

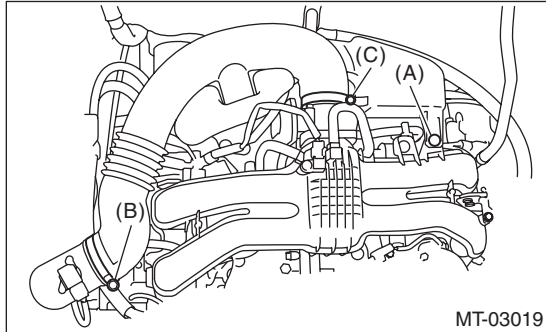
Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

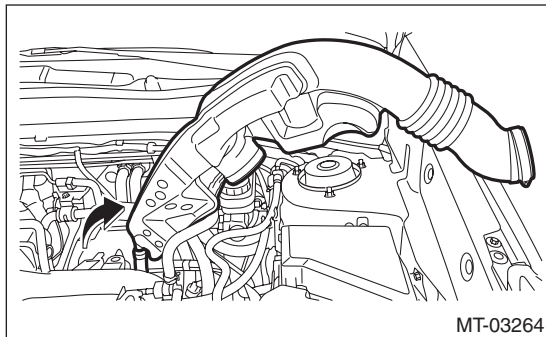
3. Manual Transmission Assembly

A: REMOVAL

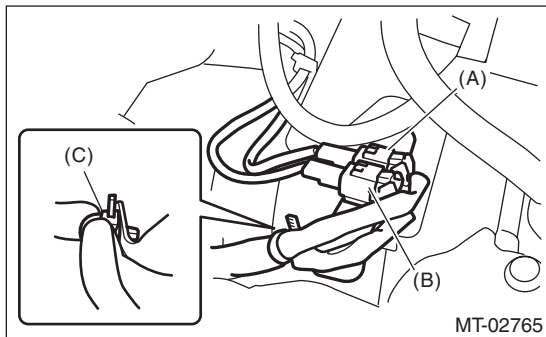
- 1) Disconnect the ground cable from battery.
- 2) Remove the clip (A) from the air intake boot.
- 3) Loosen the clamp (B) connecting the air intake boot and air cleaner case (rear).
- 4) Loosen the clamp (C) which connects the air intake boot and throttle body.



- 5) Remove the air intake boot from the throttle body, and move it to the left side wheel apron.

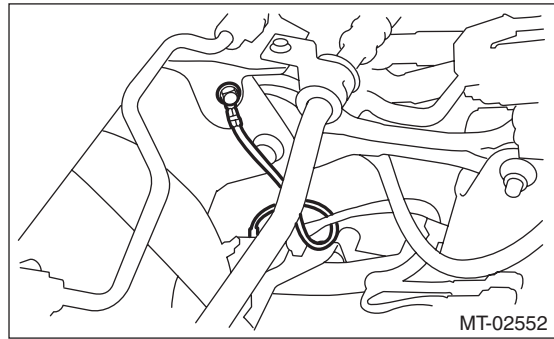


- 6) Disconnect the following connectors and remove the clip.

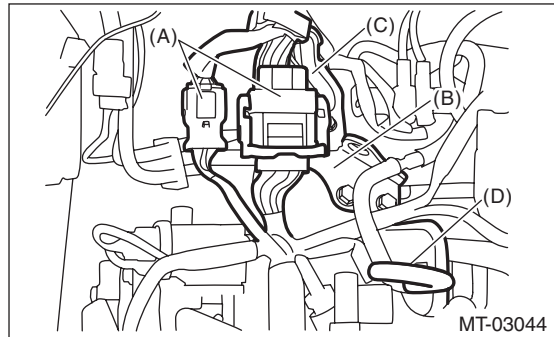


- (A) Neutral position switch connector (brown)
- (B) Back-up light switch connector (gray)
- (C) Clip

- 7) Disconnect the transmission radio ground cord terminal.

