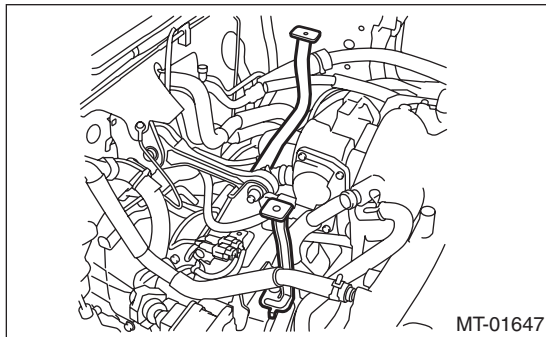


### 3. Manual Transmission Assembly

#### A: REMOVAL

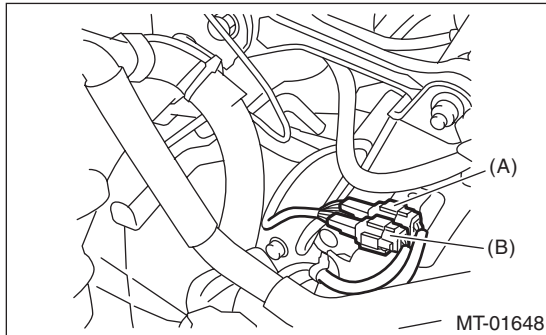
- 1) Set the vehicle on a lift.
- 2) Open the front hood.
- 3) Disconnect the ground cable from battery.
- 4) Drain transmission gear oil completely. <Ref. to 5MT-20, REPLACEMENT, Transmission Gear Oil.>
- 5) Remove the air intake chamber and intake boot. (non-turbo model) <Ref. to IN(H4SO)-7, REMOVAL, Air Intake Chamber.>
- 6) Remove the air intake chamber stay. (non-turbo model)



- 7) Remove the intercooler. (Turbo model) <Ref. to IN(H4DOTC)-13, REMOVAL, Intercooler.>

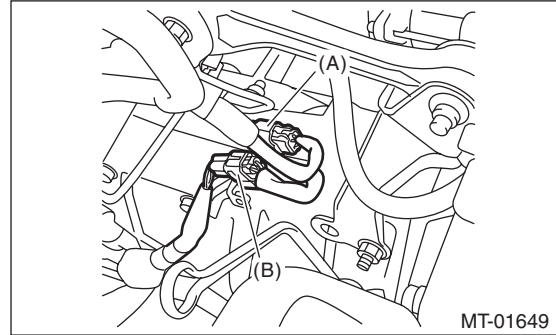
- 8) Disconnect the following connector.

- Non-turbo model



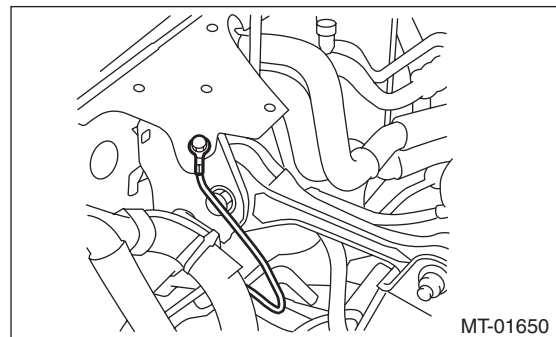
- (A) Neutral position switch connector (Brown)  
(B) Back-up light switch connector (Gray)

- Turbo model

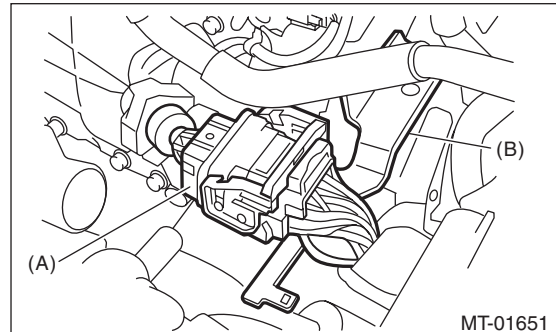


- (A) Neutral position switch and back-up light switch connector  
(B) Rear oxygen sensor connector

- 9) Disconnect the ground cable.



