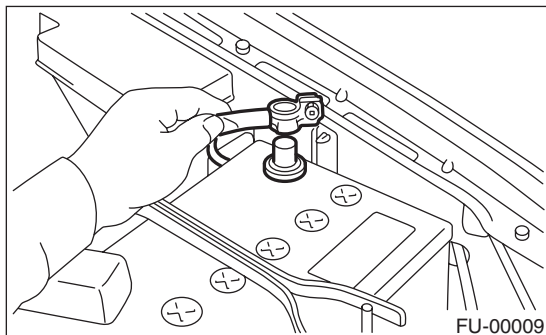


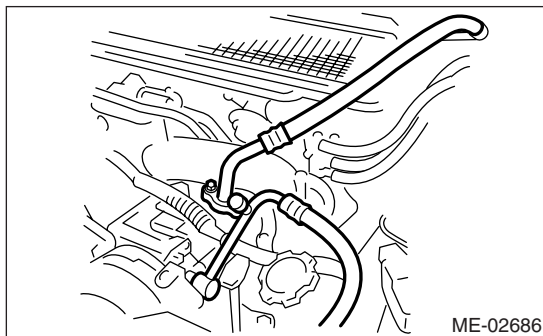
9. Engine Assembly

A: REMOVAL

- 1) Set the vehicle on a lift.
- 2) Open the front hood fully and support with the front food stay.
- 3) Remove the collector cover.
- 4) Collect the refrigerant from A/C system. <Ref. to AC-20, Refrigerant Recovery Procedure.>
- 5) Release the fuel pressure. <Ref. to FU(H4SO)-44, RELEASING OF FUEL PRESSURE, PROCEDURE, Fuel.>
- 6) Disconnect the ground cable from battery.



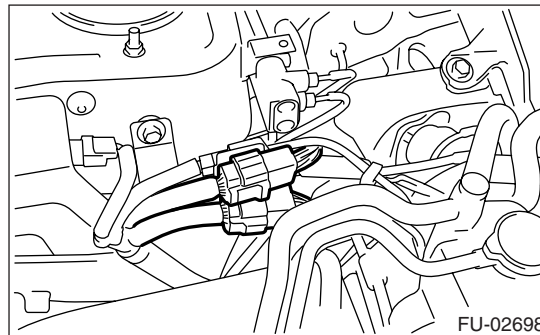
- 7) Open the fuel filler flap lid, and remove the filler cap.
- 8) Remove the radiator from vehicle. <Ref. to CO(H4SO)-25, REMOVAL, Radiator.>
- 9) Remove the coolant filler tank. <Ref. to CO(H4SO)-41, REMOVAL, Coolant Filler Tank.>
- 10) Remove the secondary air pump. <Ref. to EC(H4DOTC)-9, INSPECTION, Secondary Air Pump.>
- 11) Disconnect the A/C pressure hoses from A/C compressor.



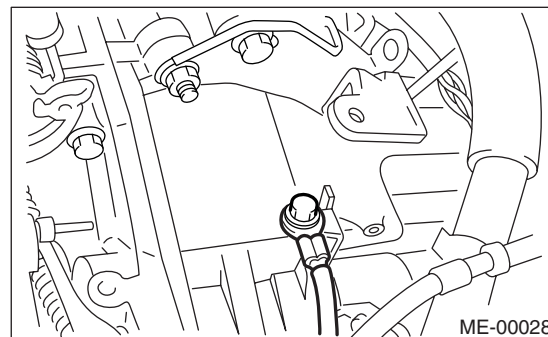
- 12) Remove the intercooler. <Ref. to IN(H4DOTC)-10, REMOVAL, Intercooler.>

- 13) Disconnect the following connectors and cables.

