

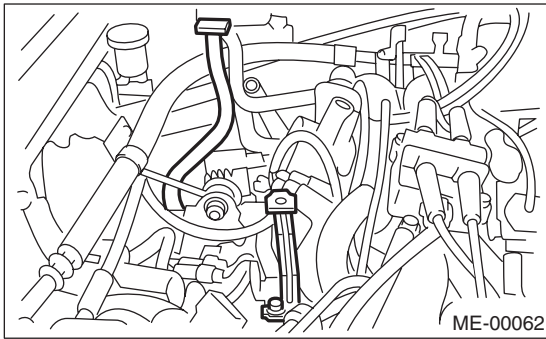
# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

### 3. Manual Transmission Assembly

#### A: REMOVAL

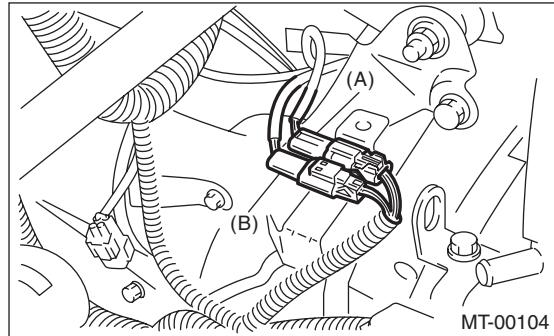
- 1) Set the vehicle on a lift.
- 2) Open the front hood fully, and support with stay.
- 3) Disconnect the ground cable from the battery.
- 4) Drain transmission gear oil completely.  
<Ref. to 5MT-25, REPLACEMENT, Transmission Gear Oil.>
- 5) Remove the intake boot and air intake chamber. (Non-turbo model) <Ref. to IN(H4SO)-6, REMOVAL, Air Intake Chamber.>
- 6) Remove the air intake chamber stay. (Non-turbo model)



- 7) Remove the intercooler. (Turbo model) <Ref. to IN(H4DOTC)-11, REMOVAL, Intercooler.>

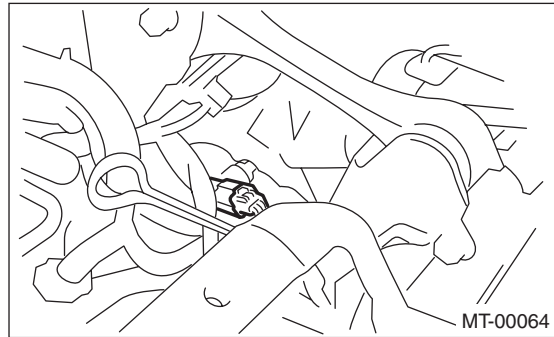
- 8) Disconnect the following connectors and transmission cables.

- (1) Neutral position switch connector
  - (2) Back-up light switch connector
- Non-turbo model

