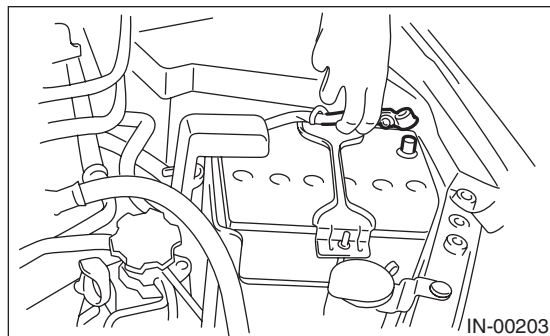


## 10. Engine Assembly

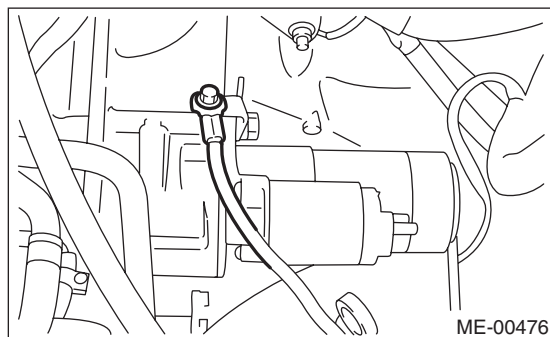
### A: REMOVAL

- 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-19, PROCEDURE, Refrigerant Recovery Procedure.>
- 5) Release the fuel pressure.  
<Ref. to FU(H6DO)-38, RELEASING OF FUEL PRESSURE, PROCEDURE, Fuel.>
- 6) Remove the fuel filler cap.
- 7) Disconnect the ground cable from battery.

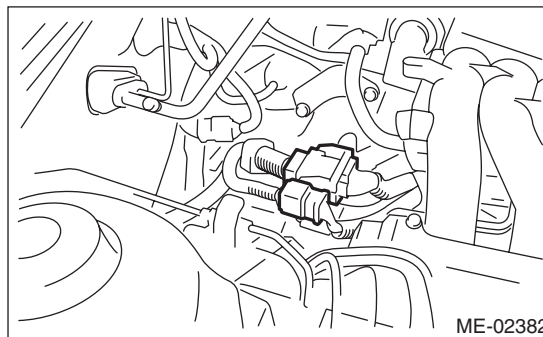


- 8) Remove the air intake duct, air cleaner case and air intake chamber.  
<Ref. to IN(H6DO)-8, REMOVAL, Air Intake Duct.>  
<Ref. to IN(H6DO)-5, REMOVAL, Air Cleaner Case.> <Ref. to IN(H6DO)-7, REMOVAL, Air Intake Chamber.>
- 9) Remove the radiator from vehicle. <Ref. to CO(H6DO)-14, REMOVAL, Radiator.>
- 10) Remove the V-belts. <Ref. to ME(H6DO)-32, REMOVAL, V-belt.>
- 11) Disconnect the A/C pressure hoses from A/C compressor. <Ref. to AC-38, REMOVAL, Hose and Tube.>
- 12) Disconnect the following connector.

- (1) Engine ground terminal



- (2) Engine harness connectors

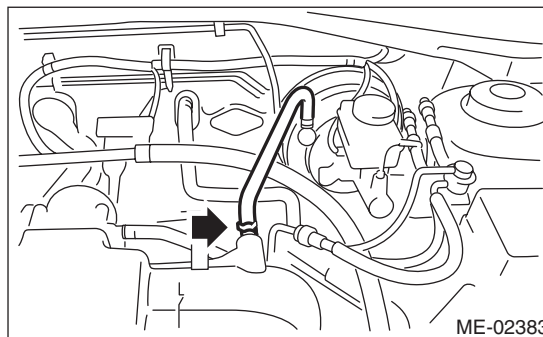


- (3) Generator connector, terminal and A/C compressor connector

- (4) Power steering switch connector

- 13) Disconnect the following hoses.