- 10) Disconnect the engine harness connectors, and then remove the engine hanger rear. (non-turbo model)

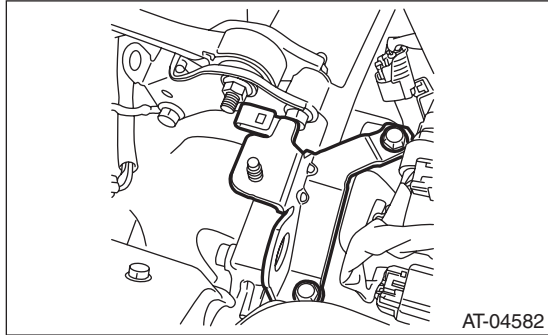


- (A) Engine harness connectors  
(B) Engine hanger rear

# Manual Transmission Assembly

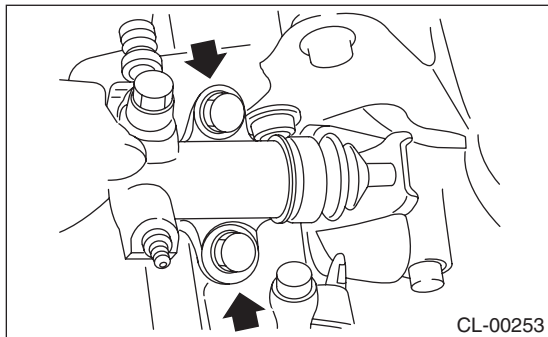
## MANUAL TRANSMISSION AND DIFFERENTIAL

- 11) Remove the engine hanger. (Turbo model)



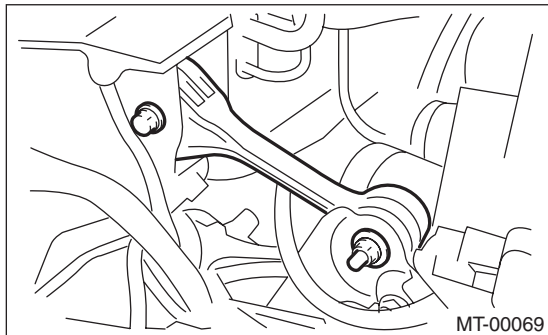
- 12) Remove the starter. <Ref. to SC(H4SO)-7, REMOVAL, Starter.>

- 13) Remove the operating cylinder from the transmission, and suspend on a wire.

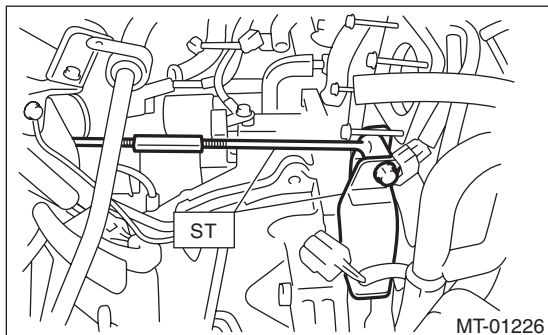


- 14) Remove the throttle body. (non-turbo model)  
<Ref. to FU(H4SO)-14, REMOVAL, Throttle Body.>

- 15) Remove the pitching stopper.



- 16) Set the ST.  
ST 41099AC000 ENGINE SUPPORT ASSY



- 17) Lift up the vehicle.

- 18) Remove the front and center exhaust pipes. (non-turbo model) <Ref. to EX(H4SO)-6, REMOVAL, Front Exhaust Pipe.> <Ref. to EX(H4SO)-9, REMOVAL, Center Exhaust Pipe.>

- 19) Remove the center exhaust pipe. (Turbo model) <Ref. to EX(H4DOTC)-9, REMOVAL, Center Exhaust Pipe.>

- 20) Remove the rear exhaust pipe and muffler.