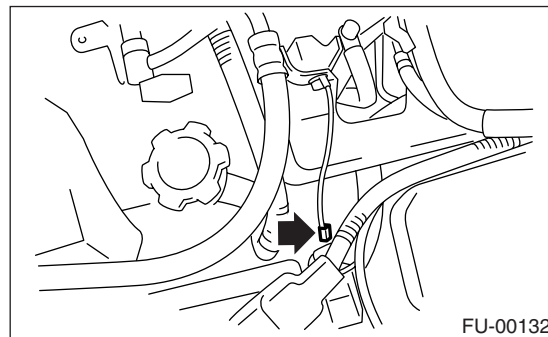
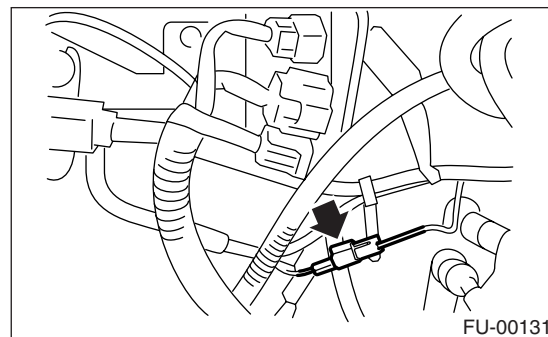
(1) Engine harness connectors



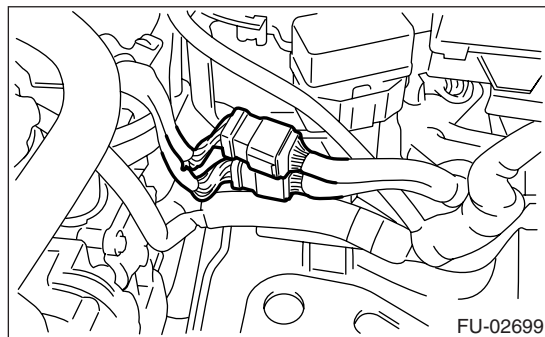
(2) Engine ground terminal



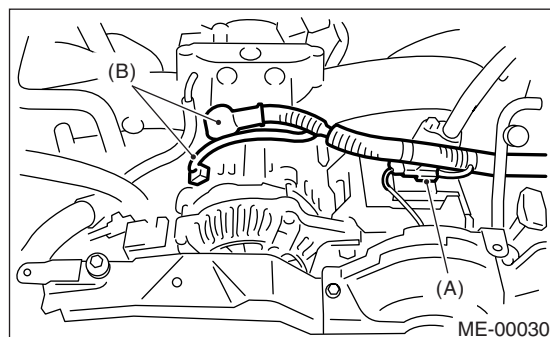
(3) Disconnect the right and left engine ground-ing cables.



(4) Engine harness connectors

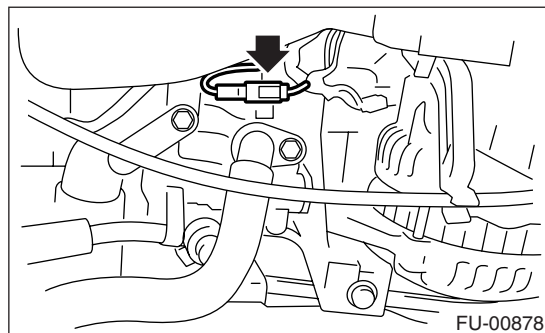


(5) Generator connector, terminal and A/C compressor connector



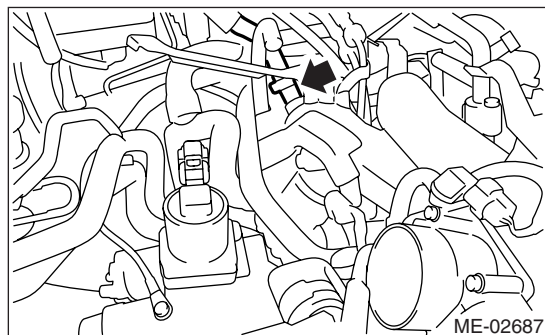
- (A) A/C compressor connector
- (B) Generator connector and terminal

(6) Power steering switch connector



14) Disconnect the following hoses.