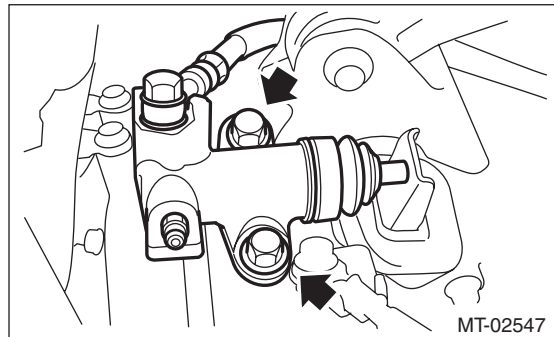


- 8) Remove the harness bracket, disconnect the engine harness connectors, remove the air breather hose, and then remove the engine hanger rear.



- (A) Engine harness connectors
- (B) Engine hanger rear
- (C) Harness bracket
- (D) Air breather hose

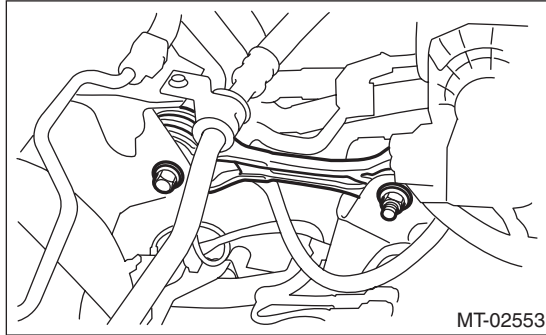
- 9) Remove the starter. <Ref. to SC(H4DO(w/o HEV))-8, REMOVAL, Starter.>
- 10) Remove the operating cylinder and suspend on a wire.



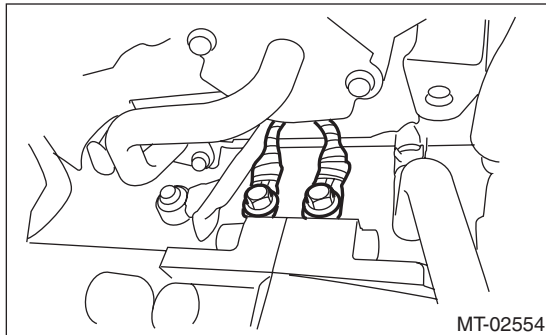
Manual Transmission Assembly

MANUAL TRANSMISSION AND DIFFERENTIAL

11) Remove the pitching stopper.

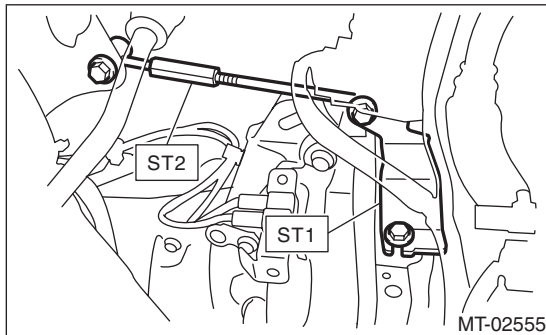


12) Disconnect two ground cables from rear end of the engine.

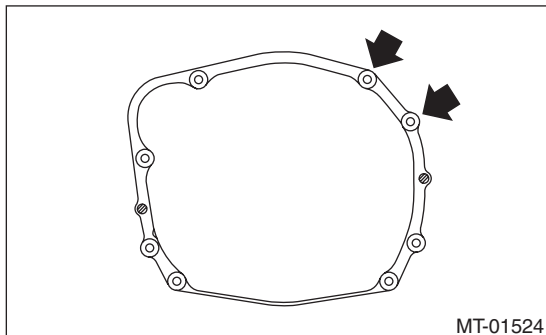


13) Set the ST.

ST1 41099AA012 ENGINE SUPPORT BRACKET
ST2 41099AA020 ENGINE SUPPORT



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



15) Remove the front tires.