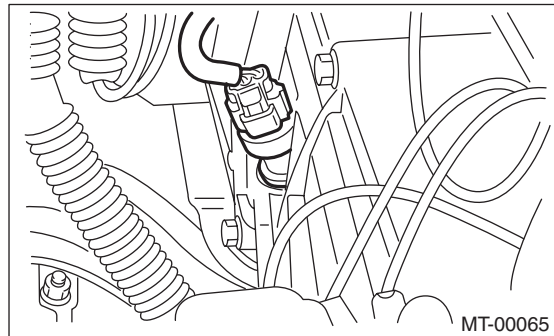


- (A) Neutral position switch connector  
(B) Back-up light switch connector

- Turbo model



- (3) Vehicle speed sensor connector

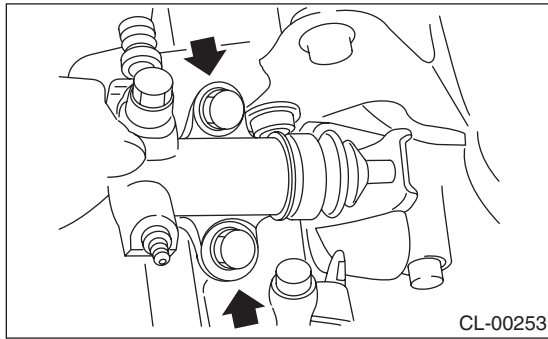


- 9) Remove the starter. <Ref. to SC(H4SO)-6, REMOVAL, Starter.>

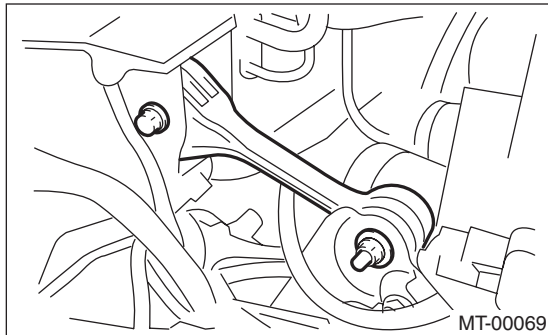
# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

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



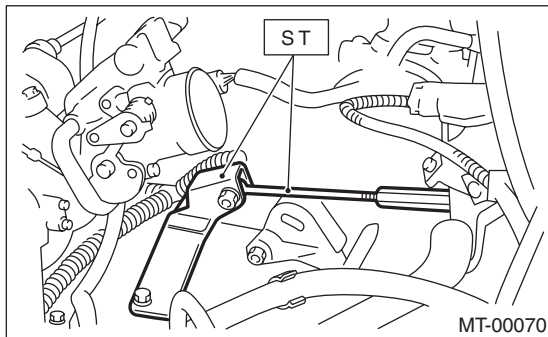
- 11) Remove the pitching stopper.



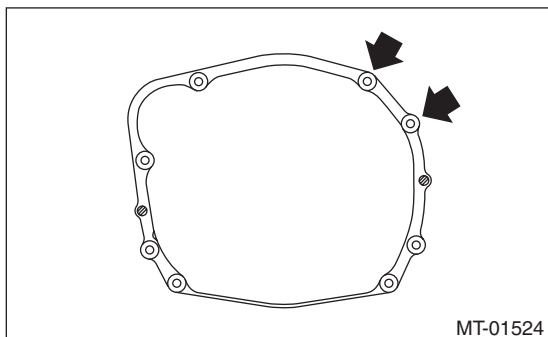
- 12) Set the ST.

ST 41099AA010 ENGINE SUPPORT BRACKET

ST 41099AA020 ENGINE SUPPORT



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



- 14) Remove the front and center exhaust pipes. (Non-turbo model) <Ref. to EX(H4SO)-4, REMOVAL, Front Exhaust Pipe.>

- 15) Remove the center exhaust pipe. (Turbo model) <Ref. to EX(H4DOTC)-8, REMOVAL, Center Exhaust Pipe.>

- 16) Remove the rear exhaust pipe and muffler.

• Non-turbo model

<Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-10, REMOVAL, Muffler.>

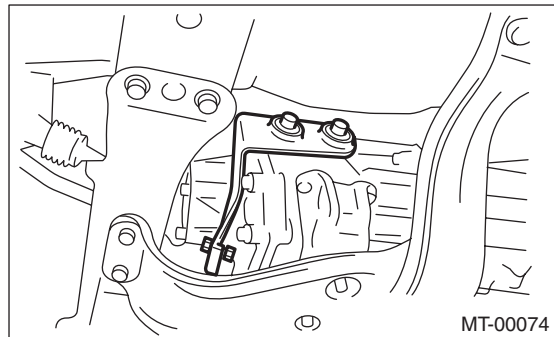
• Turbo model

<Ref. to EX(H4DOTC)-13, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-14, REMOVAL, Muffler.>

### CAUTION:

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

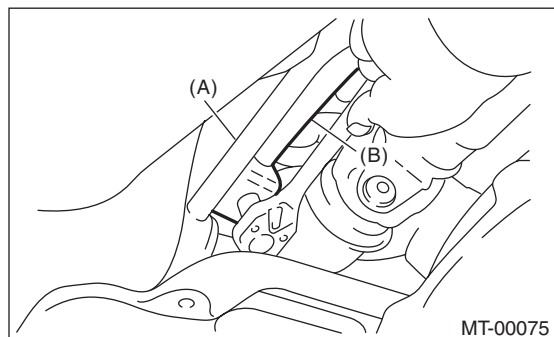
- 17) Remove the hanger bracket from the right side of transmission.



