

### 6. Manual Transmission Assembly

#### A: REMOVAL

1) Set the vehicle on a lift. Open the front hood, and support it with the stay.

##### NOTE:

Set the hood stay into the specified hole.

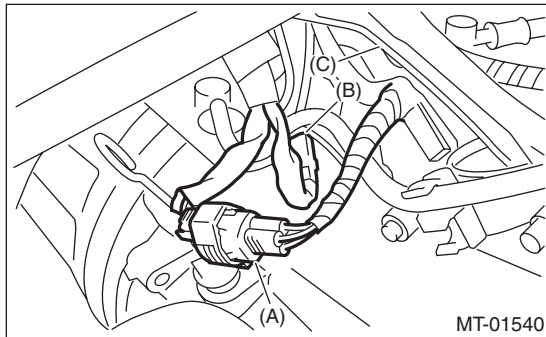
2) Disconnect the ground cable from battery.

3) Remove the collector cover.

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

5) Remove the front wheels.

6) Disconnect the following harness connectors, and then remove the engine hanger rear.

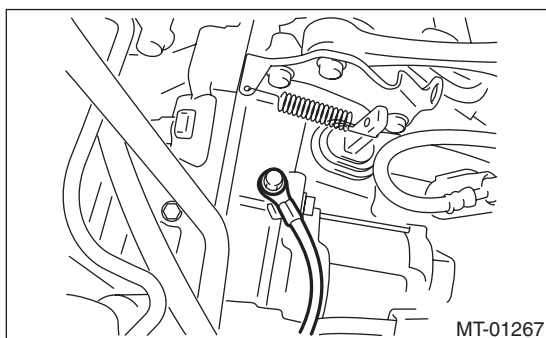
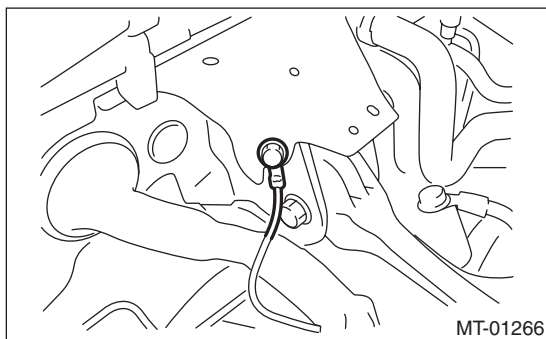


(A) Neutral position switch backup light switch connector

(B) Rear oxygen sensor connector

(C) Pitching stopper

7) Disconnect the ground cable on the upper side of the transmission case and body.

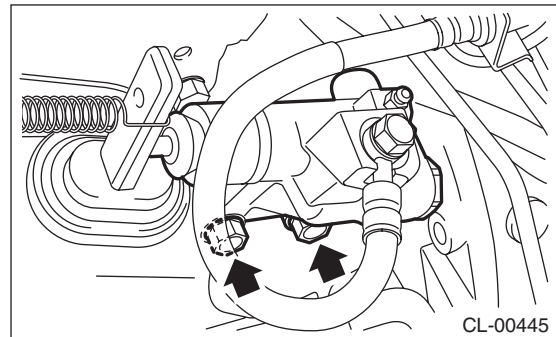


8) Remove the starter assembly. <Ref. to SC(H4SO)-6, REMOVAL, Starter.>

9) Remove the operating cylinder from the transmission.

##### NOTE:

Hang the removed operating cylinder with a piece of wire.

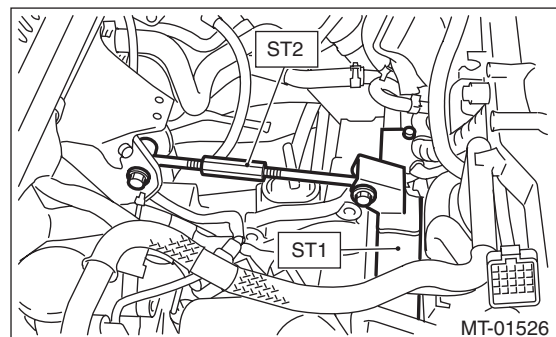


10) Remove the pitching stopper and pitching stopper bracket.

11) Set the ST.

