

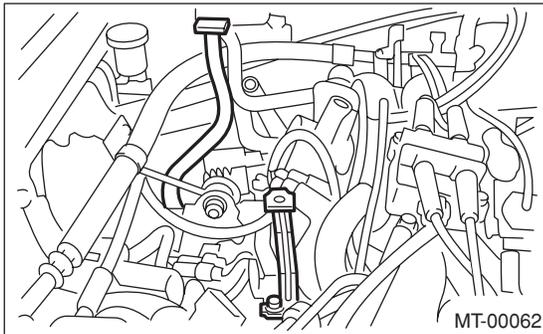
# Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

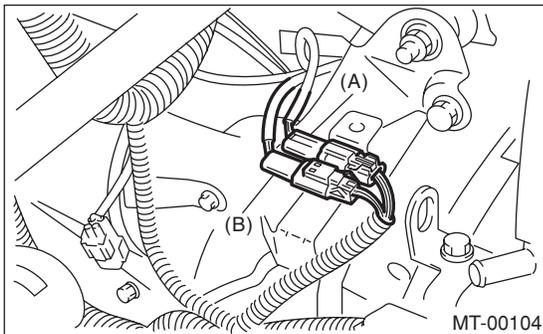
## 3. Manual Transmission Assembly

### A: REMOVAL

- 1) Open the front hood fully, and support with stay.
- 2) Disconnect the ground cable from battery.
- 3) Drain transmission gear oil completely.
- 4) Remove the air intake chamber and air cleaner case. (Non-turbo model) <Ref. to IN(H4SO)-9, REMOVAL, Air Intake Chamber.> <Ref. to IN(H4SO)-7, REMOVAL, Air Cleaner Case.>
- 5) Remove the air intake chamber stay. (Non-turbo model).

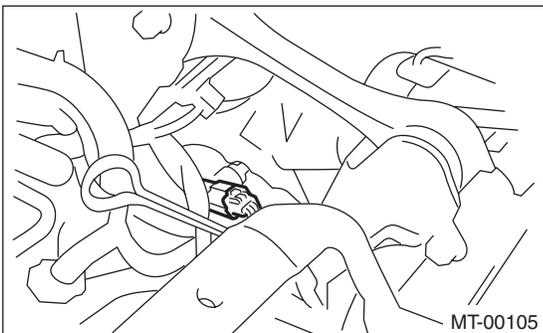


- 6) Remove the intercooler. (Turbo model) <Ref. to IN(H4DOTC)-12, REMOVAL, Intercooler.>
  - 7) Disconnect the connector of back-up light switch and neutral position switch.
- Non-turbo model

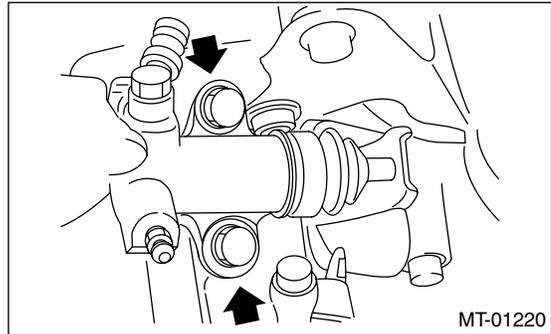


- (A) Neutral position switch connector (Brown)
- (B) Back-up light switch (Gray)

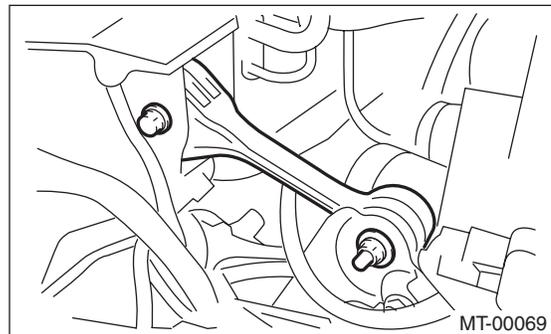
- Turbo model



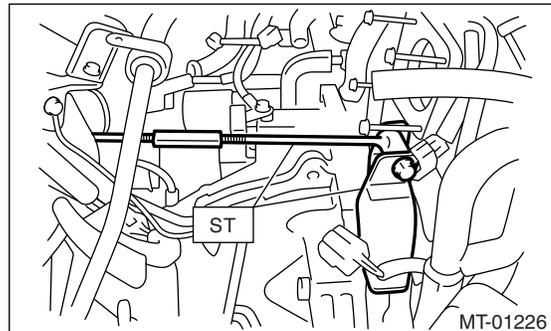
- 8) Remove the starter. <Ref. to SC(H4SO)-6, REMOVAL, Starter.>
- 9) Remove the operating cylinder from transmission.