- 18) Remove the propeller shaft. <Ref. to DS-13, REMOVAL, Propeller Shaft.>

- 19) Remove the gear shift rod and the stay from the transmission.

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



(A) Stay

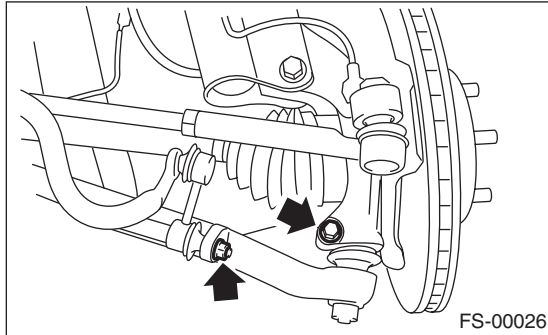
(B) Gear shift rod

- 20) Separate the stabilizer link from the transverse link.

# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

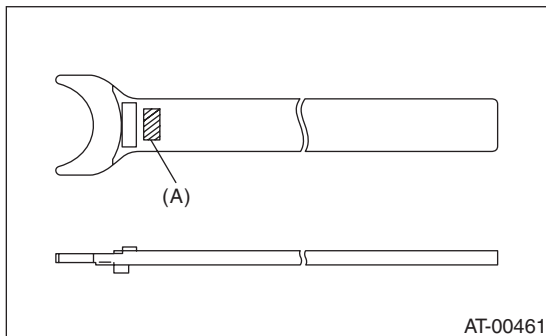
21) Remove the bolt securing the ball joint of the transverse link to the housing, then separate the transvers link and the housing.



22) Using the ST, remove the front drive shaft from the transmission side.

### NOTE:

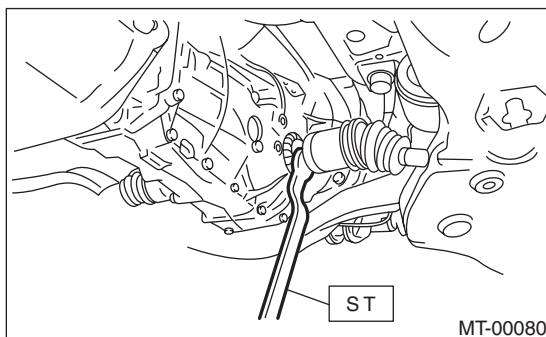
- Face letters "MT" on the handle of the ST to the transmission side.



(A) Letter "MT"

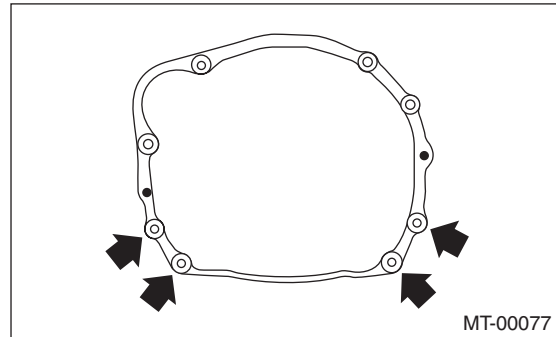
- Keep an angle so that the protrusion of the ST touches the transmission case during the operation.

ST 28399SA000 FRONT DRIVE SHAFT REMOVER



23) Hold the transmission side joint (AARi) of front drive shaft by hand and extract the housing from the transmission by pressing it outside so as not to stretch the boot on the AARi side.

