bolts which install power steering pump to bracket.



- (5) Place power steering pump on the right side wheel apron.



- 16) Disconnect spark plug cords from ignition coil.

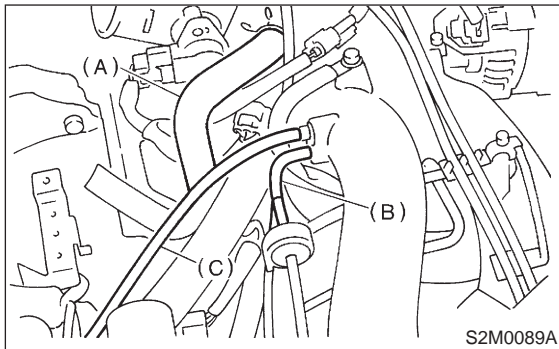


SERVICE PROCEDURE

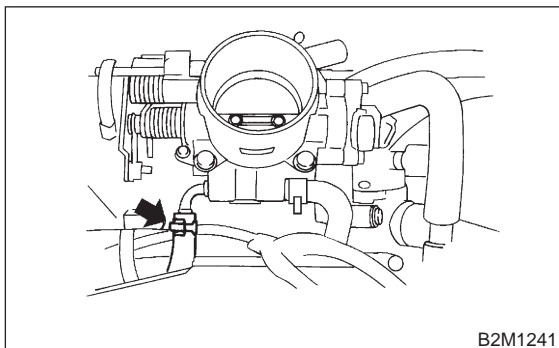
[W4A0] 2-7
4. Intake Manifold

17) Disconnect PCV hose (A) and pressure regulator vacuum hose (B) from intake manifold.

18) Disconnect vacuum hose (C) to cruise control diaphragm. (With cruise control models)

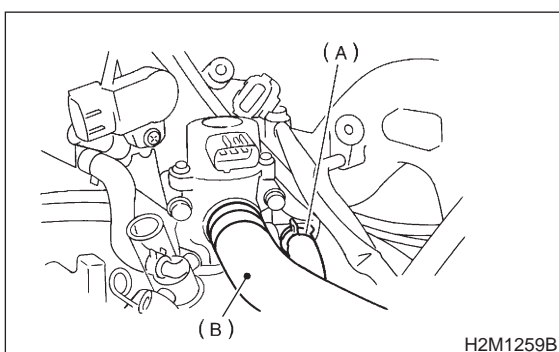


19) Disconnect engine coolant hose from throttle body.

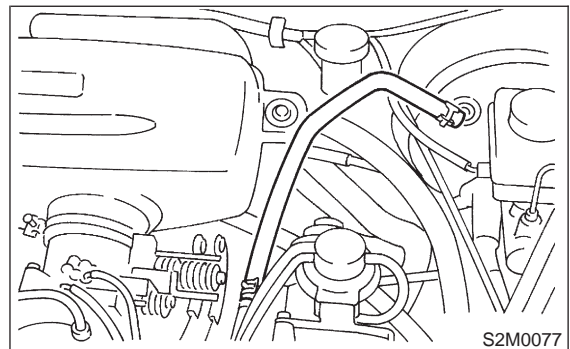


20) Disconnect engine coolant hose (A) from idle air control solenoid valve.

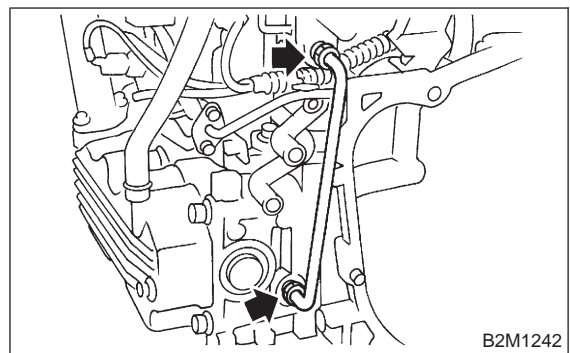
21) Disconnect air by-pass hose (B) from idle air control solenoid valve.



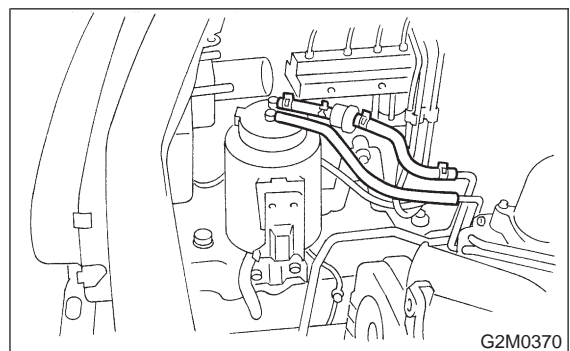
22) Disconnect brake booster hose.



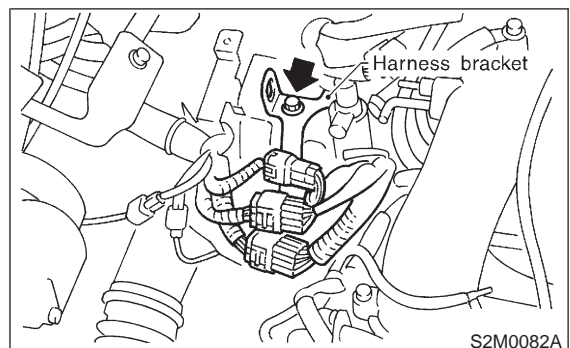
23) Remove EGR pipe. (Except 2200 cc MT vehicles)



24) Disconnect canister hoses from pipes. (2200 cc FWD and Taiwan spec. vehicles)



25) Remove engine harness bracket from transmission housing, and disconnect engine harness connectors from bulkhead harness connectors.

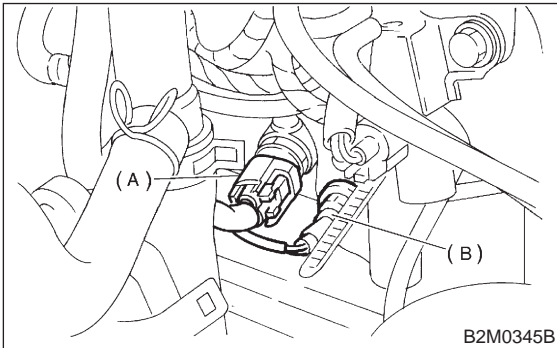


2-7 [W4A0]

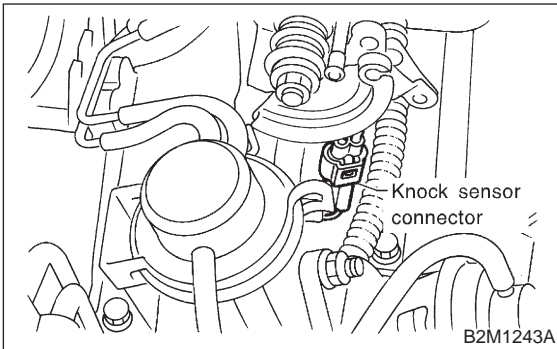
4. Intake Manifold

SERVICE PROCEDURE

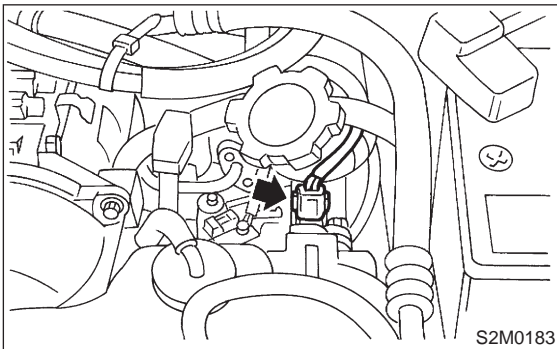
26) Disconnect connectors from engine coolant temperature sensor (A) and thermometer (B).