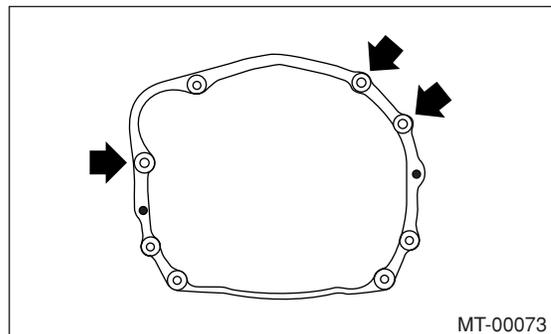
- 10) Remove the pitching stopper.



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



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



- 13) Lift-up the vehicle.

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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.

### CAUTION:

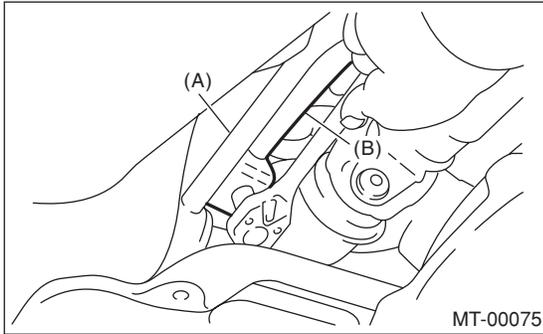
**When removing the exhaust pipes, be careful each exhaust pipe does not drop out.**

17) Remove the heat shield cover. (if equipped)

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

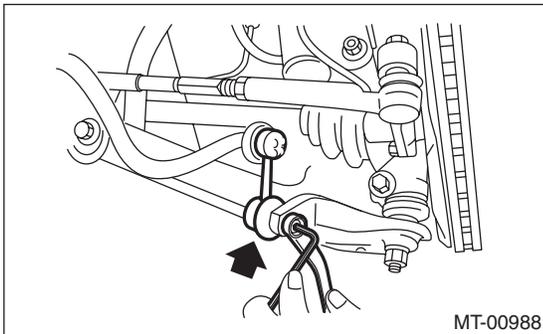
19) Remove the gear shift rod and the stay from transmission.

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

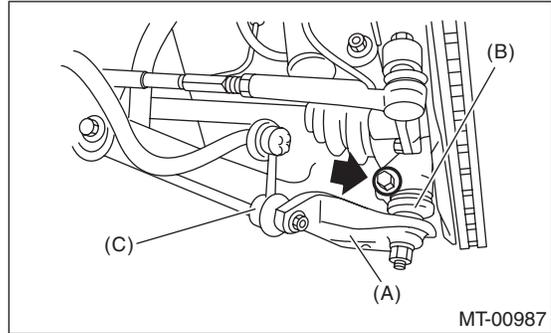


- (A) Stay  
(B) Rod

20) Remove the stabilizer link from front arm.

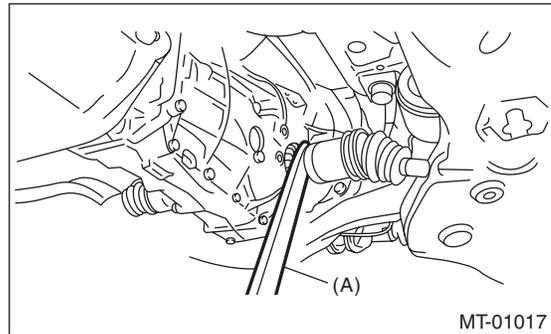


21) Remove the bolt securing ball joint of front arm to housing.