- (1) Brake booster vacuum hose



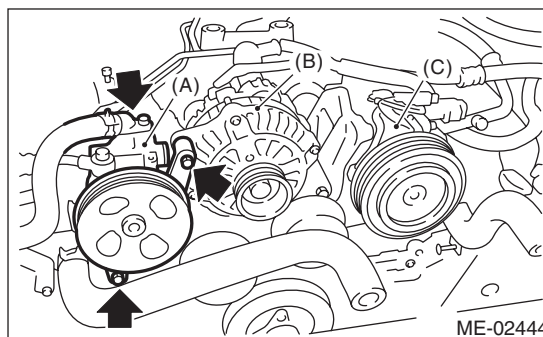
- (2) Heater inlet and outlet hoses

- (3) Pressure regulator vacuum hose

- 14) Remove the power steering pump from the bracket.

#### NOTE:

Do not disconnect the hose and pipe from the pump body.



- (A) Power steering pump

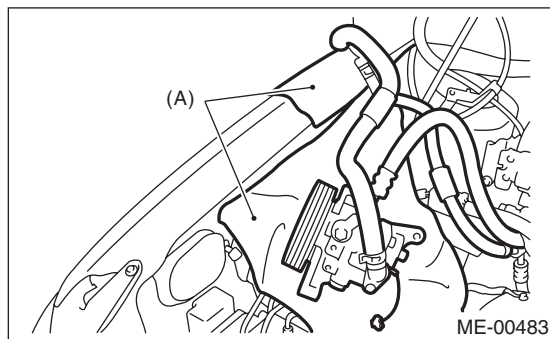
- (B) Generator

- (C) A/C compressor

# Engine Assembly

## MECHANICAL

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



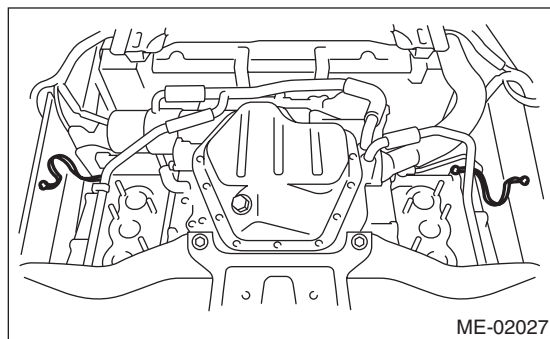
(A) Cloth

- 15) Lift-up the vehicle.  
16) Remove the under cover.  
17) Remove the front exhaust pipe.  
<Ref. to EX(H6DO)-4, REMOVAL, Front Exhaust Pipe.>

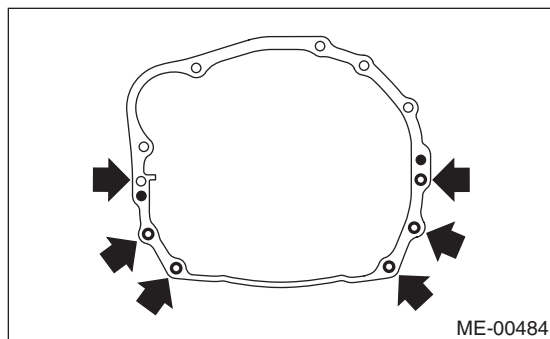
### NOTE:

Be careful not to let the front exhaust pipe interfere with water pipes on engine side.

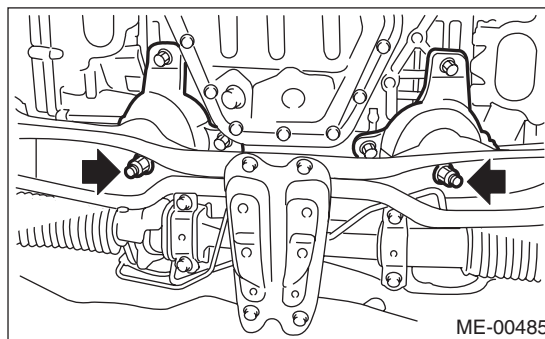
- 18) Remove the ground cable.



