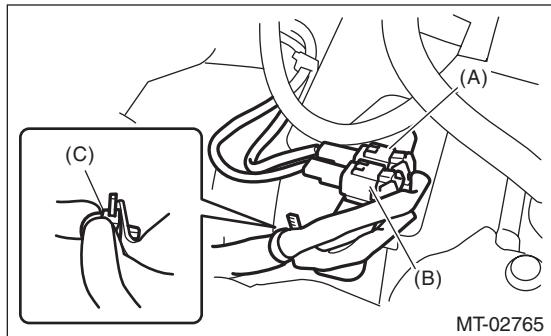


3. Manual Transmission Assembly

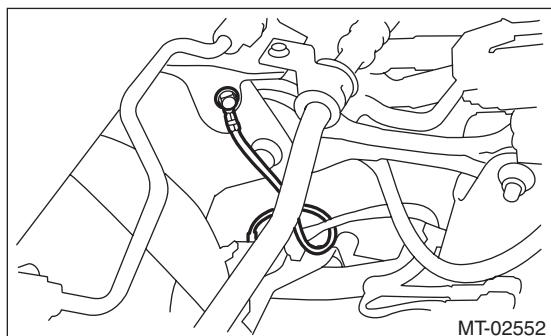
A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Drain transmission gear oil completely. <Ref. to 5MT-22, REPLACEMENT, Transmission Gear Oil.>
- 3) Remove the air intake boot. <Ref. to IN(H4DO)-12, REMOVAL, Air Intake Boot.>
- 4) Disconnect the following connectors and remove the clip from the bracket.

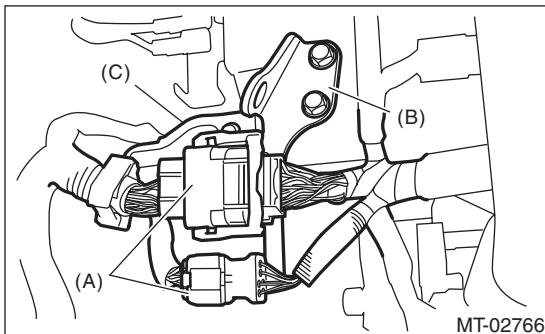


(A) Neutral position switch connector (brown)
 (B) Back-up light switch connector (gray)
 (C) Clip

- 5) Disconnect the transmission radio ground cord terminal.

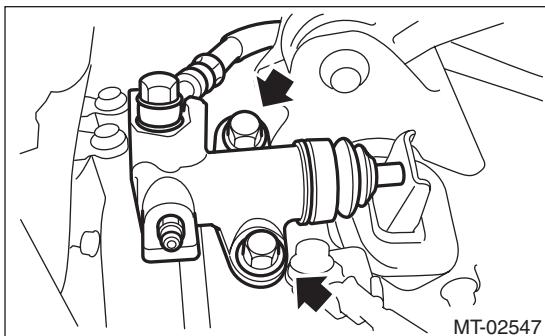


- 6) Remove the harness bracket and disconnect the engine harness connectors, and then remove the engine hanger rear.

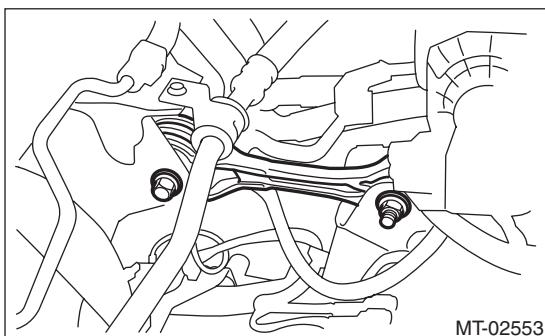


(A) Engine harness connectors
 (B) Engine hanger rear
 (C) Harness bracket

- 7) Remove the starter. <Ref. to SC(H4DO)-9, REMOVAL, Starter.>
- 8) Remove the operating cylinder from the transmission, and suspend on a wire.