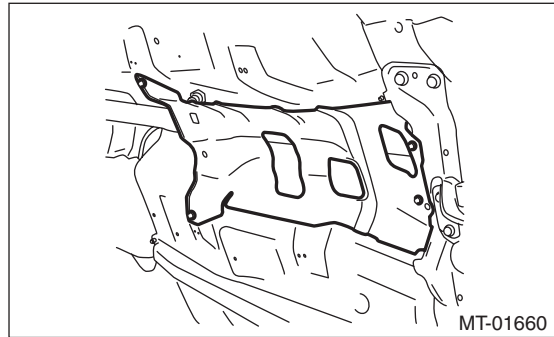
16) Lift up the vehicle.

17) Remove the under cover. <Ref. to EI-32, REMOVAL, Front Under Cover.>

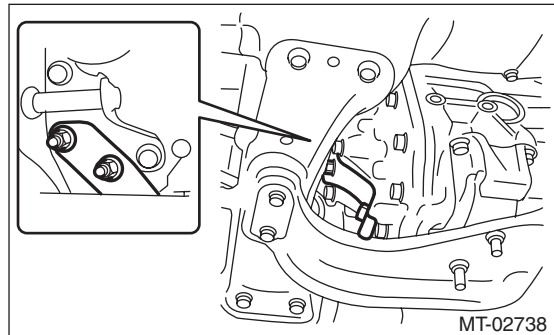
18) Remove the center exhaust pipe. <Ref. to EX(H4DO(w/o HEV))-14, REMOVAL, Center Exhaust Pipe.>

19) Drain transmission gear oil completely. <Ref. to 5MT-21, REPLACEMENT, Transmission Gear Oil.>

20) Remove the center exhaust cover.



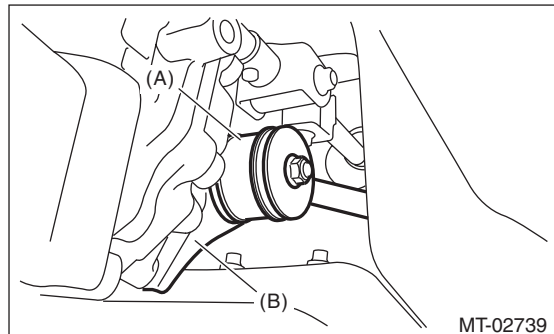
21) Remove the hanger bracket.



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

23) Remove the gear shift rod and stay.

(1) Remove the stay.



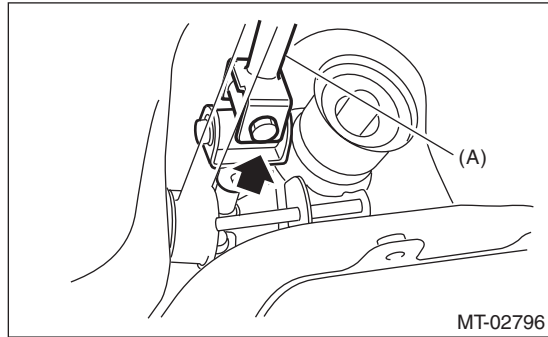
(A) Stay

(B) Shift bracket

Manual Transmission Assembly

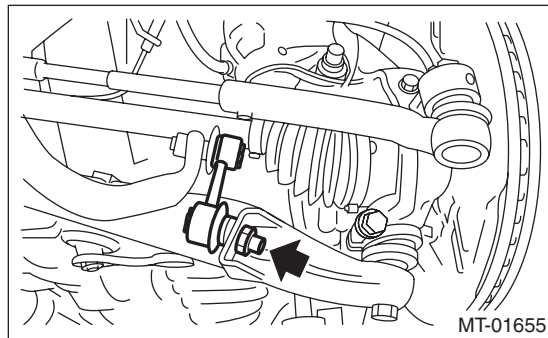
MANUAL TRANSMISSION AND DIFFERENTIAL

(2) Remove the gear shift rod.