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

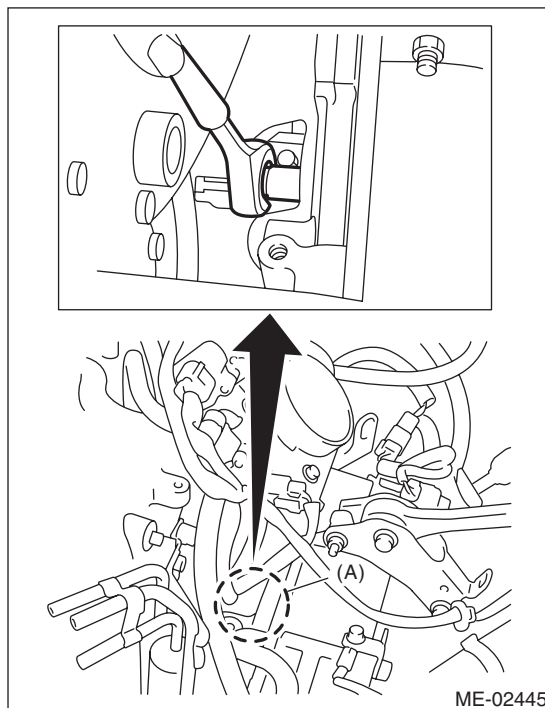


- 20) Remove the nuts which install front cushion rubber onto front crossmember.

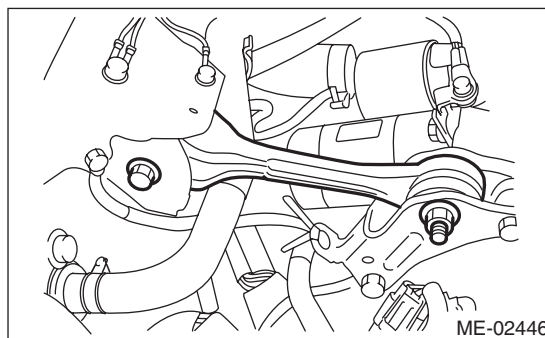


- 21) Separate the torque converter clutch from drive plate.

- (1) Lower the vehicle.  
(2) Remove the service hole plug (A).  
(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) Disconnect the fuel delivery hose and evaporation hose.

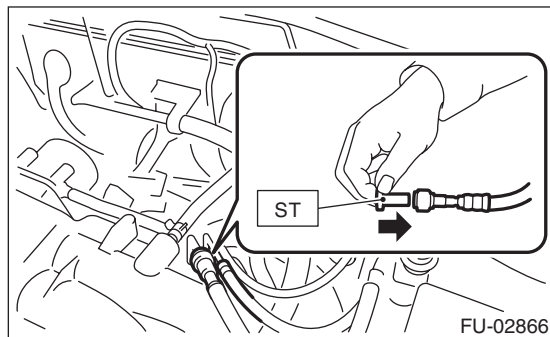
- (1) Disconnect the connector of fuel pipe by pushing the ST in the direction of arrow.

ST 42099AE000 CONNECTOR REMOVER

- (2) Remove the clip and disconnect the evaporation hose from the pipe.

**CAUTION:**

- Collect fuel from the hose into container.
- Disconnect the hose with its end wrapped with cloth to prevent fuel from splashing.

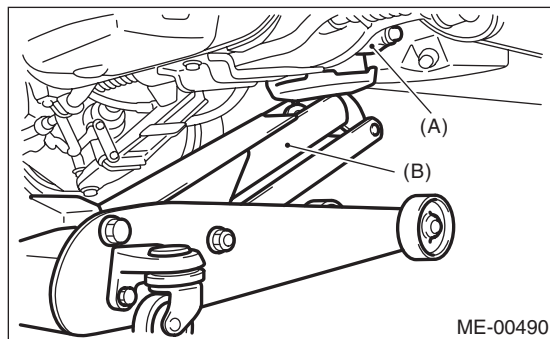


24) Support the engine with a lifting device and wire ropes.