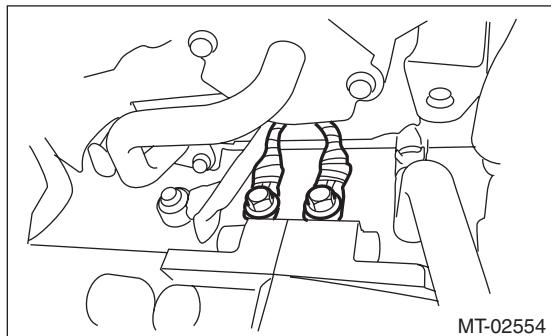
- 9) Remove the pitching stopper.



Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

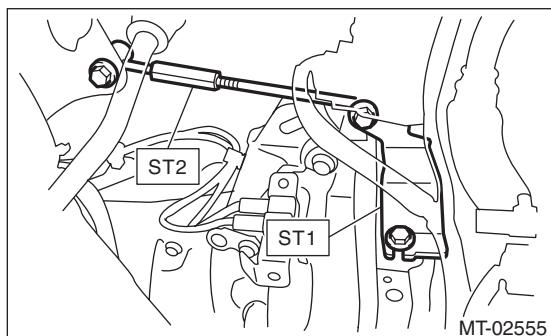
- 10) Disconnect two ground cables from rear end of the engine.



- 11) Set the ST.

ST1 41099AA010 ENGINE SUPPORT BRACKET

ST2 41099AA020 ENGINE SUPPORT

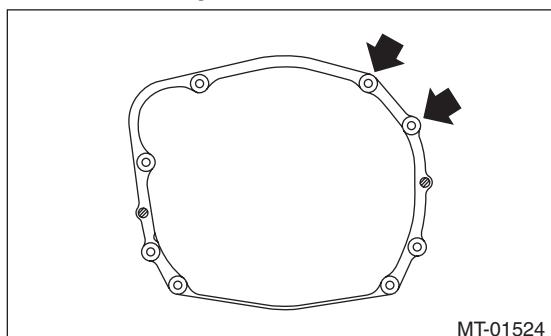


- 12) Lift up the vehicle.

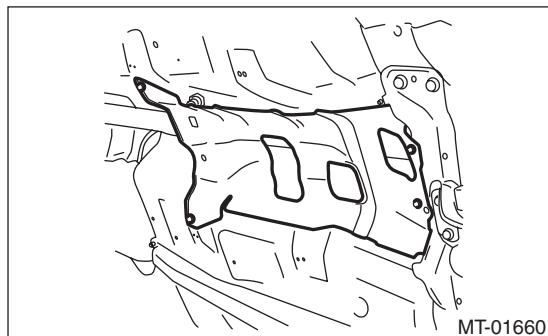
- 13) Remove the under cover. <Ref. to EI-27, REMOVAL, Front Under Cover.>

- 14) Remove the center exhaust pipe. <Ref. to EX(H4DO)-14, REMOVAL, Center Exhaust Pipe.>

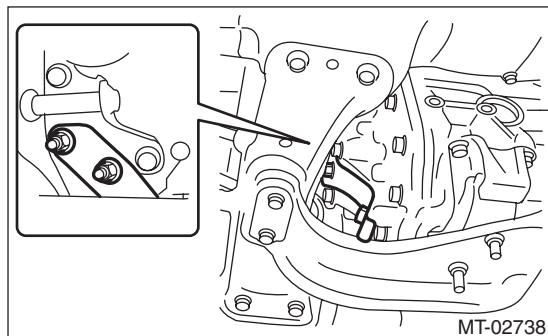
- 15) Remove the bolts which hold upper side of transmission to engine.



- 16) Remove the center exhaust cover.



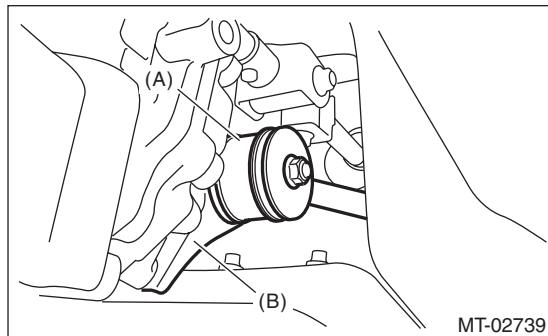
- 17) Remove the hangar bracket from the transmission.



