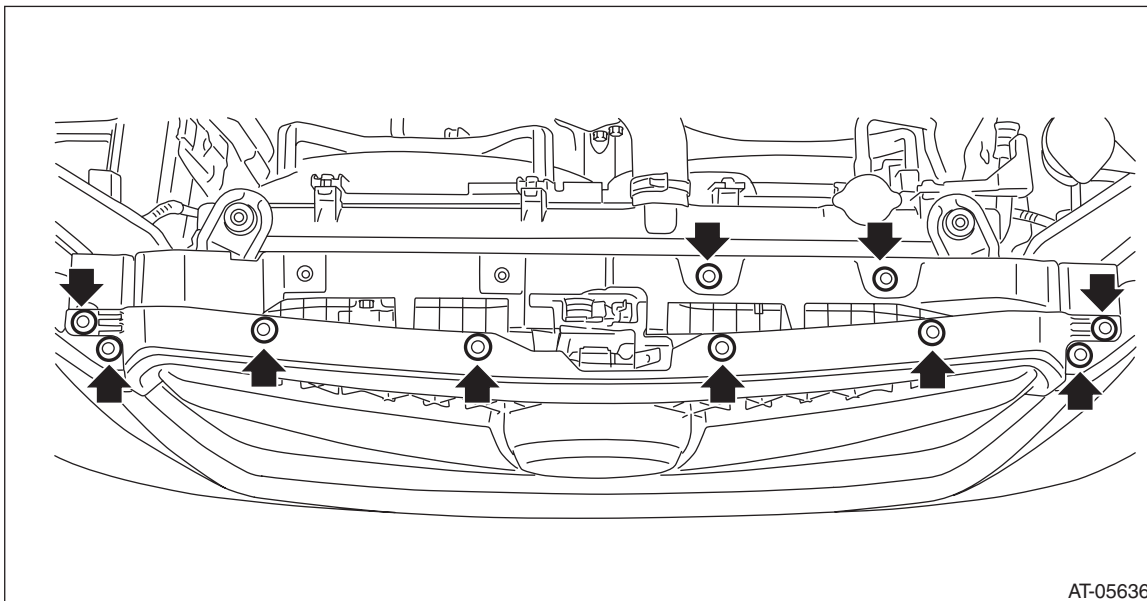


10. Automatic Transmission Assembly

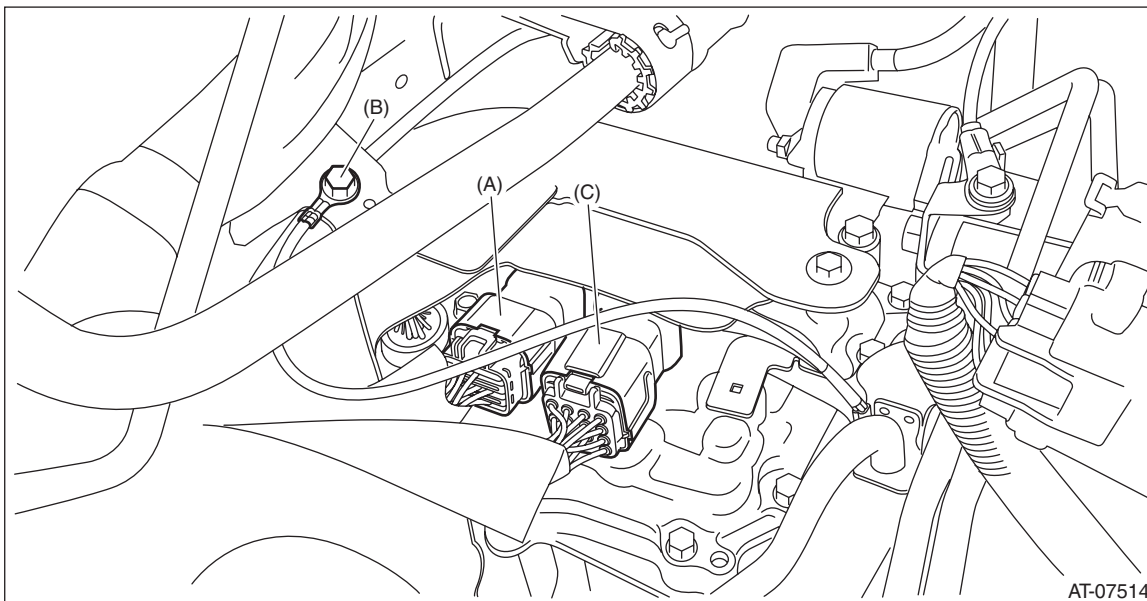
A: REMOVAL

- 1) Remove the front wheels.
- 2) Disconnect the ground cable from battery.
- 3) Remove the air intake duct. <Ref. to IN(H4DO)-14, REMOVAL, Air Intake Duct.>
- 4) Remove the air intake boot assembly. <Ref. to IN(H4DO)-13, REMOVAL, Air Intake Boot.>
- 5) Remove the ten clips and remove the grille bracket.