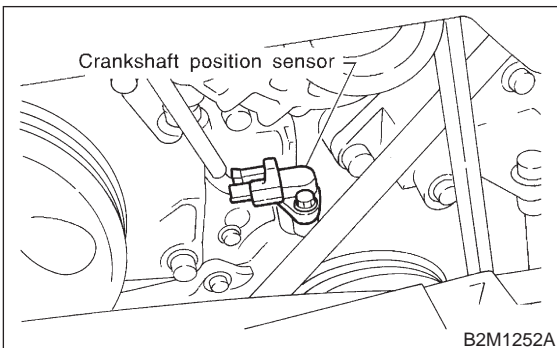
27) Disconnect knock sensor connector.



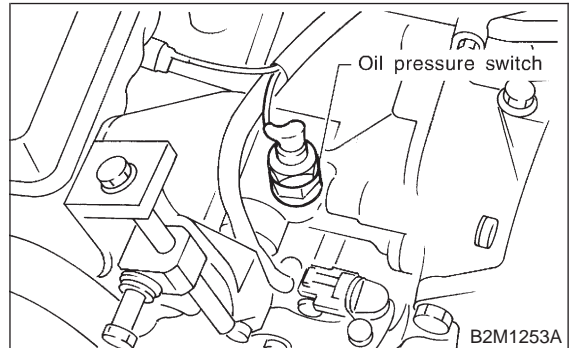
28) Disconnect connector from camshaft position sensor.



29) Disconnect connector from crankshaft position sensor.

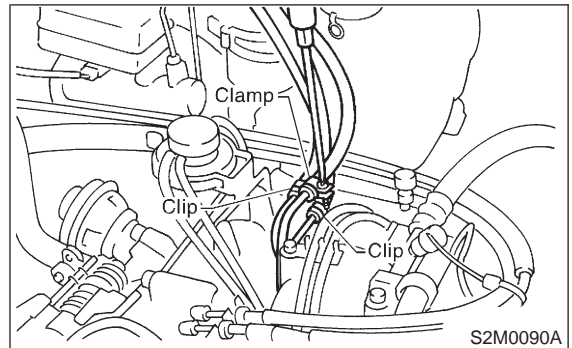


30) Disconnect connector from oil pressure switch.

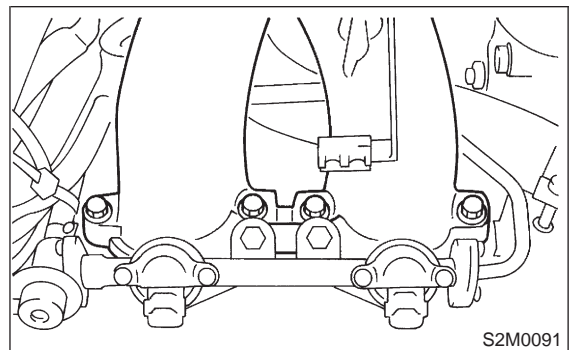


31) Disconnect fuel hoses from fuel pipes.

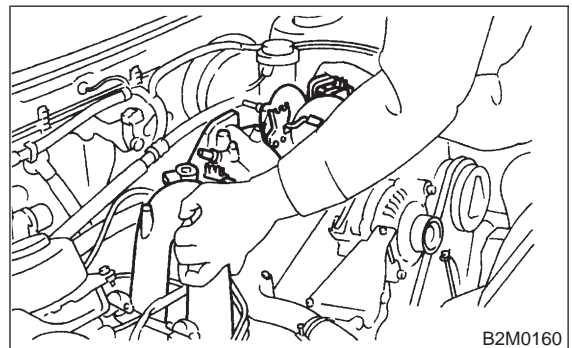
WARNING:
Catch fuel from hoses in a container.



32) Remove bolts which hold intake manifold onto cylinder heads.



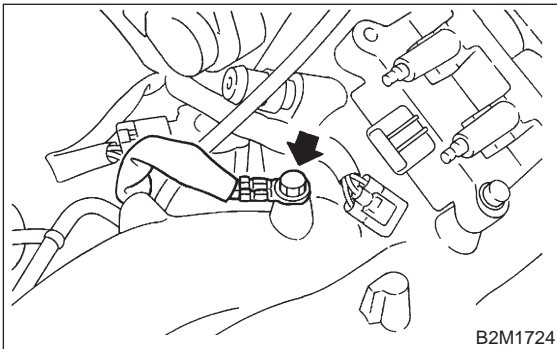
33) Remove intake manifold.



B: DISASSEMBLY

1. 2200 cc MODEL

1) Disconnect engine ground terminal from intake manifold.



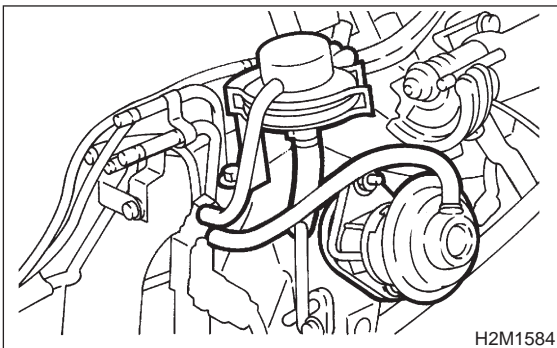
2) Disconnect EGR vacuum hose from EGR valve. (AT vehicles)

3) Disconnect back pressure hose from pipe. (AT vehicles)

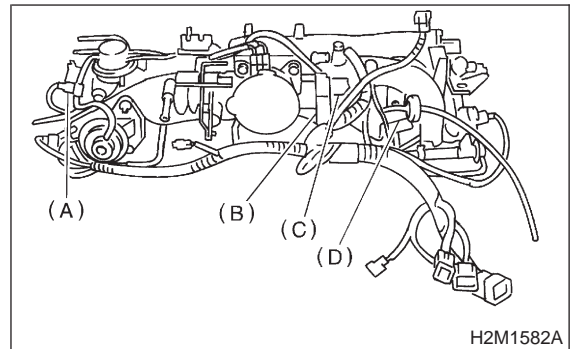
4) Disconnect BPT hoses from EGR solenoid valve and intake manifold. (AT vehicles)

5) Remove BPT with BTP holder bracket. (AT vehicles)

6) Remove EGR valve. (AT vehicles)



7) Disconnect connectors from throttle position sensor, ignition coil, fuel injectors, idle air control solenoid valve, purge control solenoid valve and EGR solenoid valve. (AT vehicles)



(A) EGR solenoid valve (AT vehicles)

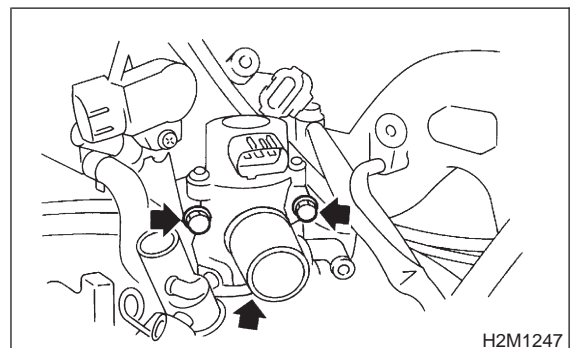
(B) Throttle position sensor

(C) Idle air control solenoid valve

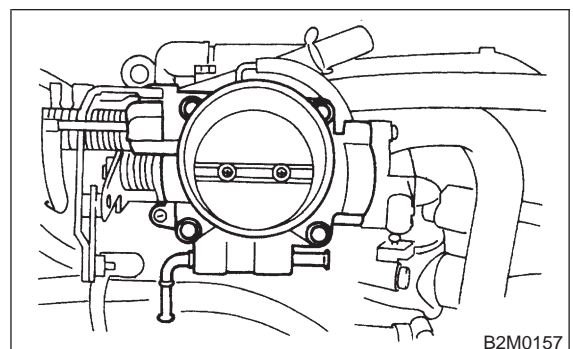
(D) Purge control solenoid valve

8) Remove engine harness from intake manifold.

