

FUEL SYSTEM

2-8

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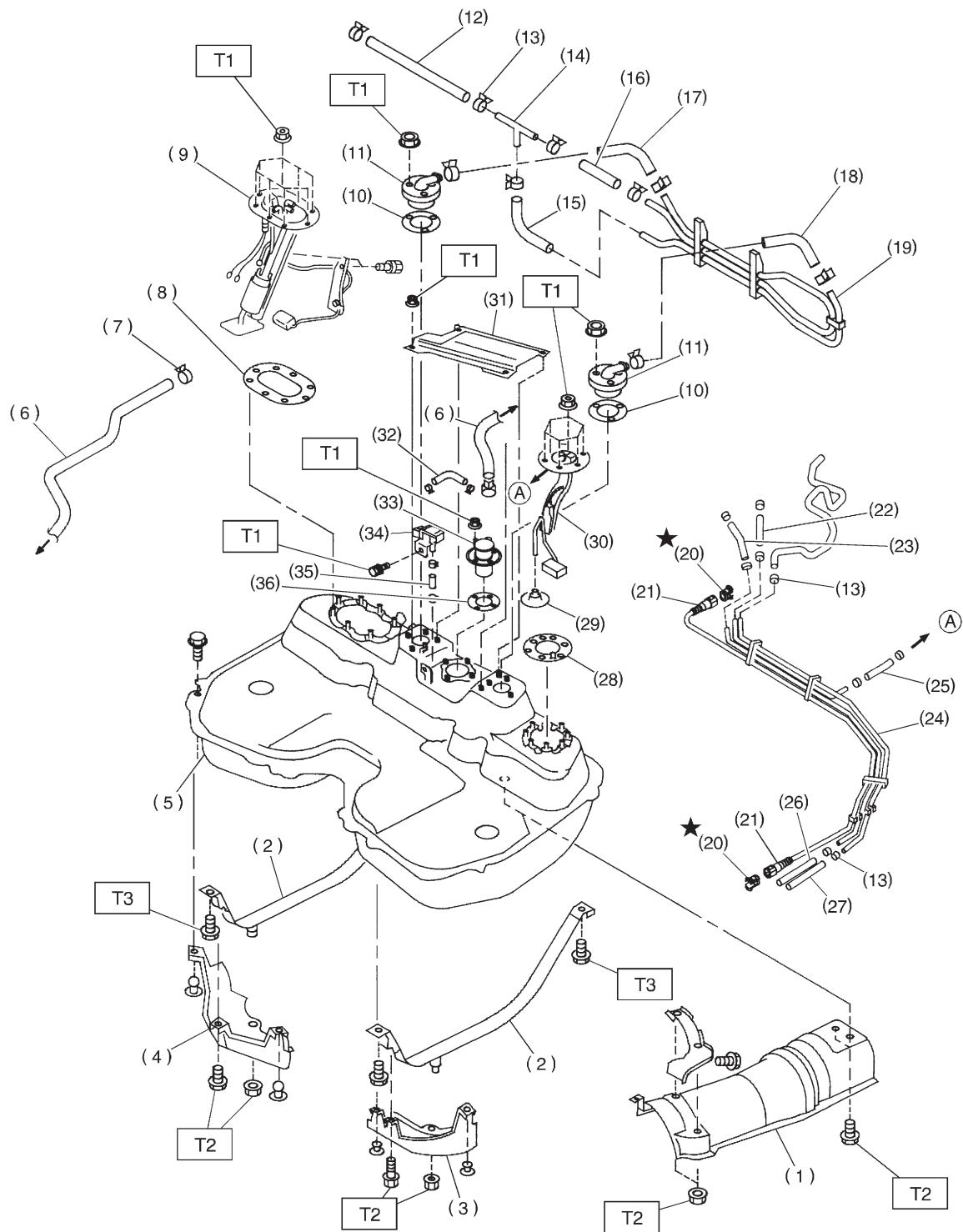
1. Fuel System

Model		2200 cc	2500 cc
Fuel tank	Capacity	60 ℥ (15.9 US gal, 13.2 Imp gal)	
	Location	Under rear seat	
Fuel pump	Type	Impeller	
	Discharge pressure	250.1 kPa (2.55 kg/cm ² , 36.3 psi)	
	Discharge flow	More than 80 ℥ (21.1 US gal, 17.6 Imp gal)/h [12 V at 250.1 kPa (2.55 kg/cm ² , 36.3 psi)]	More than 80 ℥ (21.1 US gal, 17.6 Imp gal)/h [12 V at 300 kPa (3.06 kg/cm ² , 43.5 psi)]
Fuel filter		Cartridge type	

MEMO:

1. Fuel Tank

A: 2200 cc MODEL



(1) Heat seated cover	(15) Evaporation hose C	(29) Jet pump filter
(2) Fuel tank band	(16) Evaporation hose B	(30) Fuel sub meter unit
(3) Protector LH	(17) Evaporation hose D	(31) Protector cover
(4) Protector RH	(18) Evaporation hose E	(32) Vent valve hose
(5) Fuel tank	(19) Evaporation pipe ASSY	(33) Vent valve
(6) Canister hose A	(20) Retainer	(34) Fuel tank pressure sensor
(7) Clip	(21) Quick connector	(35) Fuel tank pressure sensor hose
(8) Fuel pump gasket	(22) Jet pump hose A	(36) Vent valve gasket
(9) Fuel pump ASSY	(23) Fuel return hose A	
(10) Fuel cut valve gasket	(24) Fuel pipe ASSY	
(11) Fuel cut valve	(25) Jet pump hose B	
(12) Fuel delivery hose A	(26) Fuel return hose B	
(13) Clip	(27) Evaporation hose F	
(14) Joint pipe	(28) Fuel sub meter gasket	

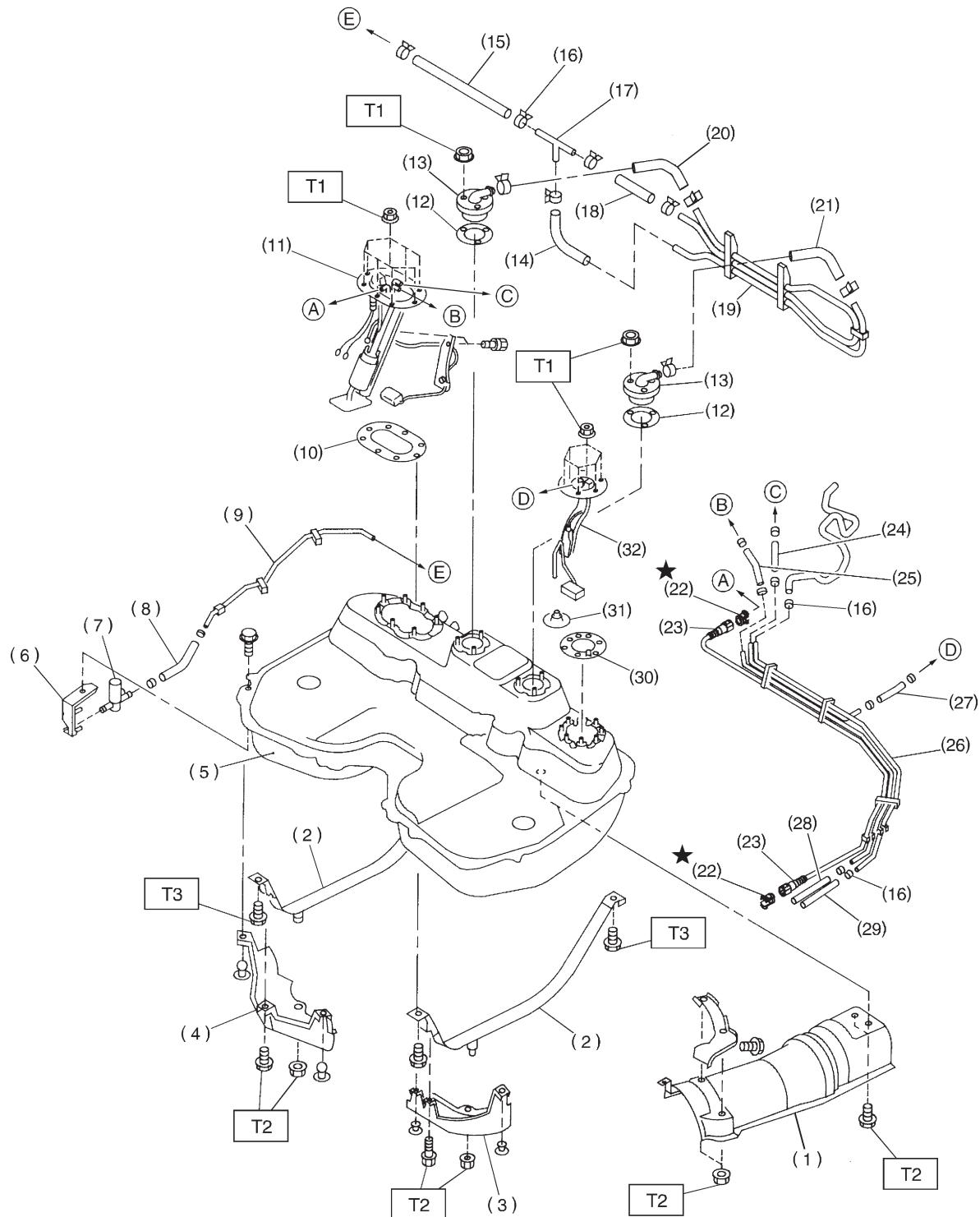
Tightening torque: N·m (kg·m, ft·lb)

T1: 4.4±1.5 (0.45±0.15, 3.3±1.1)

T2: 7.4±2.0 (0.75±0.2, 5.4±1.4)

T3: 33±10 (3.4±1.0, 25±7)

B: 2500 cc MODEL

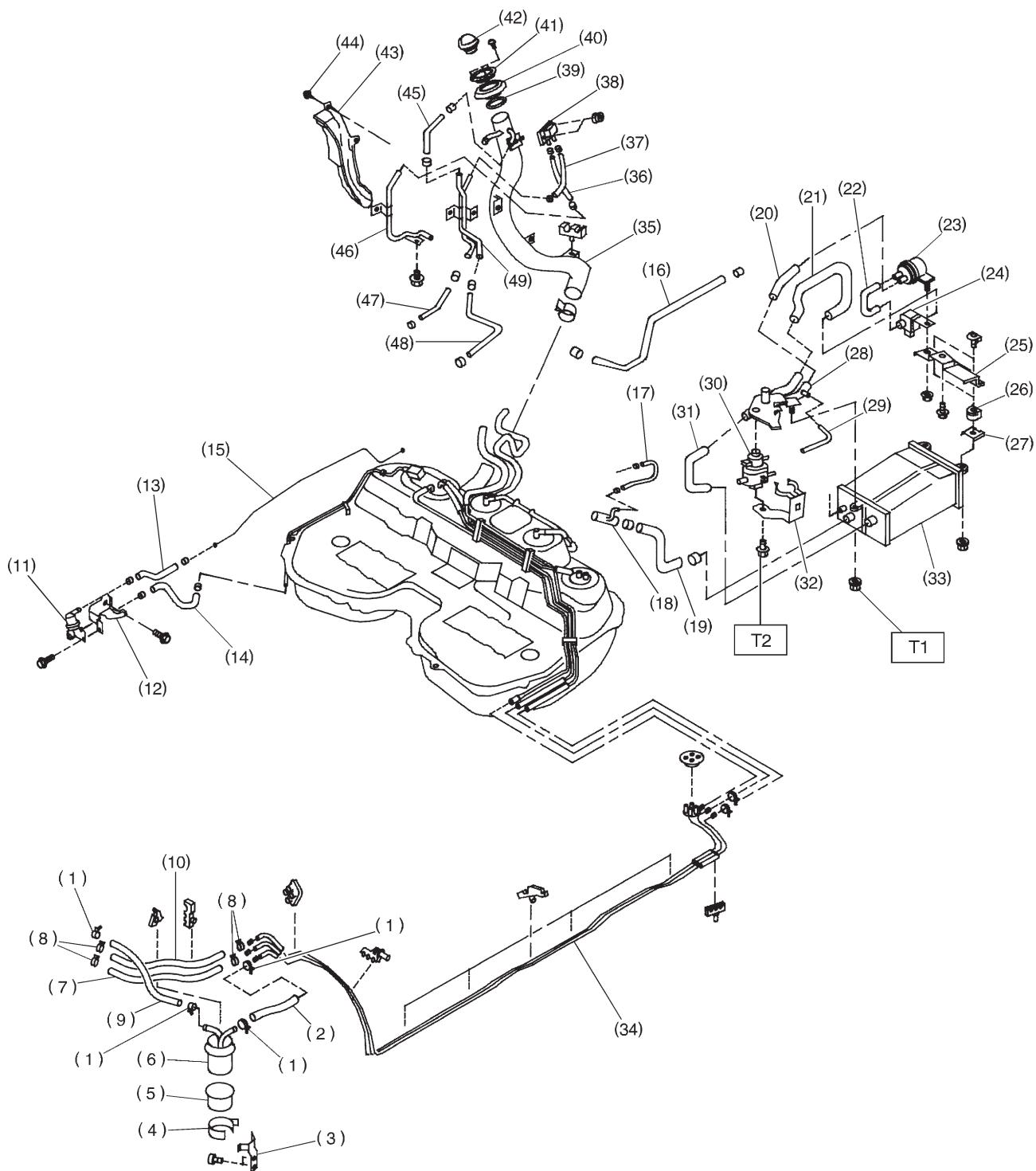


(1) Heat sealed cover	(13) Fuel cut valve	(26) Fuel pipe ASSY
(2) Fuel tank band	(14) Evaporation hose C	(27) Jet pump hose B
(3) Protector LH	(15) Evaporation hose A	(28) Fuel return hose B
(4) Protector RH	(16) Clip	(29) Evaporation hose F
(5) Fuel tank	(17) Joint pipe	(30) Fuel sub meter gasket
(6) Pressure control solenoid valve bracket	(18) Evaporation hose B	(31) Jet pump filter
(7) Pressure control solenoid valve	(19) Evaporation pipe ASSY	(32) Fuel sub meter unit
(8) Evaporation hose G	(20) Evaporation hose D	
(9) Evaporation pipe A	(21) Evaporation hose E	
(10) Fuel pump gasket	(22) Retainer	
(11) Fuel pump ASSY	(23) Quick connector	
(12) Fuel cut valve gasket	(24) Jet pump hose A	
	(25) Fuel return hose A	

Tightening torque: N·m (kg·m, ft·lb)**T1: 4.4 ± 1.5 (0.45 ± 0.15 , 3.3 ± 1.1)****T2: 7.4 ± 2.0 (0.75 ± 0.2 , 5.4 ± 1.4)****T3: 33 ± 10 (3.4 ± 1.0 , 25 ± 7)**

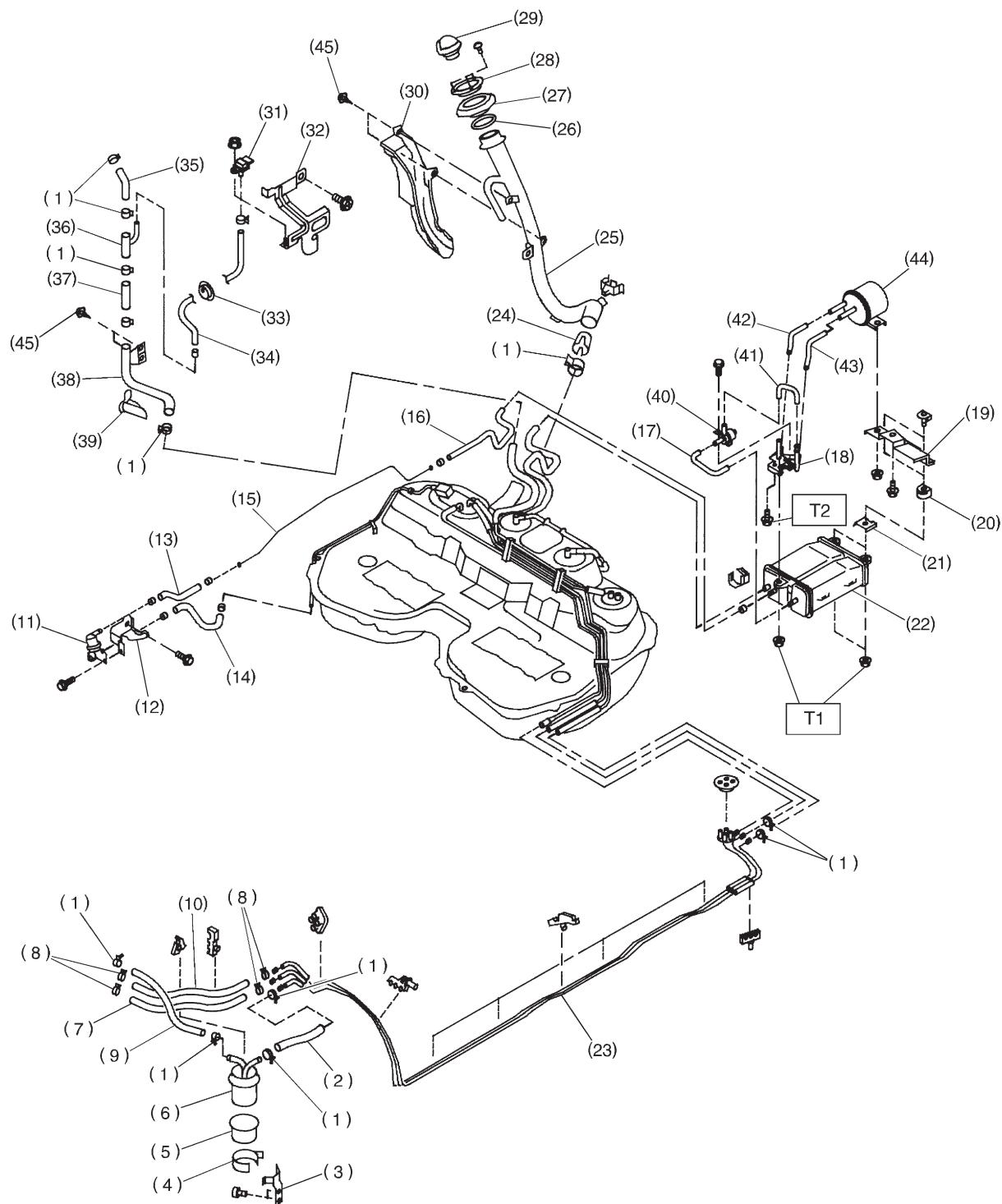
2. Fuel Line

A: 2200 cc MODEL



(1) Clamp	(20) Air filter hose A	(38) Shut valve
(2) Fuel delivery hose A	(21) Drain valve hose	(39) Packing
(3) Fuel filter bracket	(22) Air filter hose B	(40) Ring A
(4) Fuel filter holder	(23) Air filter	(41) Ring B
(5) Fuel filter cup	(24) Drain valve	(42) Fuel filler cap
(6) Fuel filter	(25) Canister upper bracket	(43) Fuel filler pipe protector
(7) Evaporation hose	(26) Cushion rubber	(44) Tapping screw
(8) Clip	(27) Canister lower bracket	(45) Evaporation hose O
(9) Fuel delivery hose B	(28) Canister holder	(46) Joint pipe
(10) Fuel return hose	(29) Evaporation hose L	(47) Evaporation hose P
(11) Roll over valve	(30) Pressure control solenoid valve	(48) Evaporation hose Q
(12) Roll over valve bracket	(31) Canister hose B	(49) Evaporation pipe
(13) Evaporation hose H	(32) Pressure control solenoid valve holder	
(14) Evaporation hose I	(33) Canister	Tightening torque: N·m (kg·m, ft·lb)
(15) Evaporation pipe B	(34) Fuel pipe ASSY	T1: 23±7 (2.3±0.7, 16.6±5.1)
(16) Evaporation hose J	(35) Fuel filler pipe	T2: 25±7 (2.5±0.7, 18.1±5.1)
(17) Evaporation hose K	(36) Evaporation hose M	
(18) Joint pipe	(37) Evaporation hose N	
(19) Canister hose A		

B: 2500 cc MODEL



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(1) Clamp	(18) Canister holder	(34) Fuel tank pressure sensor hose
(2) Fuel delivery hose A	(19) Canister upper bracket	(35) Air ventilator hose A
(3) Fuel filter bracket	(20) Cushion rubber	(36) Air ventilator pipe A
(4) Fuel filter holder	(21) Canister lower bracket	(37) Air ventilator hose B
(5) Fuel filter cup	(22) Canister	(38) Air ventilator pipe B
(6) Fuel filter	(23) Fuel pipe ASSY	(39) Air ventilator pipe protector
(7) Evaporation hose	(24) Fuel filler valve	(40) Vent control solenoid valve
(8) Clip	(25) Fuel filler pipe	(41) Vent control solenoid valve hose
(9) Fuel delivery hose B	(26) Packing	(42) Air filter hose A
(10) Fuel return hose	(27) Ring A	(43) Air filter hose B
(11) Roll over valve	(28) Ring B	(44) Air filter
(12) Roll over valve bracket	(29) Fuel filler cap	(45) Tapping screw
(13) Evaporation hose H	(30) Fuel filler pipe protector	
(14) Evaporation hose I	(31) Fuel tank pressure sensor	
(15) Evaporation pipe B	(32) Fuel tank pressure sensor bracket	
(16) Canister hose A	(33) Grommet	
(17) Canister hose B		

Tightening torque: N·m (kg·m, ft·lb)

T1: 23 ± 7 (2.3±0.7, 17±5.1)

T2: 25 ± 7 (2.5±0.7, 18±5.1)

1. On-car Services

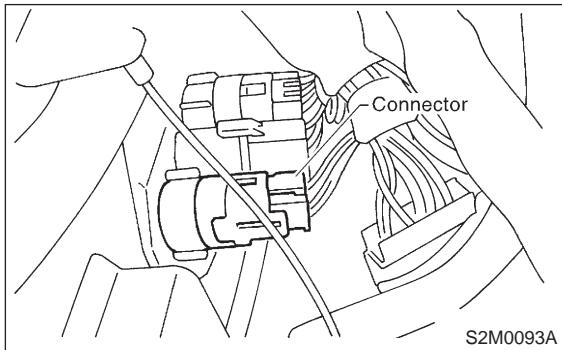
A: PRECAUTIONS

WARNING:

- Place "No fire" signs near the working area.
- Disconnect ground terminal from battery.
- Be careful not to spill fuel on the floor.

B: RELEASING OF FUEL PRESSURE

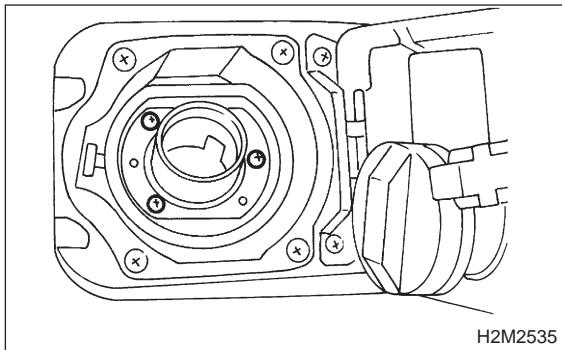
- 1) Disconnect connector from fuel pump relay.