25) Support the transmission with a garage jack.

**CAUTION:**

**Doing this is very important because the transmission lowers for its own weight. This work is also of great importance for facilitating reinstallation.**



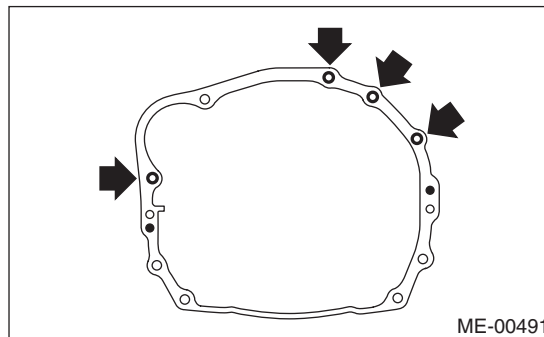
- (A) Transmission
- (B) Garage jack

**CAUTION:**

**Before removing the engine away from transmission, check to be sure no work has been overlooked.**

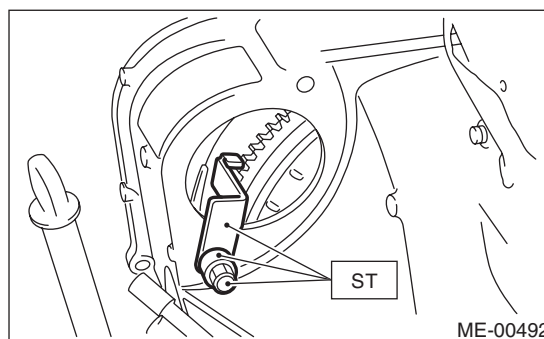
26) Separation of engine and transmission:

- (1) Remove the starter. <Ref. to SC(H4SO)-6, REMOVAL, Starter.>
- (2) Remove the bolts which hold upper side of transmission to engine.



27) Attach the ST to converter case.

ST 498277200 STOPPER SET



28) 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.

29) Remove the front cushion rubbers.

# Engine Assembly

## MECHANICAL

### 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.

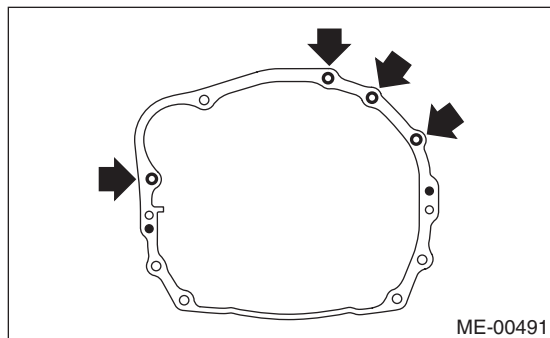
#### **NOTE:**

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

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

#### **Tightening torque:**

**50 N·m (5.1 kgf-m, 37 ft-lb)**



4) Remove the lifting device and wire ropes.

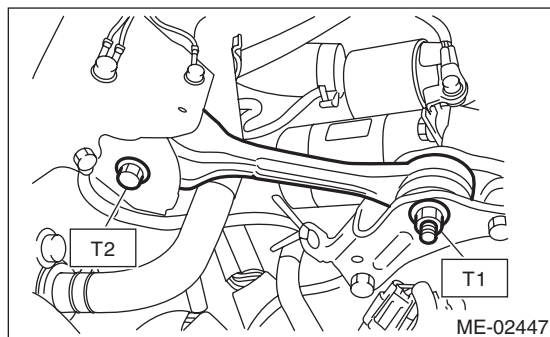
5) Remove the garage jack.

6) Attach the pitching stopper.

#### **Tightening torque:**

**T1: 50 N·m (5.1 kgf-m, 37 ft-lb)**

**T2: 58 N·m (5.9 kgf-m, 42.8 ft-lb)**



7) Remove the ST from converter case.