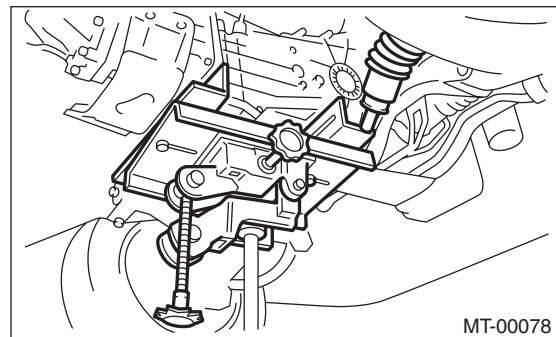
24) Remove the bolts and nuts which hold lower side of transmission to engine.



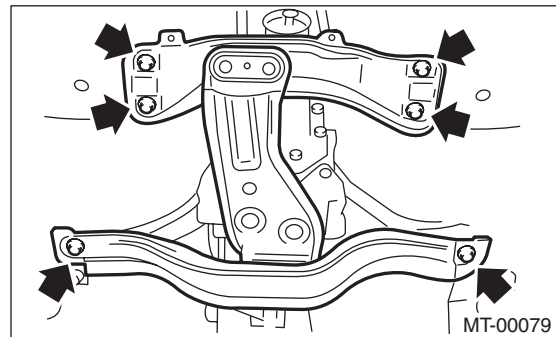
25) Place the transmission jack under the transmission.

### CAUTION:

**Always support the transmission case with a transmission jack.**



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



27) Tighten the turnbuckle of the ST while lowering the transmission jack to tilt the engine assembly towards the back.

28) Remove the transmission.

### NOTE:

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

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

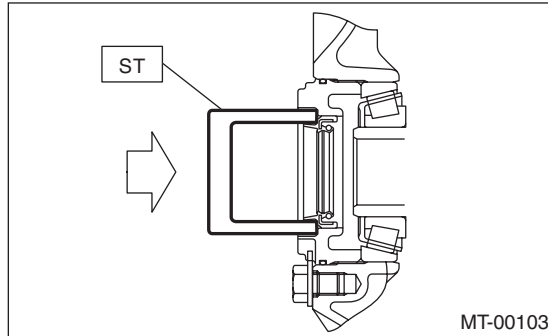
### B: INSTALLATION

1) Replace the differential side retainer oil seal with a new part. <Ref. to 5MT-35, 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 the removing the front drive shaft.



2) Install the transmission cushion rubber to the transmission assembly.

#### Tightening torque:

**35 N·m (3.6 kgf-m, 25.8 ft-lb)**

3) Install the transmission onto the engine.

- (1) Gradually raise the transmission with the transmission jack.
- (2) Engage at the spline section.

#### NOTE:

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

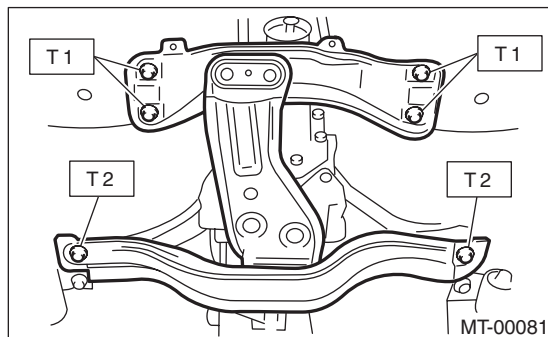
4) Loosen the turnbuckle of the ST while raising the transmission jack to return the engine to its original position.

5) 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)**

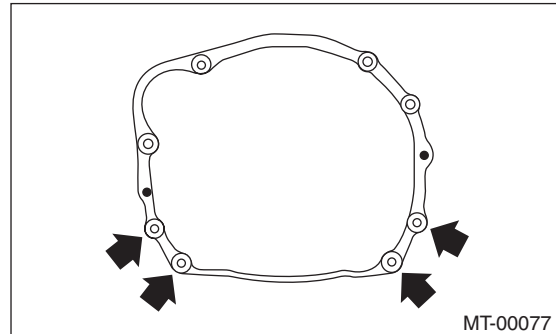


6) Take out the transmission jack.