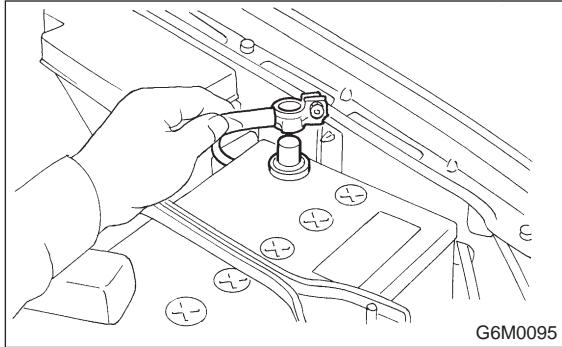
- 2) Start the engine, and run it until it stalls.
- 3) After the engine stalls, crank it for five more seconds.
- 4) Turn ignition switch OFF.

C: DRAINING OF FUEL

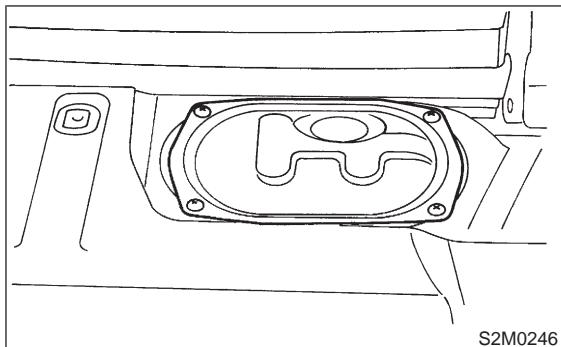
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



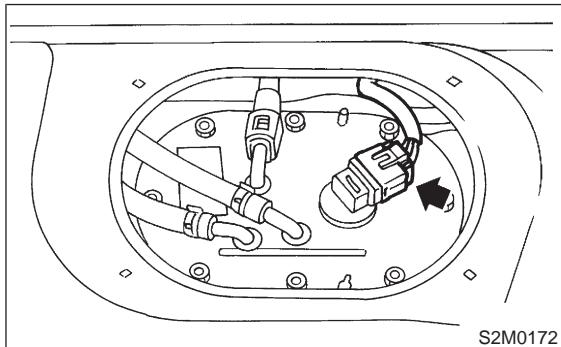
- 3) Disconnect battery ground cable.



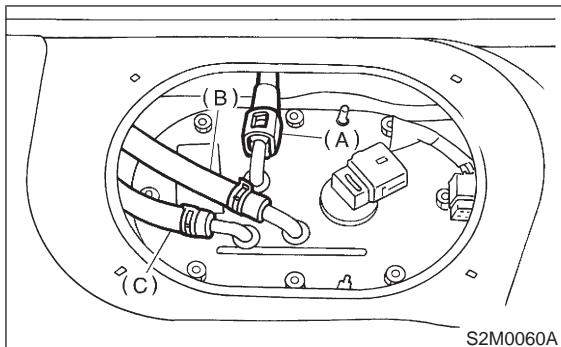
- 4) Remove access hole lid.



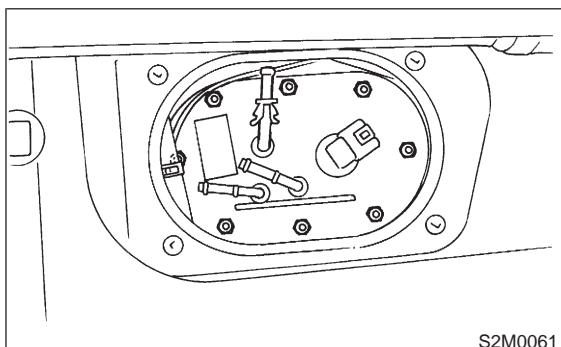
- 5) Disconnect connector from fuel pump.



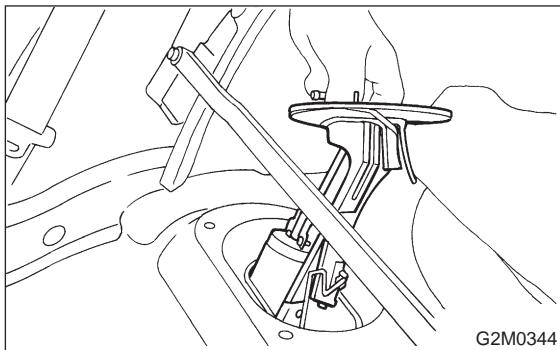
- 6) Disconnect quick connector, and then disconnect fuel delivery hose (A). <Ref. to 2-8 [W7A0].>
- 7) Move clips, and then disconnect fuel return hose (B) and jet pump hose (C).



- 8) Remove nuts which install fuel pump assembly onto fuel tank.

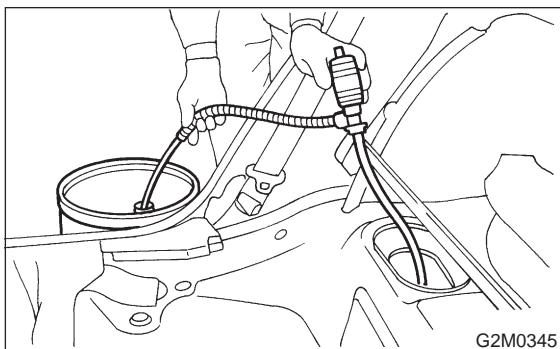


9) Take off fuel pump from fuel tank.

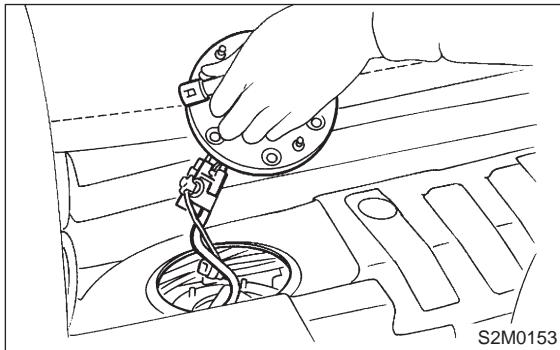


10) Drain fuel from fuel tank by using a hand pump.

WARNING:
Do not use a motor pump when draining fuel.

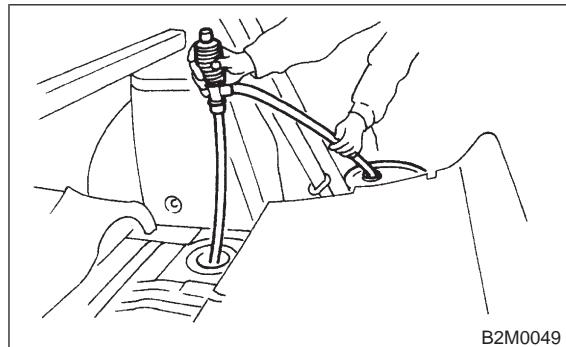


11) Remove fuel sub meter unit. <Ref. to 2-8 [W10A0].>



12) Drain fuel from there.

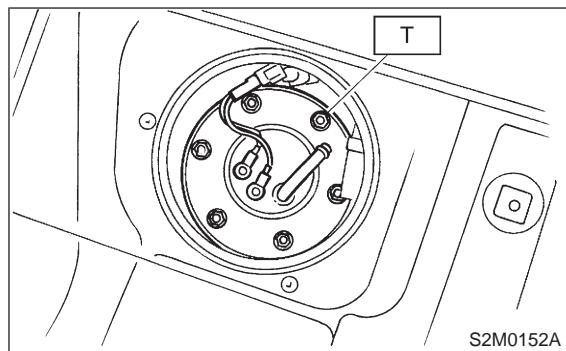
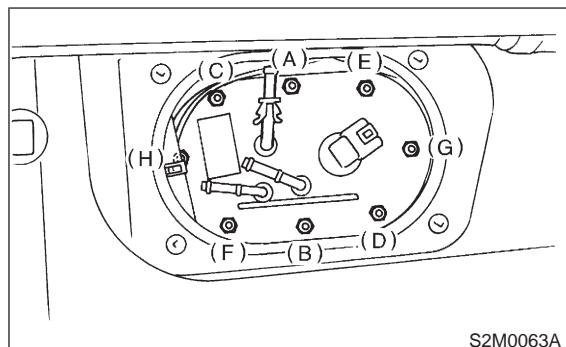
WARNING:
Do not use a motor pump when draining fuel.



13) After draining fuel, reinstall fuel pump and fuel sub meter unit.

Tighten nuts of fuel pump in numerical sequence shown in figure to specified torque.

Tightening torque:
 $4.4 \pm 1.5 \text{ N}\cdot\text{m} (0.45 \pm 0.15 \text{ kg}\cdot\text{m}, 3.3 \pm 1.1 \text{ ft}\cdot\text{lb})$



D: MEASUREMENT OF FUEL PRESSURE

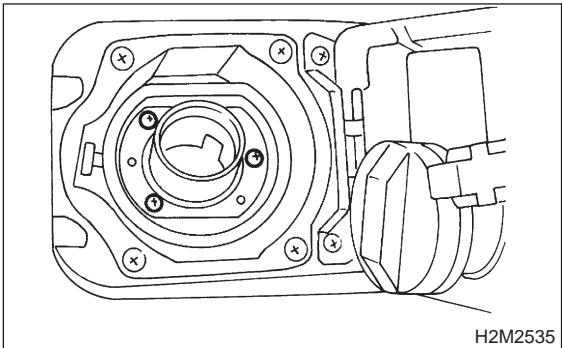
WARNING:
Before removing fuel pressure gauge, release fuel pressure.

NOTE:

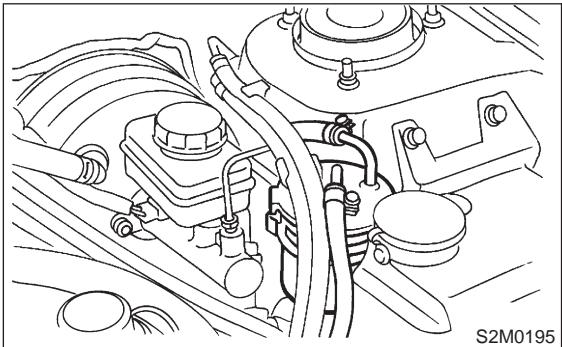
If out of specification, check or replace pressure regulator and pressure regulator vacuum hose.

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

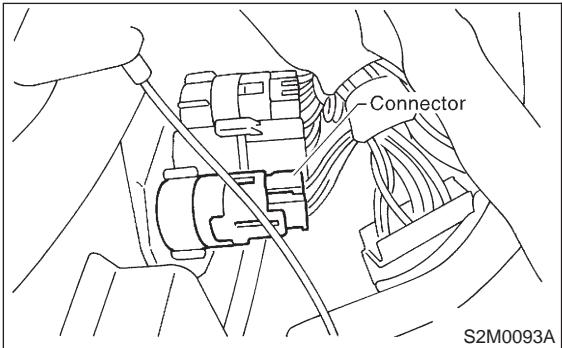
2) Open fuel flap lid, and remove fuel filler cap.



3) Disconnect fuel delivery hoses from fuel filter, and connect fuel pressure gauge.



4) Connect connector to fuel pump relay.

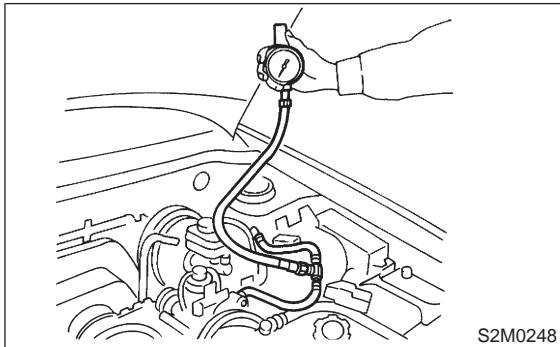


5) Start the engine.

6) Measure fuel pressure while disconnecting pressure regulator vacuum hose from collector chamber.

Fuel pressure:

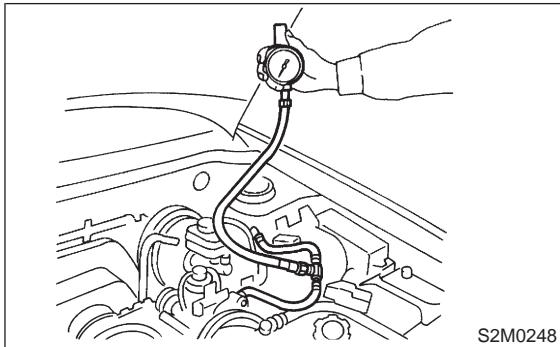
$235 - 265 \text{ kPa (2.4 - 2.7 kg/cm}^2, 34 - 38 \text{ psi})$



7) After connecting pressure regulator vacuum hose, measure fuel pressure.

Fuel pressure:

$177 - 206 \text{ kPa (1.8 - 2.1 kg/cm}^2, 26 - 30 \text{ psi})$

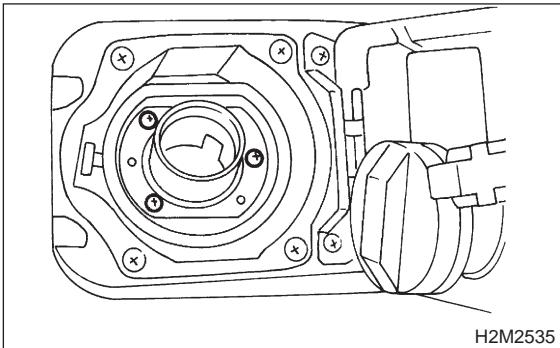


2. Fuel Tank

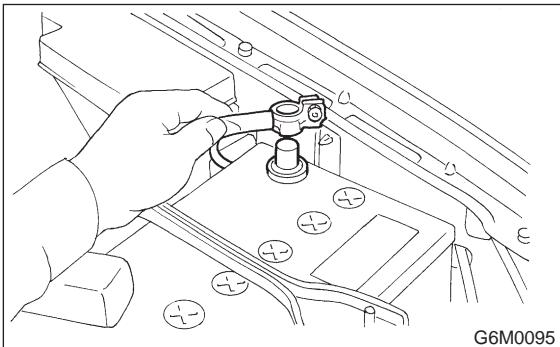
A: REMOVAL

1. 2200 cc MODEL

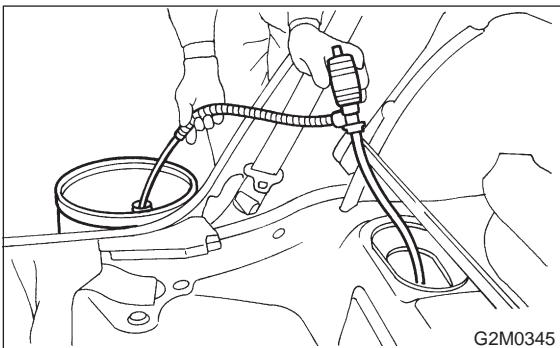
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



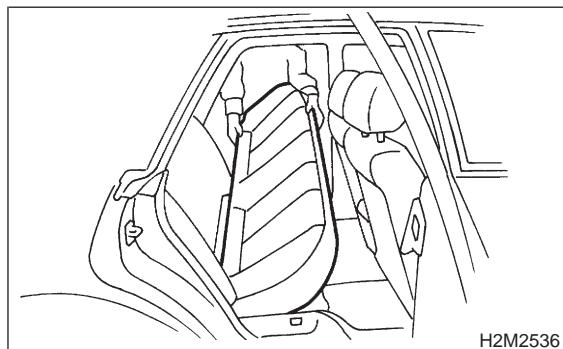
- 3) Disconnect battery ground cable.



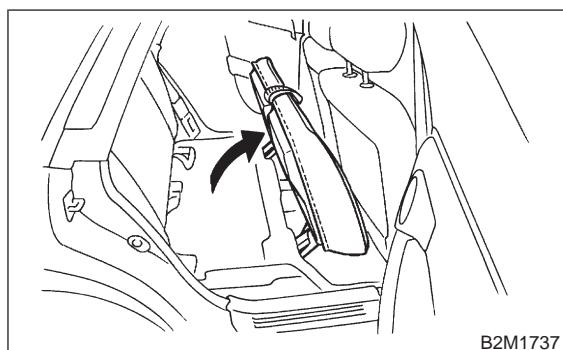
- 4) Drain fuel from fuel tank. <Ref. to 2-8 [W1C0].>



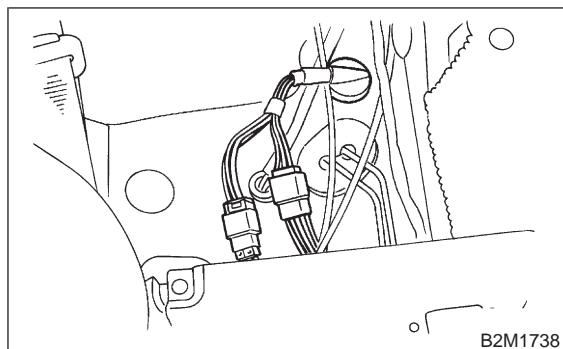
- 5) Remove rear seat cushion. (Sedan model)
<Ref. to 5-3 [W2A1].>



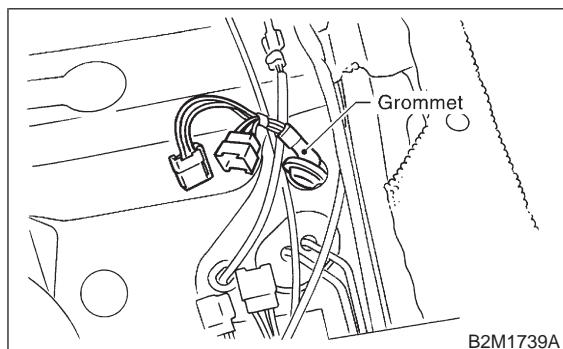
- 6) Move rear seat cushion forward. (Wagon model) <Ref. to 5-3 [W2A2].>



- 7) Disconnect connector of fuel tank cord from rear harness.



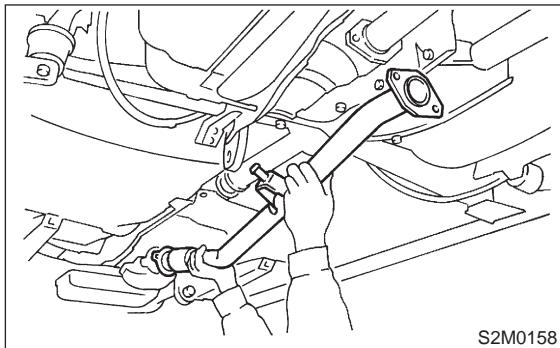
- 8) Push grommet which holds fuel tank cord on floor panel into under the body.



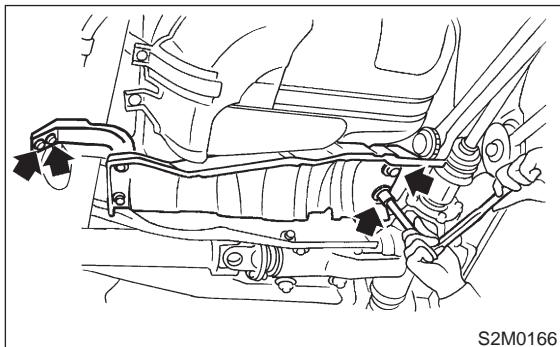
- 9) Lift-up the vehicle.
- 10) Remove rear exhaust pipe.
 - (1) Separate rear exhaust pipe from center exhaust pipe.
 - (2) Separate rear exhaust pipe from muffler.
 - (3) Remove bracket from rubber cushion, and remove exhaust pipe.

NOTE:

To facilitate the removal of parts, apply a coat of SUBARU CRC5-56 (Part No. 004301003). <Ref. to 2-9 [W3A0].>



- 11) Remove heat sealed cover.

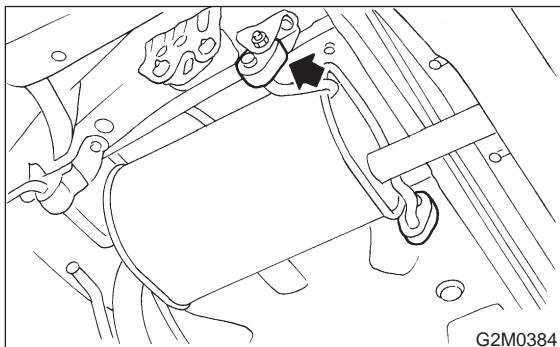


- 12) Remove muffler assembly.

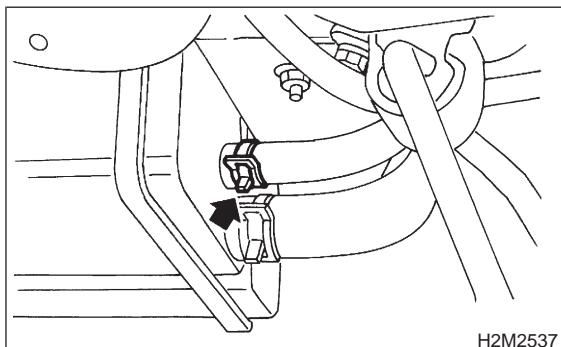
<Ref. to 2-9 [W4A0].>

NOTE:

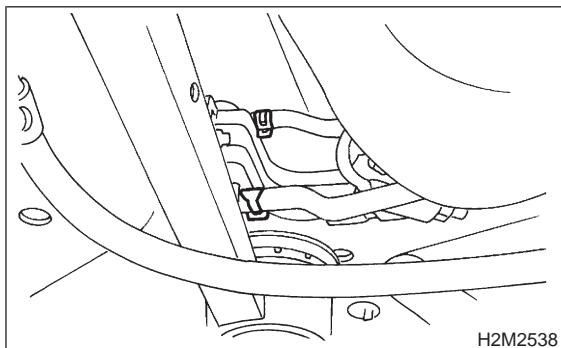
To facilitate the removal of parts, apply a coat of SUBARU CRC5-56 (Part No. 004301003).



- 13) Move clip, and disconnect evaporation hose from canister.

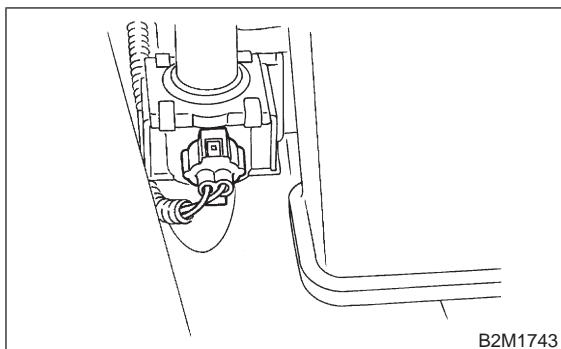


- 14) Disconnect hose from joint pipe.

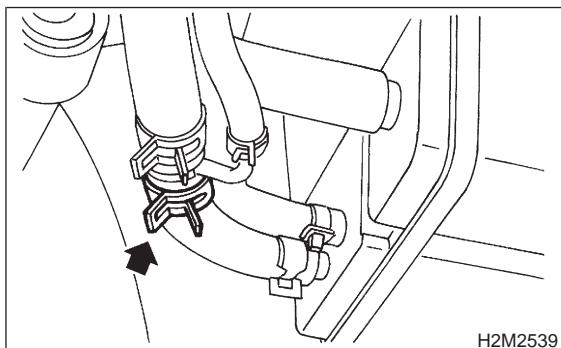


- 15) Disconnect connector from pressure control solenoid valve.