(1) Brake booster vacuum hose

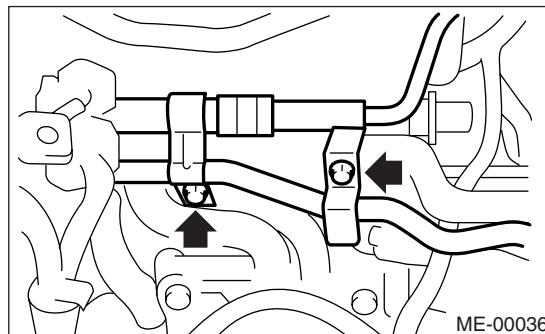


(2) Heater inlet and outlet hoses

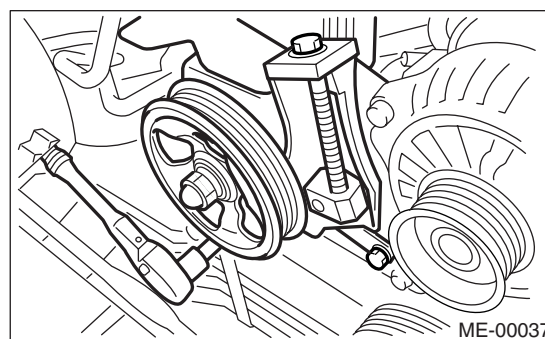
15) Remove the power steering pump.

(1) Remove the front side V-belt. <Ref. to ME(H4DOTC)-38, FRONT SIDE BELT, REMOVAL, V-belt.>

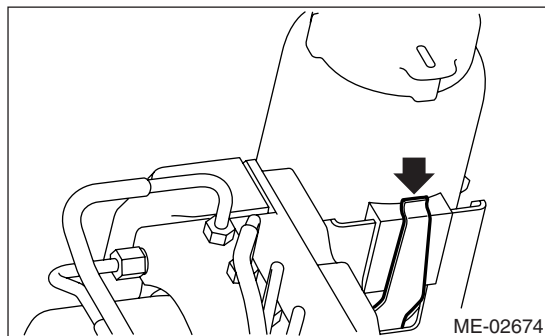
(2) Remove the power steering pipe from the fuel pip protector RH along with the bracket.



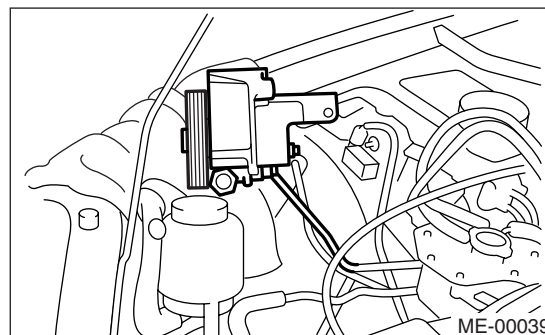
(3) Remove the power steering pump.



(4) Remove the reservoir tank from the bracket by pulling it upwards.



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



16) Lift-up the vehicle.

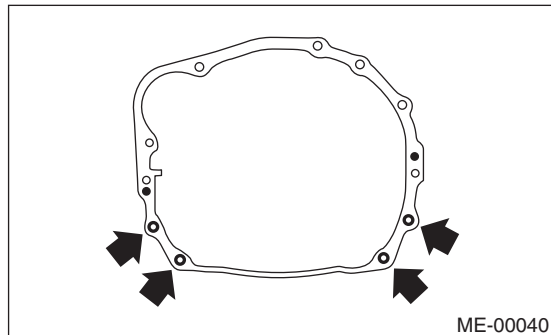
Engine Assembly

MECHANICAL

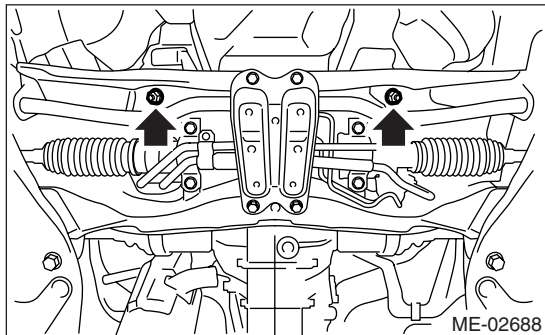
17) Remove the ATF cooler pipe from frame. (AT model)

18) Remove the center exhaust pipe. <Ref. to EX(H4DOTC)-7, REMOVAL, Center Exhaust Pipe.>

19) Remove the bolts and nuts which hold lower side of transmission to engine.