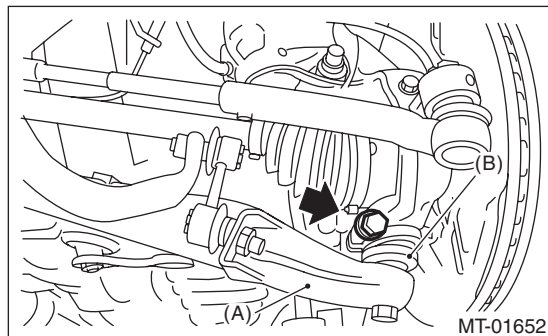


(A) Gear shift rod

24) Disconnect the stabilizer link.



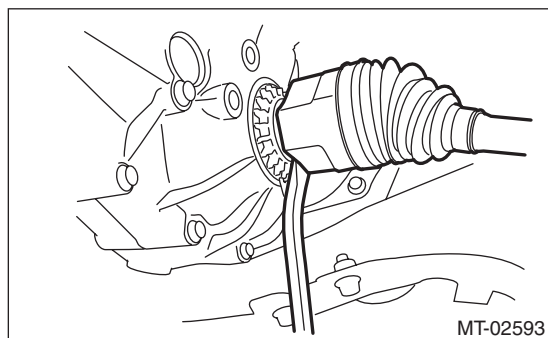
25) Remove the bolt securing the ball joint of the front arm to the housing, then separate the front arms and the housing.



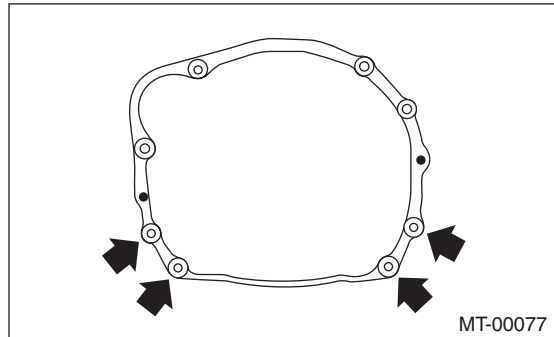
(A) Front arm

(B) Ball joint

26) Using a crowbar, separate the left and right front drive shafts.



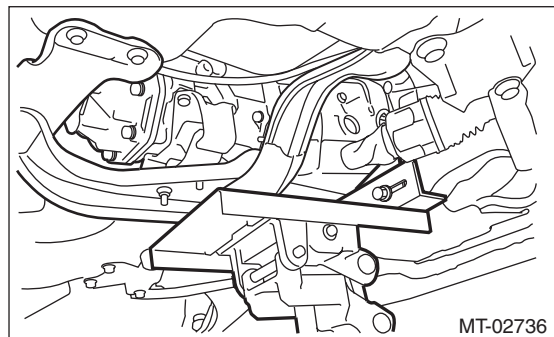
27) Remove the bolts and nuts which hold lower side of transmission to engine.



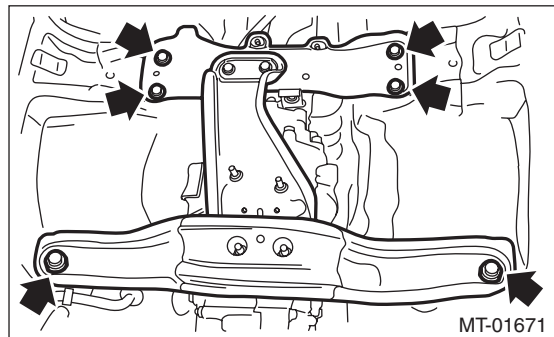
28) Place the transmission jack under the transmission.

CAUTION:

Always support the transmission case with a transmission jack.



29) Remove the front crossmember and the rear crossmember.



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

31) Remove the transmission.

NOTE:

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

32) Remove the transmission cushion rubber.