ST1 41099AA010 ENGINE SUPPORT BRACKET

ST2 41099AA020 ENGINE SUPPORT



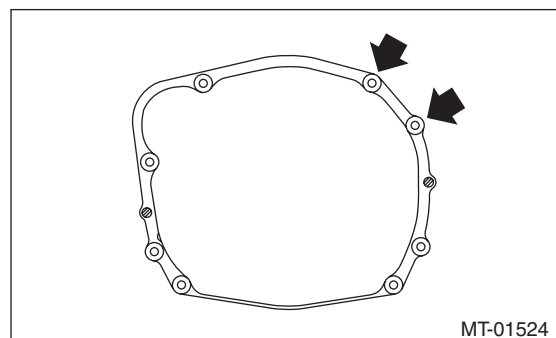
12) Remove the clutch release shaft.

(1) Remove the plug using a hexagon wrench.

(2) Attach a 6 mm (0.24 in) bolt to the release shaft, and pull out the release shaft.

(3) Lift the release fork, and remove from the claw of the release bearing. Pull the release fork to the engine side, and make it so that it moves freely.

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



# Manual Transmission Assembly

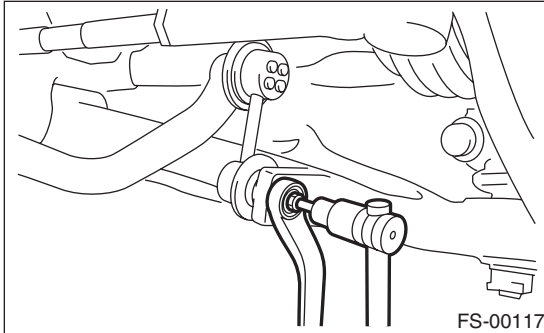
## MANUAL TRANSMISSION AND DIFFERENTIAL

- 14) Lift the vehicle.
- 15) Remove the center exhaust pipe. <Ref. to EX(H4DOTC)-8, REMOVAL, Center Exhaust Pipe.>
- 16) Remove the rear exhaust pipe and muffler.

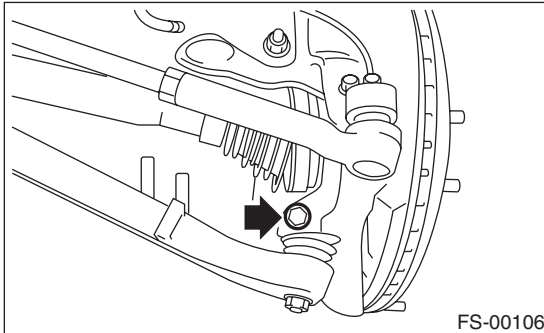
### CAUTION:

**When removing the exhaust pipes, be careful each exhaust pipe does not drop out.**

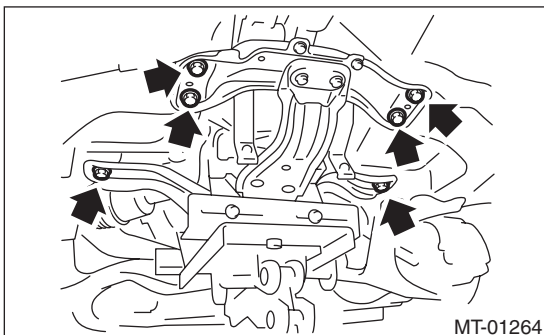
- 17) Remove the heat shield cover. (If equipped)
- 18) Remove the propeller shaft. <Ref. to DS-10, REMOVAL, Propeller Shaft.>
- 19) Remove the front stabilizer link.



- 20) Remove the ball joint of front arm from the housing.



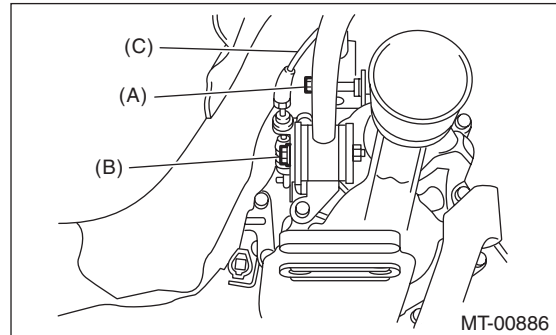
- 21) Remove the front drive shaft. <Ref. to DS-22, REMOVAL, Front Drive Shaft.>
- 22) Set the transmission jack under the transmission, and remove the front crossmember and rear crossmember.



- 23) Move the transmission to the right side of the vehicle, and remove the joint COMPL, stay bolts and reverse check cable.