- 18) Remove the propeller shaft. <Ref. to DS-12, REMOVAL, Propeller Shaft.>

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

- (1) Remove the stay from the shift bracket.



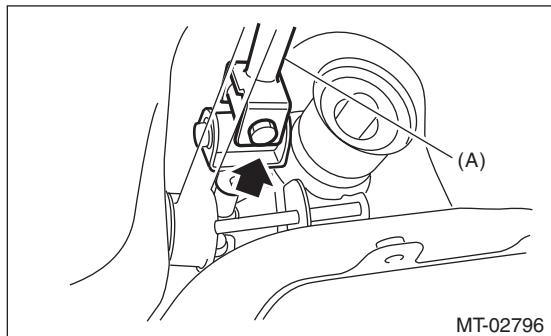
(A) Stay

(B) Shift bracket

Manual Transmission Assembly

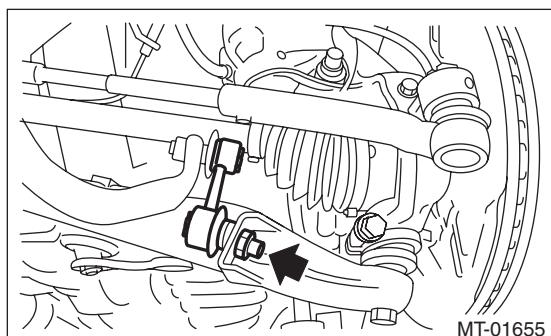
MANUAL TRANSMISSION AND DIFFERENTIAL

(2) Remove the gear shift rod from the transmission.

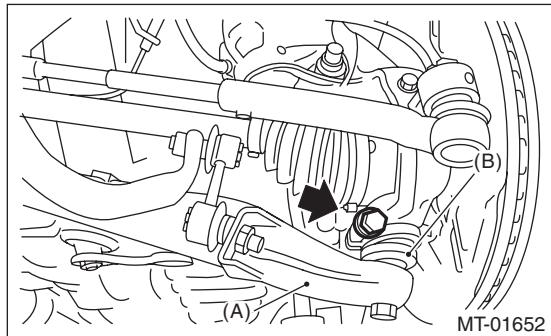


(A) Gear shift rod

20) Disconnect the stabilizer link from the front arm.



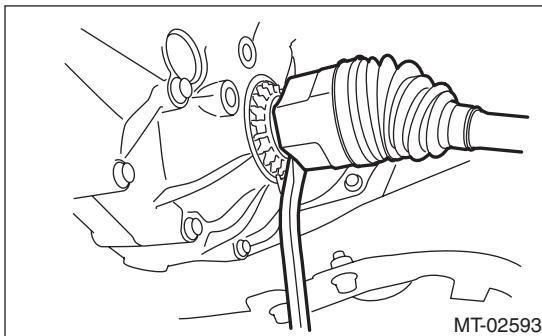
21) Remove the bolt securing the ball joint of the front arm to the housing, then separate the front arms and the housing.



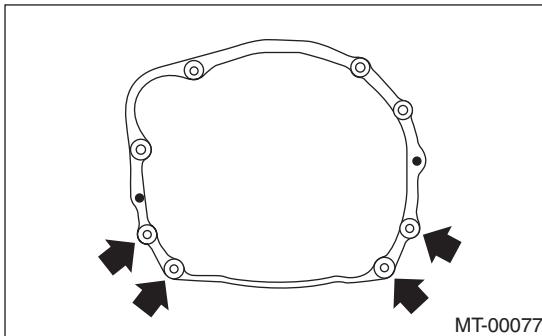
(A) Front arm

(B) Ball joint

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



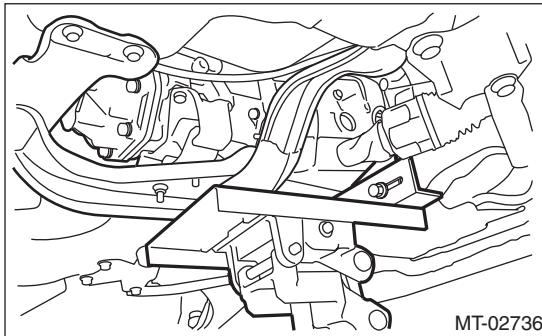
23) Remove the bolts and nuts which hold lower side of transmission to engine.