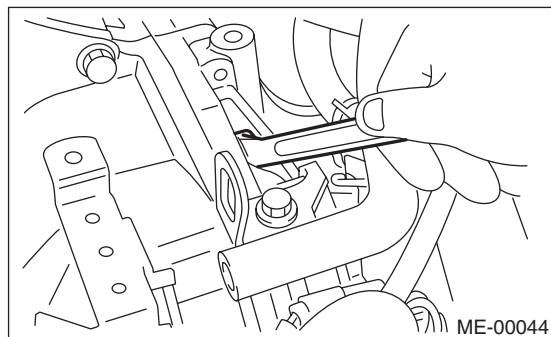


20) Remove the nuts which install front cushion rubber onto front crossmember.

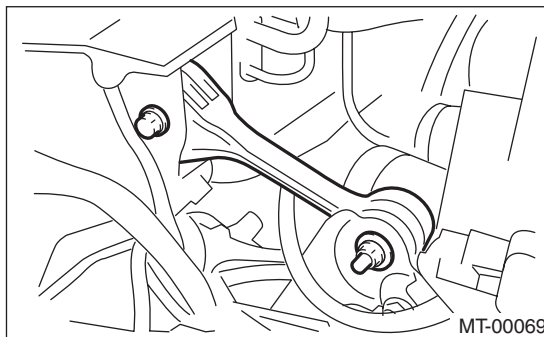


21) Separate the torque converter clutch from drive plate. (AT model)

- (1) Lower the vehicle.
- (2) Remove the service hole plug.
- (3) Remove the bolts which hold torque converter clutch to drive plate.
- (4) Remove other bolts while rotating the engine using socket wrench.



22) Remove the pitching stopper.

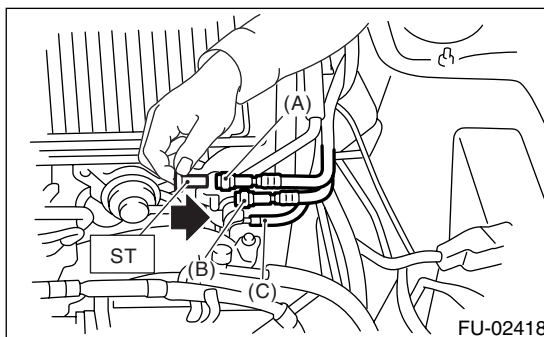


23) Using the ST to remove the fuel hose from each fuel pipe. <Ref. to FU(H4DOTC)-65, REMOVAL, Fuel Delivery, Return and Evaporation Lines.>

CAUTION:

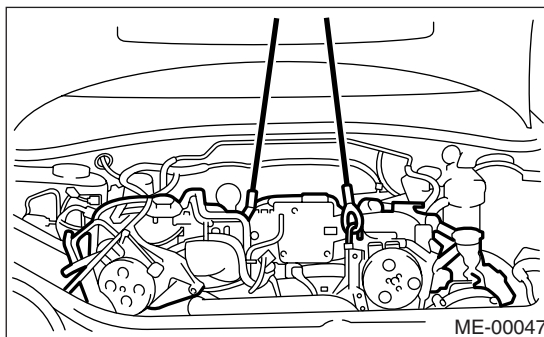
- Be careful not to spill fuel.
- Catch the fuel from hoses using a container or cloth.

ST 42099AE000 CONNECTOR REMOVER



- (A) Fuel delivery hose
- (B) Return hose
- (C) Evaporation hose

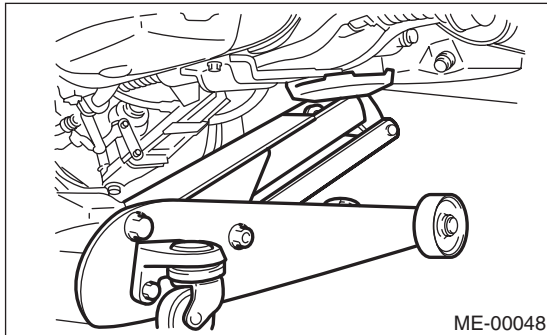
24) Support the engine with a lifting device and wire ropes.



25) Support the transmission with a garage jack.

CAUTION:

Before removing the engine away from transmission, check to be sure no work has been overlooked. Doing this is very important because the transmission lowers for its own weight. This work is also of great importance for facilitating reinstallation.