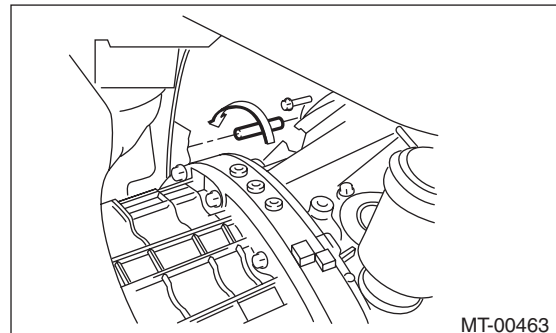
### NOTE:

If the transmission is not moved aside, the joint COMPL and stay bolts may contact the body and cause damage.



- (A) Joint COMPL bolt
- (B) Stay bolt
- (C) Reverse check cable

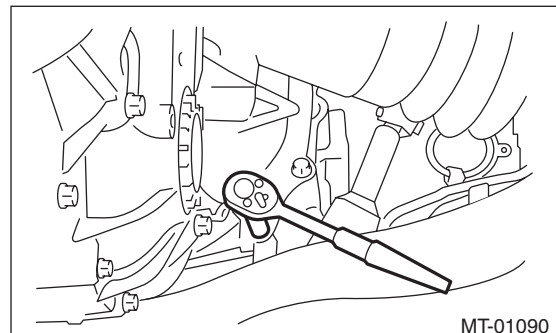
- 24) Tighten the turnbuckle of the ST to tilt the engine assembly towards the back.



- 25) Remove the bolts holding the bottom of transmission to the engine, and remove the transmission from the vehicle.

### NOTE:

- During removal, be careful not to hit the transmission against the body when pulling towards the rear.
- The clutch pipe and breather pipe may interfere with each other. Remove carefully.



### B: INSTALLATION

1) Set the release fork, release bearing and release shaft to the transmission. <Ref. to CL-18, INSTALLATION, Release Bearing and Lever.>

2) Replace the front differential side retainer oil seal.

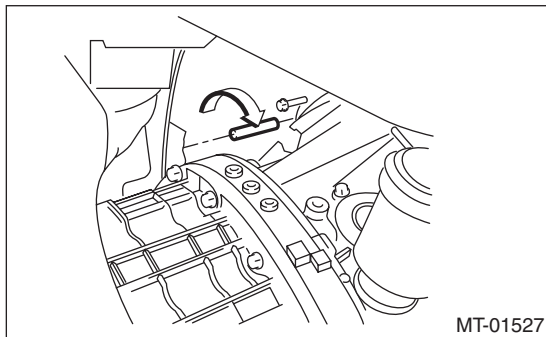
- (1) Remove the oil seal by using flat tip screwdriver etc.
- (2) Apply gear oil to the lip of new oil seals.
- (3) Install a new oil seal using ST.

ST 18675AA000 DIFFERENTIAL SIDE OIL SEAL INSTALLER

#### NOTE:

Be sure to replace the differential side oil seal after the procedure of removing front drive shaft from transmission.

3) Loosen the turnbuckle of ST to return the engine to its original position.



4) Install the transmission.

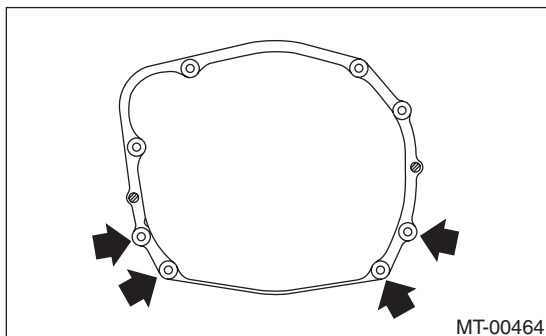
5) Tighten the bolts and nuts which hold the lower side of transmission to the engine.

#### NOTE:

- Make sure that the main shaft spline is completely inserted.
- Make sure that the rear end of the engine is set low.

#### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**

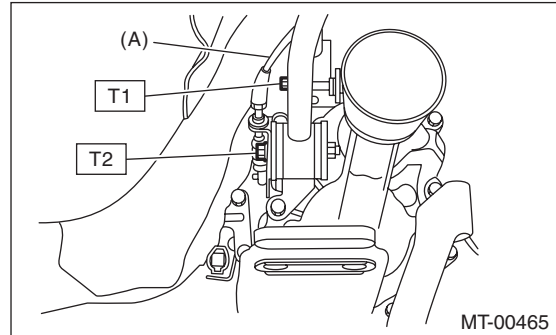


6) Move the transmission to the right side of the vehicle, and attach the joint COMPL, stay bolts and reverse check cable.