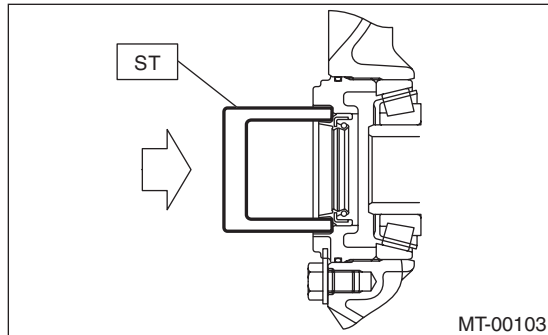
B: INSTALLATION

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

NOTE:

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

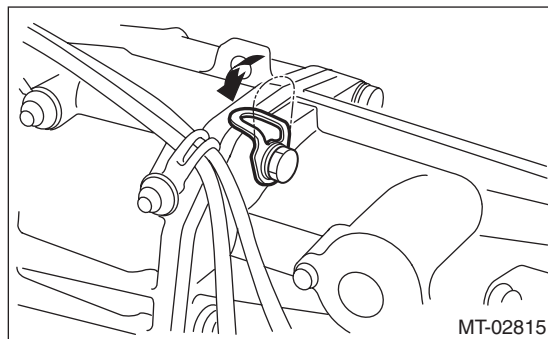
ST 18675AA000 DIFFERENTIAL SIDE OIL SEAL INSTALLER



2) Tap the transmission hanger in the rear side of transmission with a rubber hammer to bend it until full contact is obtained.

CAUTION:

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



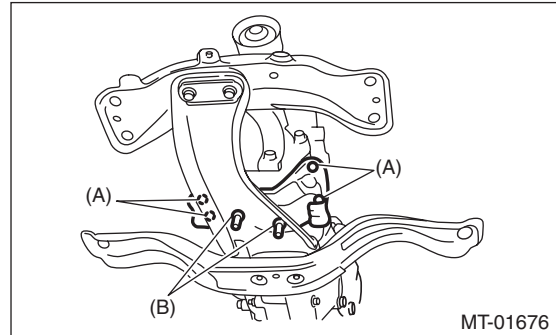
3) Install the transmission cushion rubber to the transmission, and tighten the bolt (A).

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 crossmember.

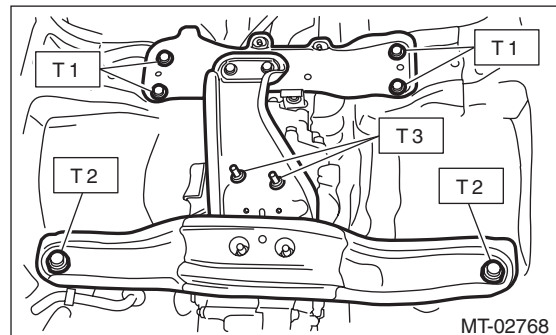
8) Tighten the transmission cushion rubber mounting nut.

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.

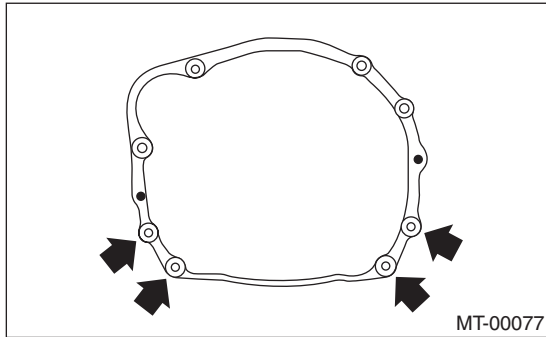
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10) Tighten the bolts and nuts which hold the lower side of transmission to the engine.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



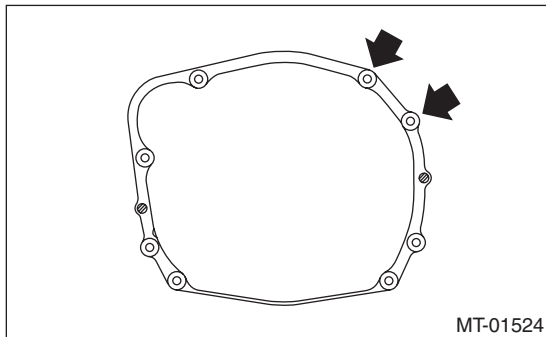
11) Lower the vehicle.