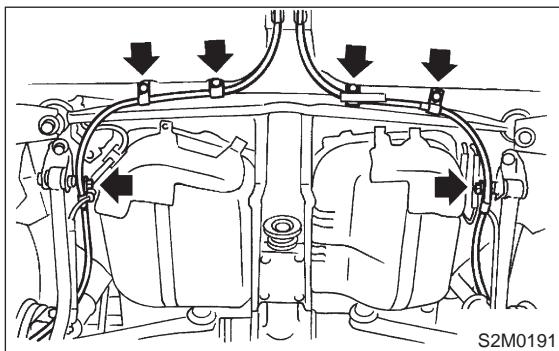
- 16) Disconnect connector from drain valve.



- 17) Disconnect hoses from roll over valve.



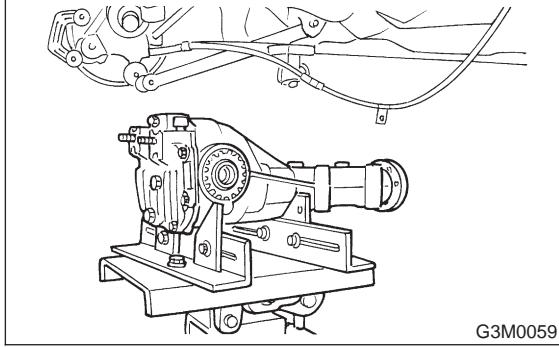
18) Remove bolts which hold parking brake cable holding bracket.



19) Remove rear differential assembly.

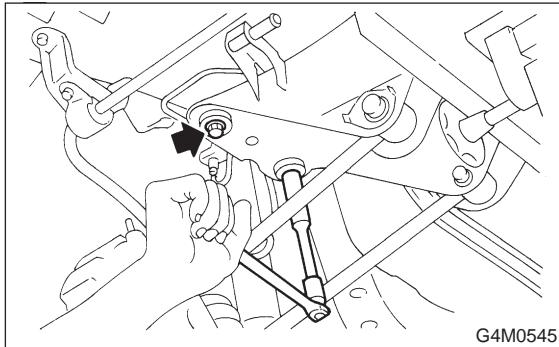
- (1) Remove rear axle shafts from rear differential assembly.
- (2) Remove rear differential front cover.
- (3) Remove propeller shaft.
- (4) Remove lower differential bracket.
- (5) Set transmission jack under rear differential.
- (6) Remove bolts which install rear differential onto rear crossmember.

<Ref. to 3-4 [W2B0].> and <Ref. 3-4 [W3B0].>

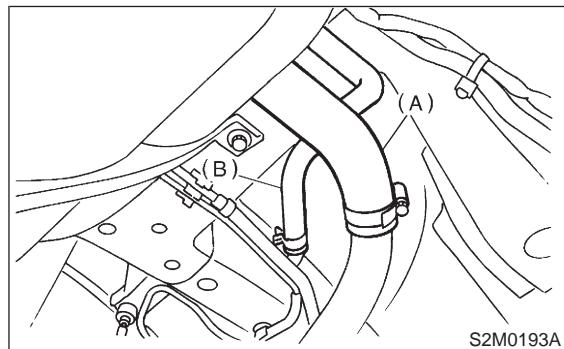


20) Remove rear crossmember.

<Ref. to 4-1 [W10A0].>

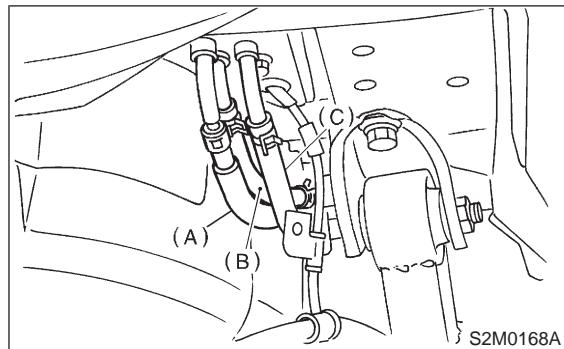


21) Loosen clamp, and disconnect fuel filler hose (A) and air vent hose (B) from fuel filler pipe and air vent pipe.



22) Move clips, and disconnect fuel return hose (B) and evaporation hose (C).

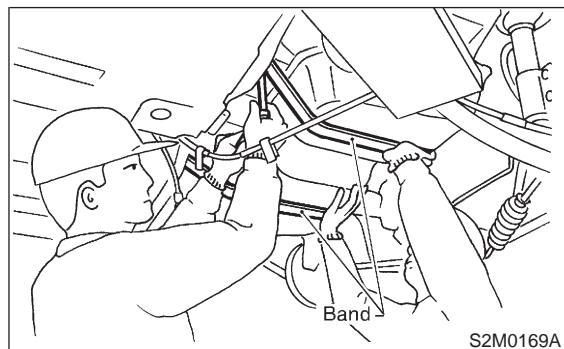
23) Disconnect quick connector, and then disconnect fuel delivery hose (A).



24) While holding fuel tank, remove bolts from bands and dismount fuel tank.

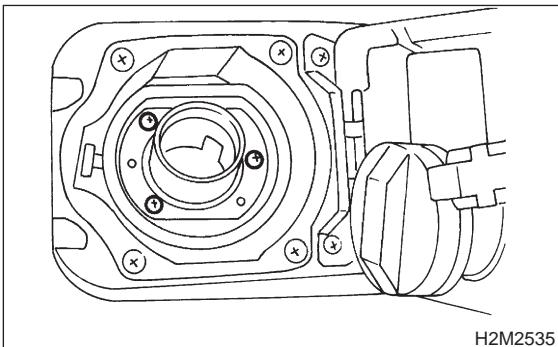
WARNING:

A helper is required to perform this work.

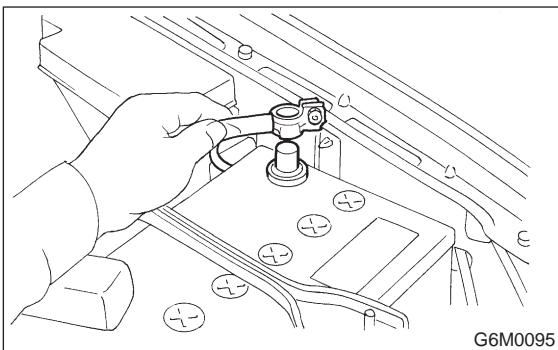


2. 2500 cc MODEL

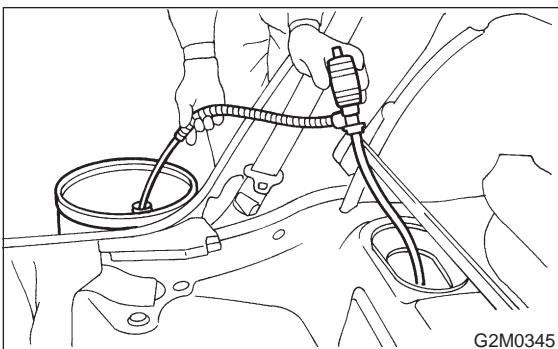
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



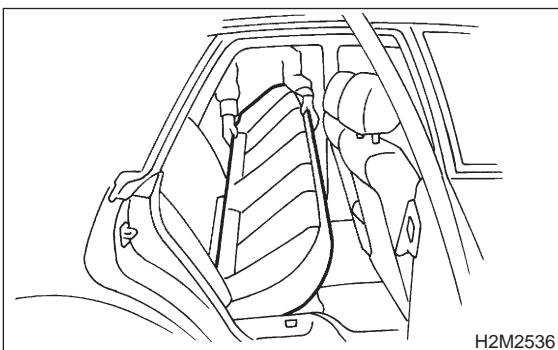
- 3) Disconnect battery ground cable.



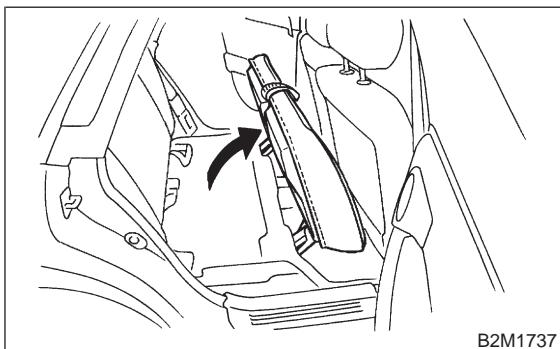
- 4) Drain fuel from fuel tank. <Ref. to 2-8 [W1C0].>



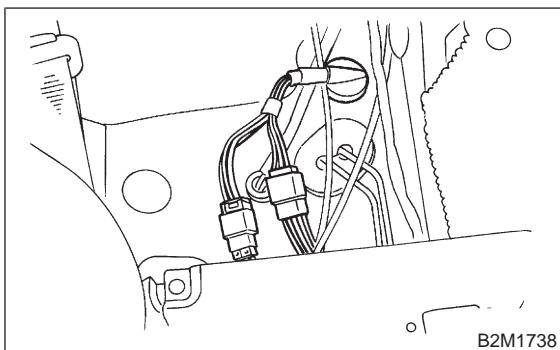
- 5) Remove rear seat cushion. (Sedan model)
<Ref. to 5-3 [W2A1].>



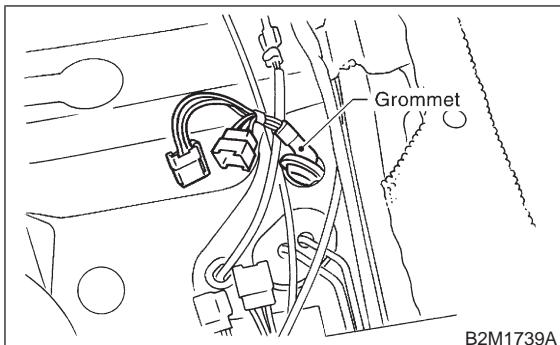
- 6) Move rear seat cushion forward. (Wagon model) <Ref. to 5-3 [W2A2].>



- 7) Disconnect connector of fuel tank cord from rear harness.



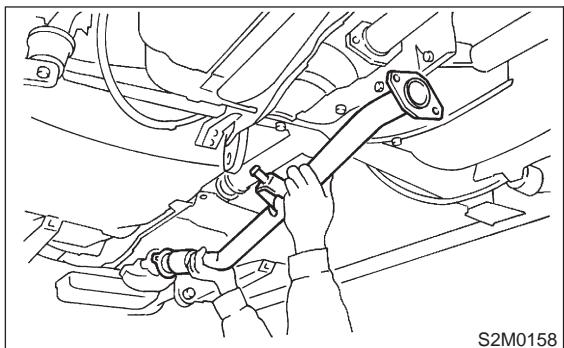
- 8) Push grommet which holds fuel tank cord on floor panel into under the body.



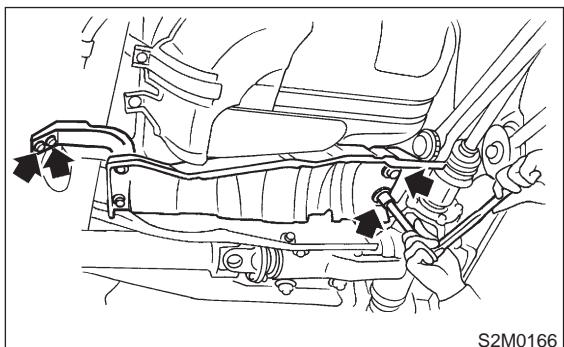
- 9) Lift-up the vehicle.
- 10) Remove rear exhaust pipe.
 - (1) Separate rear exhaust pipe from center exhaust pipe.
 - (2) Separate rear exhaust pipe from muffler.
 - (3) Remove bracket from rubber cushion, and remove exhaust pipe.

NOTE:

To facilitate the removal of parts, apply a coat of SUBARU CRC5-56 (Part No. 004301003). <Ref. to 2-9 [W3A0].>



- 11) Remove heat sealed cover.

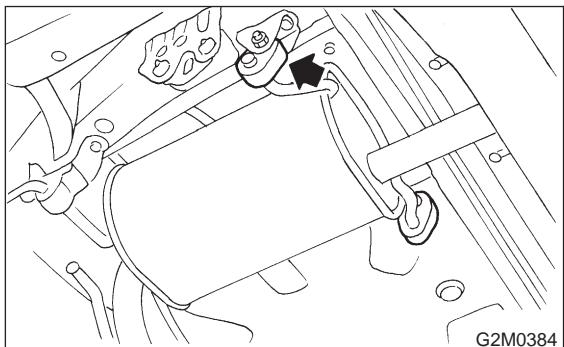


- 12) Remove muffler assembly.

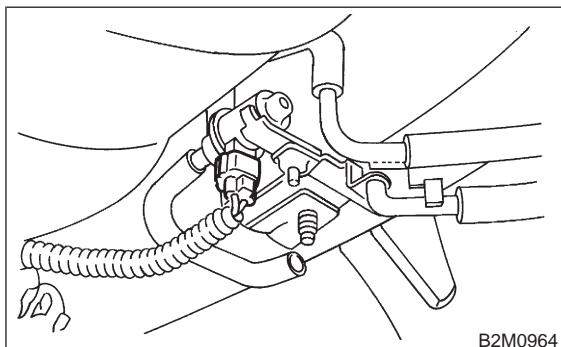
<Ref. to 2-9 [W4A0].>

NOTE:

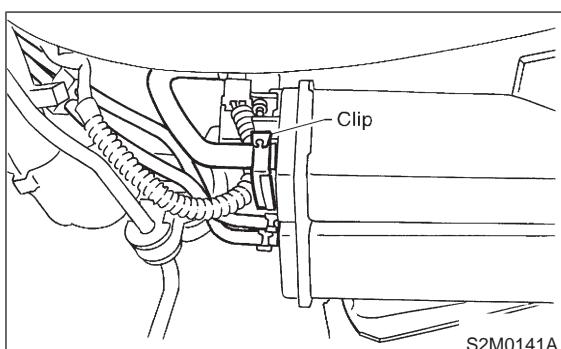
To facilitate the removal of parts, apply a coat of SUBARU CRC5-56 (Part No. 004301003).



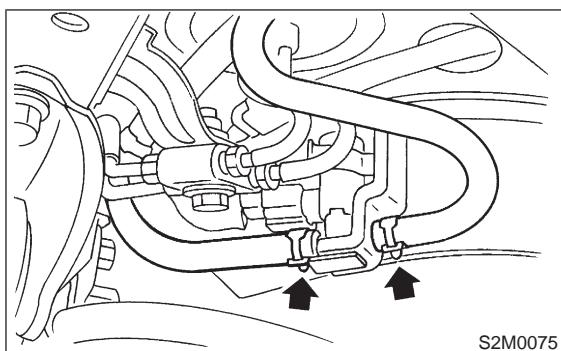
- 13) Disconnect connector from vent control solenoid valve.



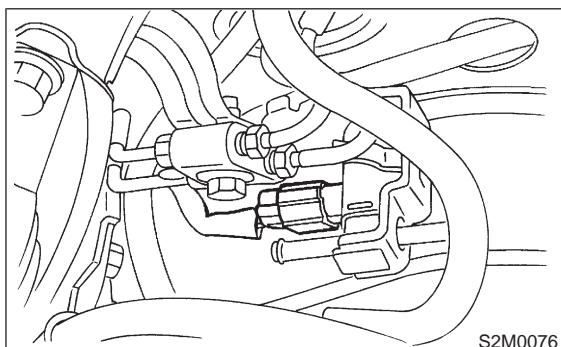
- 14) Remove clip, and disconnect evaporation hose from canister.



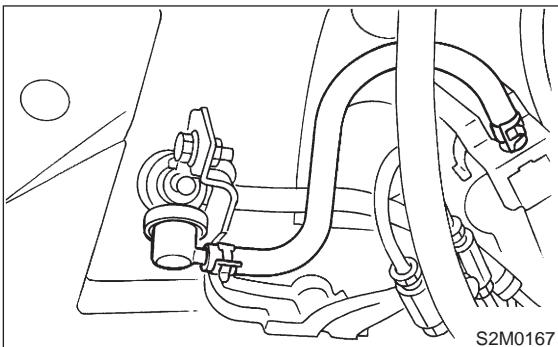
- 15) Disconnect hoses from pressure control solenoid valve.



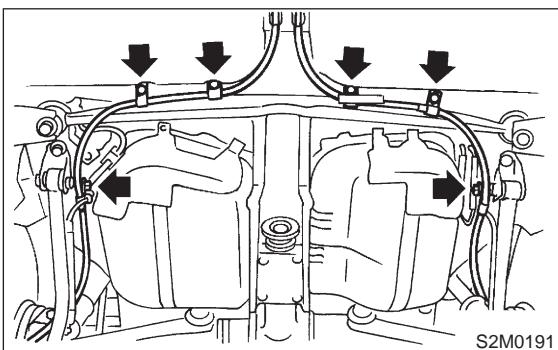
- 16) Disconnect connector of pressure control solenoid valve.



17) Disconnect hoses from roll over valve.



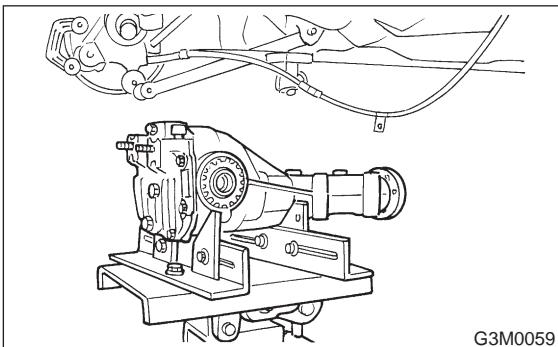
18) Remove bolts which hold parking brake cable holding bracket.



19) Remove rear differential assembly.

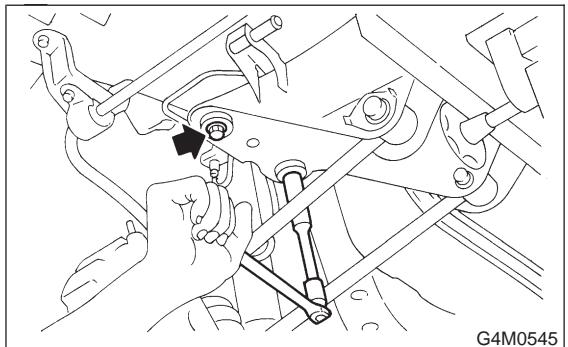
- (1) Remove rear axle shafts from rear differential assembly.
- (2) Remove rear differential front cover.
- (3) Remove propeller shaft.
- (4) Remove lower differential bracket.
- (5) Set transmission jack under rear differential.
- (6) Remove bolts which install rear differential onto rear crossmember.

<Ref. to 3-4 [W2B0].> and <Ref. to 3-4 [W3B0].>

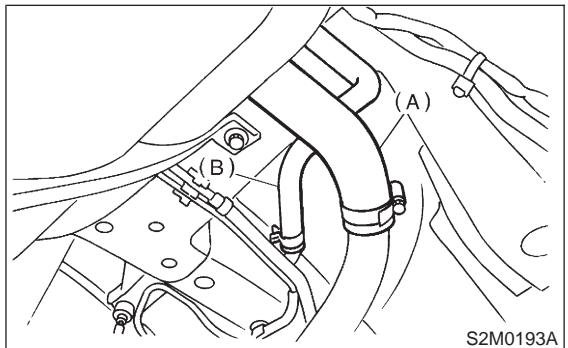


20) Remove rear crossmember.

<Ref. to 4-1 [W10A0].>

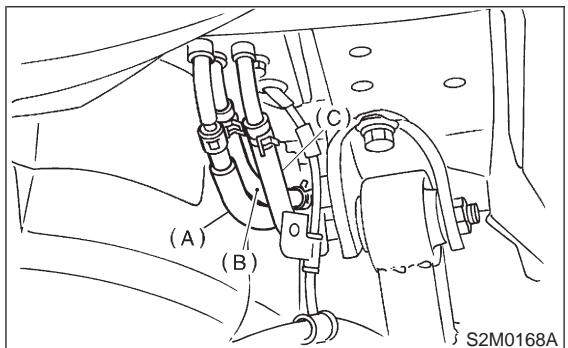


21) Loosen clamp, and disconnect fuel filler hose (A) and air vent hose (B) from fuel filler pipe and air vent pipe.



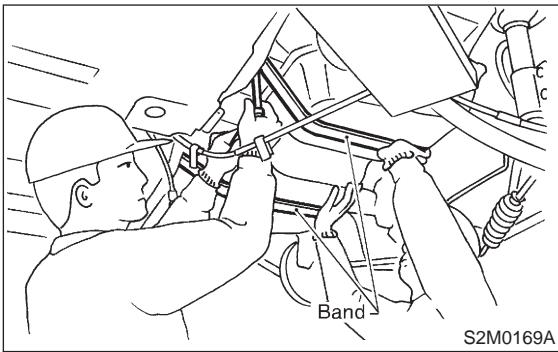
22) Move clips, and disconnect fuel return hose (B) and evaporation hose (C).

23) Disconnect quick connector, and then disconnect fuel delivery hose (A).



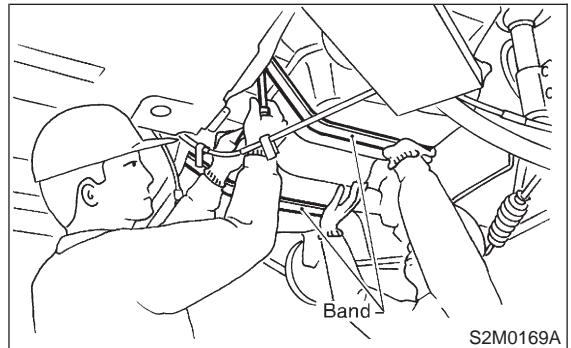
24) While holding fuel tank, remove bolts from bands and dismount fuel tank.

WARNING:
A helper is required to perform this work.



4) Connect fuel hoses, and hold them with clips and quick connector. <Ref. to 2-8 [W7B0].>
5) Tighten band mounting bolts.

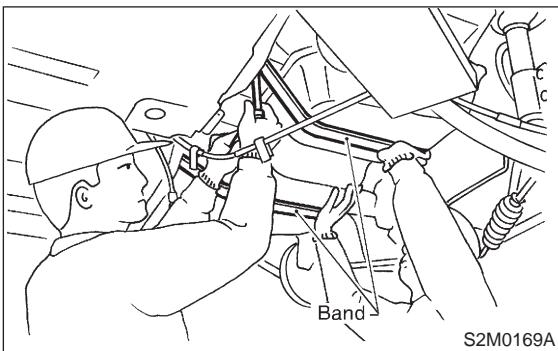
Tightening torque:
 $33\pm10 \text{ N}\cdot\text{m} (3.4\pm1.0 \text{ kg}\cdot\text{m}, 25\pm7 \text{ ft}\cdot\text{lb})$



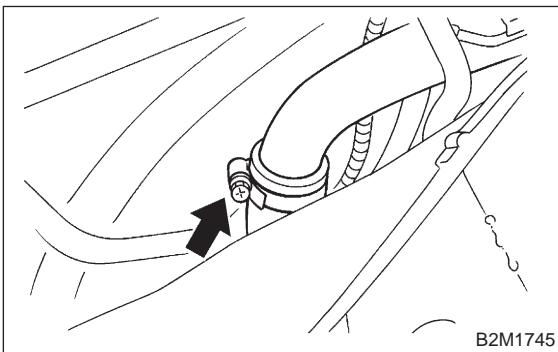
B: INSTALLATION

1. 2200 cc MODEL

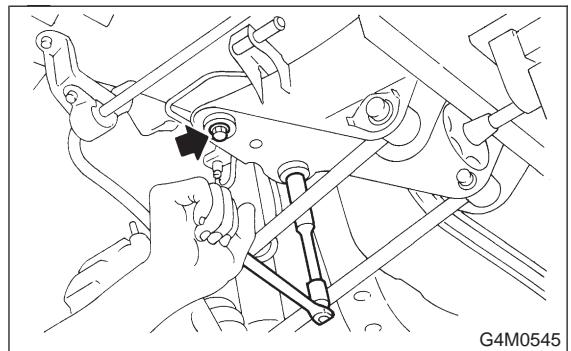
1) While a helper holds fuel tank, push fuel tank harness into access hole with grommet.
2) Set fuel tank, and temporary tighten bolts for installing fuel tank bands.