AT-05636

- 6) Disconnect the following connectors.
 - Transmission harness connectors
 - Transmission radio ground terminal
 - Inhibitor harness connector



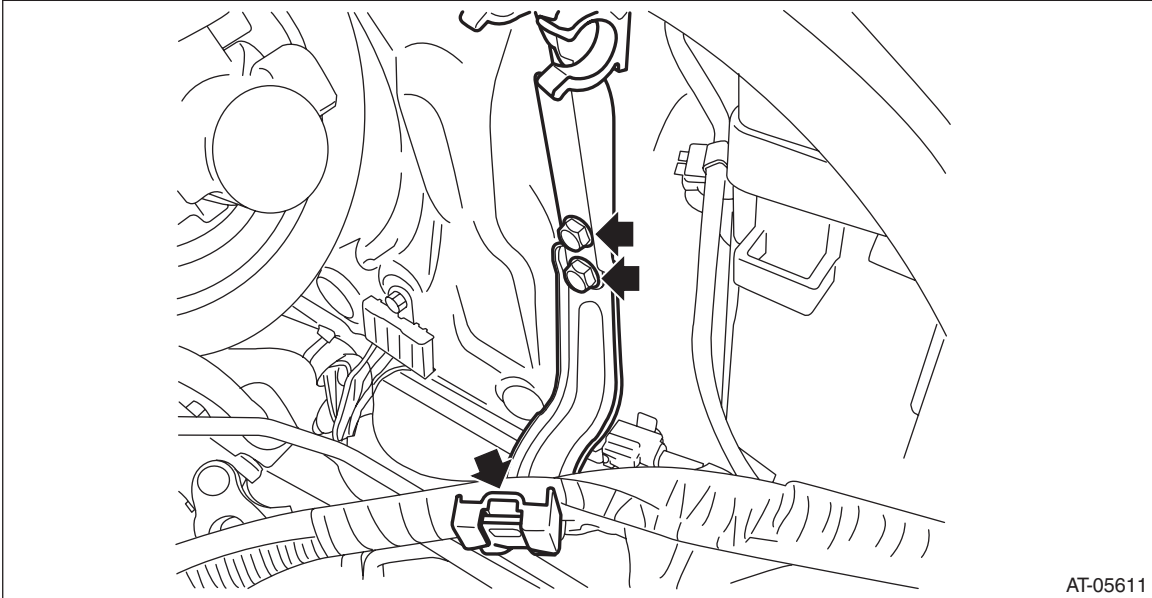
AT-07514

- (A) Transmission harness connectors
(B) Transmission radio ground terminal
(C) Inhibitor harness connector