- Non-turbo model

<Ref. to EX(H4SO)-10, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-12, REMOVAL, Muffler.>

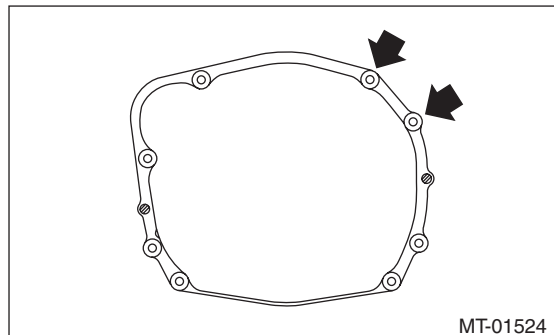
- Turbo model

<Ref. to EX(H4DOTC)-14, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-16, REMOVAL, Muffler.>

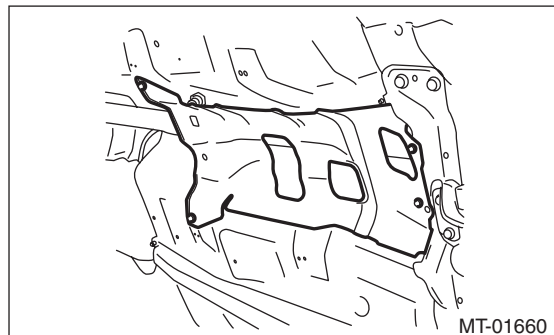
### CAUTION:

**When removing the exhaust pipes, make sure that each exhaust pipe does not drop off.**

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



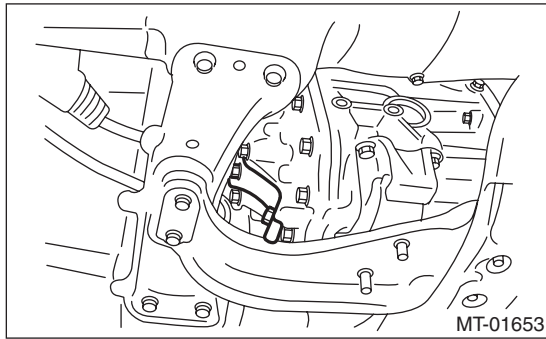
- 22) Remove the heat shield cover.



# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

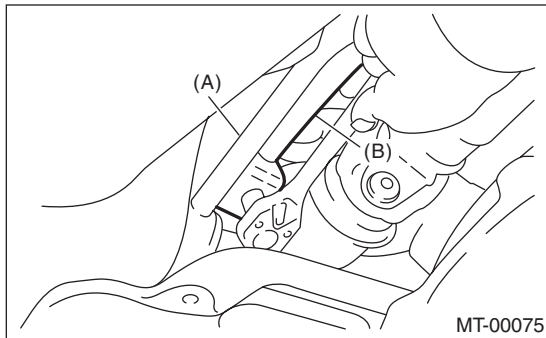
23) Remove the hanger bracket from the right side of transmission.



24) Remove the propeller shaft. <Ref. to DS-10, REMOVAL, Propeller Shaft.>

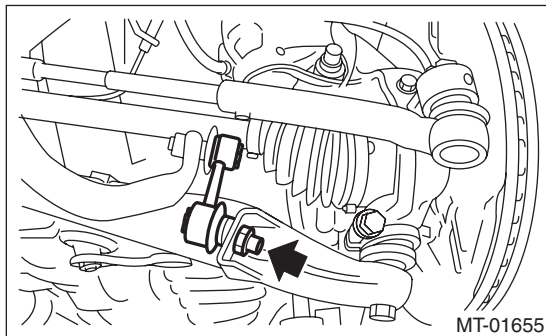
25) Remove the gear shift rod and the stay from the transmission.

- (1) Disconnect the stay from the transmission.
- (2) Disconnect the gear shift rod from the transmission.

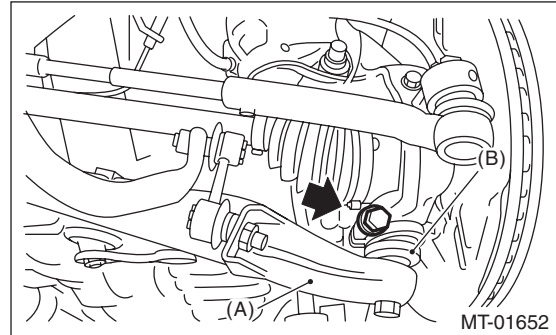


- (A) Stay  
(B) Gear shift rod

26) Disconnect the stabilizer link from the front arm.