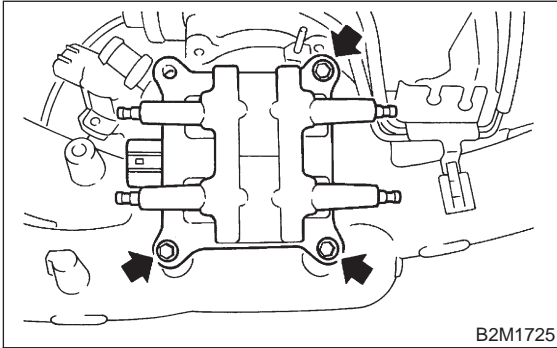
9) Remove idle air control solenoid valve from intake manifold.



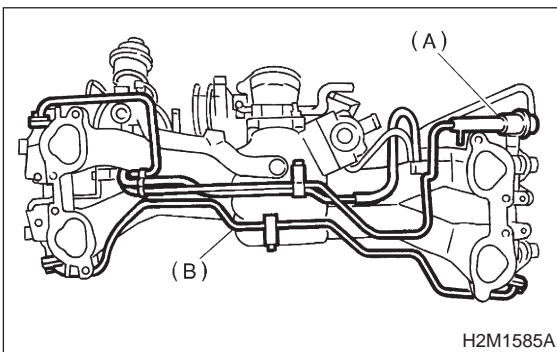
10) Remove throttle body from intake manifold.



11) Remove ignition coil.

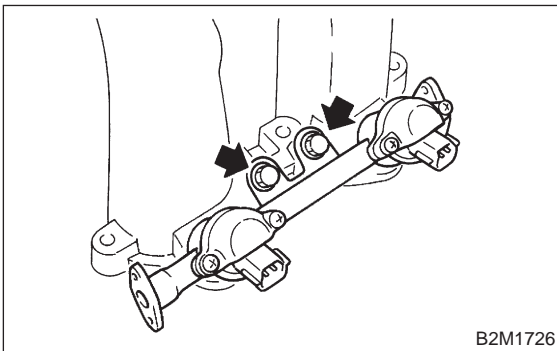


12) Remove fuel pipes, etc. from intake manifold.



- (A) Pressure regulator
- (B) Fuel pipe ASSY

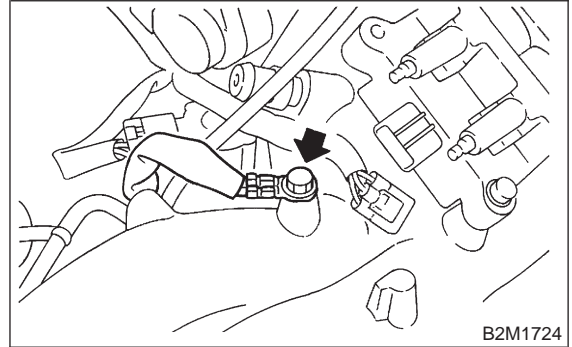
13) Remove fuel injector pipes.



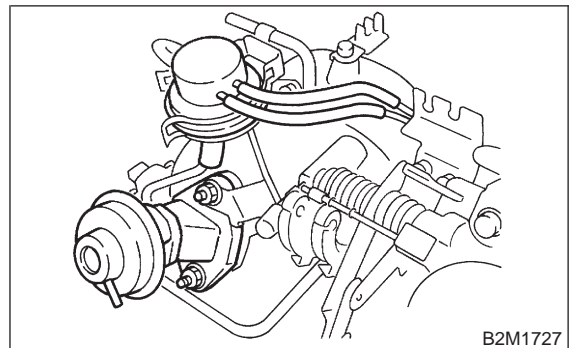
14) Remove EGR solenoid valve (AT vehicles) and purge control solenoid valve.

2. 2500 cc MODEL

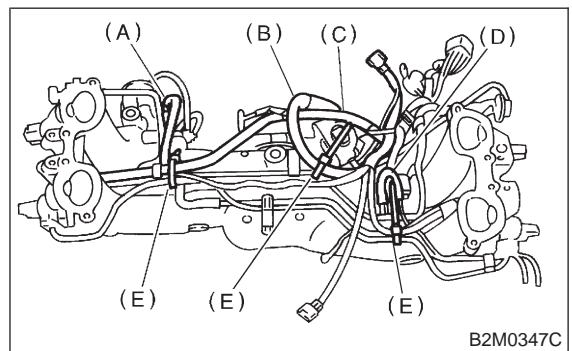
1) Disconnect engine ground terminal from intake manifold.



- 2) Disconnect EGR vacuum hose from EGR valve.
- 3) Disconnect back pressure hose from pipe.
- 4) Disconnect BPT hoses from EGR solenoid valve and intake manifold.
- 5) Remove BPT with BTP holder bracket.
- 6) Remove EGR valve.



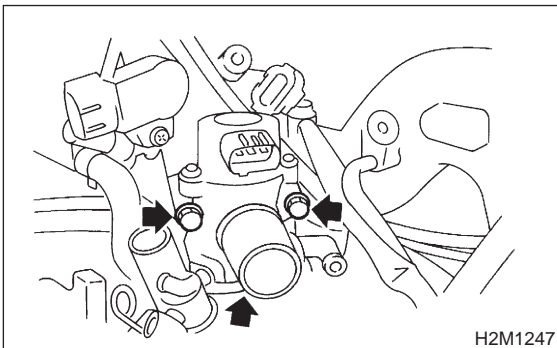
7) Disconnect connectors from throttle position sensor, ignition coil, fuel injectors, idle air control solenoid valve, purge control solenoid valve and EGR solenoid valve.



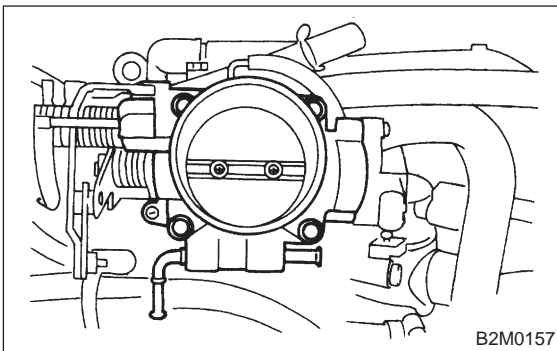
- (A) EGR solenoid valve
- (B) Throttle position sensor
- (C) Idle air control solenoid valve
- (D) Purge control solenoid valve
- (E) Harness band

8) Remove engine harness from intake manifold.