12) Install the starter. <Ref. to SC(H4DO(w/o HEV))-10, INSTALLATION, Starter.>

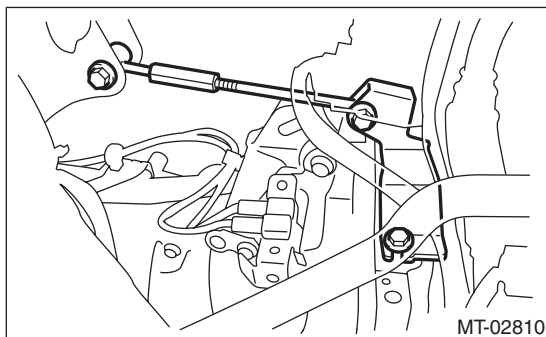
13) Tighten the bolts which hold the upper side of the transmission to the engine.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



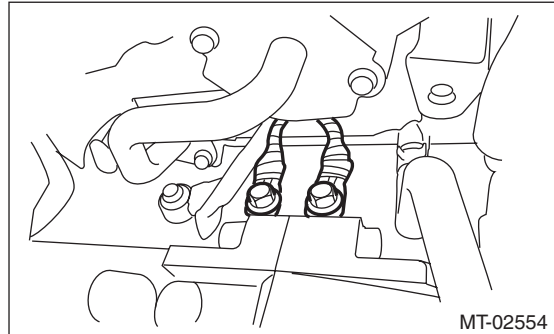
14) Remove the ST.



15) Install the ground cable.

Tightening torque:

19 N·m (1.9 kgf-m, 14.0 ft-lb)

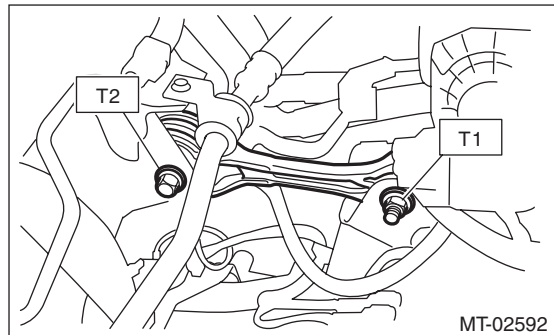


16) Install the pitching stopper.

Tightening torque:

T1: 50 N·m (5.1 kgf-m, 36.9 ft-lb)

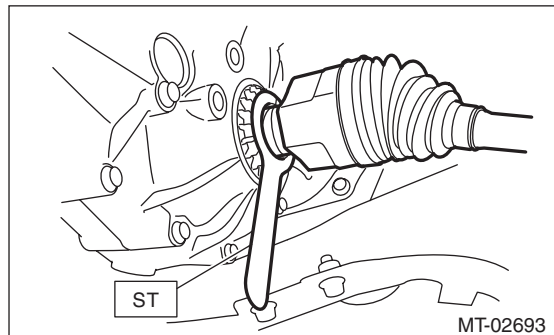
T2: 58 N·m (5.9 kgf-m, 42.8 ft-lb)



17) Lift up the vehicle.

18) Install the ST to the transmission, and then install the front drive shaft.