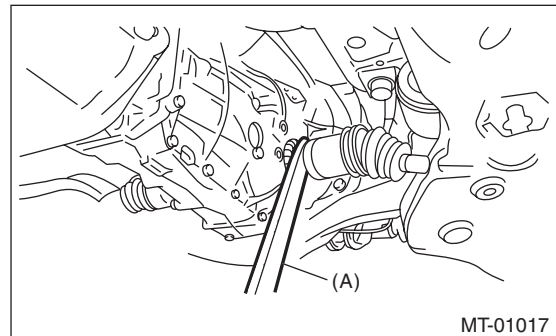


27) Remove the bolt securing the ball joint of the front arm to the housing, then separate the front arms and the housing.



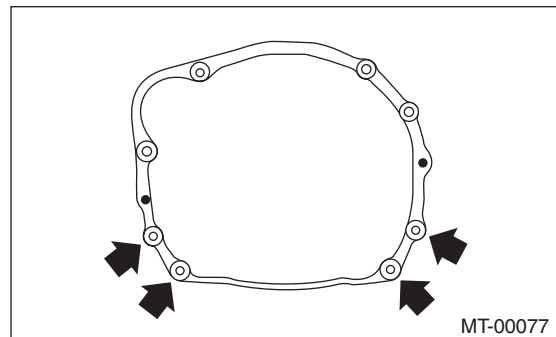
- (A) Front arm  
(B) Ball joint

28) Using a crowbar, remove the left and right front drive shaft from the transmission.



- (A) Crowbar

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



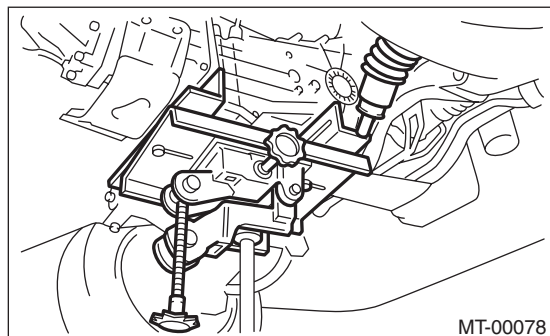
30) Place the transmission jack under the transmission.

# Manual Transmission Assembly

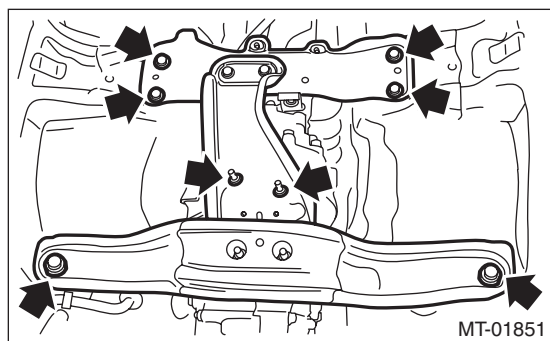
## MANUAL TRANSMISSION AND DIFFERENTIAL

### CAUTION:

Always support the transmission case with a transmission jack.



31) Remove the front crossmember and rear crossmember from the vehicle.



32) While lowering the transmission jack, tighten the turnbuckle of the ST, and incline the engine unit rearward.

33) Remove the transmission.

### NOTE:

Move the transmission jack towards the rear until the main shaft is withdrawn from the clutch disc.

34) Separate the transmission assembly from the transmission cushion rubber.

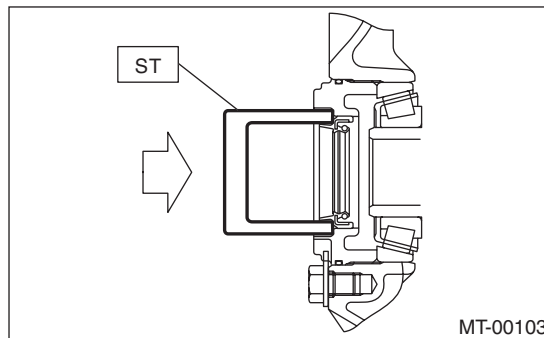
## B: INSTALLATION

1) Replace the differential side retainer oil seal.  
<Ref. to 5MT-31, REPLACEMENT, Differential Side Retainer Oil Seal.>

ST 18675AA000 DIFFERENTIAL SIDE OIL SEAL INSTALLER

### NOTE:

Be sure to replace the differential side retainer oil seal after removing the front drive shaft.