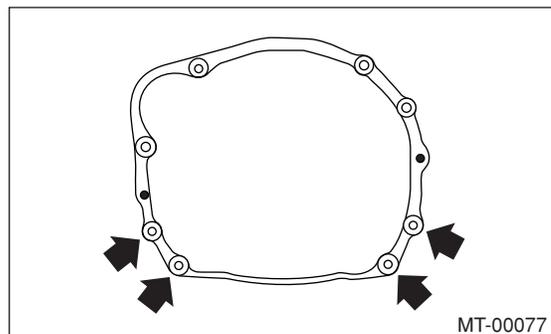
- (A) Front arm  
(B) Ball joint  
(C) Stabilizer link

22) Using the lever, remove the left and right front drive shaft from transmission side.



- (A) Lever

23) Remove the nuts which hold lower side of transmission to engine.



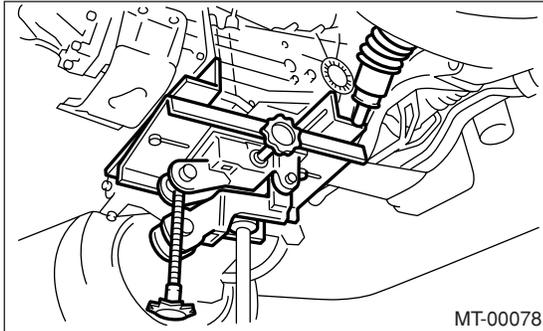
24) Place the transmission jack under transmission.

# Manual Transmission Assembly

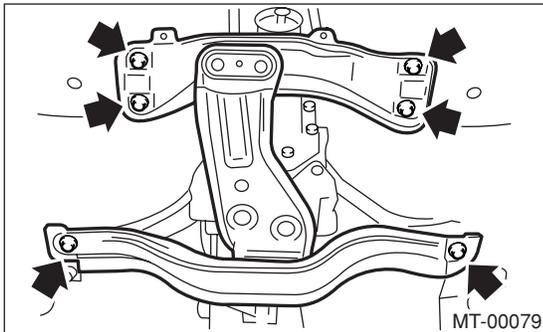
MANUAL TRANSMISSION AND DIFFERENTIAL

## CAUTION:

Always support transmission case with a transmission jack.



25) Remove the transmission rear crossmember from vehicle.



26) Remove the transmission.

## NOTE:

- (1) Move the transmission jack toward rear until main shaft is withdrawn from clutch disc.
- (2) Shrink the turnbuckle of ST while lowering the transmission jack to tilt the engine assembly backward.
- (3) Separate the transmission assembly from rear cushion rubber.

## B: INSTALLATION

1) Install the rear cushion rubber to transmission assembly.

### Tightening torque:

**35 N·m (3.6 kgf-m, 26 ft-lb)**

- 2) Install the transmission onto engine.
  - (1) Gradually raise the transmission with transmission jack.
  - (2) Loosen the turnbuckle of ST to return the engine assembly to its original position.
  - (3) Engage them at splines.

## NOTE:

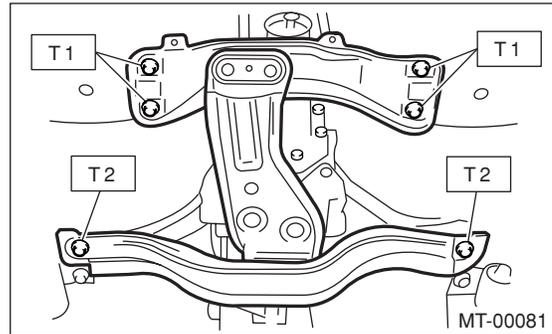
Be careful not to strike the main shaft against clutch housing cover.

3) Install the transmission rear crossmember.

### Tightening torque:

**T1: 75 N·m (7.6 kgf-m, 55 ft-lb)**

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

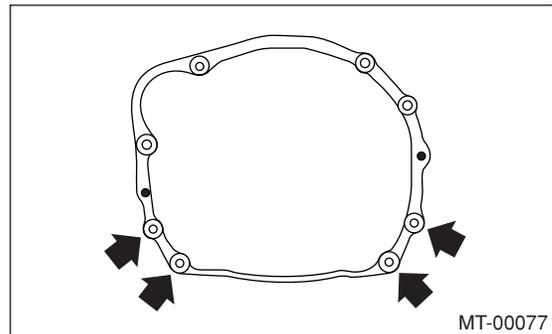


4) Take out the transmission jack.