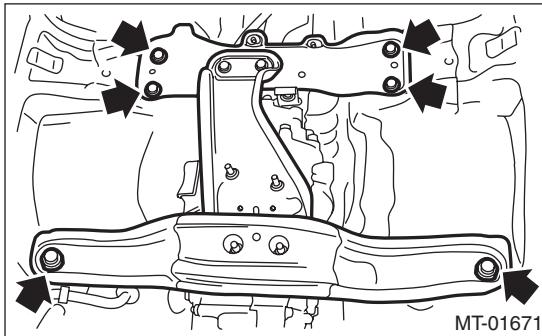
24) Place the transmission jack under the transmission.

CAUTION:

Always support the transmission case with a transmission jack.



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



Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

- 26) While lowering the transmission jack, tighten the turnbuckle of the ST, and incline the engine unit rearward.
- 27) Remove the transmission.

NOTE:

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

- 28) Separate the transmission assembly from the transmission cushion rubber.

B: INSTALLATION

- 1) Replace the differential side retainer oil seal. <Ref. to 5MT-34, REPLACEMENT, Differential Side Retainer Oil Seal.>

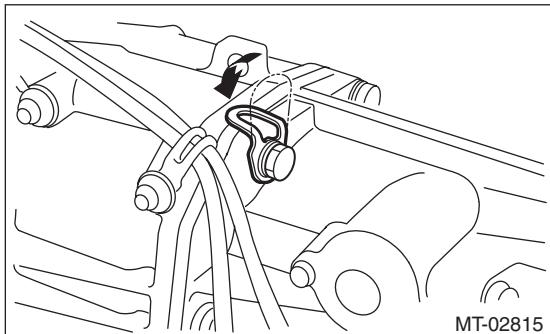
NOTE:

- Be sure to replace the differential side retainer oil seal after removing the front drive shaft.
- When a new differential side retainer oil seal has been installed, replacement is not required.

- 2) Strike and bend the transmission hanger of transmission rear with a rubber hammer etc. so that it gets in contact with the transmission case.

CAUTION:

Do not apply excessive load or impact to the transmission case.



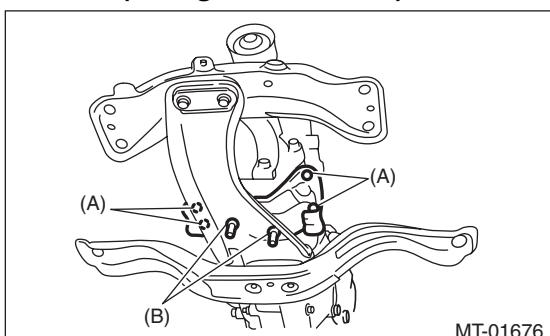
- 3) Install the transmission cushion rubber to the transmission, and tighten the bolt (A).

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

Tightening torque:

Bolt (A)

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.

- 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 cross-member.

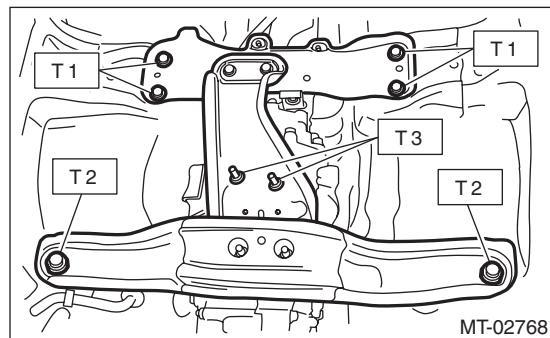
- 8) Tighten the transmission cushion rubber mounting nut.

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)

T3: 35 N·m (3.6 kgf·m, 25.8 ft·lb)

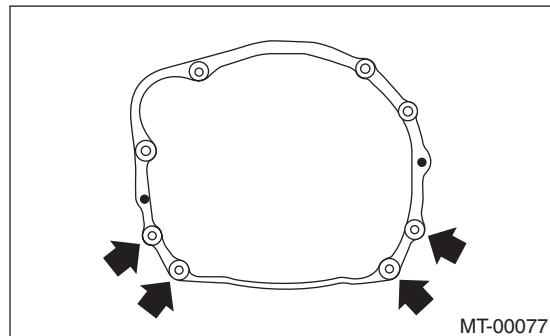


- 9) Take out the transmission jack.