2) Tap the transmission hanger at the rear of the transmission using a rubber hammer to bend it until it roughly becomes in close contact with the transmission case.

### CAUTION:

Avoid excessive load and impact to the transmission case.

3) Install the transmission cushion rubber to the transmission, and tighten the bolt (A).

4) Install the transmission cushion rubber to the center crossmember, and tighten the nut (B).

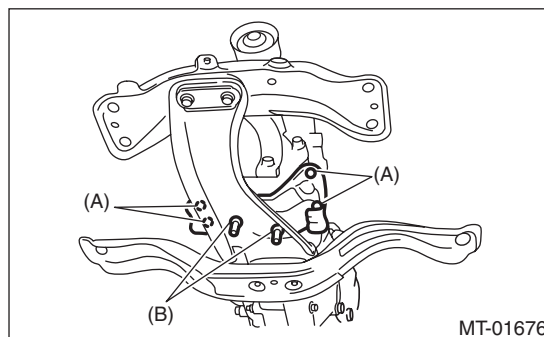
### Tightening torque:

#### Bolt (A)

35 N·m (3.6 kgf-m, 25.8 ft-lb)

#### Nut (B)

35 N·m (3.6 kgf-m, 25.8 ft-lb)



5) Install the transmission onto the engine.

(1) Lift up the transmission gradually using a transmission jack.

(2) Engage at the spline section.

### NOTE:

Be careful not to hit the main shaft against the clutch cover.

# Manual Transmission Assembly

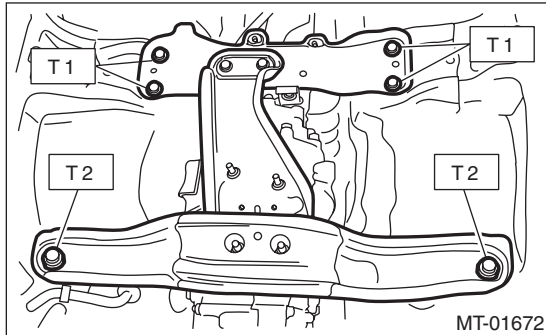
## MANUAL TRANSMISSION AND DIFFERENTIAL

- 6) While raising the transmission jack, loosen the turnbuckle of the ST, and set the engine unit to the original position.
- 7) Install the front crossmember and rear crossmember.

### **Tightening torque:**

**T1: 70 N·m (7.1 kgf-m, 51.6 ft-lb)**

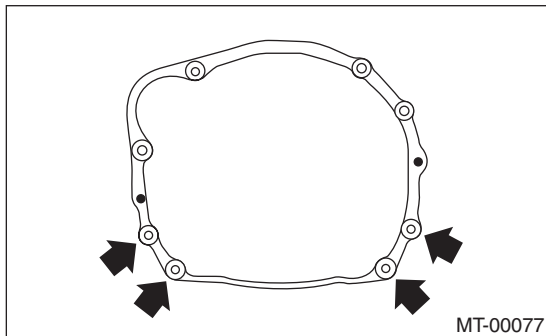
**T2: 140 N·m (14.3 kgf-m, 103.3 ft-lb)**



- 8) Take out the transmission jack.
- 9) Tighten the bolts and nuts which hold the lower side of transmission to the engine.

### **Tightening torque:**

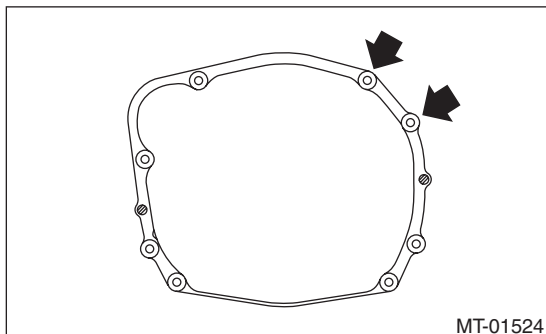
**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