ST 28399SA010 OIL SEAL PROTECTOR



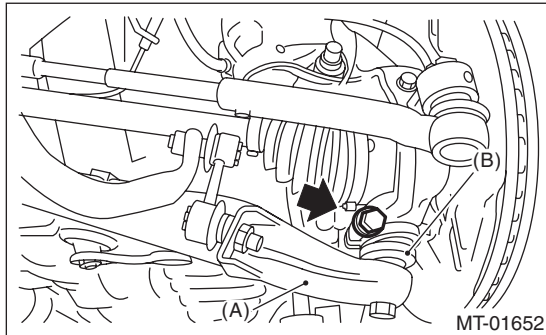
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19) Insert the front arm ball joint and tighten the mounting bolt.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)

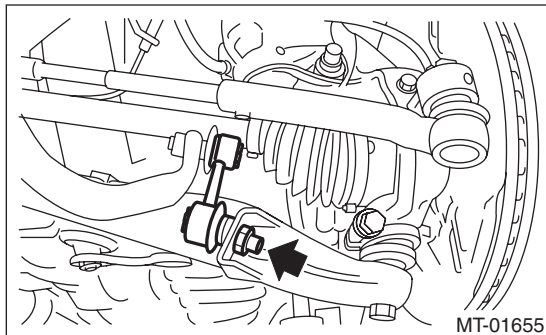


- (A) Front arm
- (B) Ball joint

20) Install the stabilizer link.

Tightening torque:

30 N·m (3.1 kgf-m, 22.1 ft-lb)



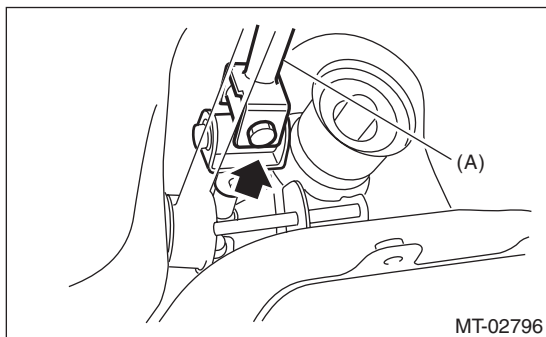
21) Attach the gear shift rod and stay.
(1) Install the gear shift rod.

NOTE:

Use a new self-locking nut.

Tightening torque:

12 N·m (1.2 kgf-m, 8.9 ft-lb)



- (A) Gear shift rod

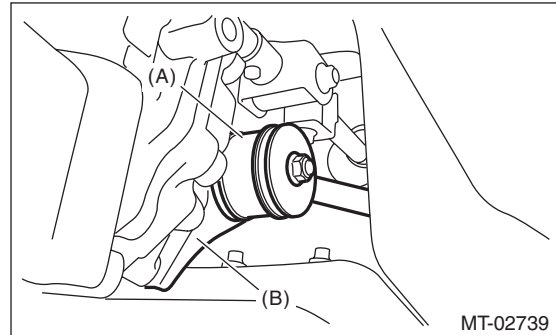
(2) Install the stay.

NOTE:

Use a new self-locking nut.

Tightening torque:

18 N·m (1.8 kgf-m, 13.3 ft-lb)



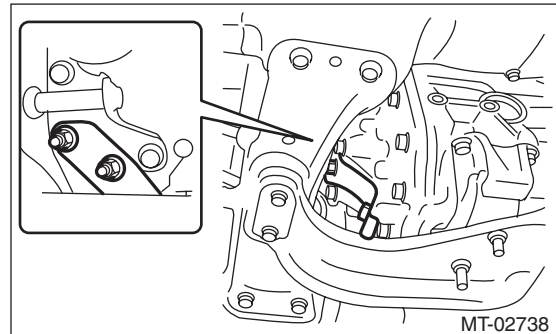
- (A) Stay
- (B) Shift bracket

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

23) Install the hanger bracket.

Tightening torque:

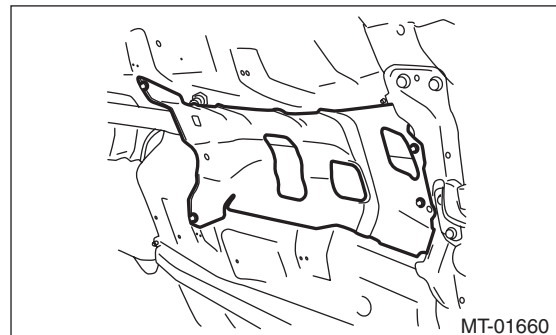
23 N·m (2.3 kgf-m, 17.0 ft-lb)



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(w/o HEV))-15, INSTALLATION, Center Exhaust Pipe.>

26) Install the under cover. <Ref. to EI-32, INSTALLATION, Front Under Cover.>

27) Lower the vehicle.