- 10) 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)



- 11) Lower the vehicle.

- 12) Install the starter. <Ref. to SC(H4DO)-12, INSTALLATION, Starter.>

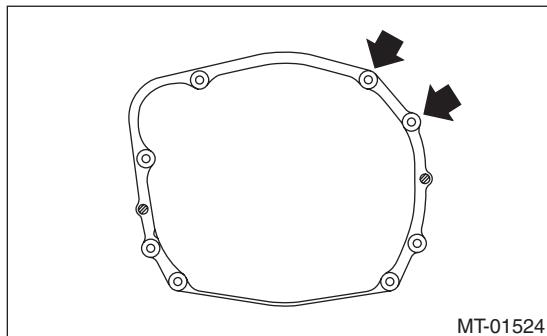
Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

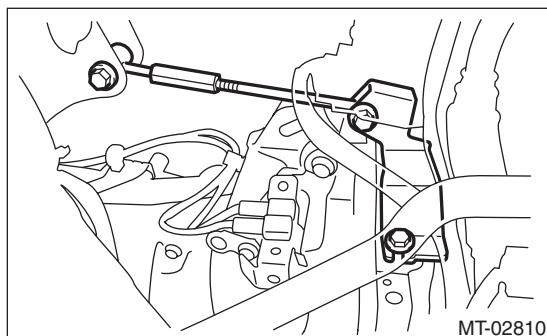
13) Tighten the bolts which hold the upper side of the transmission to the engine.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



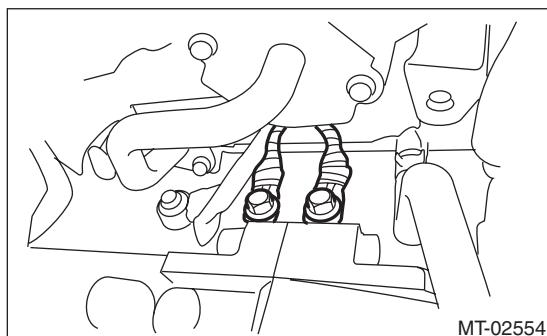
14) Remove the ST.



15) Install the ground cable.

Tightening torque:

19 N·m (1.9 kgf-m, 14.0 ft-lb)

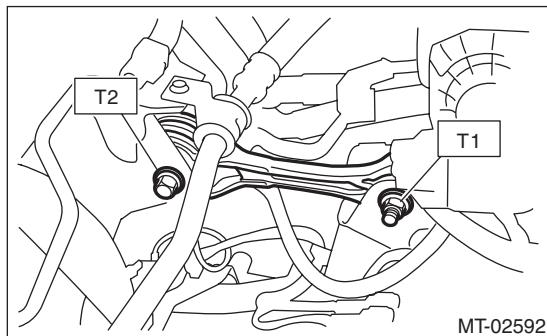


16) Install the pitching stopper.

Tightening torque:

T1: 50 N·m (5.1 kgf-m, 36.9 ft-lb)

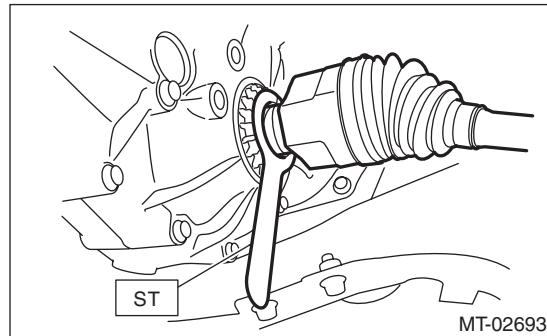
T2: 58 N·m (5.9 kgf-m, 42.8 ft-lb)



17) Lift up the vehicle.

18) Install the front drive shaft into the transmission.