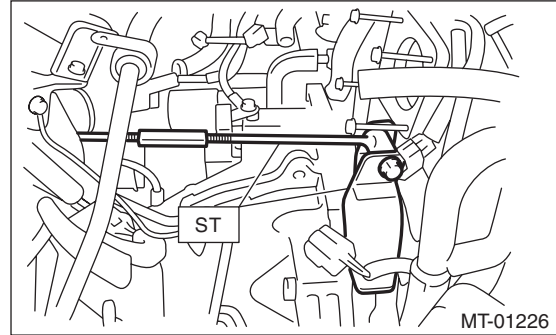
- 10) Connect the transmission to the engine.
  - (1) Install the starter. <Ref. to SC(H4SO)-7, INSTALLATION, Starter.>
  - (2) Tighten the bolts which hold the upper side of the transmission to the engine.

### **Tightening torque:**

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



- 11) Remove the ST.

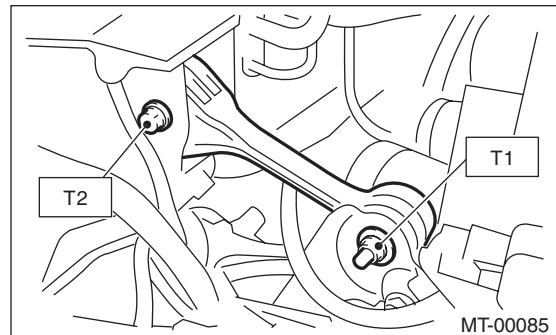


- 12) Install the pitching stopper.

### **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)**

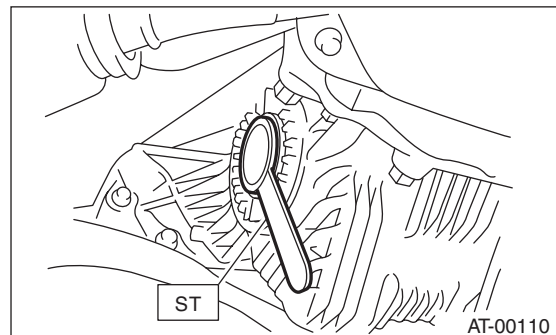


- 13) Install the throttle body. (non-turbo model)  
<Ref. to FU(H4SO)-14, INSTALLATION, Throttle Body.>

- 14) Lift up the vehicle.

- 15) Install the front drive shaft into the transmission.

ST 28399SA010 OIL SEAL PROTECTOR



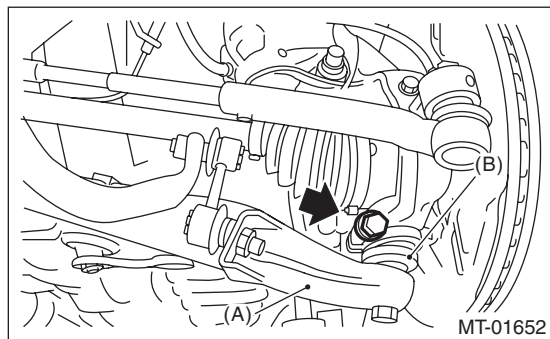
- 16) Insert the front arm ball joint into the housing lower part, and tighten the mounting bolt.

# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



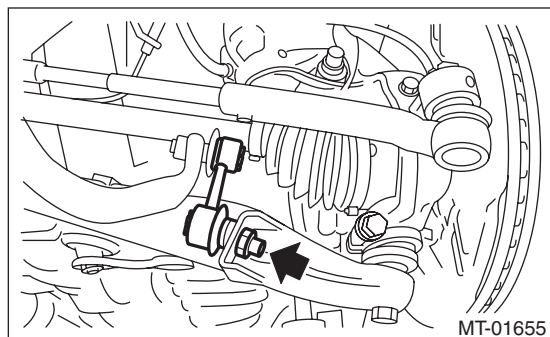
(A) Front arm

(B) Ball joint

17) Attach the stabilizer link to the front arm.