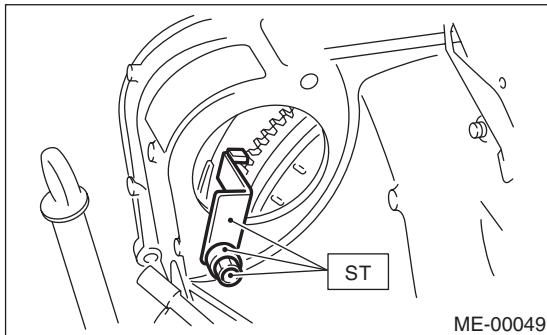


26) Separation of engine and transmission.

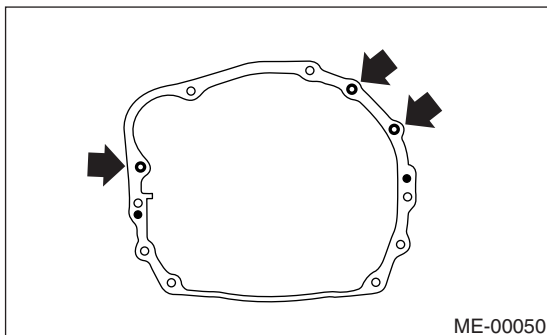
(1) Remove the starter. <Ref. to SC(H4SO)-5, REMOVAL, Starter.>

(2) Set the ST to torque converter clutch case. (AT model)

ST 498277200 STOPPER SET



(3) Remove the bolts which hold upper side of transmission to engine.



27) Remove the engine from vehicle.

(1) Slightly raise the engine.

(2) Raise the transmission with garage jack.

(3) Move the engine horizontally until main shaft is withdrawn from clutch cover.

(4) Slowly move the engine away from engine compartment.

NOTE:

Be careful not to damage adjacent parts or body panels with crank pulley, oil level gauge, etc.

28) Remove the front cushion rubbers.

B: INSTALLATION

1) Install the front cushion rubbers.

Tightening torque:

35 N·m (3.6 kgf-m, 25.8 ft-lb)

2) Position the engine in engine compartment and align it with transmission.

NOTE:

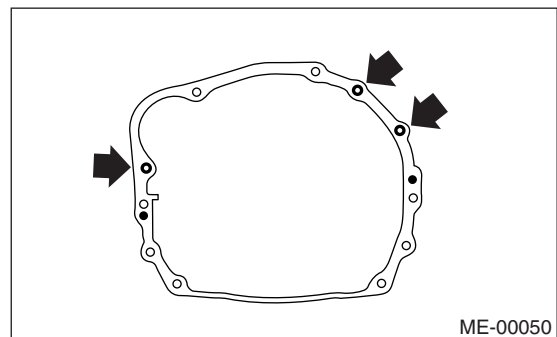
Be careful not to damage adjacent parts or body panels with crank pulley, oil level gauge, etc.

3) Apply a small amount of grease to splines of main shaft. (MT model)

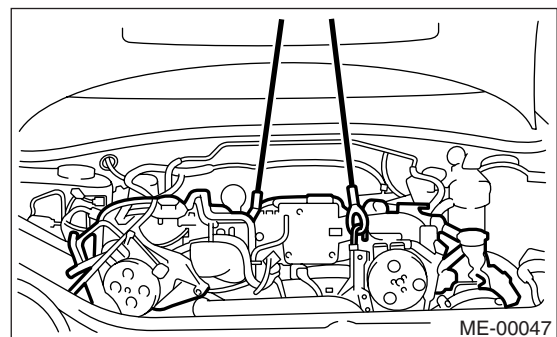
4) Tighten the bolts which hold upper side of transmission to engine.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



5) Remove the lifting device and wire ropes.



6) Remove the garage jack.

Engine Assembly

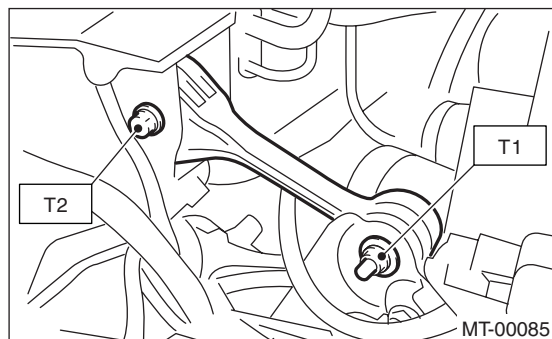
MECHANICAL

7) Install the pitching stopper.