#### Tightening torque:

**T1: 11.8 N·m (1.2 kgf-m, 8.7 ft-lb)**

**T2: 32 N·m (3.3 kgf-m, 23.6 ft-lb)**



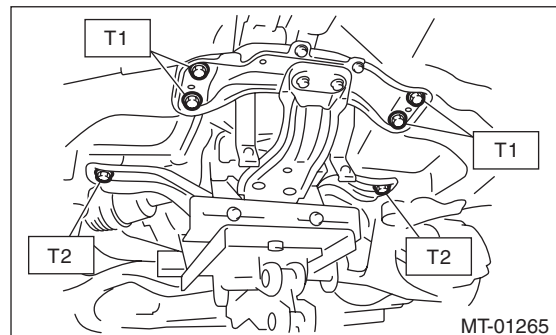
(A) Reverse check cable

7) Install the front crossmember and rear crossmember.

#### Tightening torque:

**T1: 75 N·m (7.6 kgf-m, 55.3 ft-lb)**

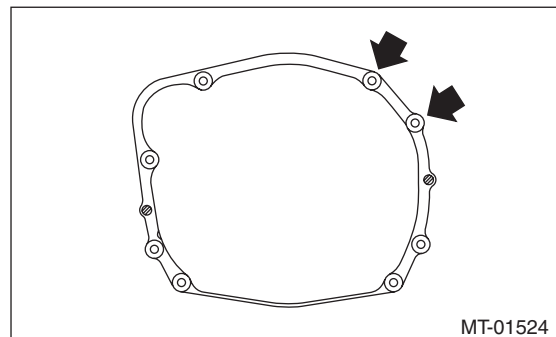
**T2: 140 N·m (14.3 kgf-m, 103 ft-lb)**



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

#### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



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## MANUAL TRANSMISSION AND DIFFERENTIAL

9) Make sure that the release bearing is completely inserted.

### NOTE:

- Push the release fork towards the operating cylinder side until a clicking sound is heard. Pull the release fork towards the engine side. If the release fork is not in contact with the case, the setting is complete.
- Confirm that the boot cover is set securely.



10) Install the pitching stopper bracket.

### Tightening torque:

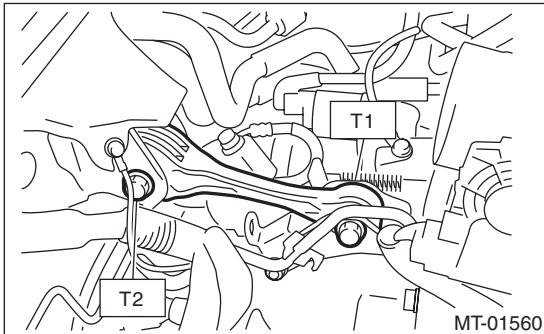
**41 N·m (4.2 kgf-m, 30.2 ft-lb)**

11) Install the pitching stopper.

### Tightening torque:

**T1: 50 N·m (5.1 kgf-m, 36.9 ft-lb)**

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



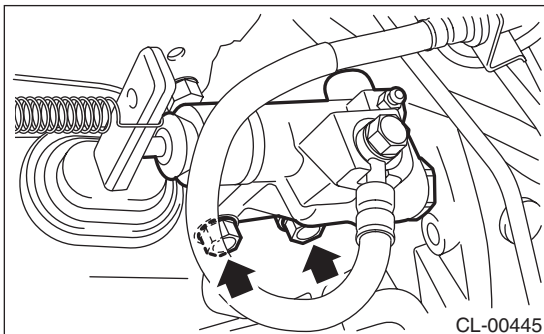
12) Install the clutch operating cylinder.