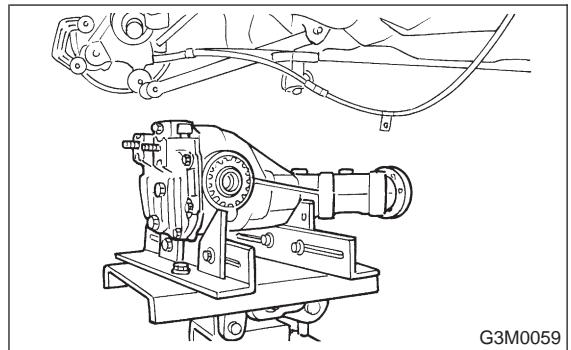
3) Connect fuel filler hose, and tighten clamp.



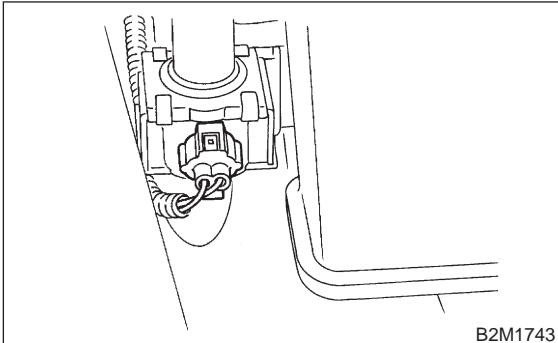
6) Install rear crossmember. <Ref. to 4-1 [W10C0].>



7) Install rear differential assembly. <Ref. to 3-4 [W2F0].> and <Ref. to 3-4 [W3F0].>

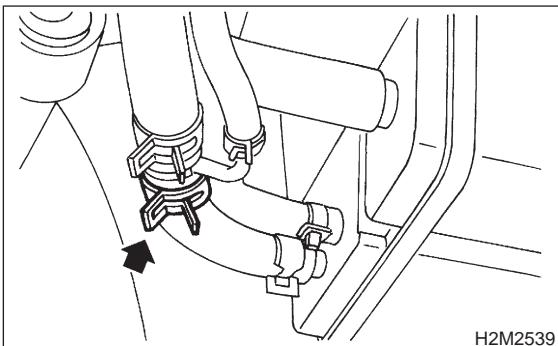


8) Connect connector to drain valve.

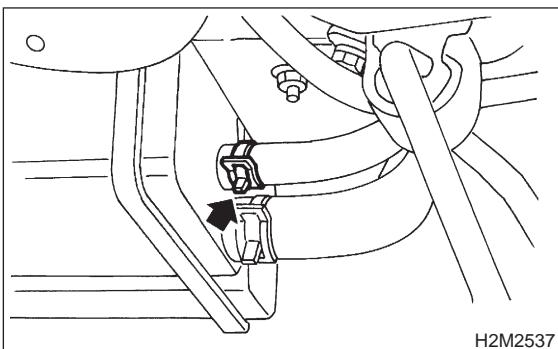


9) Connect connector to pressure control solenoid valve.

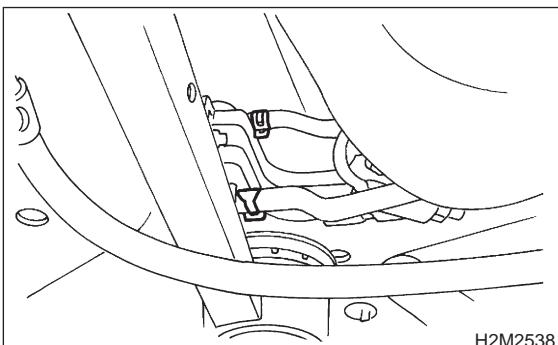
10) Connect hose to joint pipe.



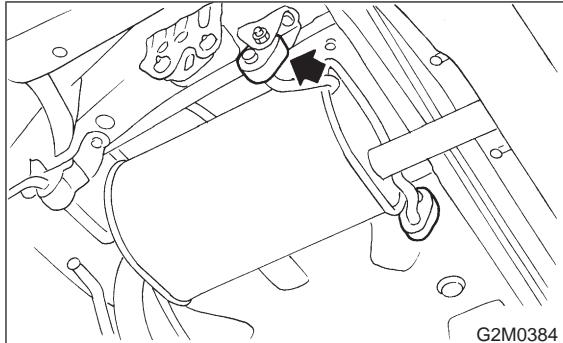
11) Connect evaporation hose to canister, and hold them with clip.



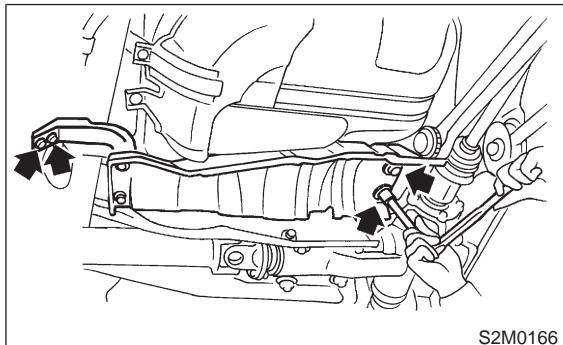
12) Connect hoses to roll over valve.



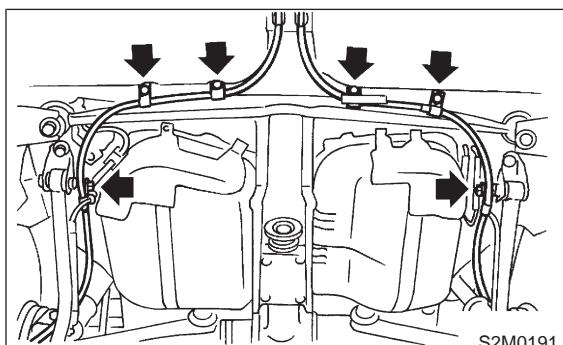
13) Install muffler assembly. <Ref. to 2-9 [W4A0].>



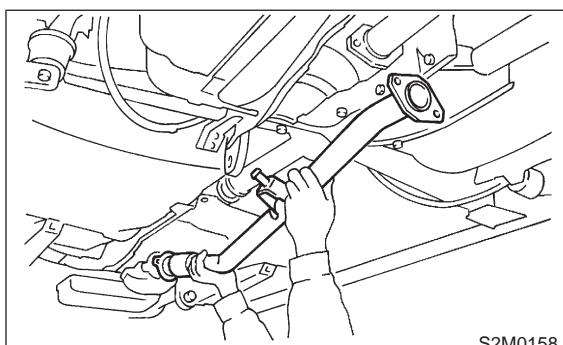
14) Install heat sealed cover.



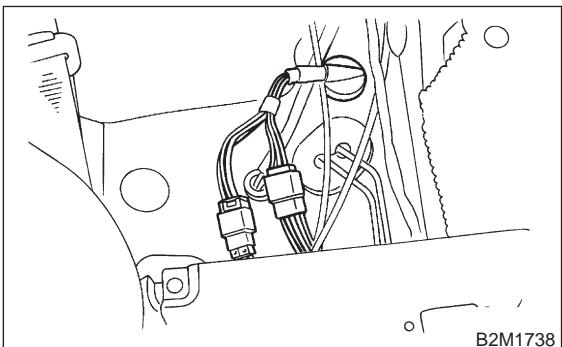
15) Install bolts which hold parking brake holding bracket.



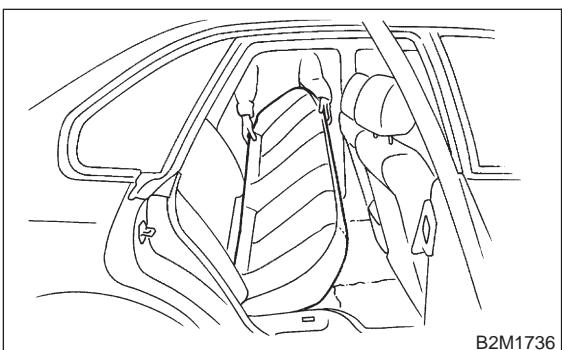
16) Install rear exhaust pipe. <Ref. to 2-9 [W3B0].>



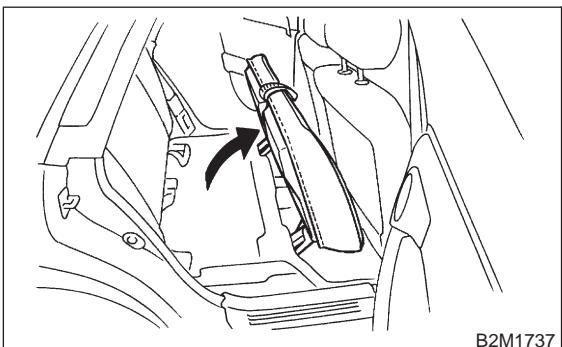
17) Lower the vehicle.
18) Connect connectors to fuel tank harness, and plug access hole with grommet.



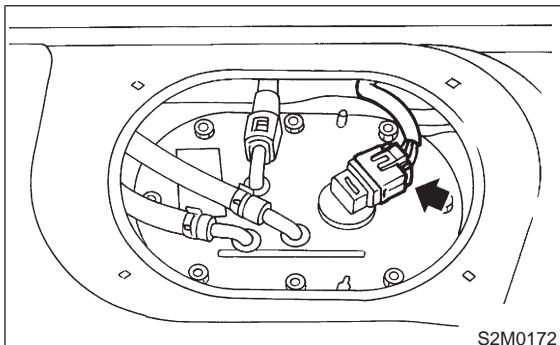
19) Install rear seat cushion. (Sedan model) <Ref. to 5-3 [W2B1].>



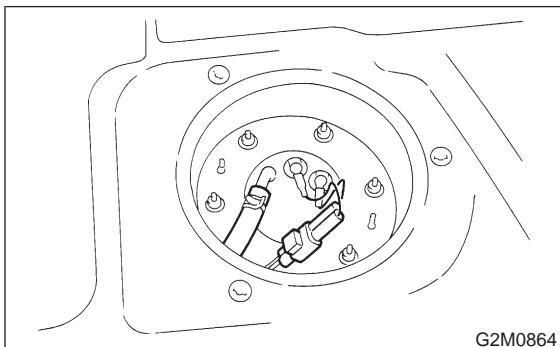
20) Set rear seat cushion. (Wagon model) <Ref. to 5-3 [W2B2].>



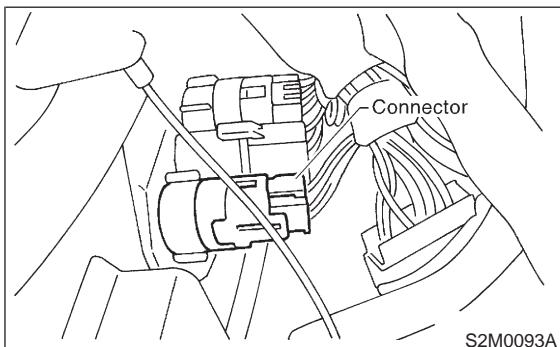
21) Install fuel filler cap.
22) Install fuel pump, and connect connector and fuel hoses. <Ref. to 2-8 [W5C0].> and <Ref. to 2-8 [W7B0].>



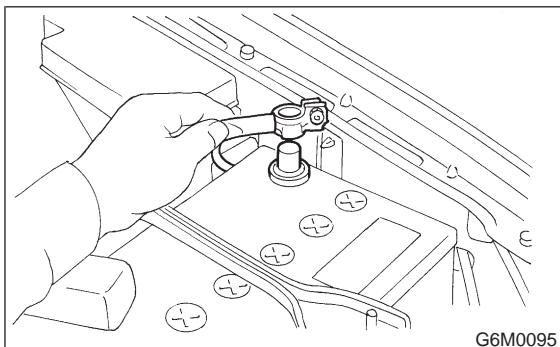
23) Install fuel sub meter unit, and connect connector and jet pump hose. <Ref. to 2-8 [W10A0].>



24) Connect connector to fuel pump relay.

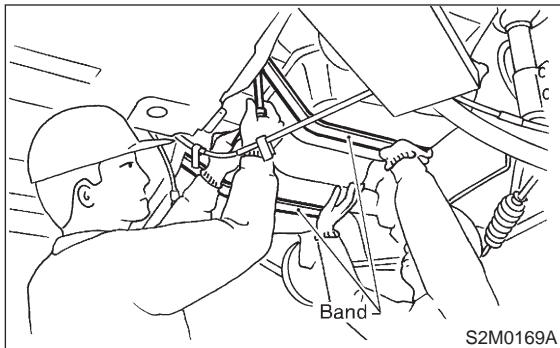


25) Connect battery ground cable.

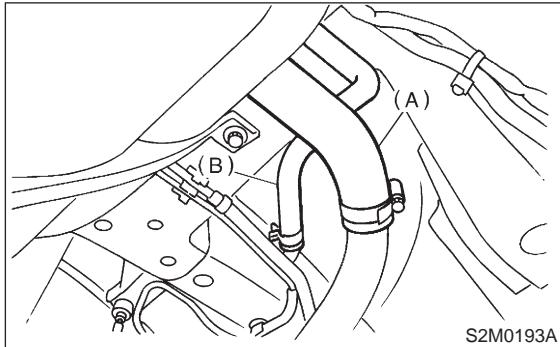


2. 2500 cc MODEL

- 1) While a helper holds fuel tank, push fuel tank harness into access hole with grommet.
- 2) Set fuel tank, and temporary tighten bolts for installing fuel tank bands.



- 3) Connect fuel filler hose (A) and air vent hose (B).

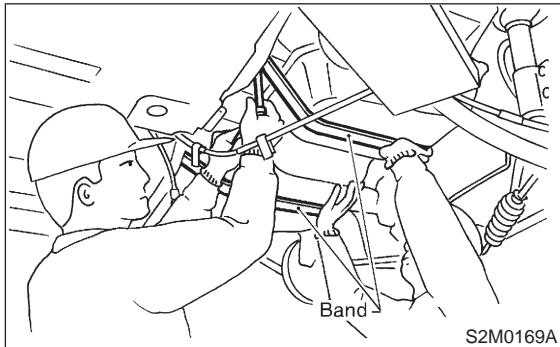


- 4) Connect fuel hoses, and hold them with clips and quick connector. <Ref. to 2-8 [W7B0].>

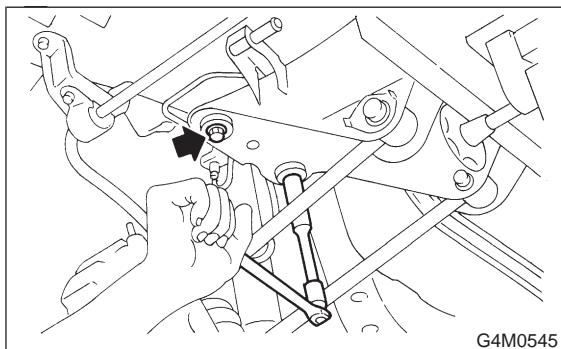
- 5) Tighten band mounting bolts.

Tightening torque:

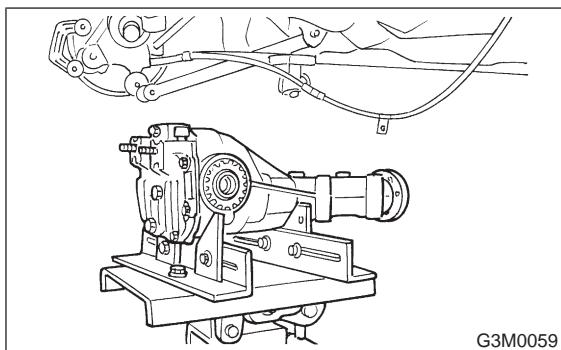
$33 \pm 10 \text{ N}\cdot\text{m}$ ($3.4 \pm 1.0 \text{ kg}\cdot\text{m}$, $25 \pm 7 \text{ ft-lb}$)



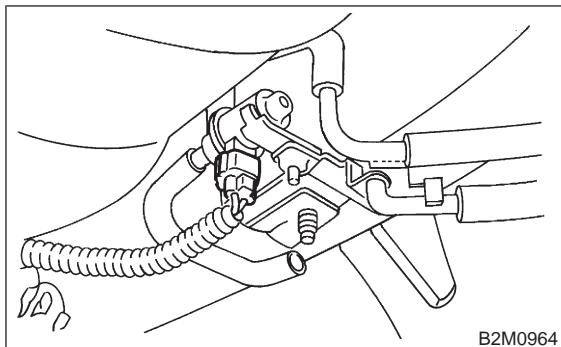
- 6) Install rear crossmember. <Ref. to 4-1 [W10C0].>



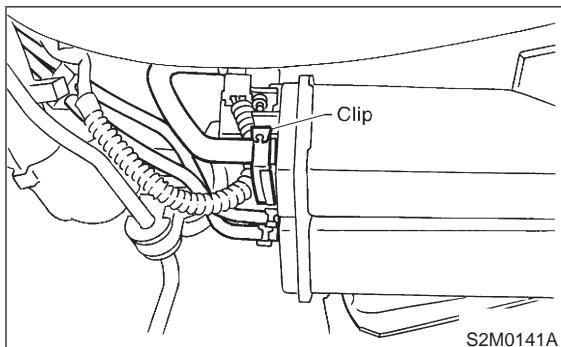
- 7) Install rear differential assembly. <Ref. to 3-4 [W2F0].> and <Ref. to 3-4 [W3F0].>



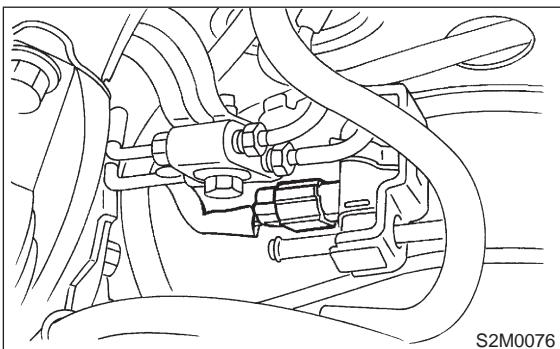
- 8) Connect connector to vent control solenoid valve.



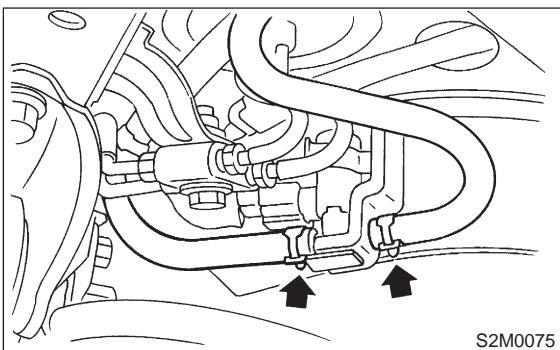
- 9) Connect evaporation hose to canister, and hold them with clip.



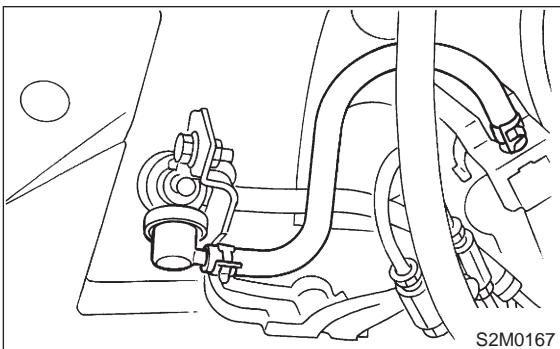
10) Connect connector to pressure control solenoid valve.



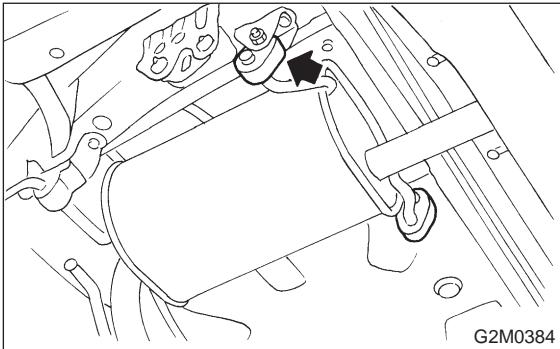
11) Connect hoses to pressure control solenoid valve.



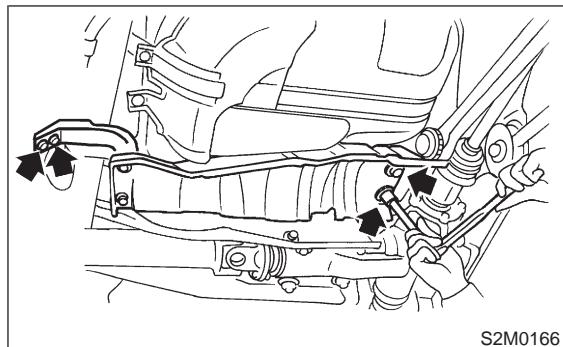
12) Connect hoses to roll over valve.



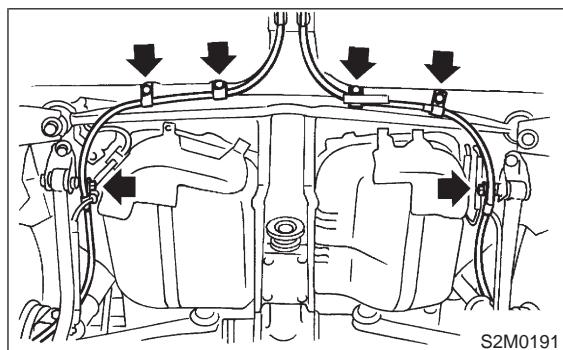
13) Install muffler assembly. <Ref. to 2-9 [W4A0].>



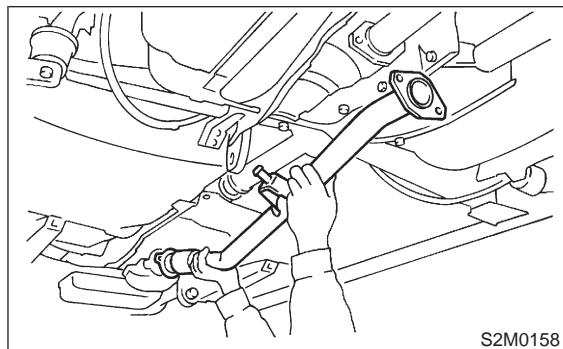
14) Install heat sealed cover.



15) Install bolts which hold parking brake holding bracket.