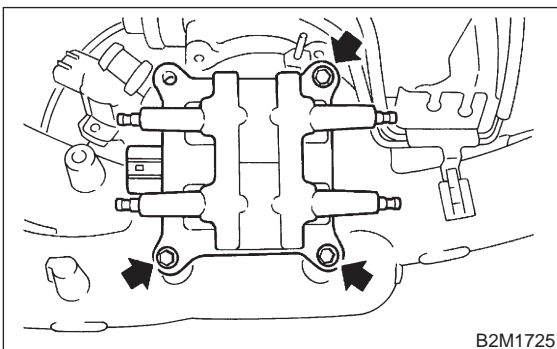
9) Remove idle air control solenoid valve from intake manifold.



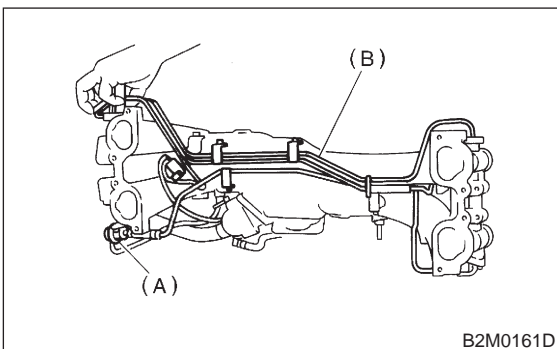
10) Remove throttle body from intake manifold.



11) Remove ignition coil.

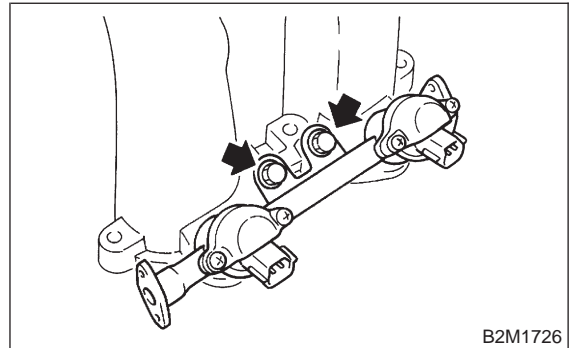


12) Remove fuel pipes, etc. from intake manifold.



- (A) Pressure regulator
- (B) Fuel pipe ASSY

13) Remove fuel injector pipes.

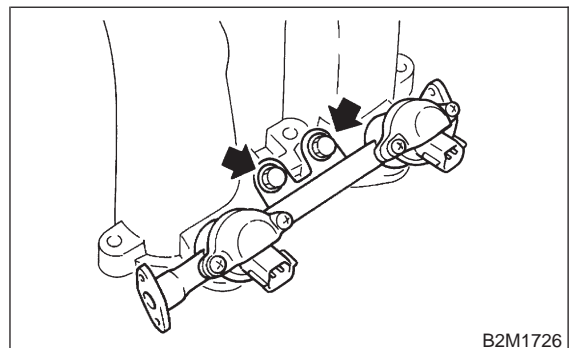


14) Remove EGR solenoid valve and purge control solenoid valve.

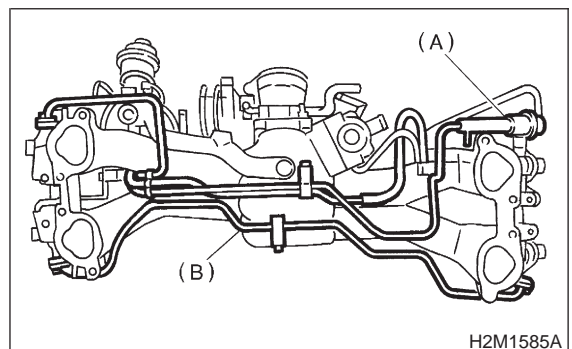
C: ASSEMBLY

1. 2200 cc MODEL

- 1) Install EGR solenoid valve (AT vehicles) and purge control solenoid valve.
- 2) Install fuel injector pipes.



3) Assemble fuel pipes, etc. to intake manifold.



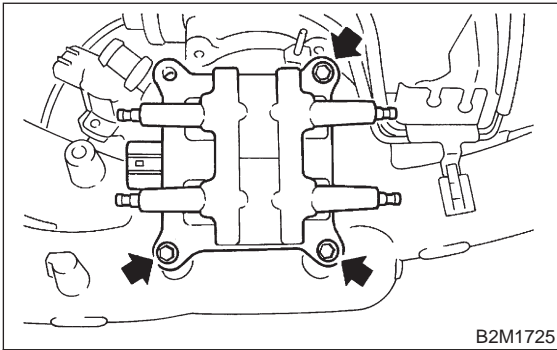
- (A) Pressure regulator
- (B) Fuel pipe ASSY

2-7 [W4C1]

4. Intake Manifold

SERVICE PROCEDURE

- 4) Install ignition coil.



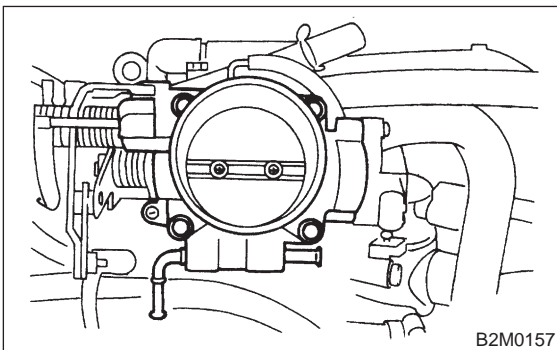
- 5) Assemble throttle body to intake manifold.

CAUTION:

Replace gasket with a new one.

Tightening torque:

$22 \pm 2 \text{ N}\cdot\text{m}$ ($2.2 \pm 0.2 \text{ kg}\cdot\text{m}$, $15.9 \pm 1.4 \text{ ft}\cdot\text{lb}$)



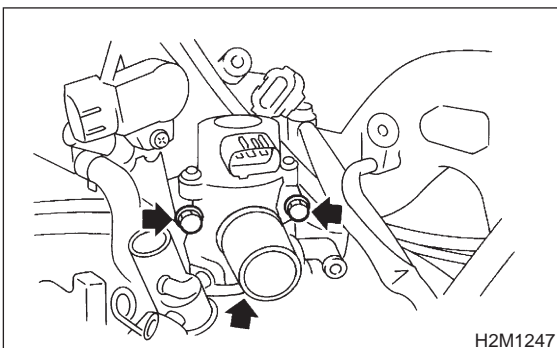
- 6) Install idle air control solenoid valve to intake manifold.

CAUTION:

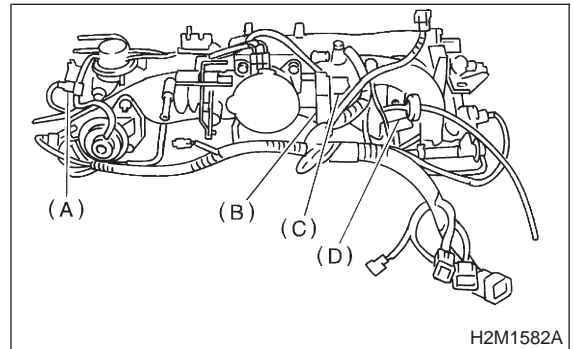
Replace gasket with a new one.