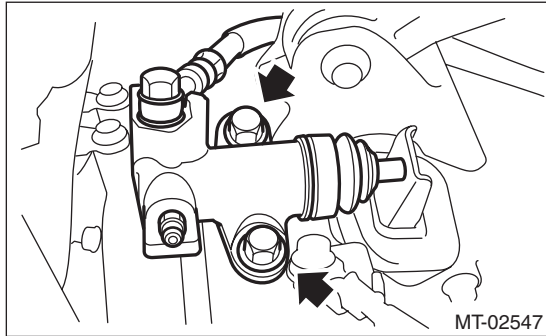
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28) Install the operating cylinder.

Tightening torque:

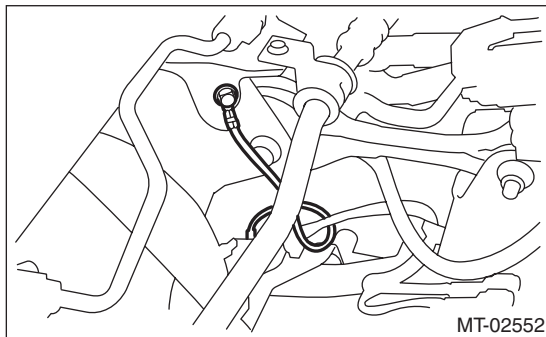
37 N·m (3.8 kgf-m, 27.3 ft-lb)



29) Install the transmission radio ground cord terminal.

Tightening torque:

13 N·m (1.3 kgf-m, 9.6 ft-lb)



30) Install the engine hanger rear.

Tightening torque:

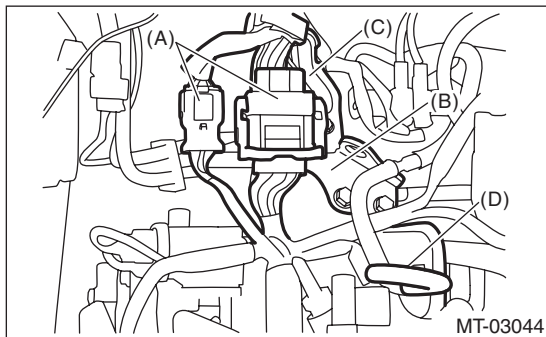
21 N·m (2.1 kgf-m, 15.5 ft-lb)

31) Install the air breather hose.

32) Connect the engine harness connector, then attach the harness bracket.

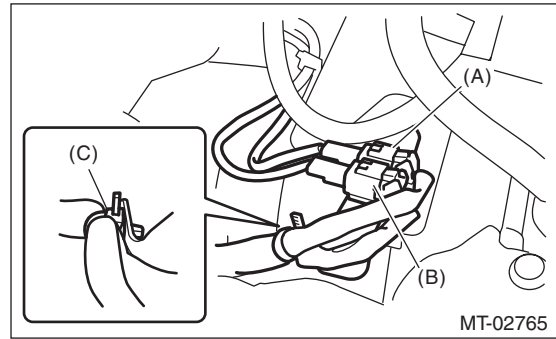
Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)



- (A) Engine harness connectors
- (B) Engine hanger rear
- (C) Harness bracket
- (D) Air breather hose

33) 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

34) Pour in transmission gear oil and check the oil level. <Ref. to 5MT-21, Transmission Gear Oil.>

35) Install the air intake boot. <Ref. to IN(H4DO(w/o HEV))-12, INSTALLATION, Air Intake Boot.>

36) Install the front tires.

37) Connect the battery ground terminal.