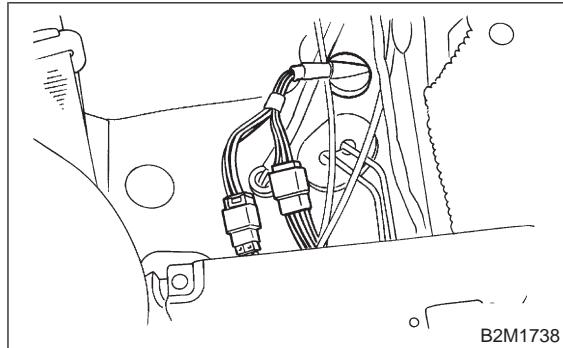


16) Install rear exhaust pipe. <Ref. to 2-9 [W3B0].>

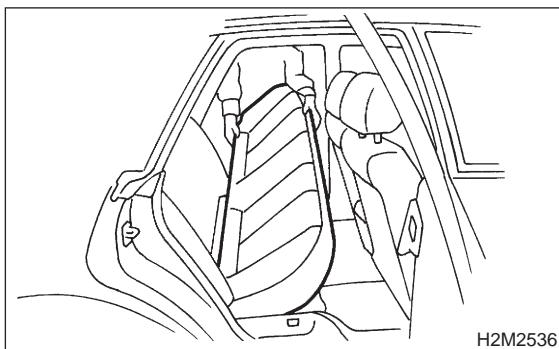


17) Lower the vehicle.

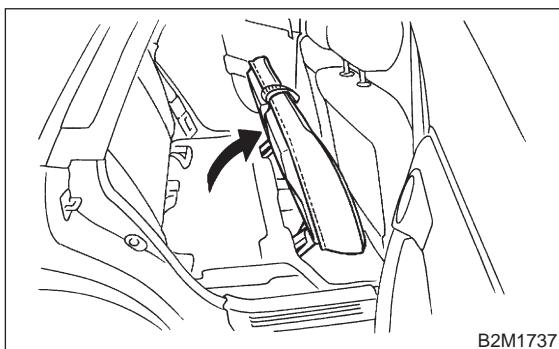
18) Connect connectors to fuel tank harness, and plug access hole with grommet.



19) Install rear seat cushion. (Sedan model) <Ref. to 5-3 [W2B1].>

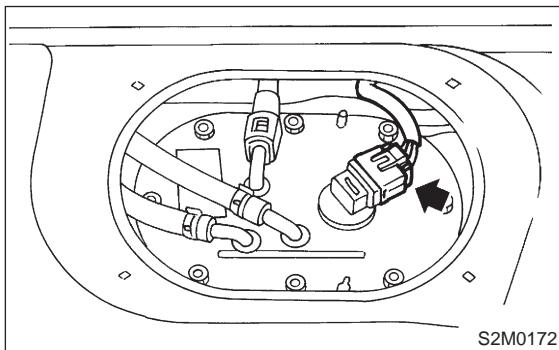


20) Set rear seat cushion. (Wagon model) <Ref. to 5-3 [W2B2].>

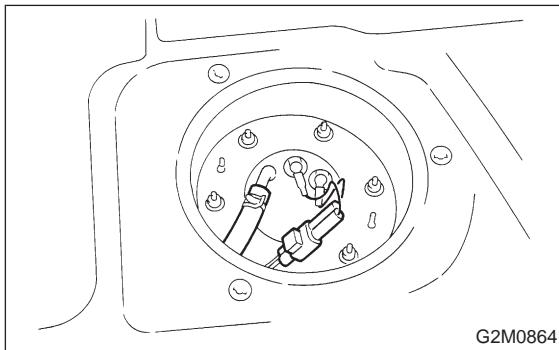


21) Install fuel filler cap.

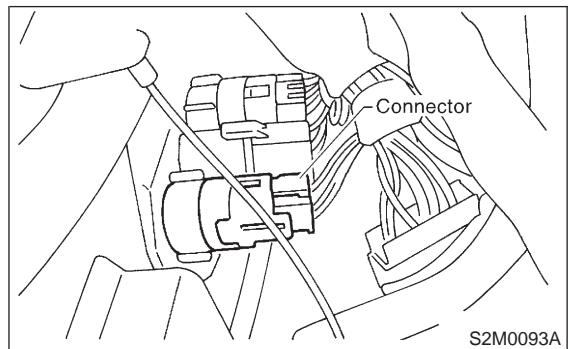
22) Install fuel pump, and connect connector and fuel hoses. <Ref. to 2-8 [W5C0].> and <Ref. to 2-8 [W7B0].>



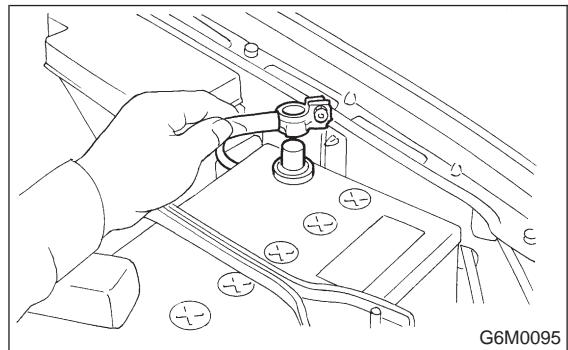
23) Install fuel sub meter unit, and connect connector and jet pump hose. <Ref. to 2-8 [W10A0].>



24) Connect connector to fuel pump relay.



25) Connect battery ground cable.

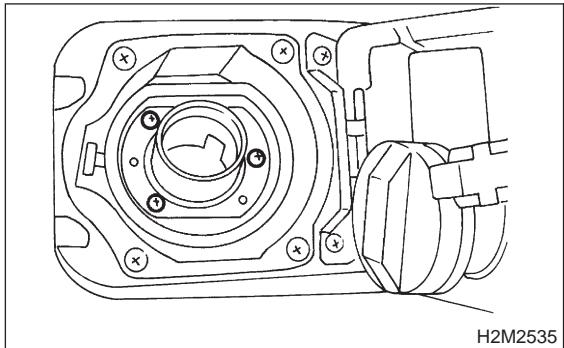


3. Fuel Filler Pipe

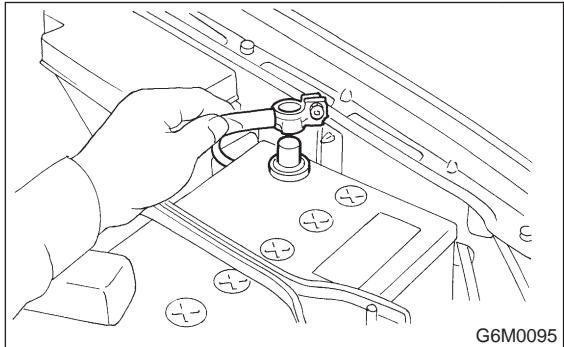
A: REMOVAL

1. 2200 cc MODEL

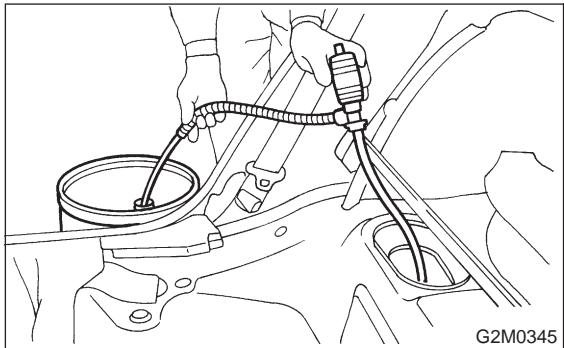
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



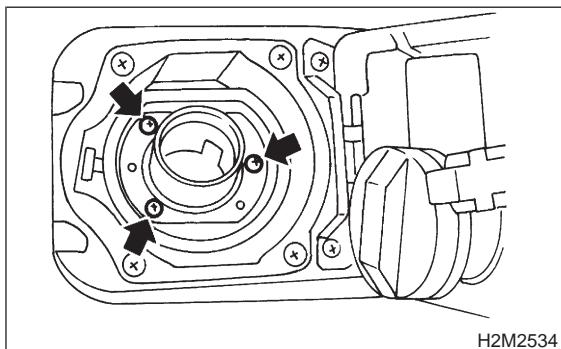
- 3) Disconnect battery ground cable.



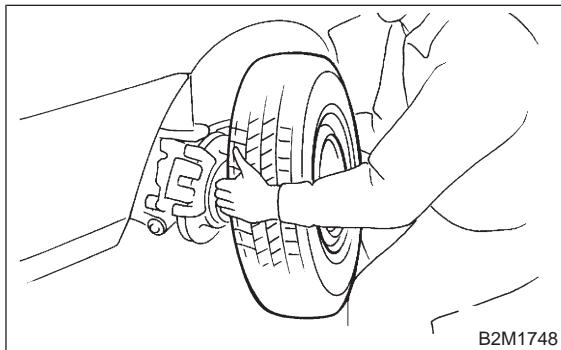
- 4) Drain fuel from fuel tank. <Ref. to 2-8 [W1C0].>



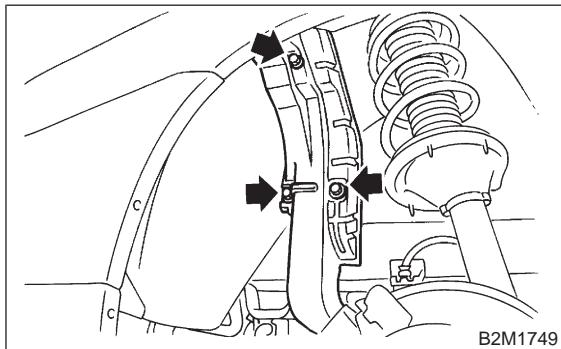
- 5) Remove screws which install fuel filler pipe on filler lid open.



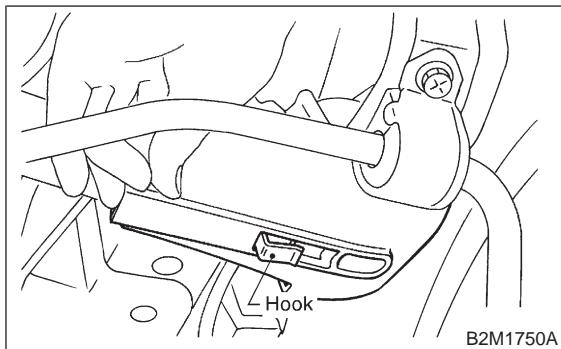
- 6) Remove wheel nuts of rear right side.
- 7) Lift-up the vehicle.
- 8) Remove rear right side wheel.



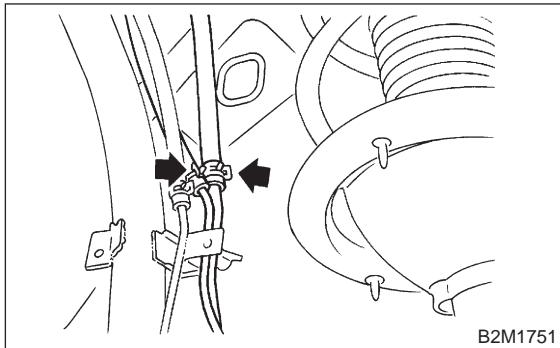
- 9) Remove bolts which install protector cover on body.



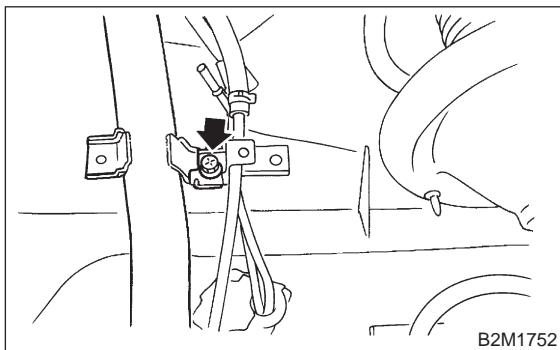
- 10) While releasing the under side of protector cover from hook, remove it.



11) Disconnect evaporation hoses from pipes.

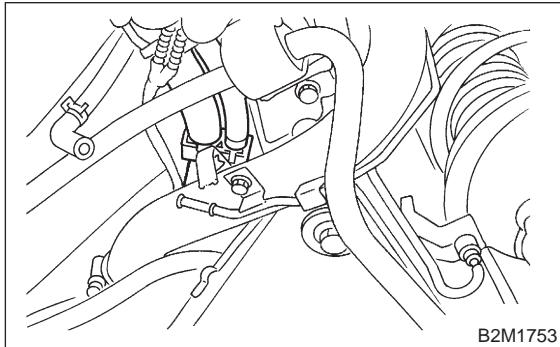


12) Remove bolts which hold fuel filler pipe bracket.

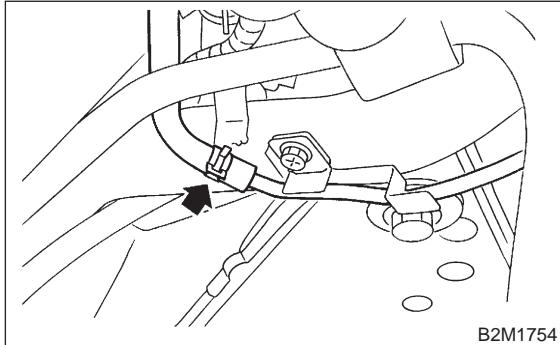


13) Lift-up the vehicle more.

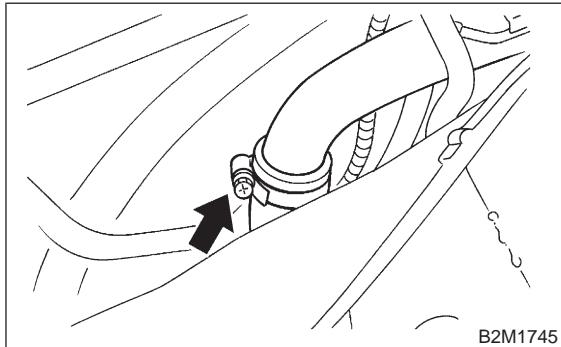
14) Remove two evaporation hoses from clip.



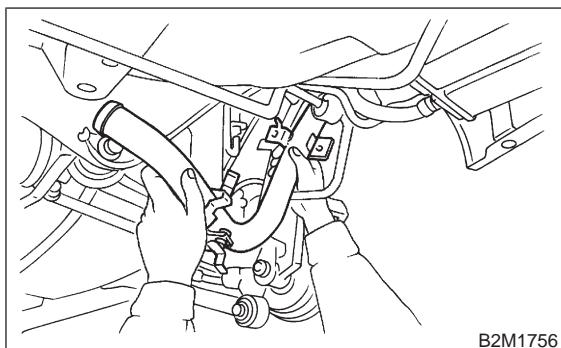
15) Disconnect evaporation hose from joint pipe.



16) Loosen clamp, and disconnect fuel filler hose from fuel filler pipe.

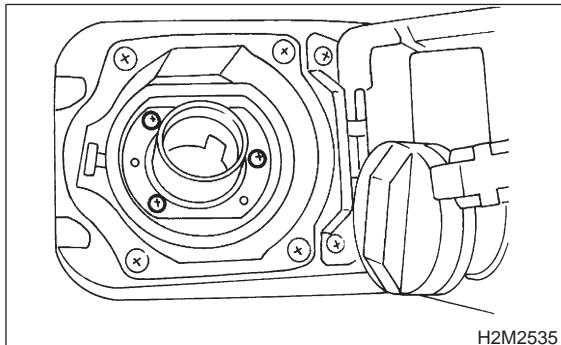


17) Remove fuel filler pipe to under side of vehicle.

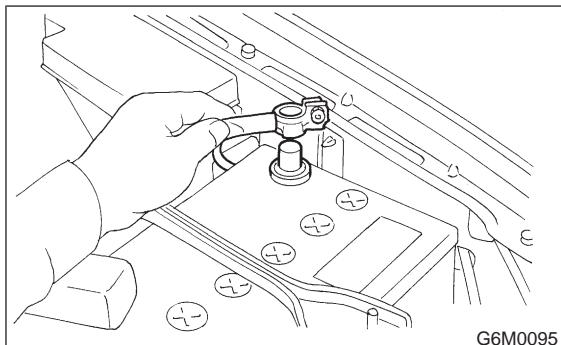


2. 2500 cc MODEL

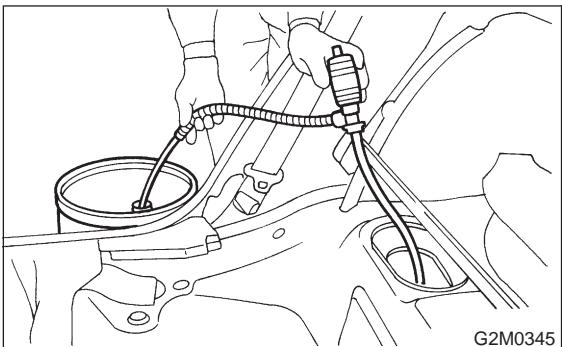
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



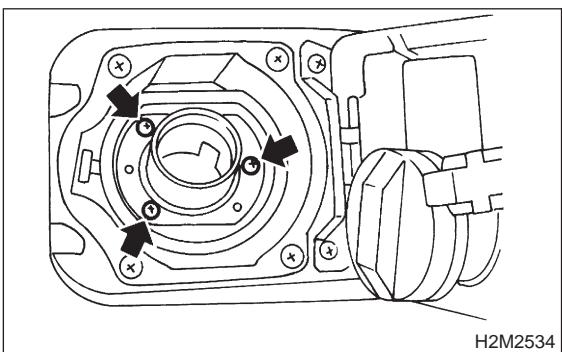
- 3) Disconnect battery ground cable.



4) Drain fuel from fuel tank. <Ref. to 2-8 [W1C0].>



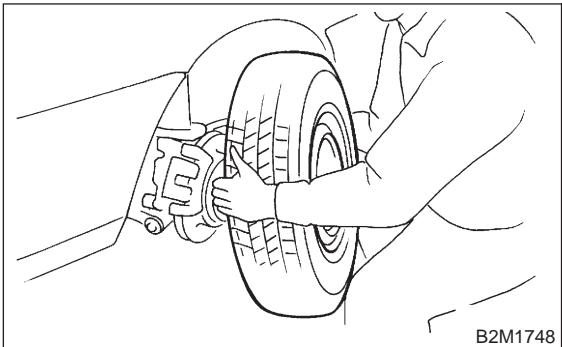
5) Remove screws which install fuel filler pipe on filler lid open.



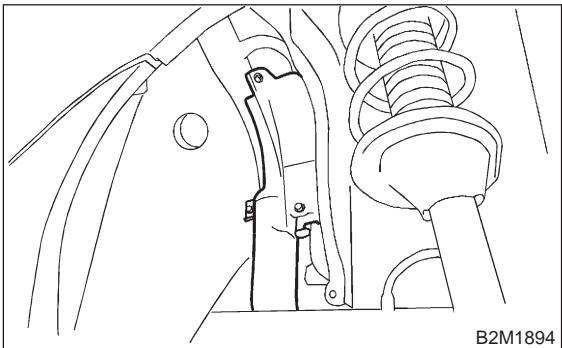
6) Remove wheel nuts of rear right side.

7) Lift-up the vehicle.

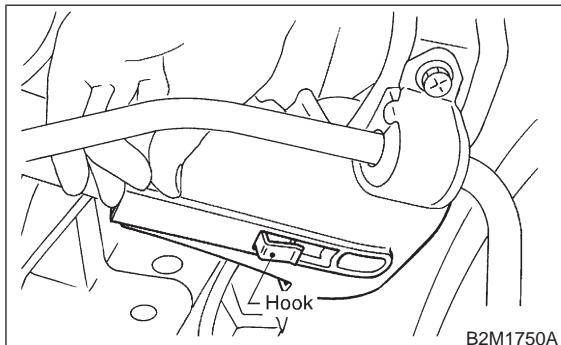
8) Remove rear right side wheel.



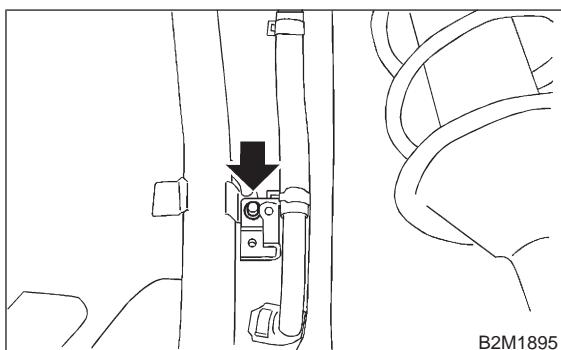
9) Remove bolts which install protector cover on body.



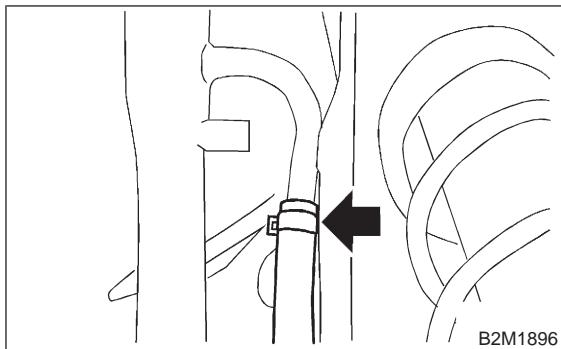
10) While releasing the under side of protector cover from hook, remove it.



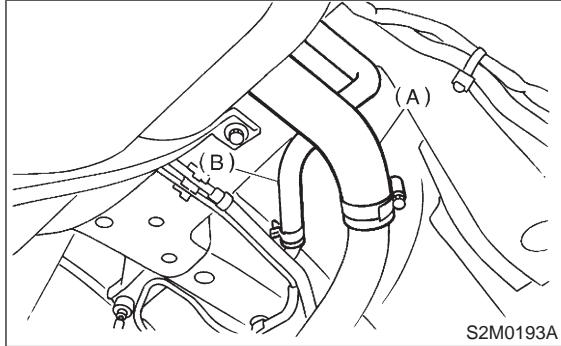
11) Remove bolts which hold fuel filler pipe bracket.



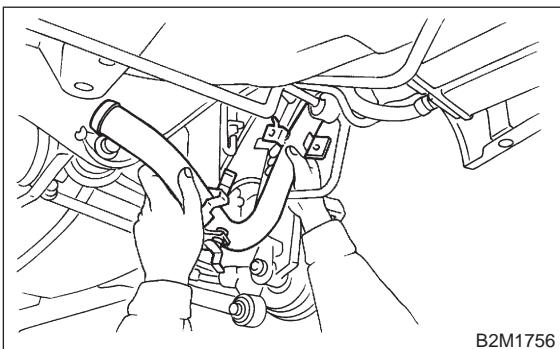
12) Move clip, and disconnect air vent hose from air vent pipe.



13) Loosen clamp, and separate air vent hose (B) and fuel filler hose (A) from air vent and fuel filler pipe.



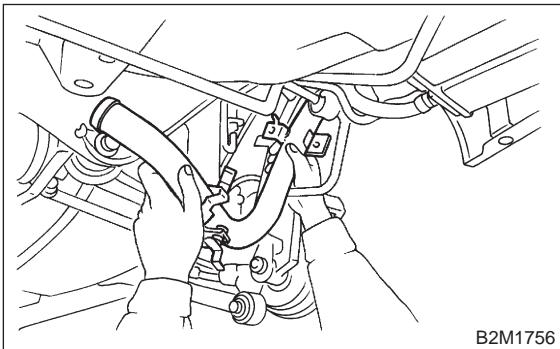
14) Remove fuel filler pipe to under side of the vehicle.