Automatic Transmission Assembly

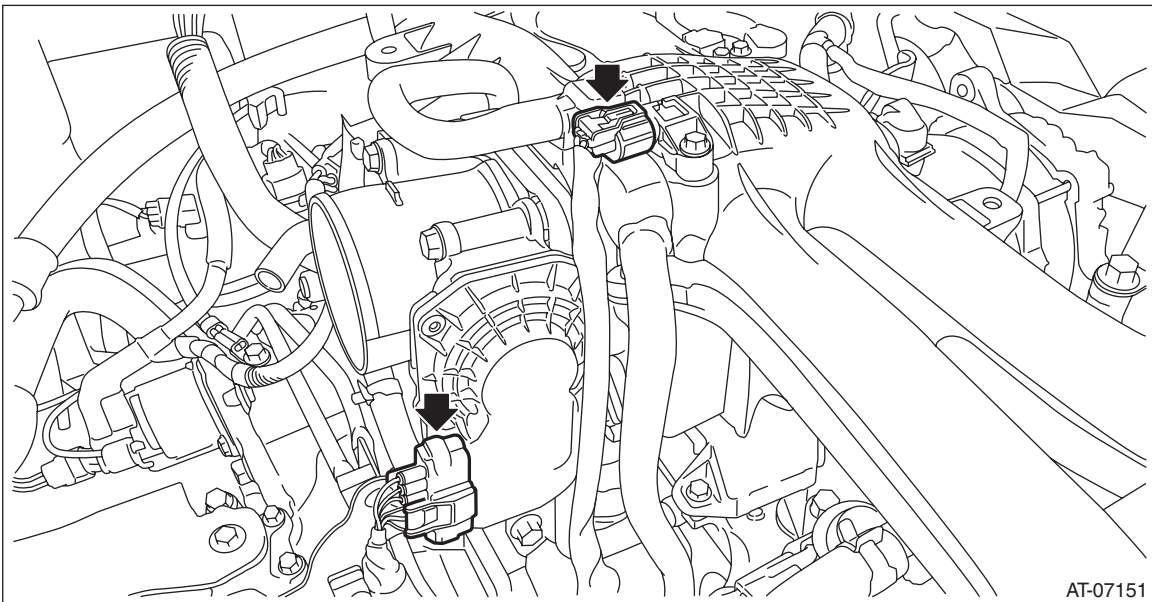
CONTINUOUSLY VARIABLE TRANSMISSION

7) Separate the battery cable clip to remove the bracket.



8) Remove the starter. <Ref. to SC(H4DO)-7, REMOVAL, Starter.>

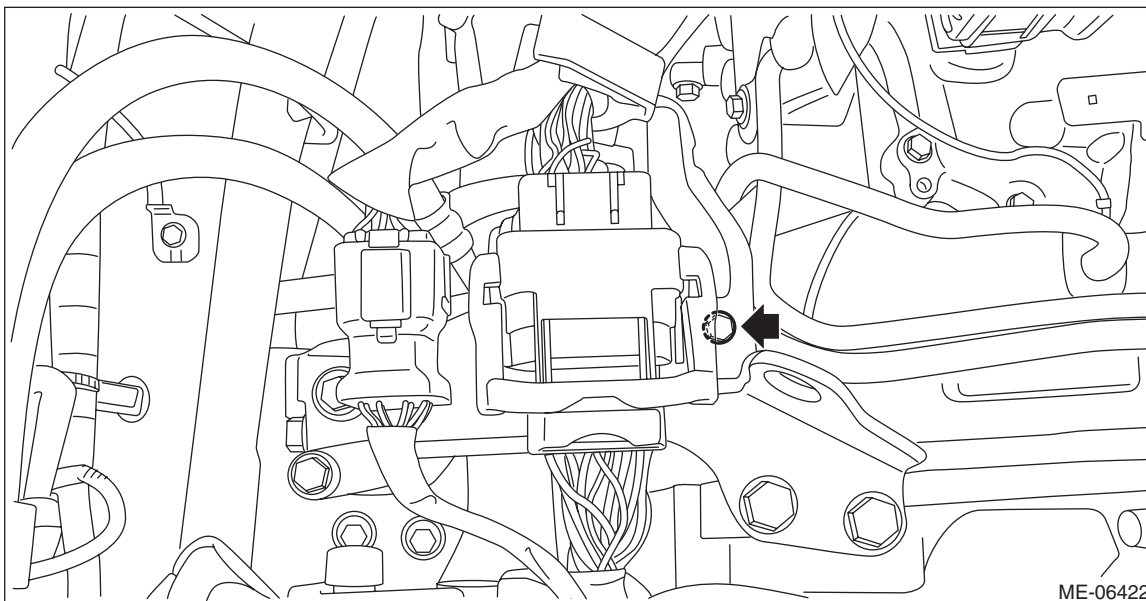
9) Disconnect the throttle position sensor harness connector and manifold pressure sensor harness connector.