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

### Tightening torque:

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



6) Connect the transmission to engine.

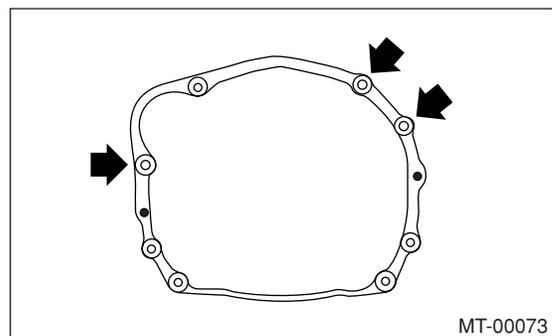
(1) Install the starter.

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

(2) Tighten the bolts that hold upper side of transmission to engine.

### Tightening torque:

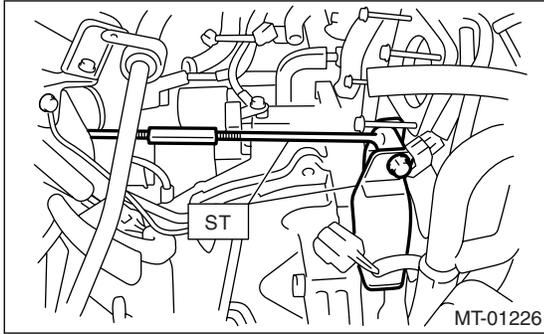
**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



# Manual Transmission Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

7) Remove the ST.

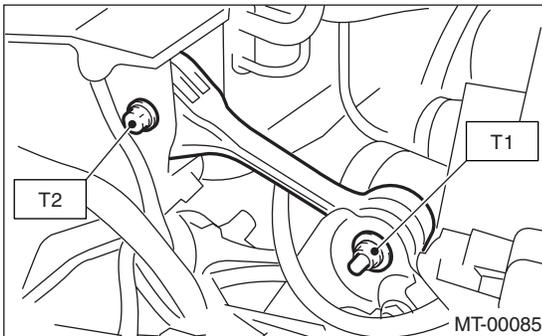


8) Install the pitching stopper.

**Tightening torque:**

**T1: 50 N·m (5.1 kgf-m, 37 ft-lb)**

**T2: 58 N·m (5.9 kgf-m, 43 ft-lb)**



9) Lift-up the vehicle.

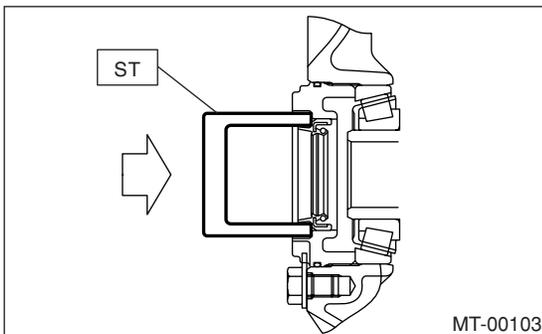
10) Install the front drive shaft into transmission.

11) Replace the differential side retainer oil seal.  
<Ref. to 5MT-33, REPLACEMENT, Differential Side Retainer Oil Seal.>

ST 18675AA000 DIFFERENTIAL SIDE OIL SEAL INSTALLER

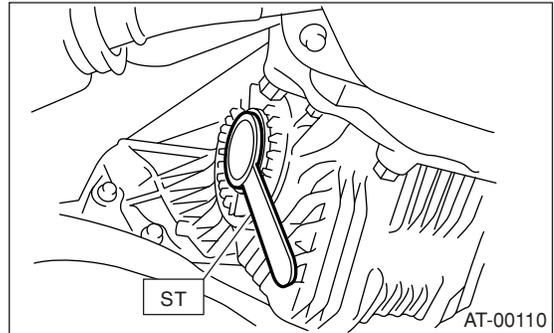
**NOTE:**

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



12) Install the front drive shaft into transmission.