Tightening torque:

$6.4 \pm 0.5 \text{ N}\cdot\text{m}$ ($0.65 \pm 0.05 \text{ kg}\cdot\text{m}$, $4.7 \pm 0.4 \text{ ft}\cdot\text{lb}$)



- 7) Install engine harness onto intake manifold.
8) Connect connectors to throttle position sensor, ignition coil, fuel injectors, idle air control solenoid valve, purge control solenoid valve and EGR solenoid valve. (AT vehicles)



- (A) EGR solenoid valve (AT vehicles)
(B) Throttle position sensor
(C) Idle air control solenoid valve
(D) Purge control solenoid valve

- 9) Install EGR valve. (AT vehicles)

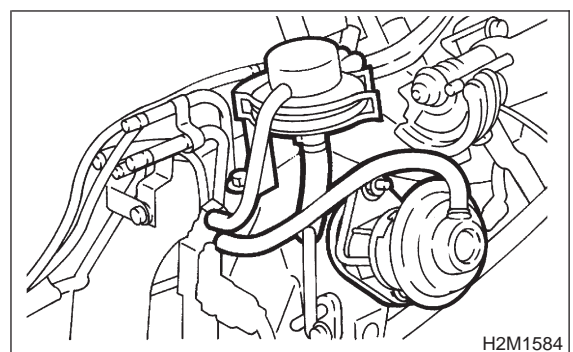
CAUTION:

Replace gasket with a new one.

Tightening torque:

$19 \pm 1.5 \text{ N}\cdot\text{m}$ ($1.9 \pm 0.15 \text{ kg}\cdot\text{m}$, $13.7 \pm 1.1 \text{ ft}\cdot\text{lb}$)

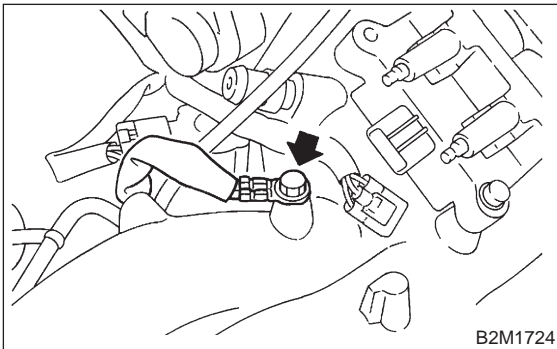
- 10) Install BPT with BPT holder bracket. (AT vehicles)
11) Connect BPT hoses from EGR solenoid valve and intake manifold. (AT vehicles)
12) Connect back pressure hose from pipe. (AT vehicles)
13) Connect EGR vacuum hose from EGR valve. (AT vehicles)



14) Connect engine ground terminal to intake manifold.

Tightening torque:

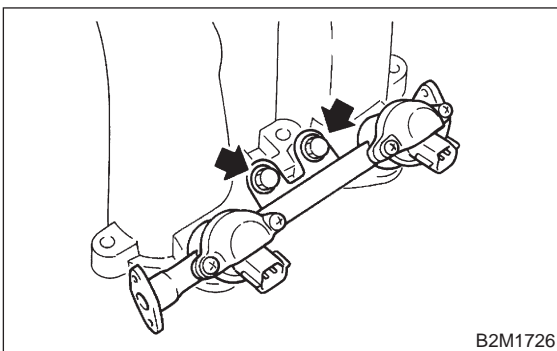
$19 \pm 1.5 \text{ N}\cdot\text{m}$ ($1.9 \pm 0.15 \text{ kg}\cdot\text{m}$, $13.7 \pm 1.1 \text{ ft}\cdot\text{lb}$)



B2M1724

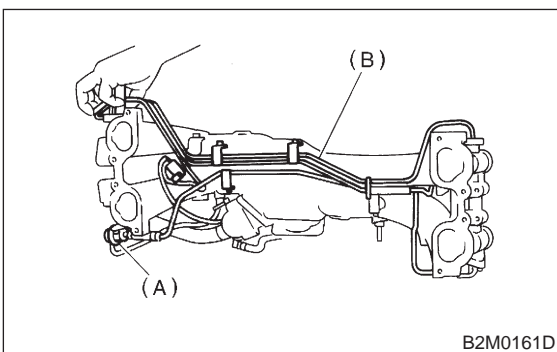
2. 2500 cc MODEL

- 1) Install EGR solenoid valve and purge control solenoid valve.
- 2) Install fuel injector pipes.



B2M1726

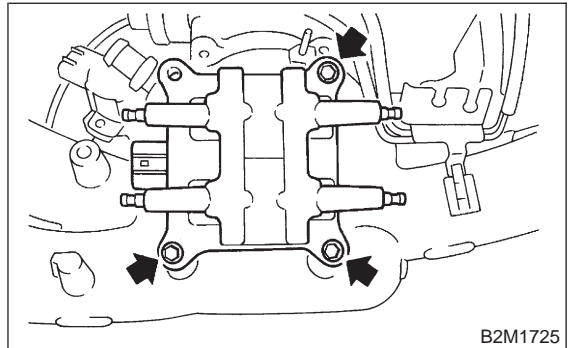
3) Assemble fuel pipes, etc. to intake manifold.



B2M0161D

- (A) Pressure regulator
- (B) Fuel pipe ASSY

4) Install ignition coil.



B2M1725

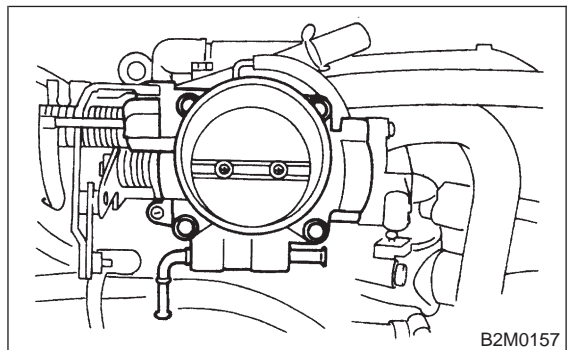
5) Assemble throttle body to intake manifold.

CAUTION:

Replace gasket with a new one.

Tightening torque:

$22 \pm 2 \text{ N}\cdot\text{m}$ ($2.2 \pm 0.2 \text{ kg}\cdot\text{m}$, $15.9 \pm 1.4 \text{ ft}\cdot\text{lb}$)



B2M0157

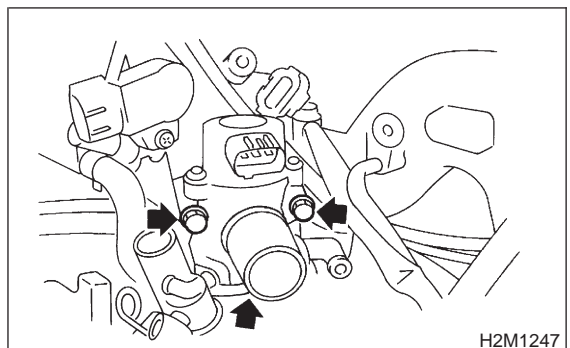
6) Install idle air control solenoid valve to intake manifold.

CAUTION:

Replace gasket with a new one.

Tightening torque:

$6.4 \pm 0.5 \text{ N}\cdot\text{m}$ ($0.65 \pm 0.05 \text{ kg}\cdot\text{m}$, $4.7 \pm 0.4 \text{ ft}\cdot\text{lb}$)



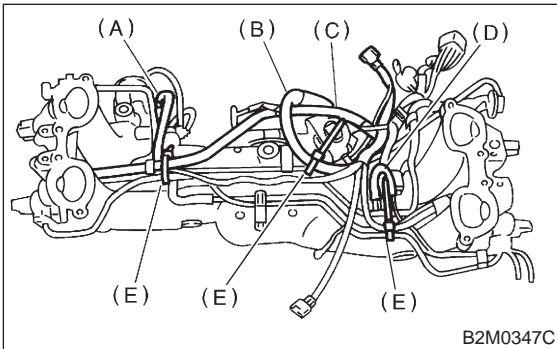
H2M1247

2-7 [W4D0]

4. Intake Manifold

SERVICE PROCEDURE

- 7) Install engine harness onto intake manifold.
- 8) Connect connectors to throttle position sensor, ignition coil, fuel injectors, idle air control solenoid valve, purge control solenoid valve and EGR solenoid valve.