#### **NOTE:**

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

ST 498277200 STOPPER SET

8) Install the starter. <Ref. to SC(H4SO)-6, INSTALLATION, Starter.>

9) Install the torque converter clutch to drive plate.

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

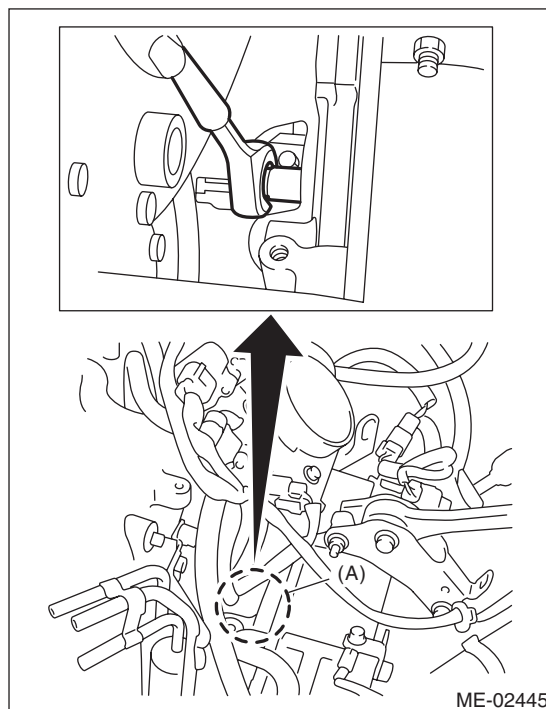
(2) Tighten other bolts while rotating the crankshaft using socket wrench.

#### **NOTE:**

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

#### **Tightening torque:**

**25 N·m (2.5 kgf-m, 18 ft-lb)**



(3) Install the service hole plug (A) to prevent getting foreign matter inside.

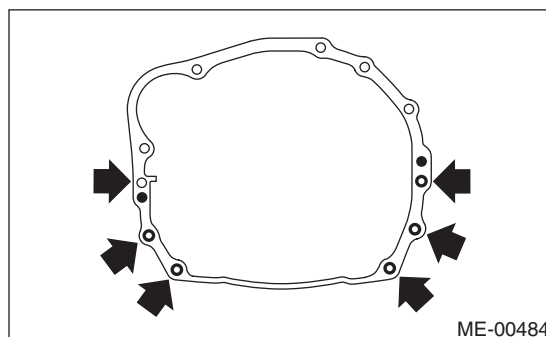
10) Install the power steering pump. <Ref. to PS-47, INSTALLATION, Oil Pump.>

11) Lift-up the vehicle.

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

#### **Tightening torque:**

**50 N·m (5.1 kgf-m, 37 ft-lb)**



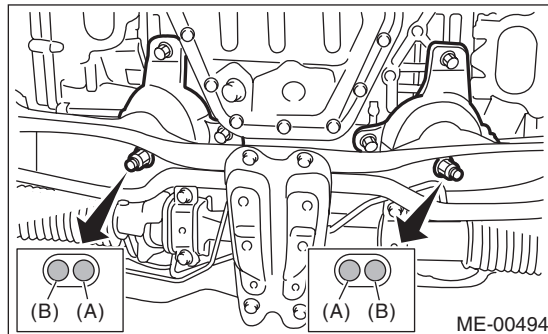
13) Tighten the nuts which install the front cushion rubber onto crossmember.