7) Tighten the nuts and bolts which holds the lower side of the transmission to the engine.

#### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



8) Connect the engine and transmission.

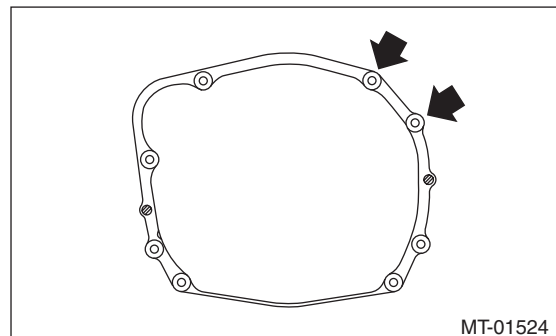
(1) Install the starter.

<Ref. to SC(H4SO)-6, INSTALLATION, Starter.>

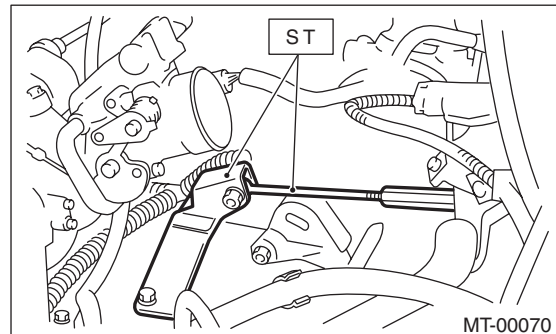
(2) Tighten the bolts which holds the upper side of the transmission to the engine.

#### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



9) Remove the ST.



# Manual Transmission Assembly

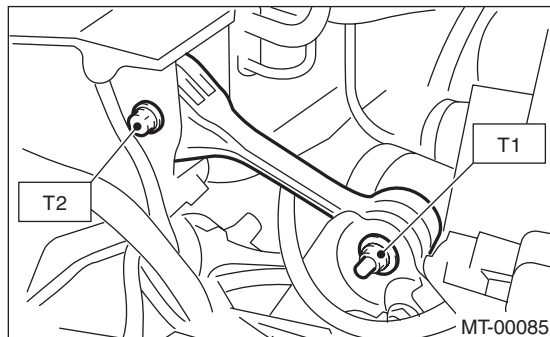
## MANUAL TRANSMISSION AND DIFFERENTIAL

10) 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)**



11) Lift up the vehicle.

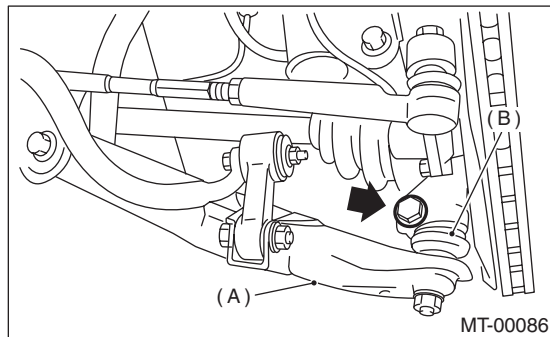
12) Install the front drive shaft into the transmission. <Ref. to DS-31, INSTALLATION, Front Drive Shaft.>

ST 28399SA010 FRONT DRIVE SHAFT OIL SEAL PROTECTOR

13) Insert the ball joints of the transverse link into the housing, then tighten the installing bolts.

### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



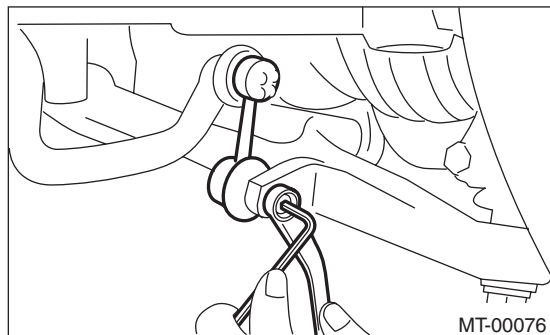
(A) Transverse link

(B) Ball joint

14) Attach the stabilizer link to the transverse link.