- (A) EGR solenoid valve
- (B) Throttle position sensor
- (C) Idle air control solenoid valve
- (D) Purge control solenoid valve
- (E) Harness band

- 9) Install EGR valve.

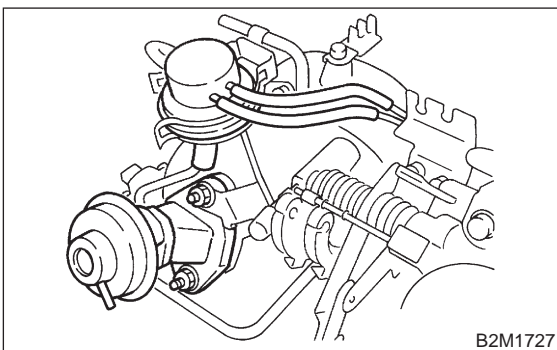
CAUTION:

Replace gasket with a new one.

Tightening torque:

$19 \pm 1.5 \text{ N}\cdot\text{m}$ ($1.9 \pm 0.15 \text{ kg}\cdot\text{m}$, $13.7 \pm 1.1 \text{ ft}\cdot\text{lb}$)

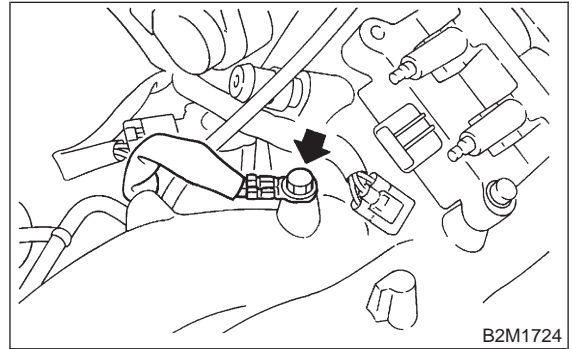
- 10) Install BPT with BPT holder bracket.
- 11) Connect BPT hoses from EGR solenoid valve and intake manifold.
- 12) Connect back pressure hose from pipe.
- 13) Connect EGR vacuum hose from EGR valve.



- 14) Connect engine ground terminal to intake manifold.

Tightening torque:

$19 \pm 1.5 \text{ N}\cdot\text{m}$ ($1.9 \pm 0.15 \text{ kg}\cdot\text{m}$, $13.7 \pm 1.1 \text{ ft}\cdot\text{lb}$)



D: INSTALLATION

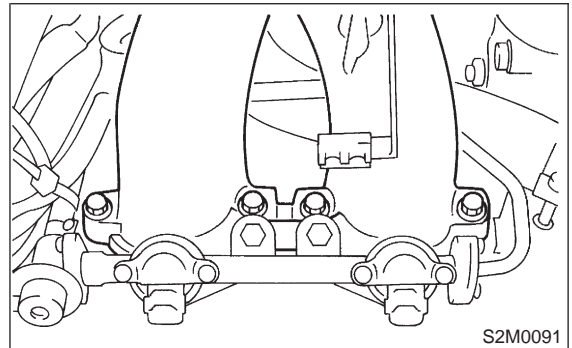
- 1) Install intake manifold onto cylinder heads.

CAUTION:

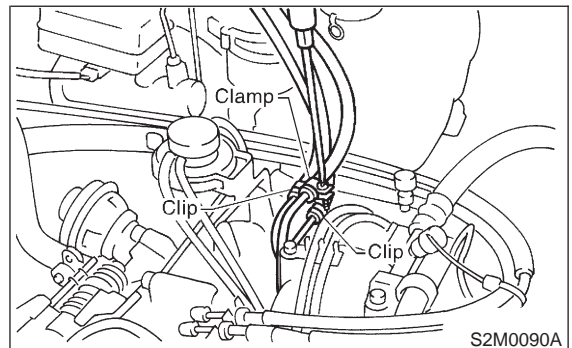
Always use new gaskets.

Tightening torque:

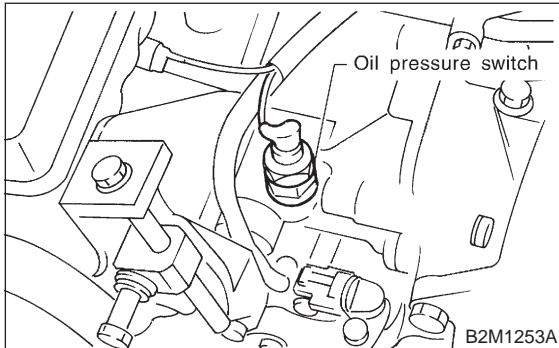
$25 \pm 2 \text{ N}\cdot\text{m}$ ($2.5 \pm 0.2 \text{ kg}\cdot\text{m}$, $18.1 \pm 1.4 \text{ ft}\cdot\text{lb}$)



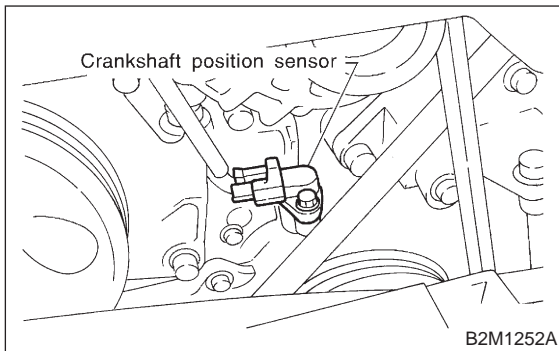
- 2) Connect fuel hoses.



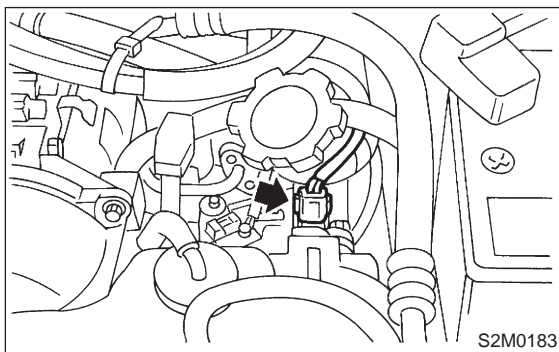
3) Connect connector to oil pressure switch.



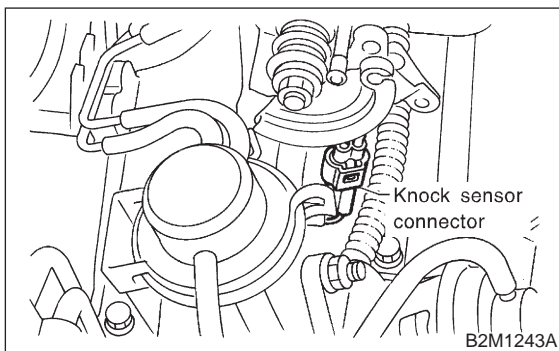
4) Connect connector to crankshaft position sensor.