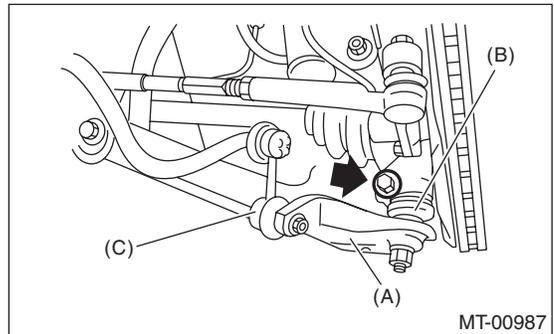
ST 28399SA010 FRONT DRIVE SHAFT OIL SEAL PROTECTOR



13) Install the ball joint of lower arm.

**Tightening torque:**

**49 N·m (5.0 kgf-m, 36 ft-lb)**



(A) Front arm

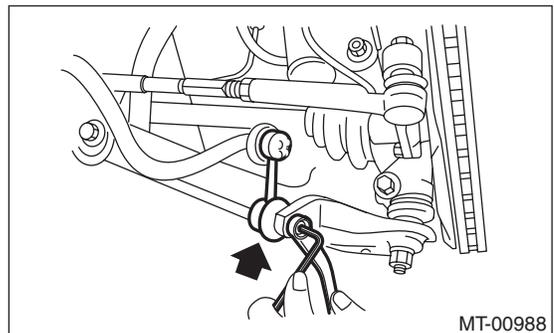
(B) Ball joint

(C) Stabilizer link

14) Install the stabilizer link into front arm.

**Tightening torque:**

**45 N·m (4.6 kgf-m, 33.2 ft-lb)**

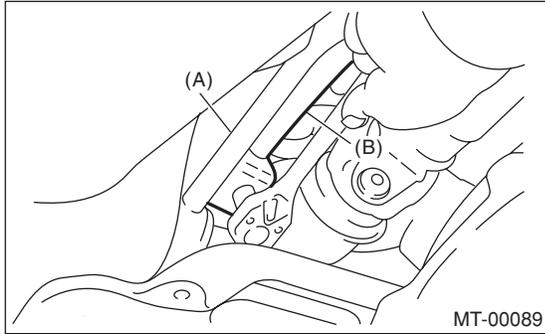


15) Install the gear shift rod and stay.

# Manual Transmission Assembly

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- (1) Install the gear shift rod into transmission.



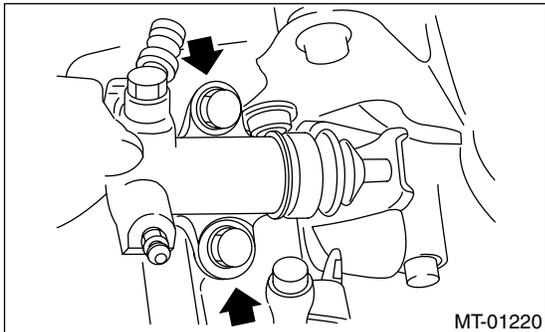
- (A) Stay  
(B) Rod

- (2) Install the stay onto transmission.

- 16) Install the propeller shaft. <Ref. to DS-11, INSTALLATION, Propeller Shaft.>  
17) Install the heat shield cover. (if equipped)  
18) Install the rear exhaust pipe and muffler.  
19) Install the front and 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 operating cylinder.

### **Tightening torque:**

**37 N·m (3.8 kgf·m, 27.5 ft-lb)**



- 22) Connect the following connectors:  
(1) Transmission ground cable

### **Tightening torque:**

**13 N·m (1.3 kgf·m, 9.4 ft-lb)**

- (2) Neutral position switch connector  
(3) Back-up light switch connector  
23) Fill transmission gear oil through the transmission level gauge hole.  
24) Install the air intake chamber stay. (Non-turbo model).

### **Tightening torque:**

**16 N·m (1.6 kgf·m, 11.6 ft-lb)**

- 25) Install the air intake chamber and air cleaner case. (Non-turbo model) <Ref. to IN(H4SO)-7, INSTALLATION, Air Cleaner Case.> <Ref. to IN(H4SO)-9, INSTALLATION, Air Intake Chamber.>

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

- 27) Connect the battery ground cable to battery.

- 28) Take off the vehicle from lift arms.