Tightening torque:

T1: 50 N·m (5.1 kgf-m, 37 ft-lb)

T2: 58 N·m (5.9 kgf-m, 43 ft-lb)



8) Remove the ST from converter case. (AT model)

CAUTION:

Be careful not to drop the ST into the converter case when removing the ST.

ST 498277200 STOPPER SET

9) Install the starter. <Ref. to SC(H4SO)-5, INSTALLATION, Starter.>

10) Install the torque converter clutch to drive plate. (AT model)

(1) Tighten the bolts which hold torque converter clutch to drive plate.

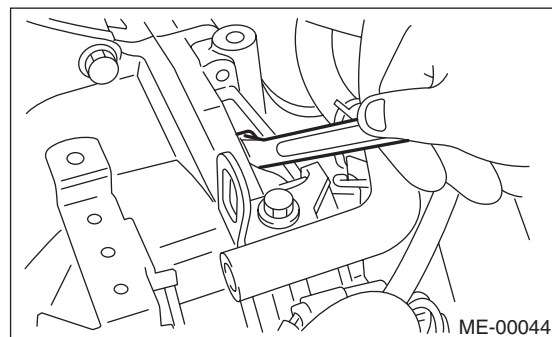
(2) Tighten other bolts while rotating the crankshaft using socket wrench.

CAUTION:

Be careful not to drop bolts into the torque converter clutch housing.

Tightening torque:

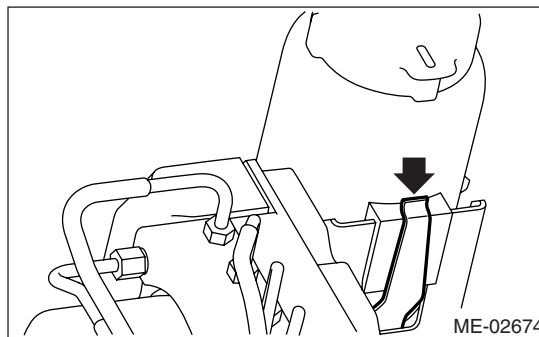
25 N·m (2.5 kgf-m, 18.1 ft-lb)



(3) Install the service hole plug.

11) Install the power steering pump.

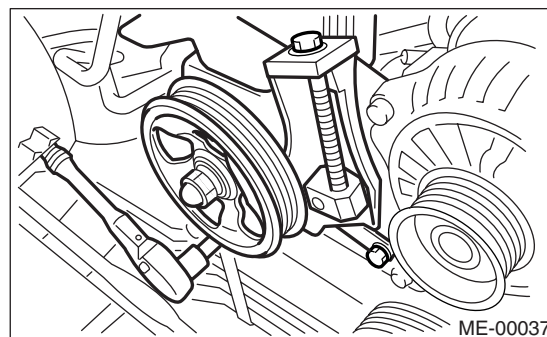
(1) Install the reservoir tank to the bracket.



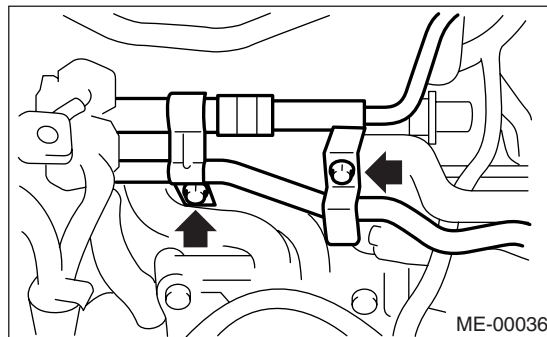
(2) Install the power steering pump.

Tightening torque:

20.1 N·m (2.05 kgf-m, 14.8 ft-lb)



(3) Install the power steering pipes onto the fuel pipe protector RH.