### Tightening torque:

**41 N·m (4.2 kgf-m, 30.2 ft-lb)**

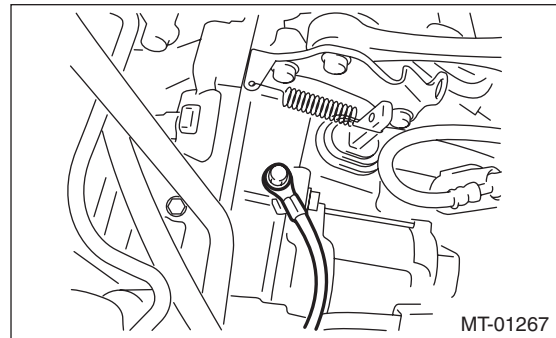
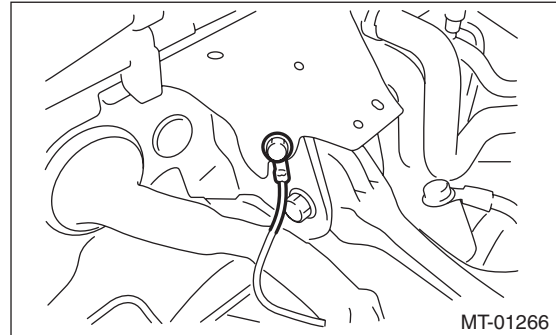
### NOTE:

Check that the clutch hose is routed properly.

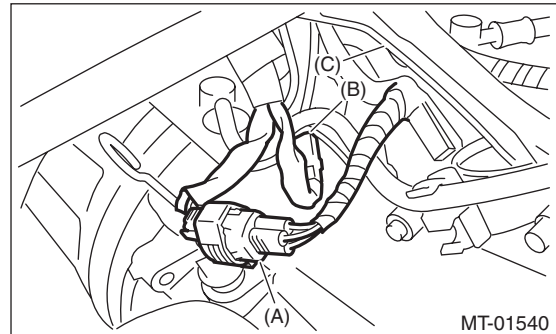


13) Install the starter assembly. <Ref. to SC(H4SO)-6, INSTALLATION, Starter.>

14) Attach the ground cable to the transmission and body.



15) Connect the following harness connectors, then attach the engine hanger rear.



- (A) Neutral position switch backup light switch connector
- (B) Rear oxygen sensor connector
- (C) Pitching stopper

16) Set the ST to side retainer.

ST 28399SA010 OIL SEAL PROTECTOR

17) Install the front drive shaft into the transmission.

### NOTE:

Replace the circlip of drive shaft with a new part.

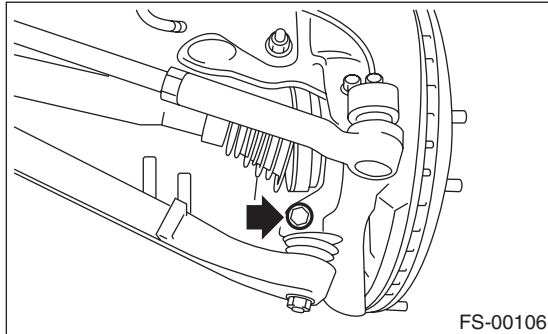
18) Install the front drive shaft into transmission, remove the ST and insert the drive shaft securely.

ST 28399SA010 OIL SEAL PROTECTOR

19) Install the ball joint of the front arm.

**Tightening torque:**

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



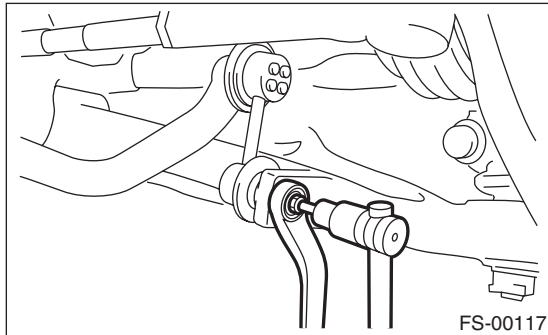
20) Install the front stabilizer link.

**Tightening torque:**

**45 N·m (4.6 kgf-m, 33.2 ft-lb)**

**NOTE:**

Use a new self-locking nut.



21) Install the heat shield cover. (If equipped)

22) Install the propeller shaft. <Ref. to DS-11, INSTALLATION, Propeller Shaft.>

23) Install the rear exhaust pipe and muffler.

24) Install the center exhaust pipe. <Ref. to EX(H4DOTC)-9, INSTALLATION, Center Exhaust Pipe.>

25) Fill the transmission gear oil.

<Ref. to 6MT-28, REPLACEMENT, Transmission Gear Oil.>

26) Install the intercooler. <Ref. to IN(H4DOTC)-12, INSTALLATION, Intercooler.>

27) Install the collector cover.

28) Connect the battery ground cable to the battery.