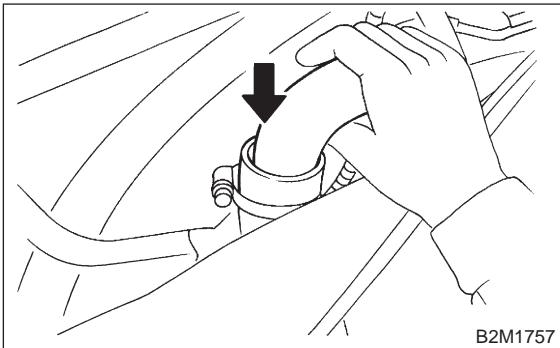
B: INSTALLATION

1. 2200 cc MODEL

1) Set fuel filler pipe from under side of vehicle, and hold it on fuel filler flap open.

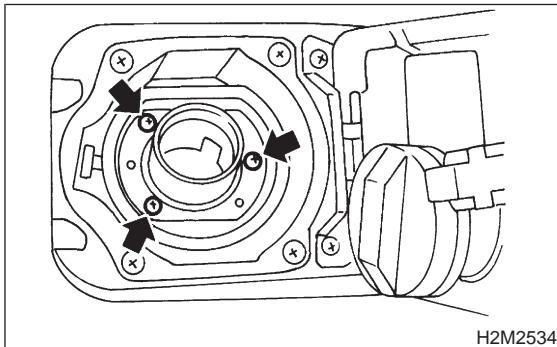


2) Connect fuel filler pipe into fuel filler hose.

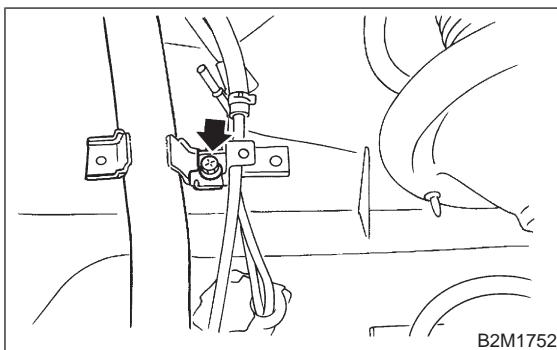


3) Lower the vehicle.

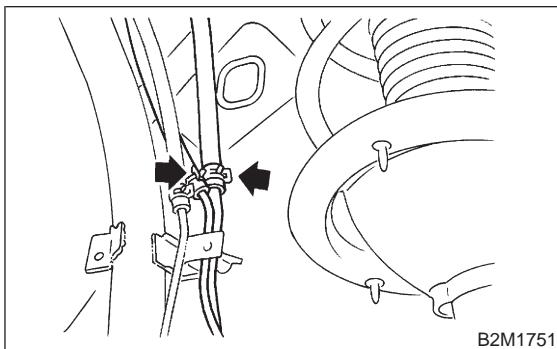
4) Temporarily tighten screws which install fuel filler pipe on filler lid open.



5) Tighten bolt which holds fuel filler pipe on body.

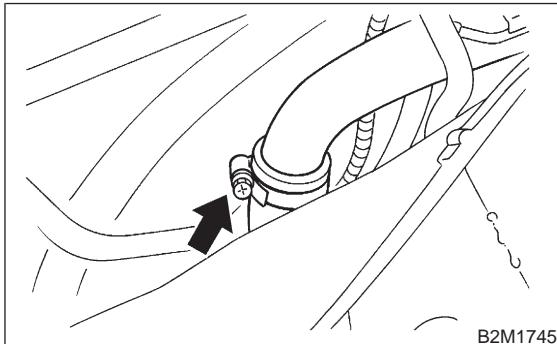


6) Connect evaporation hoses to pipes.

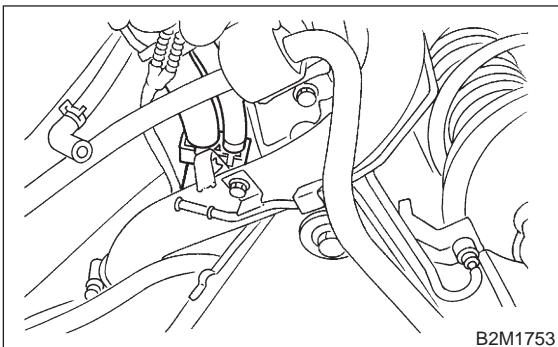


7) Lift-up the vehicle.

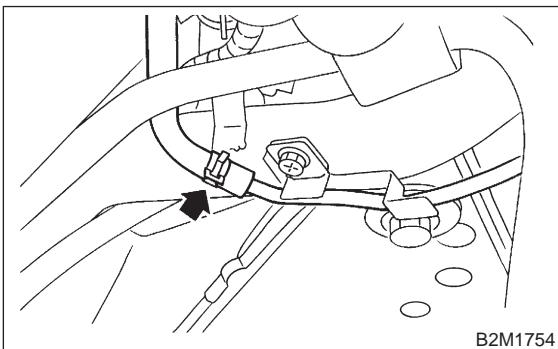
8) Tighten clamp bolt which holds fuel filler hose.



9) Install two evaporation hoses to clip.

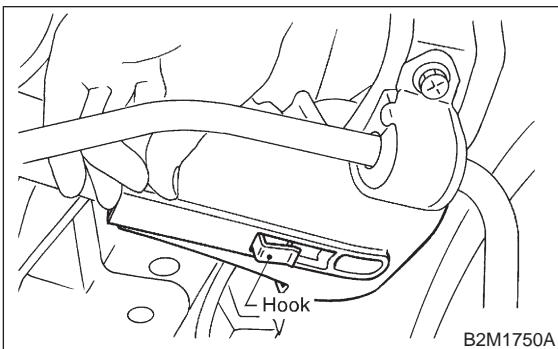


10) Connect evaporation hose to joint pipe.

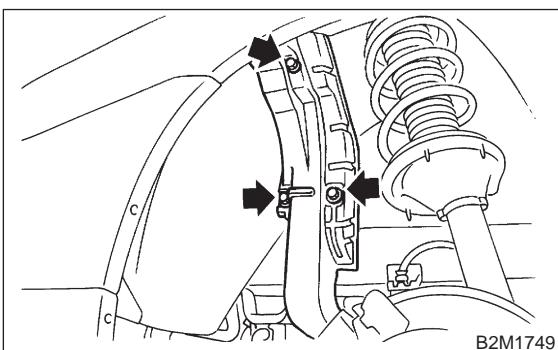


11) Lower the vehicle.

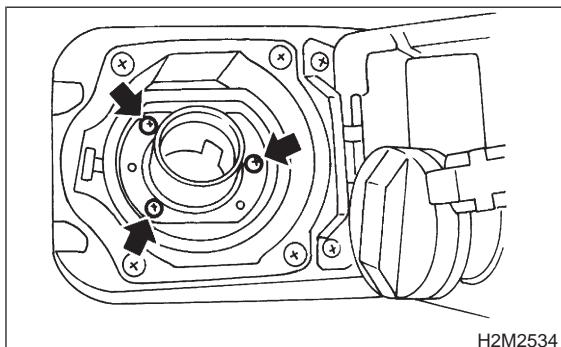
12) While holding the under side of protector cover on bracket, install it.



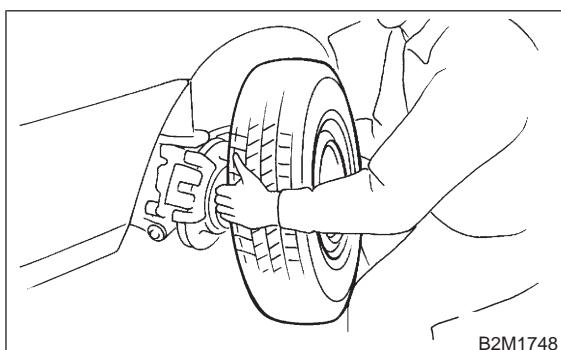
13) Tighten bolts which install protector cover on body.



14) Tighten screws which install fuel filler pipe on filler lid open.

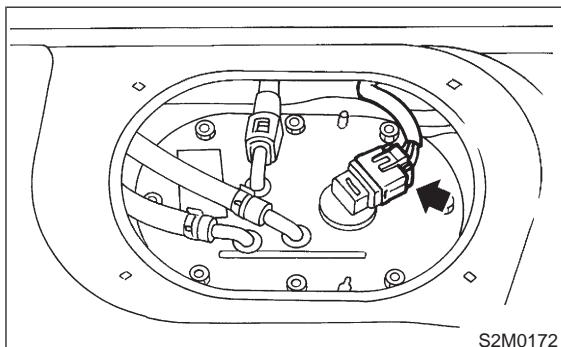


15) Install rear right wheel.

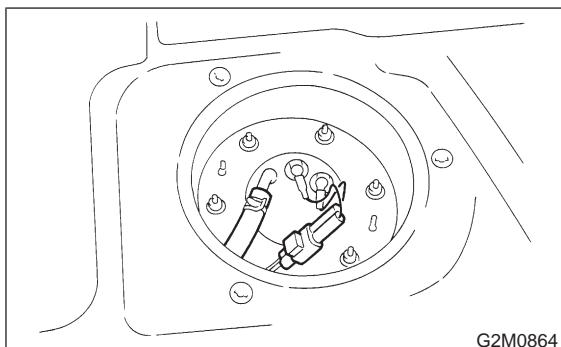


16) Install fuel filler cap.

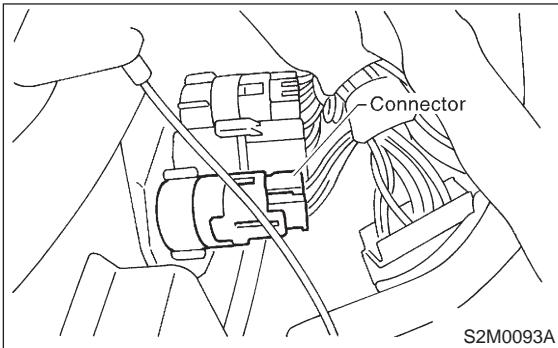
17) Install fuel pump, and connect connector and fuel hoses. <Ref. to 2-8 [W5C0].> and <Ref. to 2-8 [W7B0].>



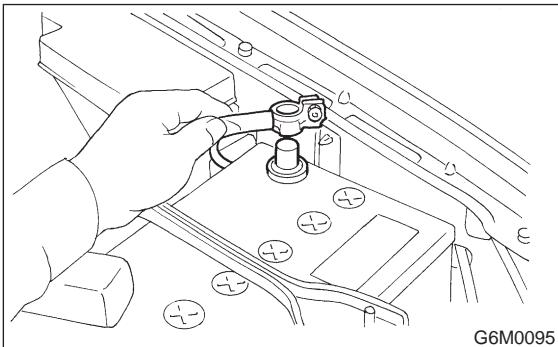
18) Install fuel sub meter unit, and connect connector and jet pump hose. <Ref. to 2-8 [W10A0].>



19) Connect connector to fuel pump relay.

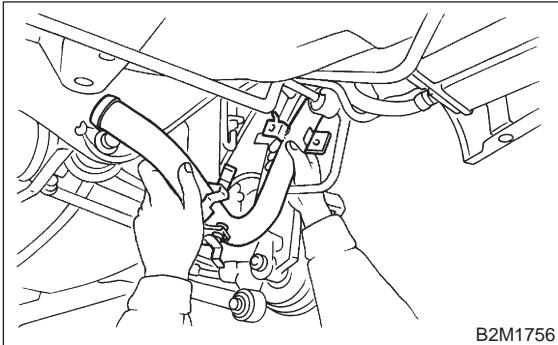


20) Connect battery ground terminal.



2. 2500 cc MODEL

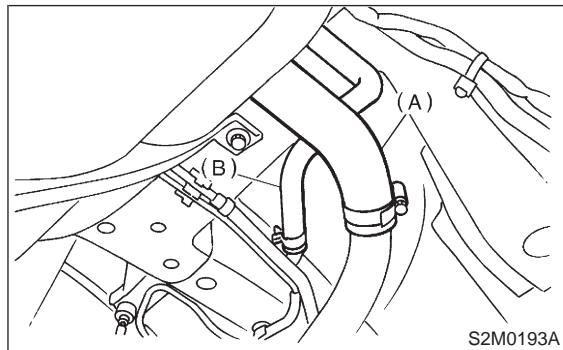
1) Set fuel filler pipe from under side of vehicle, and hold it on fuel filler flap open.



2) Insert fuel filler hose (A) approximately 25 to 30 mm (0.98 to 1.18 in) over the lower end of fuel filler pipe and tighten clamp.

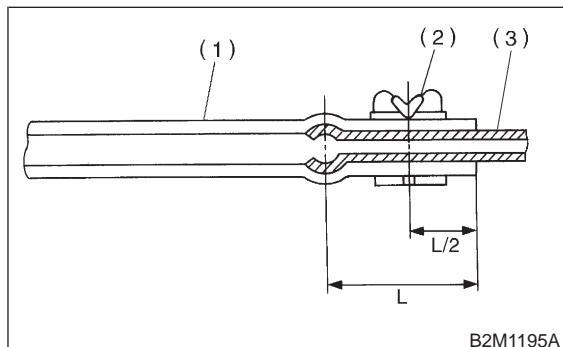
CAUTION:

Do not allow clips to touch air vent hose (B) and rear suspension crossmember.



3) Insert air vent hose approximately 25 to 30 mm (0.98 to 1.18 in) into the lower end of air vent pipe and hold clip.

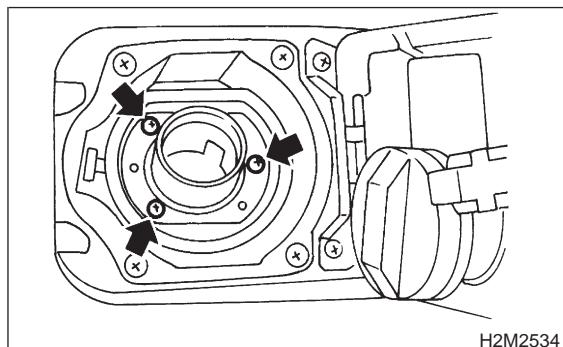
$L = 25 - 30 \text{ mm (0.98 - 1.18 in)}$



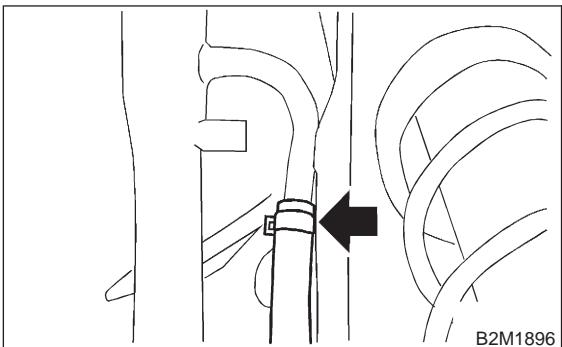
- (1) Hose
- (2) Clip
- (3) Pipe

4) Lower the vehicle.

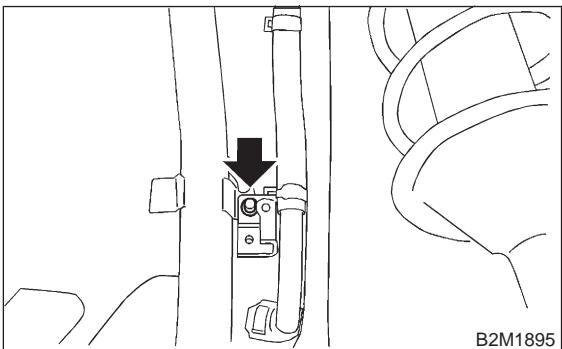
5) Temporarily tighten screws which install fuel filler pipe on filler lid open.



6) Connect air vent hose to air vent pipe.

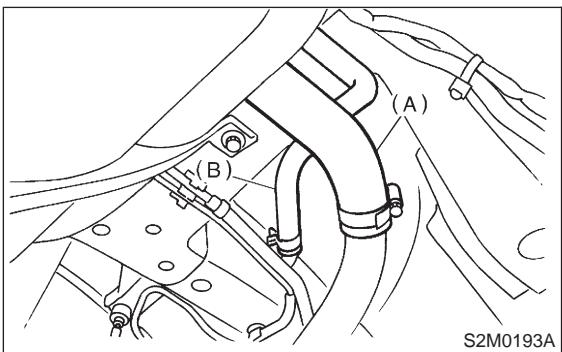


7) Tighten bolt which holds fuel filler pipe on body.



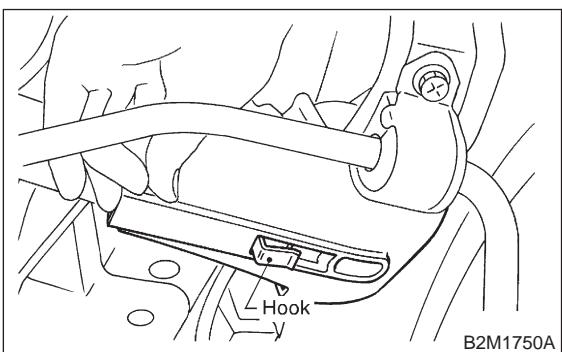
8) Lift-up the vehicle.

9) Tighten clamp bolt which holds fuel filler hose.

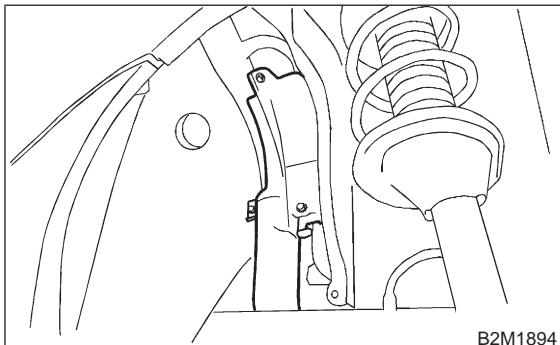


10) Lower the vehicle.

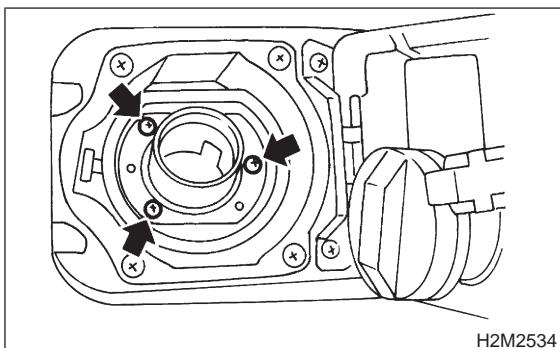
11) While holding the under side of protector cover on bracket, install protector cover.



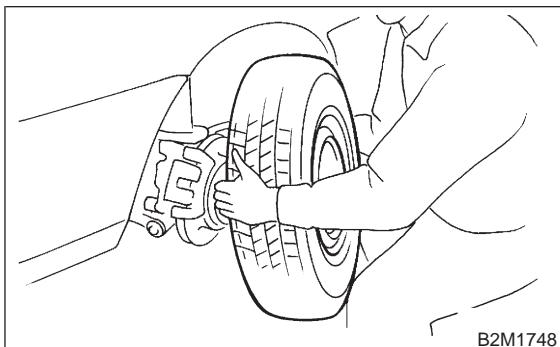
12) Tighten bolts which install protector cover on body.



13) Tighten screws which install fuel filler pipe on filler lid open.

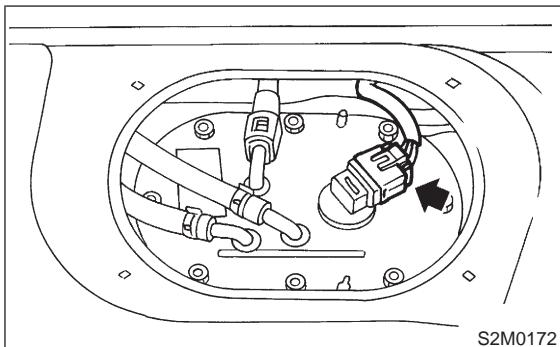


14) Install rear right wheel.

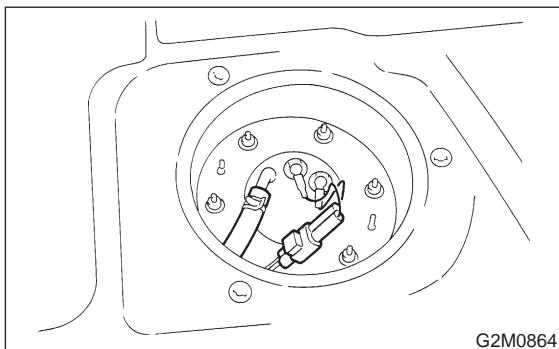


15) Install fuel filler cap.

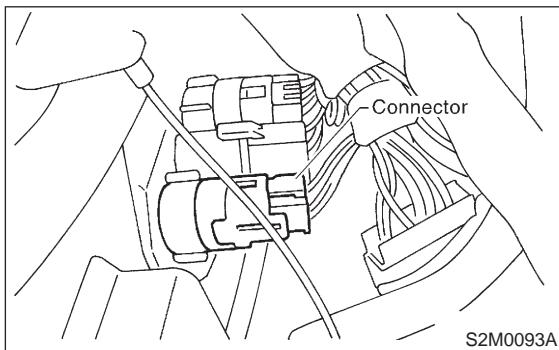
16) Install fuel pump, and connect connector and fuel hoses. <Ref. to 2-8 [W5C0].> and <Ref. to 2-8 [W7B0].>



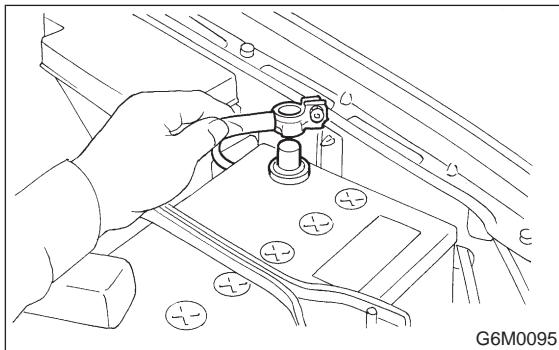
17) Install fuel sub meter unit, and connect connector and jet pump hose. <Ref. 2-8 [W10A0].>



18) Connect connector to fuel pump relay.

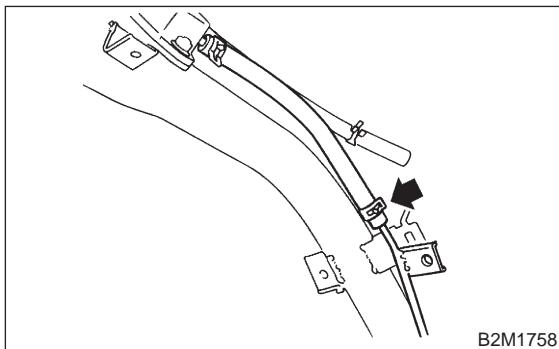


19) Connect battery ground terminal.