### Tightening torque:

**45 N·m (4.6 kgf-m, 33.2 ft-lb)**

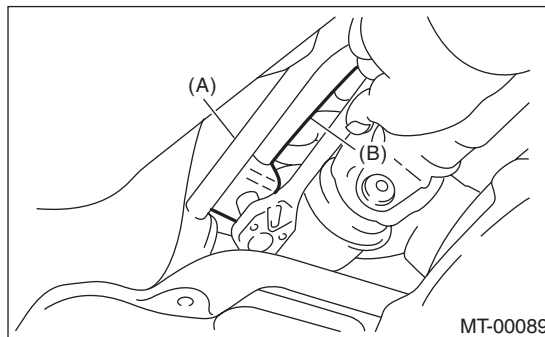


15) Attach the gear shift rod and stay.

(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

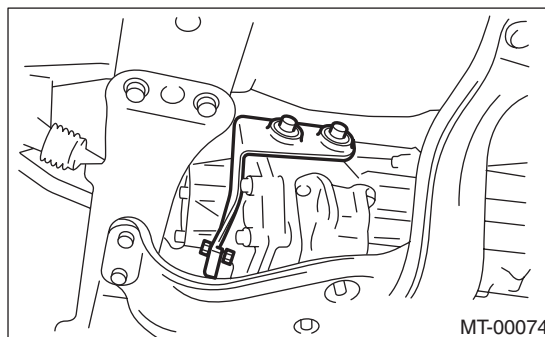
(2) Attach the stay to the transmission.

### Tightening torque:

**18 N·m (1.8 kgf-m, 13.3 ft-lb)**

16) Install the propeller shaft. <Ref. to DS-14, INSTALLATION, Propeller Shaft.>

17) Install the hanger bracket on the right side of the transmission.



18) Install the rear exhaust pipe and muffler.

- Non-turbo model

<Ref. to EX(H4SO)-8, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-10, INSTALLATION, Muffler.>

- Turbo model

<Ref. to EX(H4DOTC)-13, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-14, INSTALLATION, Muffler.>

19) Install the front exhaust pipe and the center exhaust pipe. (Non-turbo model)

<Ref. to EX(H4SO)-5, INSTALLATION, Front Exhaust Pipe.>

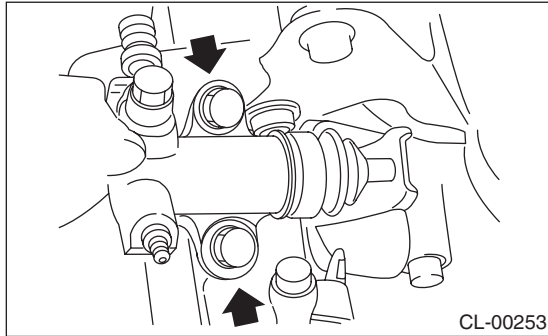
20) Install the center exhaust pipe. (Turbo model)  
<Ref. to EX(H4DOTC)-9, INSTALLATION, Center Exhaust Pipe.>

21) Install the under cover.

22) Install the operating cylinder.

**Tightening torque:**

**37 N·m (3.8 kgf-m, 27.5 ft-lb)**



23) Connect the following connectors.

- (1) Transmission ground cable

**Tightening torque:**

**13 N·m (1.3 kgf-m, 9.4 ft-lb)**

- (2) Vehicle speed sensor connector
- (3) Neutral position switch connector
- (4) Back-up light switch connector

24) Install the air intake chamber stay.

25) Install the intake boot and air intake chamber.  
<Ref. to IN(H4SO)-6, INSTALLATION, Air Intake Chamber.>

26) Install the intercooler. (Turbo model) <Ref. to IN(H4DOTC)-11, INSTALLATION, Intercooler.>

27) Pour transmission gear oil through the gauge hole. <Ref. to 5MT-25, REPLACEMENT, Transmission Gear Oil.>

28) Connect the ground cable to the battery.