### Tightening torque:

**30 N·m (3.1 kgf-m, 22.1 ft-lb)**

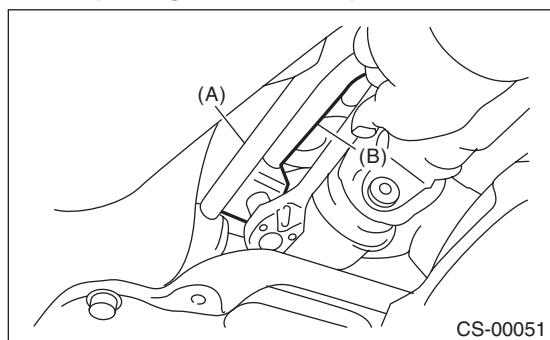


18) Attach the gear shift rod and stay.

(1) Attach the gear shift rod to the transmission.

### Tightening torque:

**12 N·m (1.2 kgf-m, 8.9 ft-lb)**



(A) Stay

(B) Gear shift rod

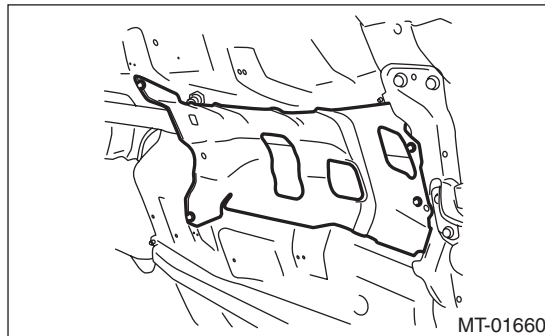
(2) Install the stay to the transmission bracket.

### Tightening torque:

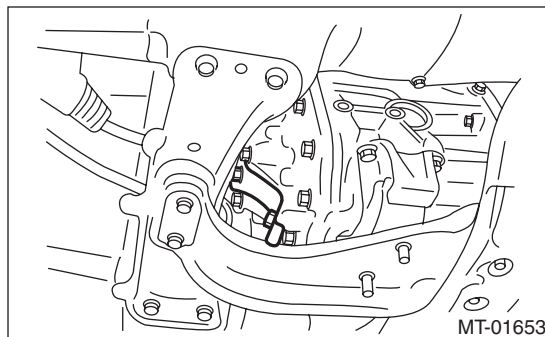
**18 N·m (1.8 kgf-m, 13.3 ft-lb)**

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

20) Install the heat shield cover.



21) Install the hanger bracket to the transmission.



22) Install the rear exhaust pipe and muffler.

- Non-turbo model

<Ref. to EX(H4SO)-10, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-12, INSTALLATION, Muffler.>

- Turbo model

<Ref. to EX(H4DOTC)-14, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-16, INSTALLATION, Muffler.>

23) Install the front and center exhaust pipe. (non-turbo model) <Ref. to EX(H4SO)-7, INSTALLATION, Front Exhaust Pipe.> <Ref. to EX(H4SO)-9, INSTALLATION, Center Exhaust Pipe.>

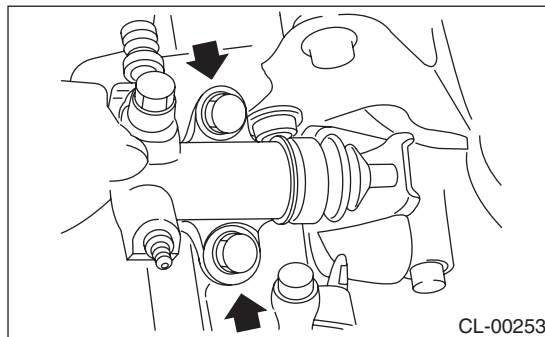
24) Install the center exhaust pipe. (Turbo model) <Ref. to EX(H4DOTC)-10, INSTALLATION, Center Exhaust Pipe.>

25) Install the under cover. <Ref. to EI-26, INSTALLATION, Front Under Cover.>

26) Install the operating cylinder.

### Tightening torque:

**37 N·m (3.8 kgf-m, 27.3 ft-lb)**



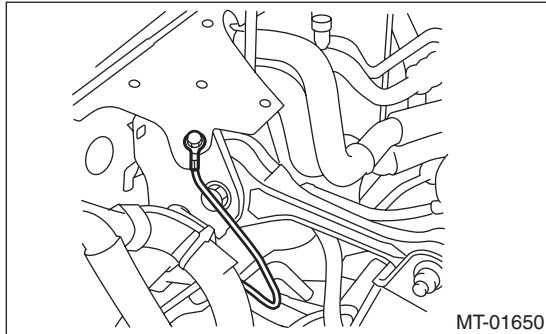
# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

27) Install the ground cable.