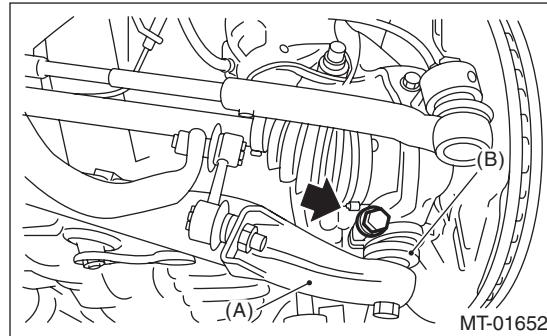
ST 28399SA010 OIL SEAL PROTECTOR



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

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



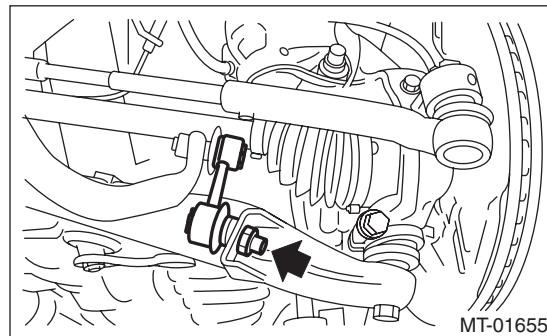
(A) Front arm

(B) Ball joint

20) Attach the stabilizer link to the front arm.

Tightening torque:

30 N·m (3.1 kgf-m, 22.1 ft-lb)



Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

21) Attach the gear shift rod and stay.

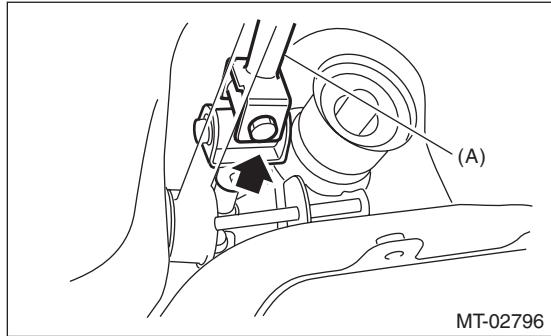
(1) Attach the gear shift rod to the transmission.

NOTE:

Use a new self-locking nut.

Tightening torque:

12 N·m (1.2 kgf·m, 8.9 ft-lb)



(A) Gear shift rod

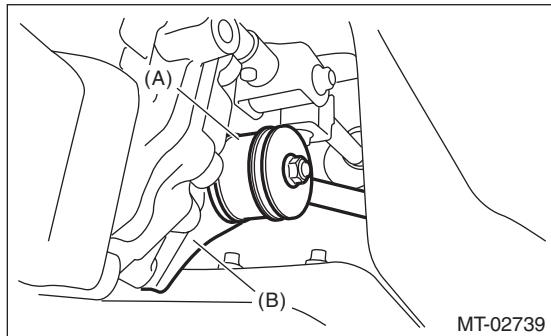
(2) Install the stay to the shift bracket.

NOTE:

Use a new self-locking nut.

Tightening torque:

18 N·m (1.8 kgf·m, 13.3 ft-lb)



(A) Stay

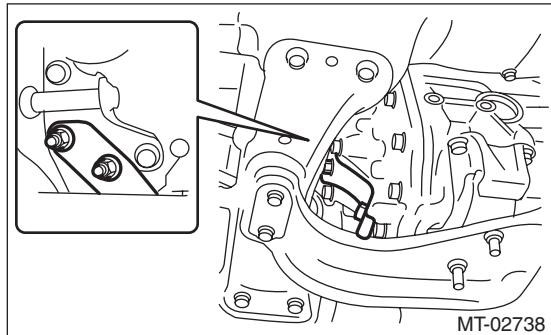
(B) Shift bracket

22) Install the propeller shaft. <Ref. to DS-13, INSTALLATION, Propeller Shaft.>

23) Install the hanger bracket to the transmission.

Tightening torque:

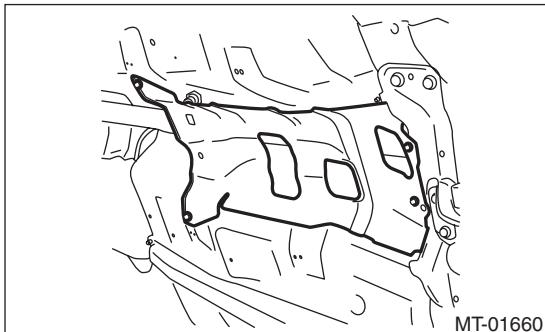
23 N·m (2.3 kgf·m, 17.0 ft-lb)



24) Install the center exhaust cover.