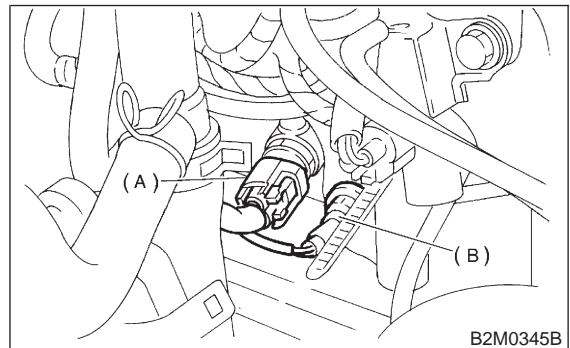
5) Connect connector to camshaft position sensor.



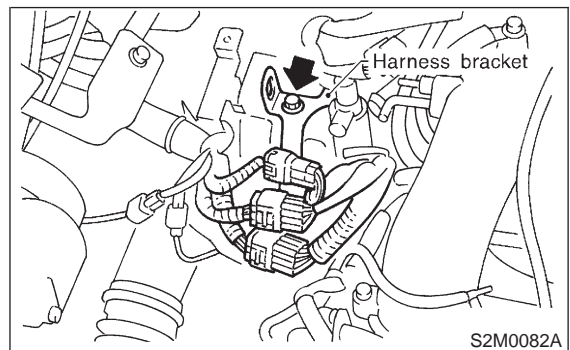
6) Connect knock sensor connector.



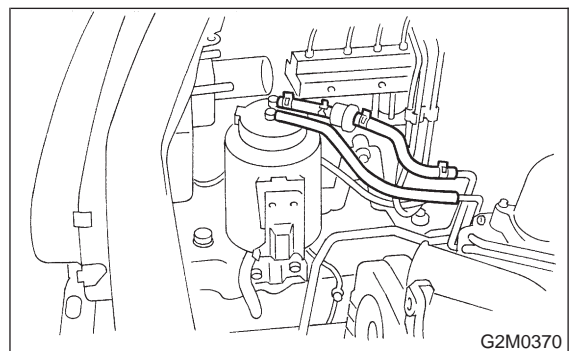
7) Connect connectors to engine coolant temperature sensor (A) and thermometer (B).



8) Install engine harness bracket, and connect engine harness connectors to bulkhead connectors.



9) Connect canister hoses. (2200 cc FWD and Taiwan spec. vehicles)



2-7 [W4D0]

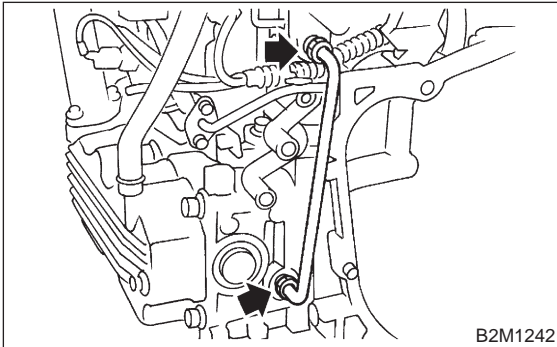
4. Intake Manifold

SERVICE PROCEDURE

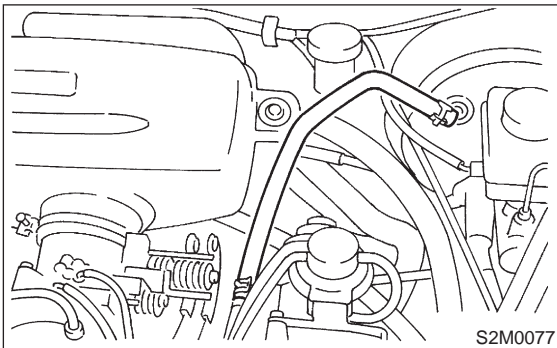
10) Install EGR pipe. (Except 2200 cc MT vehicles)

Tightening torque:

34 ± 2 N·m (3.5 ± 0.2 kg·m, 25.3 ± 1.4 ft·lb)

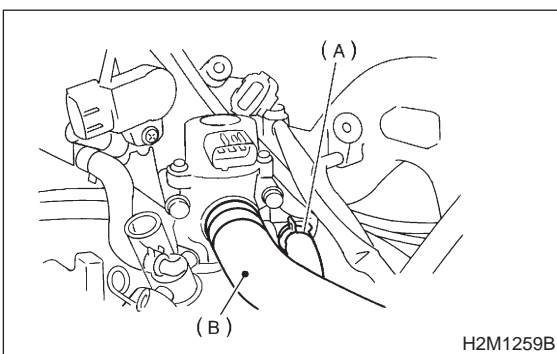


11) Connect brake booster hose.

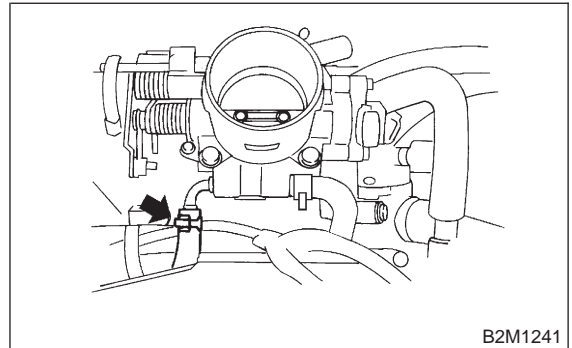


12) Connect engine coolant hose (A) to idle air control solenoid valve.

13) Connect air by-pass hose (B) to idle air control solenoid valve.

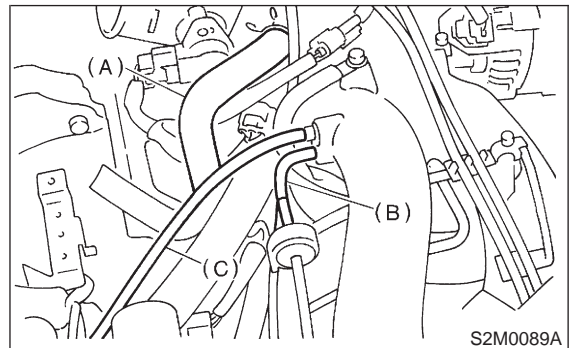


14) Connect engine coolant hose to throttle body.

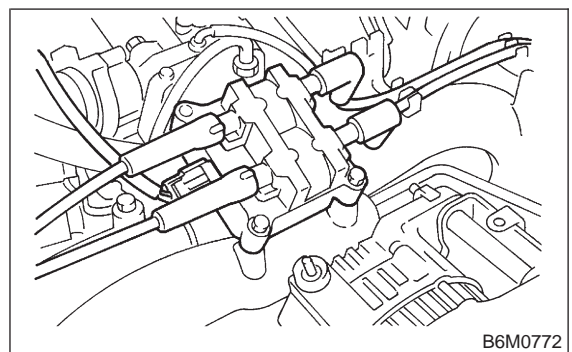


15) Connect vacuum hose (C) to cruise control diaphragm. (With cruise control models)

16) Connect PCV hose (A) and pressure regulator vacuum hose (B) to intake manifold.



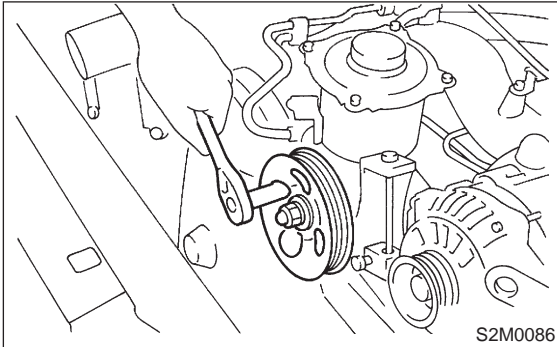
17) Connect spark plug cords to ignition coil.