**Tightening torque:**

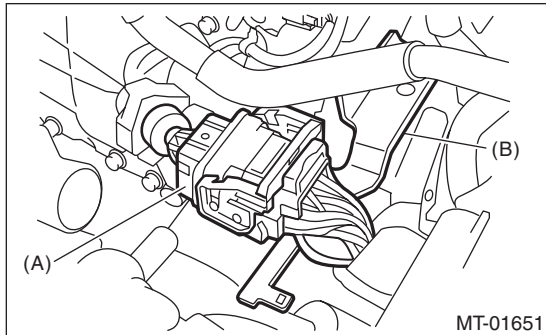
**13 N·m (1.3 kgf-m, 9.6 ft-lb)**



28) Install the engine hanger rear, and then connect the engine harness connector. (non-turbo model)

**Tightening torque:**

**16 N·m (1.6 kgf-m, 11.8 ft-lb)**

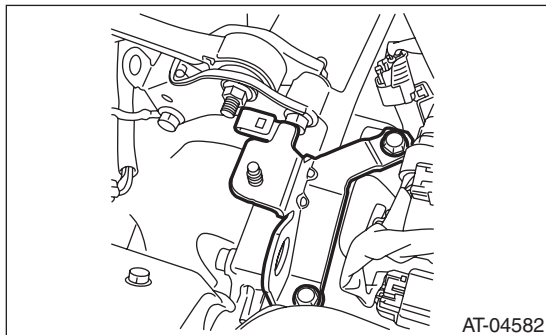


- (A) Engine harness connectors
- (B) Engine hanger rear

29) Install the engine hanger. (Turbo model)

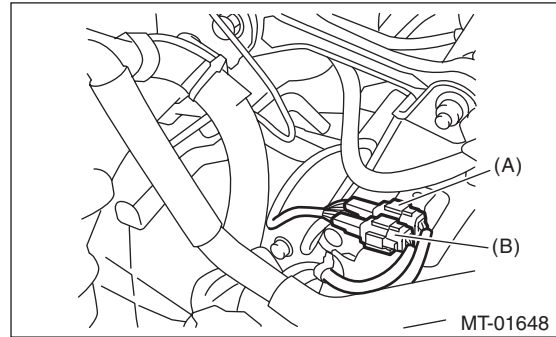
**Tightening torque:**

**16 N·m (1.6 kgf-m, 11.8 ft-lb)**



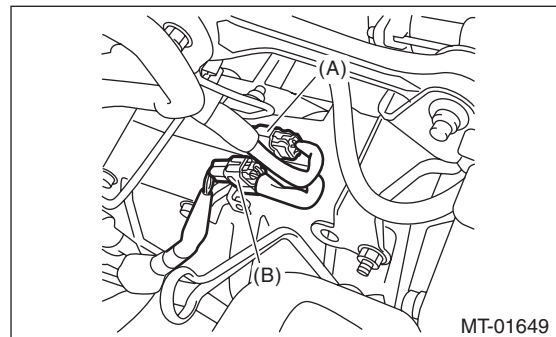
30) Connect the following connectors.

- Non-turbo model



- (A) Neutral position switch connector (Brown)
- (B) Back-up light switch connector (Gray)

- Turbo model



- (A) Neutral position switch and back-up light switch connector
- (B) Rear oxygen sensor connector

31) Install the air intake chamber stay. (non-turbo model)

**Tightening torque:**

**16 N·m (1.6 kgf-m, 11.8 ft-lb)**

32) Install the air intake chamber and intake boot. (non-turbo model)

<Ref. to IN(H4SO)-7, INSTALLATION, Air Intake Chamber.>

33) Install the intercooler. (Turbo model) <Ref. to IN(H4DOTC)-13, INSTALLATION, Intercooler.>

34) Connect the ground cable to battery.

35) Remove the lift arm from vehicle.