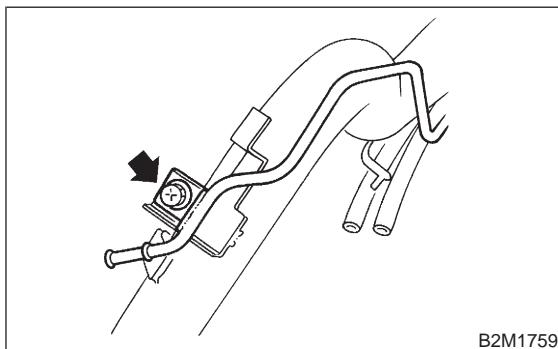


C: DISASSEMBLY (2200 cc MODEL)

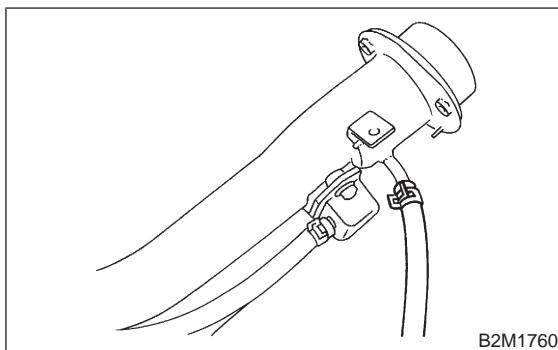
1) Move clip, and disconnect evaporation hose from joint pipe.



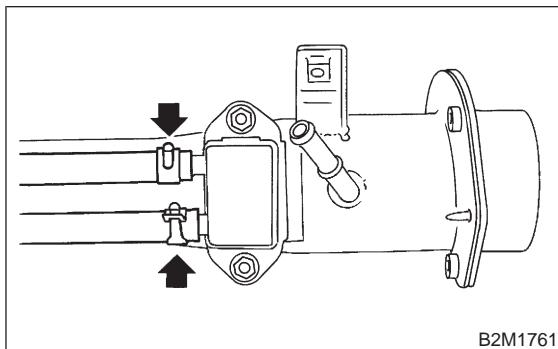
2) Remove bolt which installs joint pipe on fuel filler pipe.



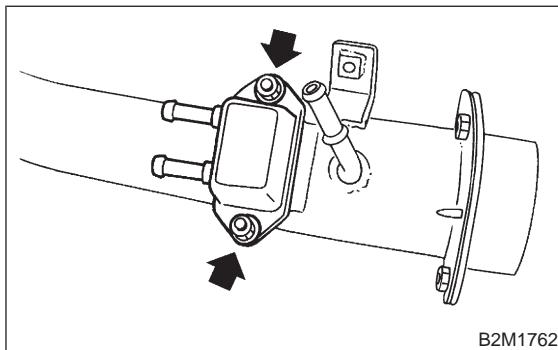
3) Disconnect evaporation hose from fuel filler pipe.



4) Disconnect evaporation hoses from shut valve.



5) Remove shut valve from fuel filler pipe.

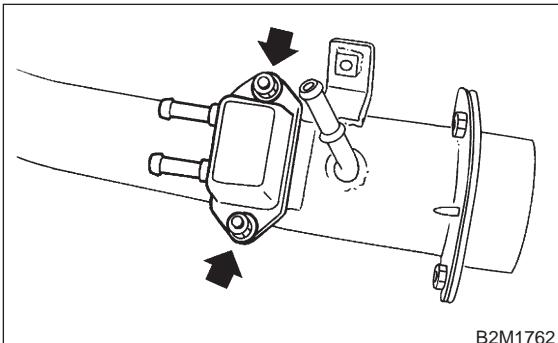


D: ASSEMBLY (2200 cc MODEL)

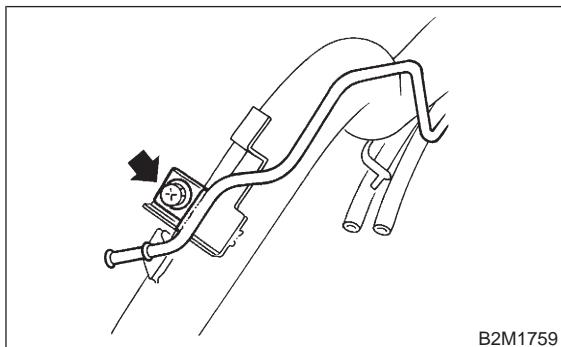
1) Install shut valve on fuel filler pipe.

Tightening torque:

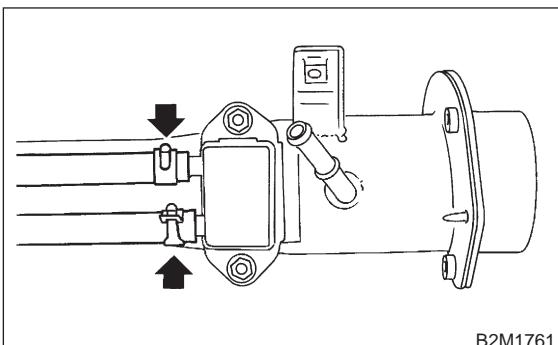
$4.4 \pm 1.5 \text{ N}\cdot\text{m} (0.45 \pm 0.15 \text{ kg}\cdot\text{m}, 3.3 \pm 1.1 \text{ ft}\cdot\text{lb})$



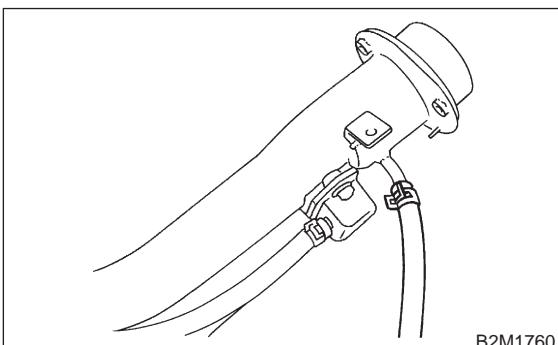
5) Install evaporation pipe to fuel filler pipe.



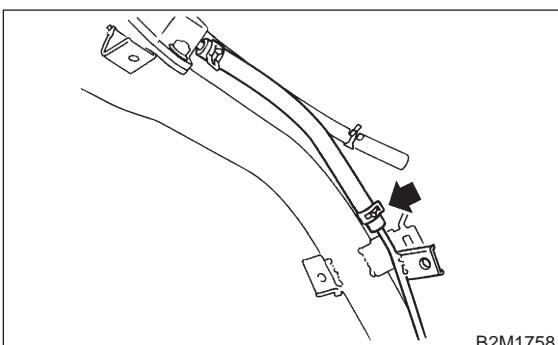
2) Connect evaporation hoses to shut valve.



3) Connect evaporation hose to fuel filler pipe.



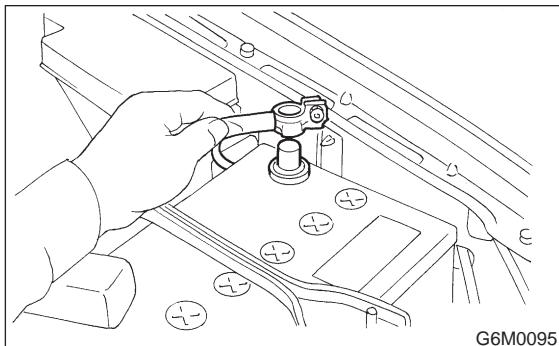
4) Connect evaporation hose to evaporation pipe.



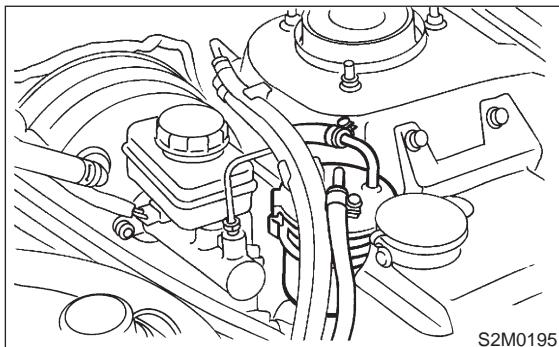
4. Fuel Filter

A: REMOVAL

- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Disconnect battery ground cable.



- 3) Disconnect fuel delivery hoses from fuel filter.



- 4) Remove filter from holder.

B: INSPECTION

- 1) Check the inside of fuel filter for dirt and water sediment.
- 2) If it is clogged, or if replacement interval has been reached, replace it.
- 3) If water is found in it, shake and expel the water from inlet port.

C: INSTALLATION

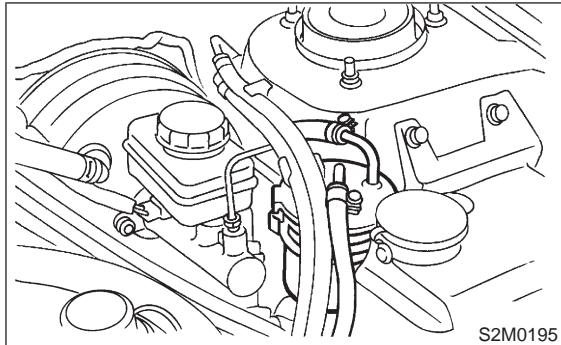
CAUTION:

- If fuel hoses are damaged at the connecting portion, replace it with a new one.
- If clamps are badly damaged, replace with new ones.

- 1) Installation is in the reverse order of removal.
- 2) Tighten hose clamp screws.

Tightening torque:

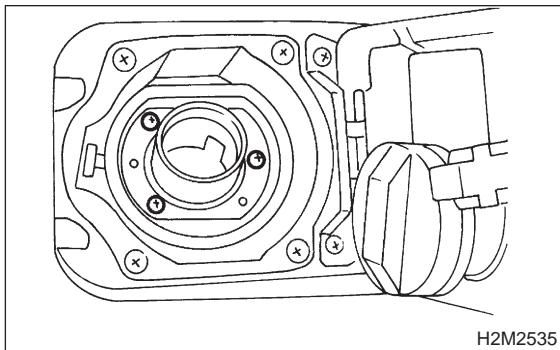
$1.0^{+0.5/-0}$ N·m ($0.1^{+0.05/-0}$ kg·m, $0.7^{+0.4/-0}$ ft-lb)



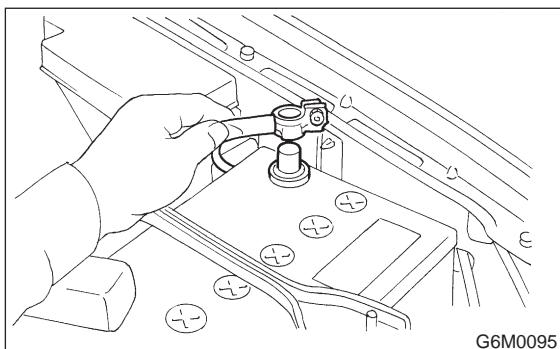
5. Fuel Pump

A: REMOVAL

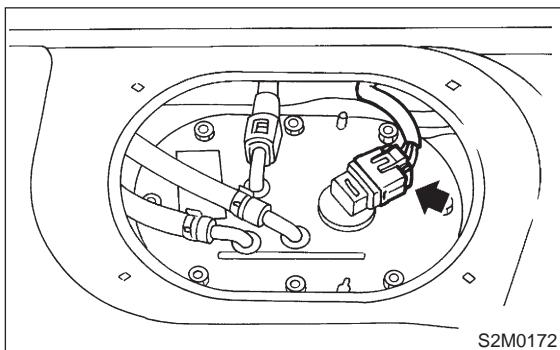
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



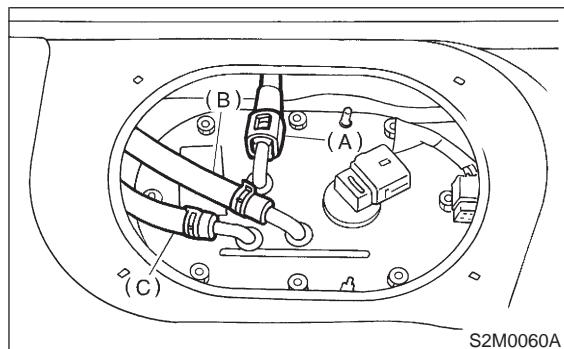
- 3) Disconnect battery ground cable.



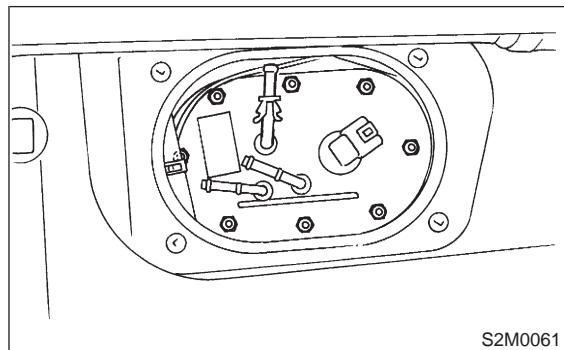
- 4) Disconnect connector from fuel pump.



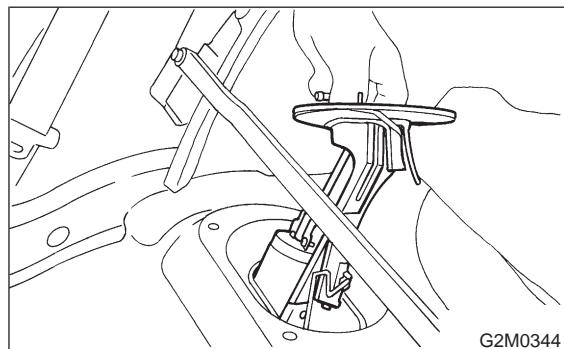
- 5) Move clips, and then disconnect fuel delivery hose (A), return hose (B) and jet pump hose (C).
- 6) Disconnect quick connector, and then disconnect fuel delivery hose (A). <Ref. to 2-8 [W7A0].>



- 7) Remove nuts which install fuel pump assembly onto fuel tank.



- 8) Take off fuel pump from fuel tank.

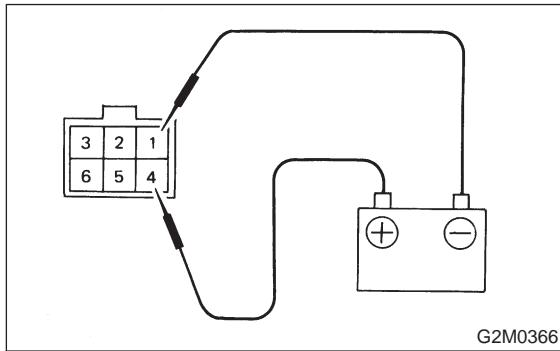


B: INSPECTION

Connect lead harness to connector terminal of fuel pump, and apply battery power supply to check whether the pump operate.

WARNING:

- Wipe off the fuel completely.
- Keep battery as far apart from fuel pump as possible.
- Be sure to turn the battery supply ON and OFF on the battery side.
- Do not run fuel pump for a long time under non-load condition.



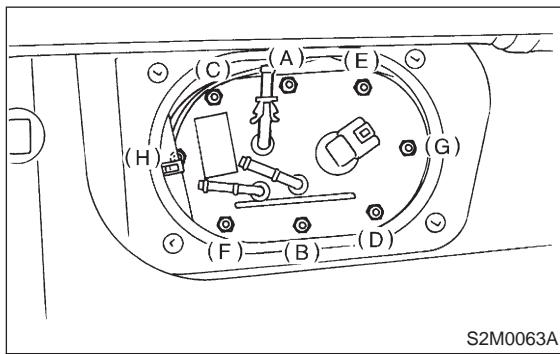
C: INSTALLATION

Installation is in the reverse order of removal. Do the following:

- (1) Always use new gaskets.
- (2) Ensure sealing portion is free from fuel or foreign particles before installation.
- (3) Tighten nuts in numerical sequence shown in Figure to specified torque.

Tightening torque:

$4.4 \pm 1.5 \text{ N}\cdot\text{m}$ ($0.45 \pm 0.15 \text{ kg}\cdot\text{m}$, $3.3 \pm 1.1 \text{ ft-lb}$)



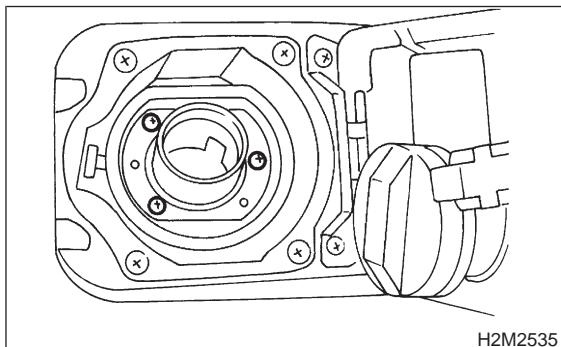
6. Fuel Meter Unit

A: REMOVAL

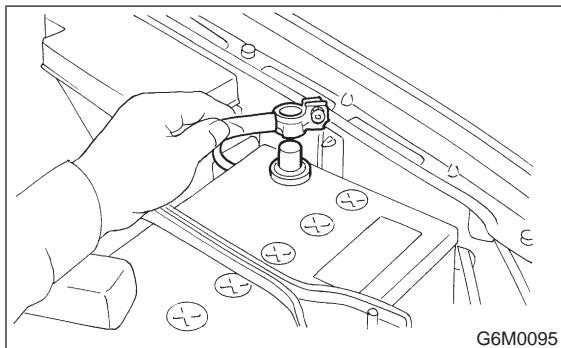
NOTE:

Fuel meter unit is built in fuel pump assembly.

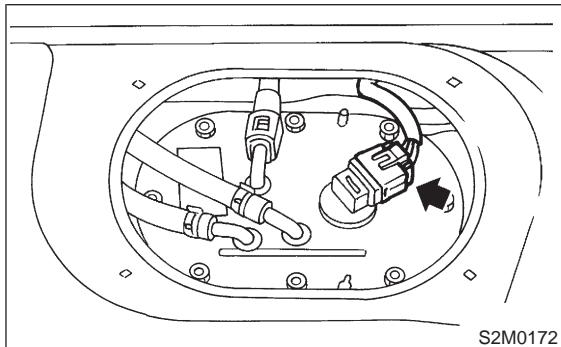
- 1) Release fuel pressure. <Ref. to 2-8 [W1B0].>
- 2) Open fuel flap lid, and remove fuel filler cap.



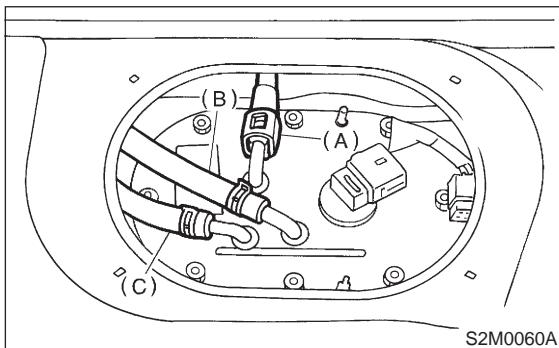
- 3) Disconnect battery ground cable.



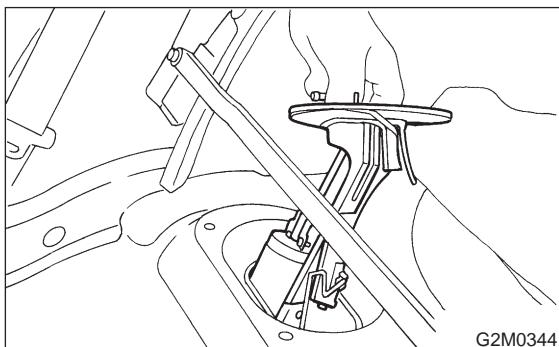
- 4) Disconnect connector from fuel pump.



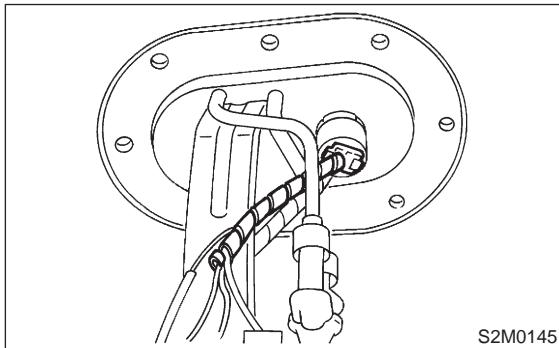
5) Move clips, and then disconnect fuel return hose (B) and jet pump hose (C).
 6) Disconnect quick connector, and then disconnect fuel delivery hose (A). <Ref. to 2-8 [W7A0].>



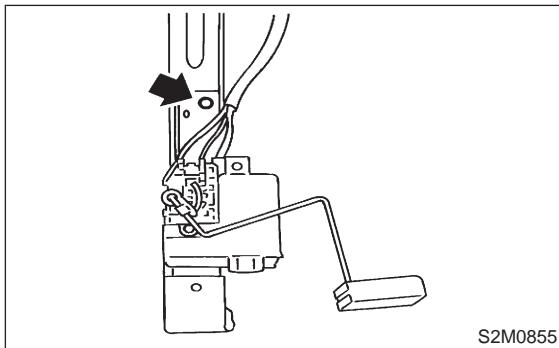
7) Remove nuts which install fuel pump assembly onto fuel tank.
 8) Take off fuel pump assembly.



9) Disconnect connector from fuel pump bracket.



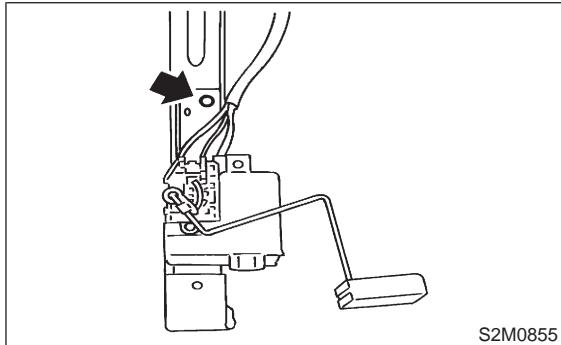
10) Remove bolt which installs fuel meter unit on mounting bracket.



B: INSTALLATION

Installation is in the reverse order of removal. Do the following:

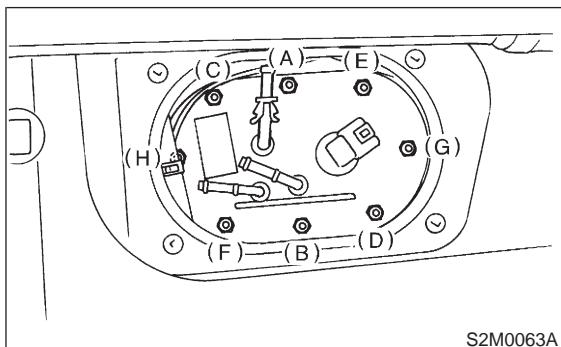
(1) Install the fuel meter unit on mounting bracket.



(2) Always use new gaskets.
 (3) Ensure sealing portion is free from fuel or foreign particles before installation.
 (4) Tighten nuts in alphabetical sequence shown in Figure to specified torque.