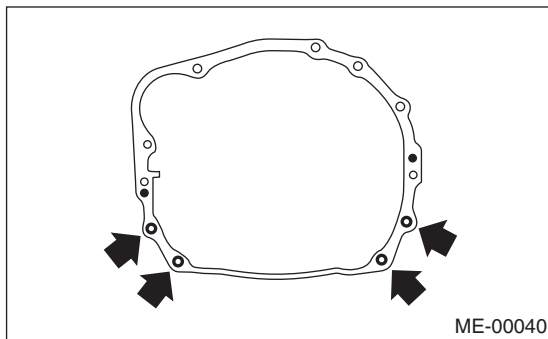
(4) Install the front side V-belt and adjust it. <Ref. to ME(H4DOTC)-38, FRONT SIDE BELT, INSTALLATION, V-belt.>

12) Lift-up the vehicle.

13) Tighten the nuts and bolts which hold lower side of transmission to engine.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



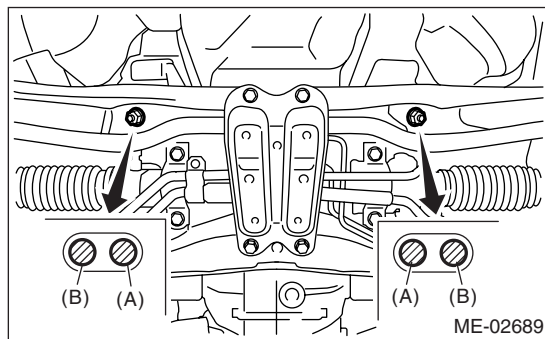
14) Tighten the nuts which install the front cushion rubber onto crossmember.

Tightening torque:

85 N·m (8.7 kgf-m, 62.7 ft-lb)

NOTE:

Make sure the front cushion rubber mounting bolts (A) and locator (B) are securely installed.



15) Install the ATF cooler pipe to frame. (AT model)

16) Install the center exhaust pipe. <Ref. to EX(H4DOTC)-8, INSTALLATION, Center Exhaust Pipe.>

17) Lower the vehicle.

18) Connect the following hoses.

- (1) Fuel delivery hose, return hose and evaporation hose
- (2) Heater inlet and outlet hoses
- (3) Brake booster vacuum hose

19) Connect the following connectors and terminals.

- (1) Engine ground terminal
- (2) Engine harness connectors
- (3) Generator connector and terminal
- (4) A/C compressor connector
- (5) Power steering switch connector

20) Install the air intake system.

(1) Install the intercooler. <Ref. to IN(H4DOTC)-10, INSTALLATION, Intercooler.>

(2) Install the air cleaner element and air cleaner upper cover.

(3) Install the engine harness connector bracket.

(4) Install the filler hose to air cleaner case.

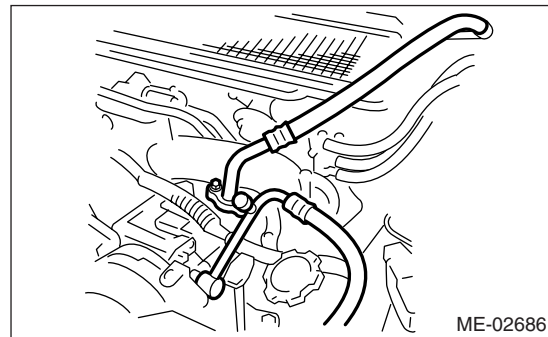
21) Install the A/C pressure hoses.

NOTE:

Replace O-ring with a new one.

Tightening torque:

15 N·m (1.5 kgf-m, 10.8 ft-lb)



22) Install the radiator. <Ref. to CO(H4SO)-27, INSTALLATION, Radiator.>

23) Install the coolant filler tank. <Ref. to CO(H4SO)-41, INSTALLATION, Coolant Filler Tank.>

24) Install the secondary air pump. <Ref. to EC(H4DOTC)-9, INSTALLATION, Secondary Air Pump.>

25) Install the battery in the vehicle, and connect cables.

26) Refill engine coolant. <Ref. to CO(H4SO)-16, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

27) Charge the A/C system with refrigerant. <Ref. to AC-21, PROCEDURE, Refrigerant Charging Procedure.>

28) Install the collector cover.

29) Remove the front hood stay, and close the front hood.

30) Take off the vehicle from lift.