**Tightening torque:**

**75 N·m (7.6 kgf·m, 55.3 ft·lb)**

**NOTE:**

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

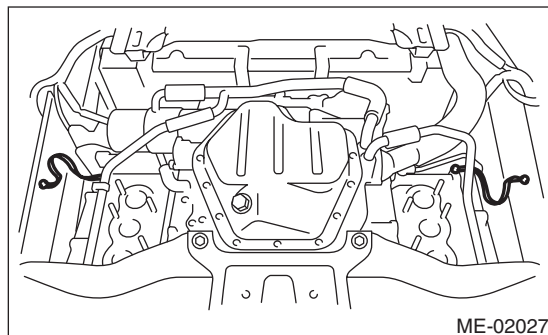


14) Install the front exhaust pipe.  
<Ref. to EX(H6DO)-5, INSTALLATION, Front Exhaust Pipe.>

**NOTE:**

- Be care not to let the front exhaust pipe interfere with water pipes and crossmember on engine side.
- Be care not to scratch the flange surface of front exhaust pipe with stud bolt on engine.

15) Connect the ground cable.



16) Install the under cover.

17) Lower the vehicle.

18) Connect the following hoses.

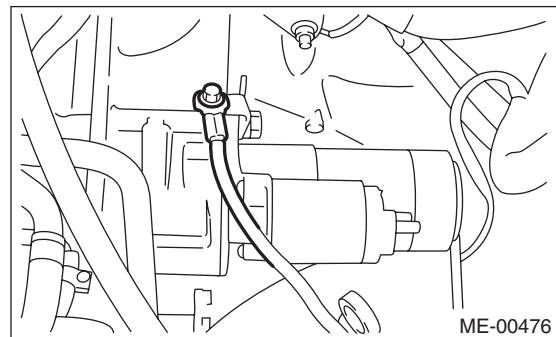
- (1) Fuel delivery hose and evaporation hose
- (2) Heater inlet and outlet hoses
- (3) Brake booster vacuum hose
- (4) Pressure regulator vacuum hose

19) Connect the following connectors.

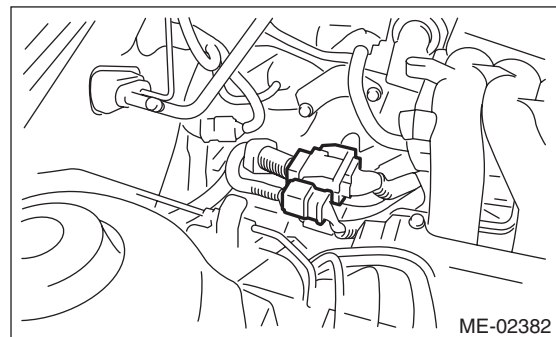
- (1) Engine ground terminal

**Tightening torque:**

**14 N·m (1.4 kgf·m, 10.1 ft·lb)**



(2) Engine harness connectors



(3) Generator connector and terminal

(4) A/C compressor connector

(5) Power steering switch connector

20) Install the A/C pressure hoses.

<Ref. to AC-38, INSTALLATION, Hose and Tube.>

21) Install the V-belts. <Ref. to ME(H6DO)-32, INSTALLATION, V-belt.>

22) Install the radiator to vehicle. <Ref. to CO(H6DO)-15, INSTALLATION, Radiator.>

23) Install the air intake duct, air cleaner case and air intake chamber. <Ref. to IN(H6DO)-8, INSTALLATION, Air Intake Duct.> <Ref. to IN(H6DO)-6, INSTALLATION, Air Cleaner Case.> <Ref. to IN(H6DO)-7, INSTALLATION, Air Intake Chamber.>

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

25) Fill engine coolant. <Ref. to CO(H6DO)-10, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

26) Check the ATF level and replenish it if necessary. <Ref. to 5AT-26, INSPECTION, Automatic Transmission Fluid.>

27) Charge the A/C system with refrigerant. <Ref. to AC-20, PROCEDURE, Refrigerant Charging Procedure.>

28) Install the collector cover.



# Engine Assembly

## MECHANICAL

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

30) Take off the vehicle from lift.

### **C: INSPECTION**

1) Check the pipes and hoses are installed firmly.

2) Check the engine coolant and ATF are at specified levels.

3) Start the engine and check for leaks of fuel, exhaust gas, engine coolant, etc. Also check for noise and vibrations.