Tightening torque:

$4.4 \pm 1.5 \text{ N}\cdot\text{m} (0.45 \pm 0.15 \text{ kg}\cdot\text{m}, 3.3 \pm 1.1 \text{ ft}\cdot\text{lb})$

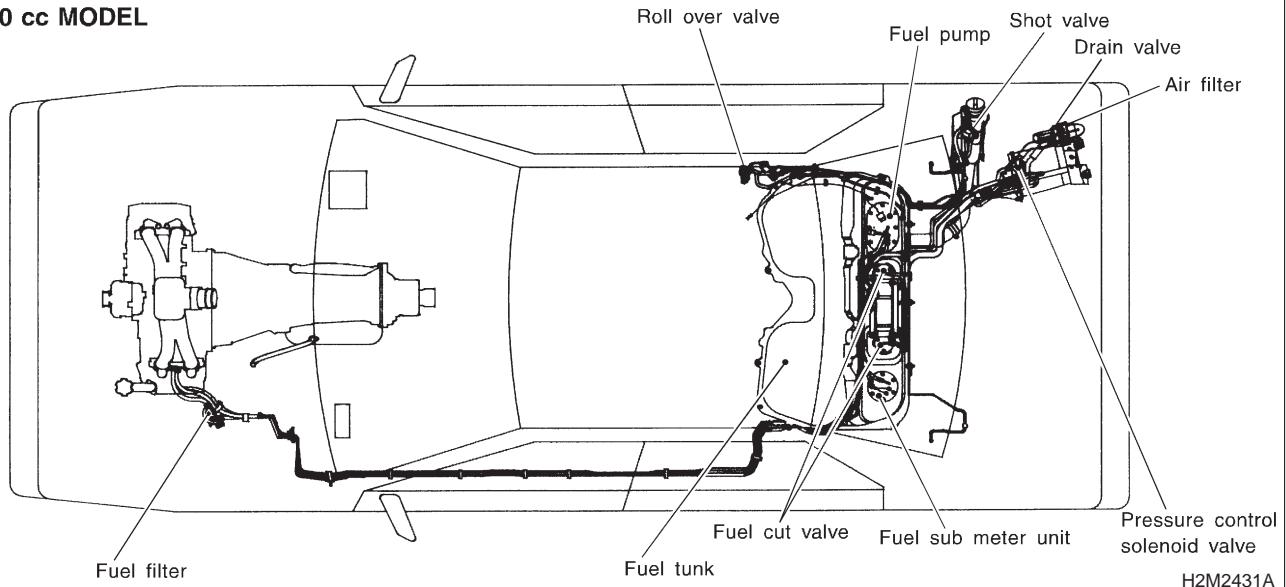


7. Fuel Delivery, Return and Evaporation Lines

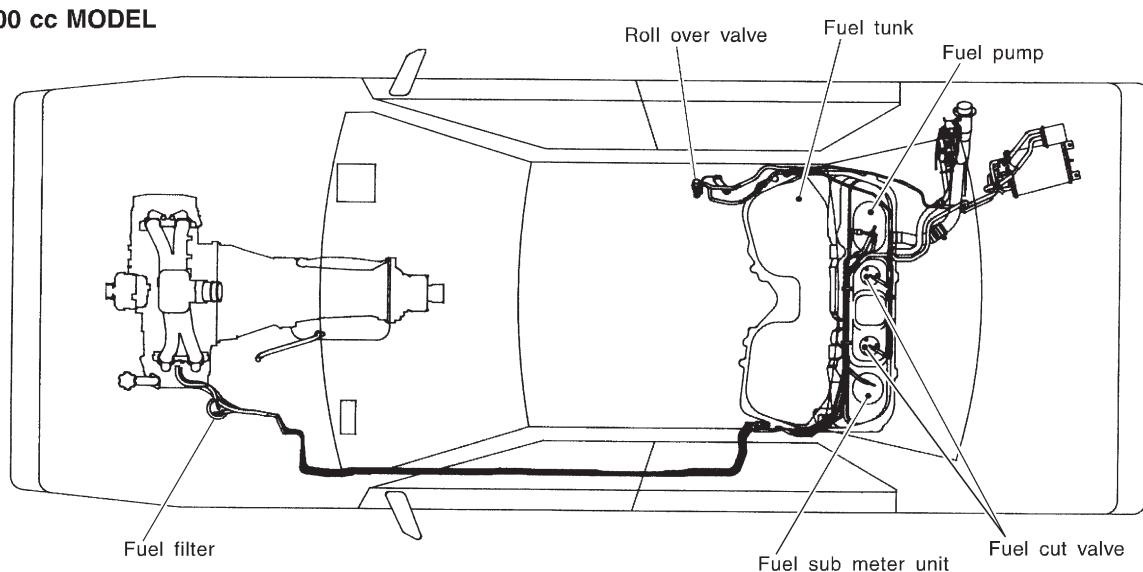
A: REMOVAL

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

2200 cc MODEL

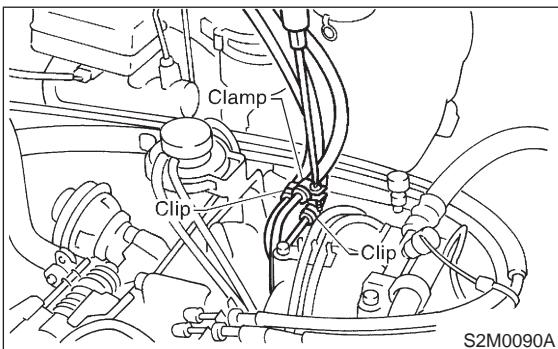


2500 cc MODEL



- 2) Open fuel flap lid, and remove fuel filler cap.
- 3) Remove inner trim, insulator and rear seat.
- 4) Remove fuel delivery pipes and hoses, fuel return pipes and hoses, and evaporation pipes and hoses.

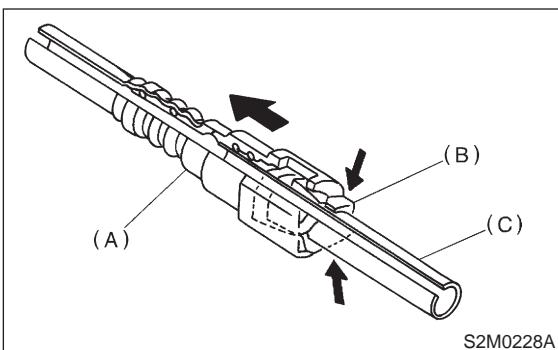
5) In engine compartment, detach fuel delivery hose, return hose and evaporation hose.



6) Separate quick connector on fuel delivery line.
 (1) Clean pipe and connector, if they are covered with dust.
 (2) Hold connector (A) and push retainer (B) down.
 (3) Pull out connector (A) from retainer (B).

CAUTION:

Replace retainer with new ones.



(A) Connector
 (B) Retainer
 (C) Pipe

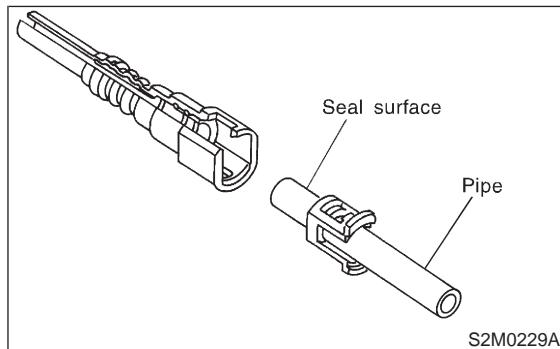
B: INSTALLATION

Installation is in the reverse order of removal.

1) Connect quick connector on fuel delivery line.

CAUTION:

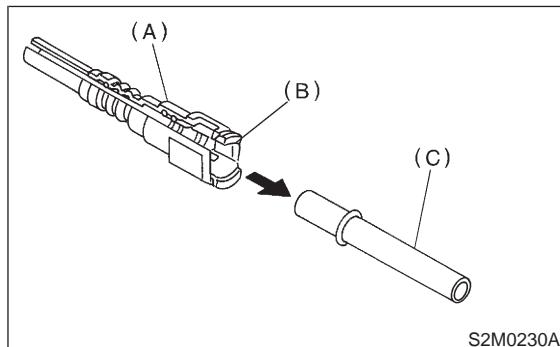
- Always use a new retainer.
- Make sure that the connected portion is not damaged or has dust. If necessary, clean seal surface of pipe.



(1) Set new retainer (B) to connector (A).
 (2) Push pipe into connector completely.

NOTE:

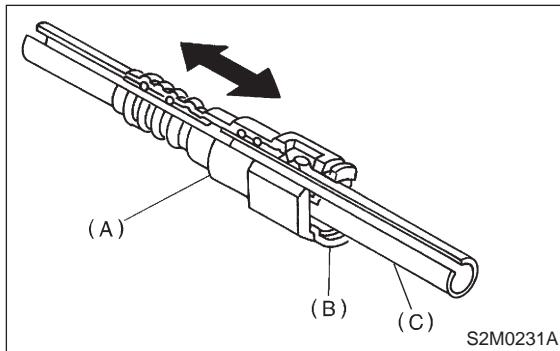
At this time, two clicking sounds are heard.



(A) Connector
 (B) Retainer
 (C) Pipe

CAUTION:

- Pull the connector to ensure it is connected securely.
- Ensure the two retainer pawls are engaged in their mating positions in the connector.
- Be sure to inspect hoses and their connections for any leakage of fuel.



(A) Connector
(B) Retainer
(C) Pipe

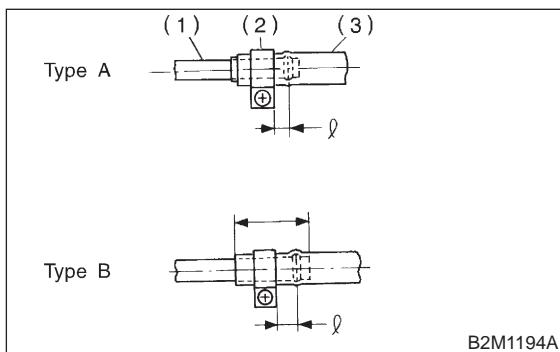
2) Connect fuel delivery hose to pipe in engine compartment with an overlap of 20 to 25 mm (0.79 to 0.98 in).

Type A: When fitting length is specified.

Type B: When fitting length is not specified.

$\ell : 1.0 — 4.0 \text{ mm (0.039 — 0.157 in)}$

$L: 20 — 25 \text{ mm (0.79 — 0.98 in)}$



(1) Fitting
(2) Clamp
(3) Hose

3) Connect return hose and evaporation hose to pipe by approx. 15 mm (0.59 in) from hose end.

Fuel return hose:

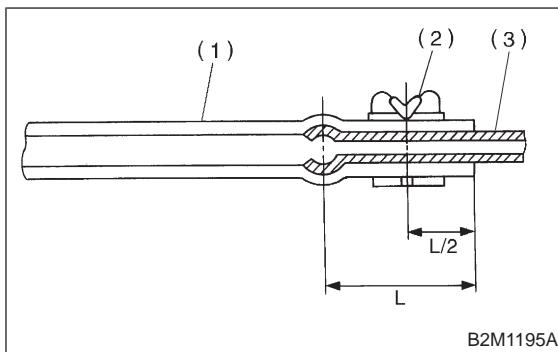
$L = 20 — 25 \text{ mm (0.79 — 0.98 in)}$

Fuel evaporation hose:

$L = 15 — 20 \text{ mm (0.59 — 0.79 in)}$

CAUTION:

Be sure to inspect hoses and their connections for any leakage of fuel.

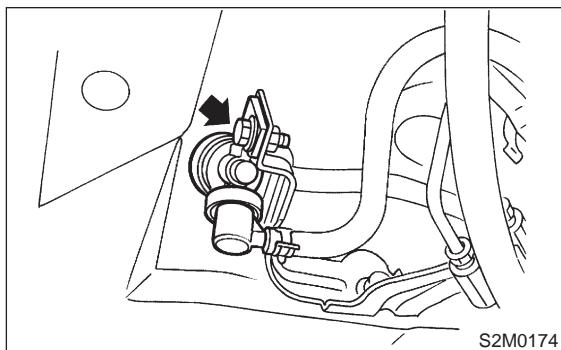


(1) Hose
(2) Clip
(3) Pipe

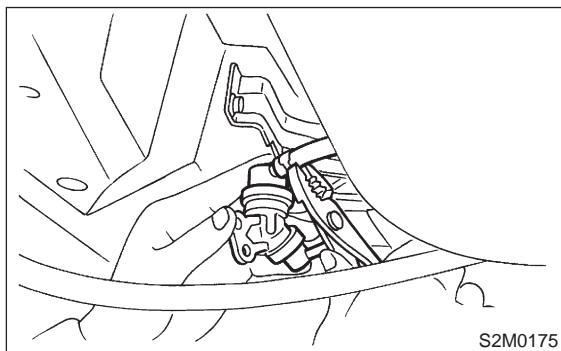
8. Roll Over Valve

A: REMOVAL AND INSTALLATION

- 1) Lift-up the vehicle.
- 2) Remove roll over valve from bracket.



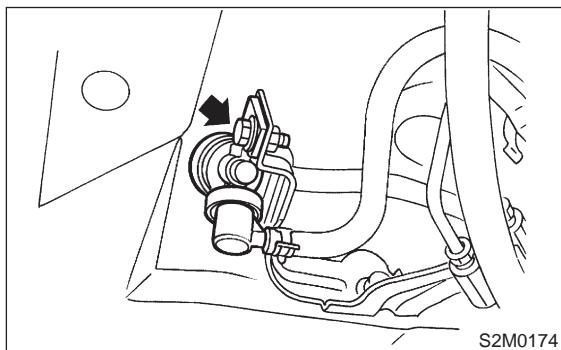
- 3) Disconnect hoses from roll over valve, and remove it from bracket.



- 4) Installation is in the reverse order of removal.

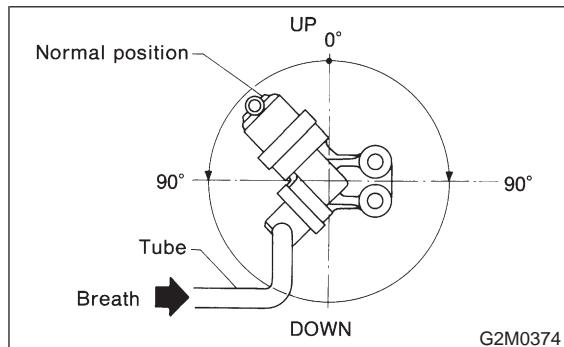
CAUTION:

- Do not install top side of valve down.
- Before installing bracket on body, securely fit concave part of bracket to hole in body.



B: INSPECTION

- 1) Connect hoses to roll over valve as shown in Figure.



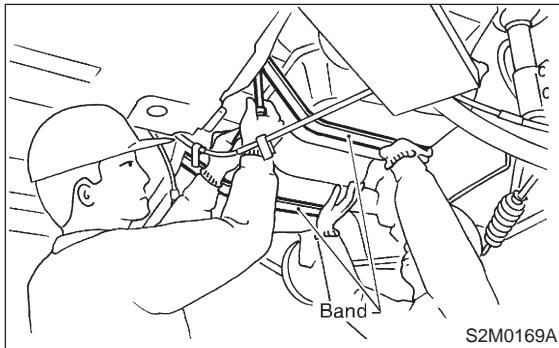
- 2) While blowing through open end of hose, tilt valve at least 90° left and right from normal position.

- 3) Ensure that there is no air flow when hose is tilted greater than 90°.

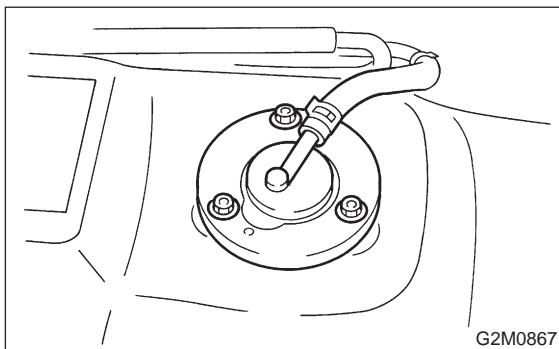
9. Fuel Cut Valve

A: REMOVAL AND INSTALLATION

- 1) Remove fuel tank. <Ref. to 2-8 [W2A0].>



- 2) Disconnect evaporation hose from fuel cut valve.
- 3) Remove fuel cut valve.



- 4) Installation is in the reverse order of removal procedure.

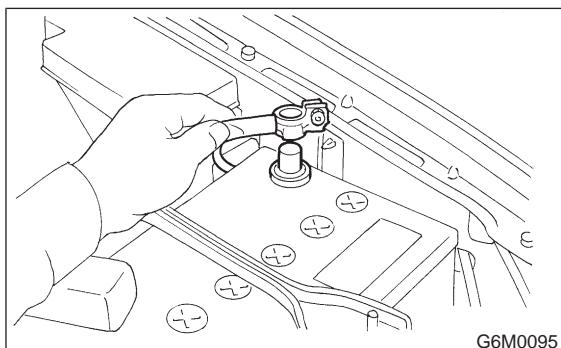
Tightening torque:

$4.4 \pm 1.5 \text{ N}\cdot\text{m} (0.45 \pm 0.15 \text{ kg}\cdot\text{m}, 3.3 \pm 1.1 \text{ ft-lb})$

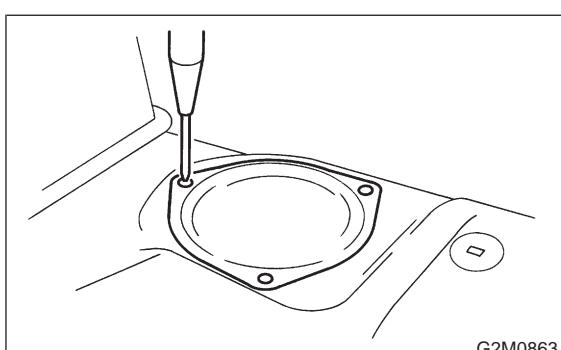
10. Fuel Sub Meter Unit

A: REMOVAL AND INSTALLATION

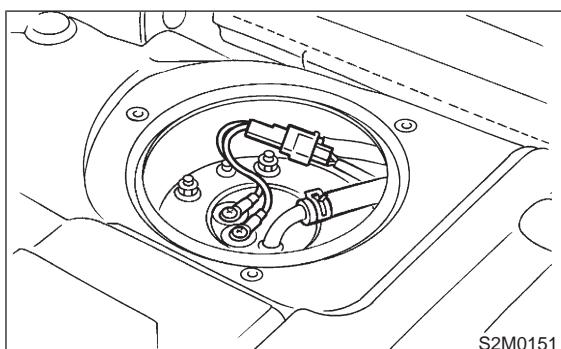
- 1) Disconnect battery ground cable.



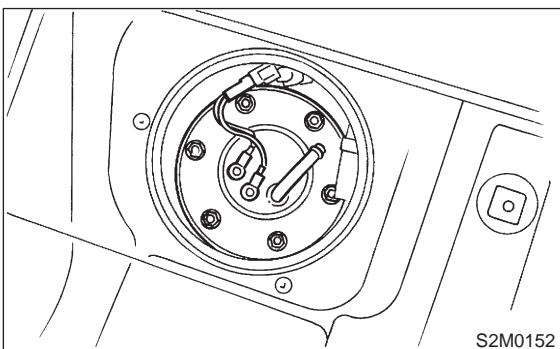
- 2) Remove fuel filler cap.
- 3) Remove service hole cover.



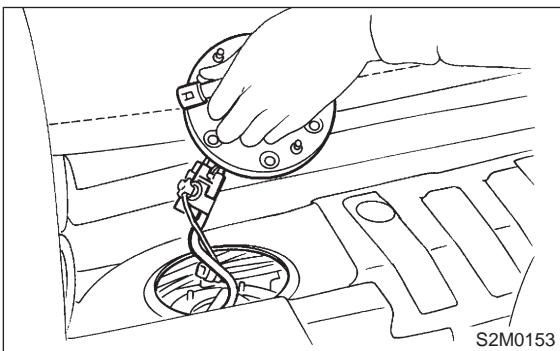
- 4) Disconnect connector from fuel sub meter, and disconnect jet pump hose.



5) Remove bolts which install fuel sub meter unit on fuel tank.



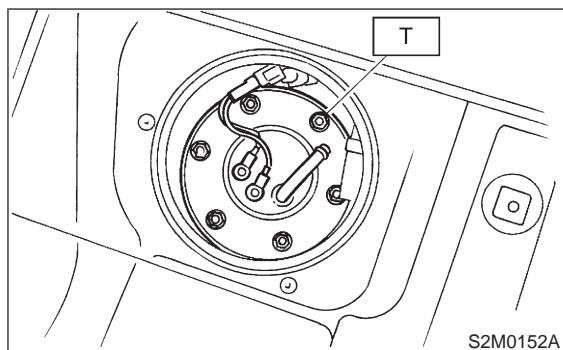
6) Remove fuel sub meter unit.



7) Installation is in the reverse order of removal.

Tightening torque:

T: $4.4 \pm 1.5 \text{ N}\cdot\text{m}$ ($0.45 \pm 0.15 \text{ kg}\cdot\text{m}$, $3.3 \pm 1.1 \text{ ft-lb}$)



1. Fuel System Trouble in General

Trouble and possible cause			Corrective action
1. Insufficient fuel supply to the injector			
1)	Fuel pump will not operate.		
	<input type="radio"/> Defective terminal contact.		Inspect connections, especially ground, and tighten securely.
	<input type="radio"/> Trouble in electromagnetic or electronic circuit parts.		Replace fuel pump.
2)	Lowering of fuel pump function.		Replace fuel pump.
3)	Clogged dust or water in the fuel filter.		Replace fuel filter, clean or replace fuel tank.
4)	Clogged or bent fuel pipe or hose.		Clean, correct or replace fuel pipe or hose.
5)	Air is mixed in the fuel system.		Inspect or retighten each connection part.
6)	Clogged or bent breather tube or pipe.		Clean, correct or replace air breather tube or pipe.
7)	Damaged diaphragm of pressure regulator.		Replace.
2. Leakage or blow out fuel			
1)	Loosened joints of the fuel pipe.		Retightening.
2)	Cracked fuel pipe, hose and fuel tank.		Replace.
3)	Defective welding part on the fuel tank.		Replace.
4)	Defective drain packing of the fuel tank.		Replace.
5)	Clogged or bent air breather tube or air vent tube.		Clean, correct or replace air breather tube or air vent tube.
3. Gasoline smell inside of compartment			
1)	Loose joints at air breather tube, air vent tube and fuel filler pipe.		Retightening.
2)	Defective packing air tightness on the fuel saucer.		Correct or replace packing.
3)	Cracked fuel separator.		Replace separator.
4)	Inoperable fuel pump modulator or circuit.		Replace.
4. Defective fuel meter indicator			
1)	Defective operation of fuel meter unit.		Replace.
2)	Defective operation of fuel meter.		Replace.
5. Noise			
1)	Large operation noise or vibration of fuel pump.		Replace.

NOTE:

When the vehicle is left unattended for an extended period of time, water may accumulate in the fuel tank.

(1) To prevent water condensation:

- Top off the fuel tank or drain the fuel completely.
- Drain water condensation from the fuel filter.

(2) Refilling the fuel tank:

Refill the fuel tank while there is still some fuel left in the tank.

(3) Protecting the fuel system against freezing and water condensation:

- Cold areas

In snow-covered areas, mountainous areas, skiing areas, etc. where ambient temperatures drop below 0°C (32°F) throughout the winter season, use an anti-freeze solution in the cooling system. Refueling will also complement the effect of anti-freeze solution each time the fuel level drops to about one-half. After the winter season, drain water which may have accumulated in the fuel filter and fuel tank in the manner same as that described under Affected areas below.

- Affected areas

When water condensation is noted in the fuel filter, drain water from both the fuel filter and fuel tank or use a water removing agent (or anti-freeze solution) in the fuel tank.

(4) Observe the instructions, notes, etc., indicated on the label affixed to the anti-freeze solution (water removing agent) container before use.