Tightening torque:

18 N·m (1.8 kgf·m, 13.3 ft-lb)



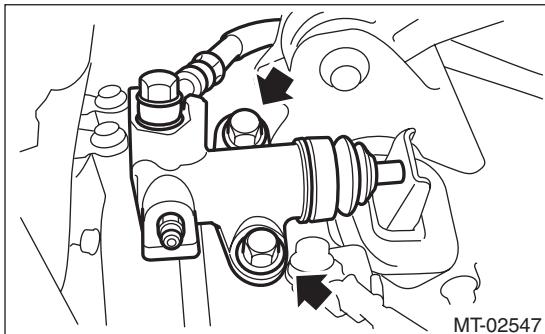
25) Install the center exhaust pipe. <Ref. to EX(H4DO)-14, INSTALLATION, Center Exhaust Pipe.>

26) Install the under cover. <Ref. to EI-27, INSTALLATION, Front Under Cover.>

27) Install the operating cylinder.

Tightening torque:

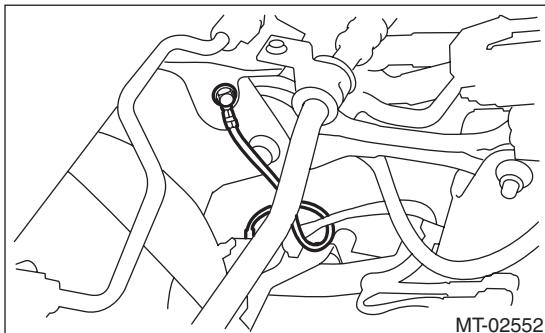
37 N·m (3.8 kgf·m, 27.3 ft-lb)



28) Install the transmission radio ground cord terminal.

Tightening torque:

13 N·m (1.3 kgf·m, 9.6 ft-lb)



29) Install the engine hanger rear.

Tightening torque:

21 N·m (2.1 kgf·m, 15.5 ft-lb)

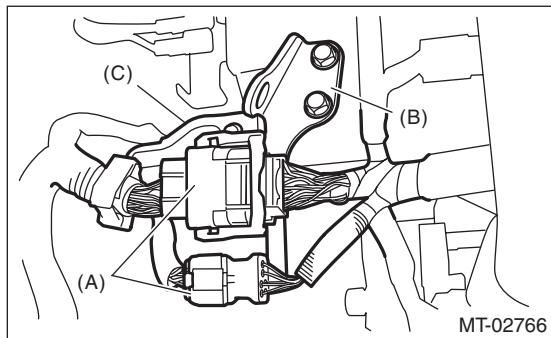
Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

- 30) Connect the engine harness connector, then attach the harness bracket.

Tightening torque:

7.5 N·m (0.8 kgf·m, 5.5 ft-lb)

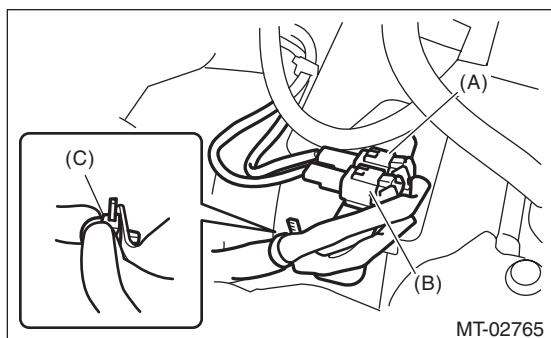


(A) Engine harness connectors

(B) Engine hanger rear

(C) Harness bracket

- 31) Connect the following connectors and secure the clip on the bracket.



(A) Neutral position switch connector (brown)

(B) Back-up light switch connector (gray)

(C) Clip

- 32) Install the air intake boot. <Ref. to IN(H4DO)-12, INSTALLATION, Air Intake Boot.>

- 33) Connect the battery ground terminal.

- 34) Remove the lift arm from vehicle.