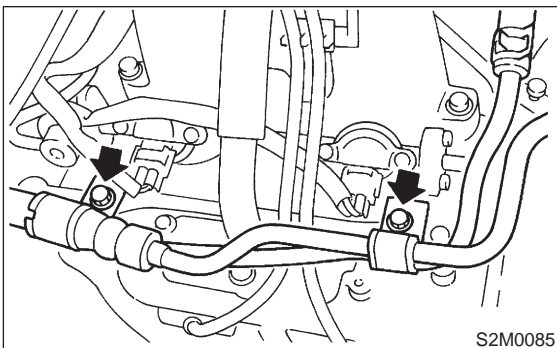
- 18) Install power steering pump on bracket.
(1) Install power steering pump on bracket, and tighten bolts.

Tightening torque:

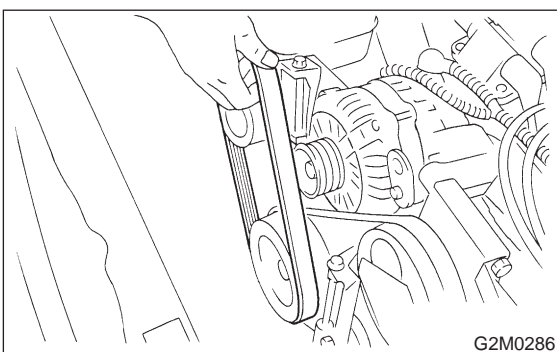
$20.1 \pm 2.5 \text{ N}\cdot\text{m}$ ($2.05 \pm 0.25 \text{ kg}\cdot\text{m}$, $14.8 \pm 1.8 \text{ ft}\cdot\text{lb}$)



- (2) Install power steering pipe brackets on right side intake manifold.

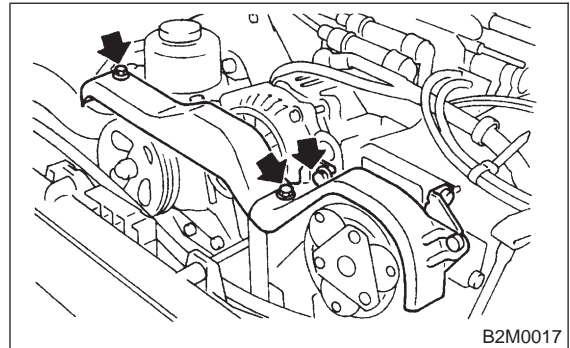


- (3) Install power steering pump drive V-belt.

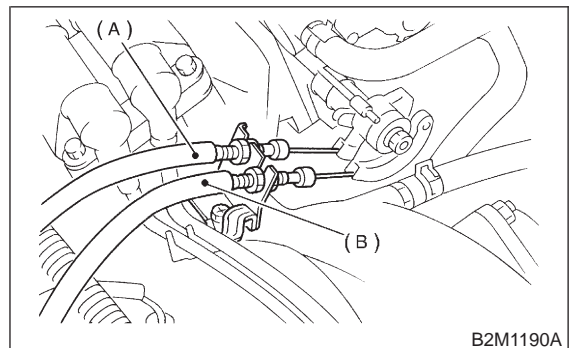


- (4) Adjust V-belt. <Ref. to 1-5 [G2A0].>

- (5) Install V-belt cover.



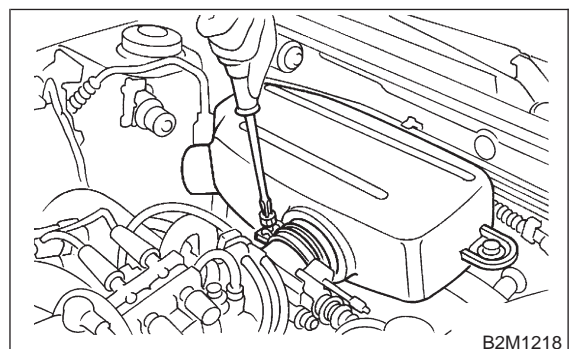
- 19) Connect vacuum hoses to pressure sources switching solenoid valve.
20) Connect accelerator cable (A).
21) Connect cruise control cable (B). (With cruise control model)



- 22) Install air intake chamber and connect air hoses.

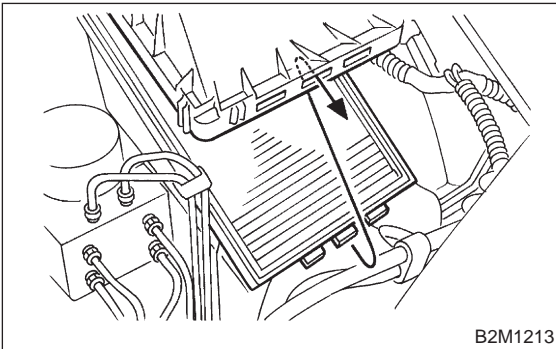
Tightening torque:

$4.9 \pm 0.5 \text{ N}\cdot\text{m}$ ($0.5 \pm 0.05 \text{ kg}\cdot\text{m}$, $3.6 \pm 0.4 \text{ ft}\cdot\text{lb}$)

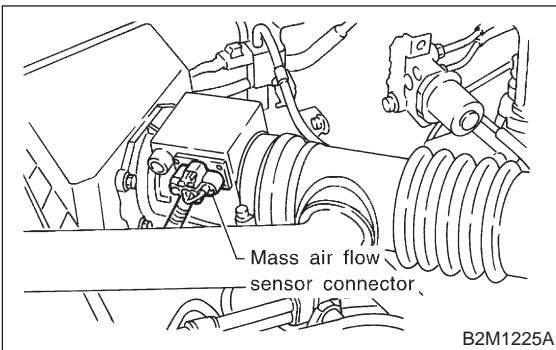


- 23) Install air cleaner element.
- 24) Install air cleaner upper cover and air intake duct as a unit.

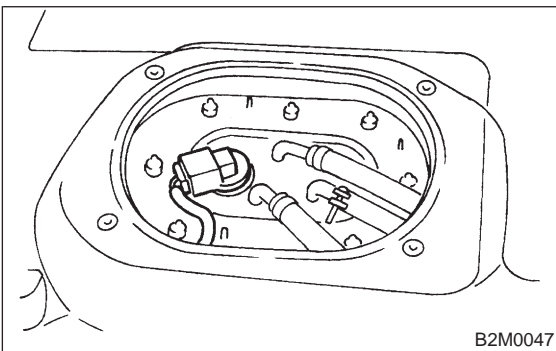
CAUTION:
Before installing air cleaner upper cover, align holes with protruding portions of air cleaner lower case, then secure upper cover to lower case.



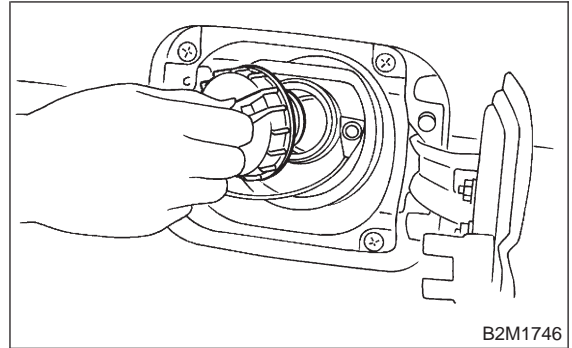
- 25) Connect connector to mass air flow sensor.



- 26) Connect connector to fuel pump, and install lid cover.



- 27) Install fuel filler cap.



- 28) Connect battery ground cable.