Automatic Transmission Assembly

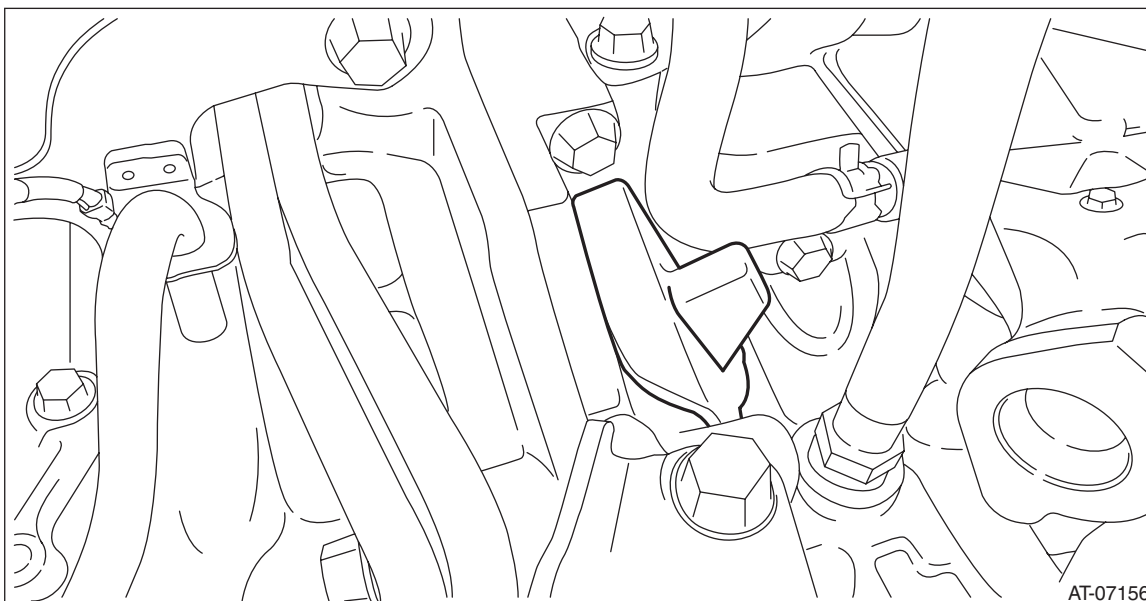
CONTINUOUSLY VARIABLE TRANSMISSION

- 10) Remove the bolt and disconnect the engine harness connector bracket.



- 11) Disconnect the engine harness connector.

- 12) Remove the service hole plug.



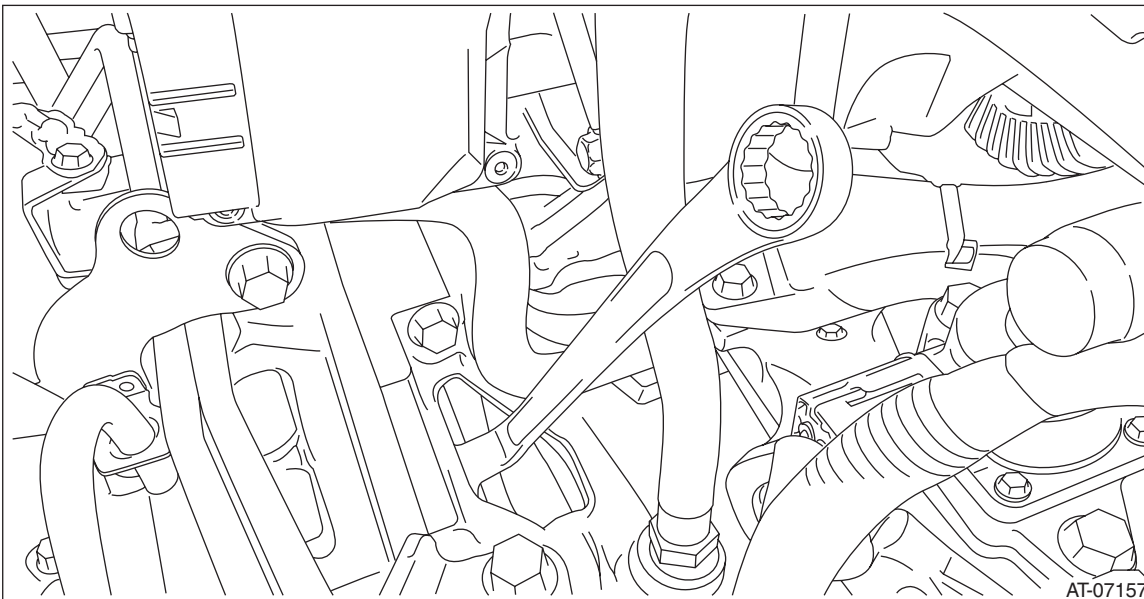
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

13) Remove the four bolts combining the torque converter and drive plate while rotating the crank pulley a little at a time in the same direction as engine revolution.

CAUTION:

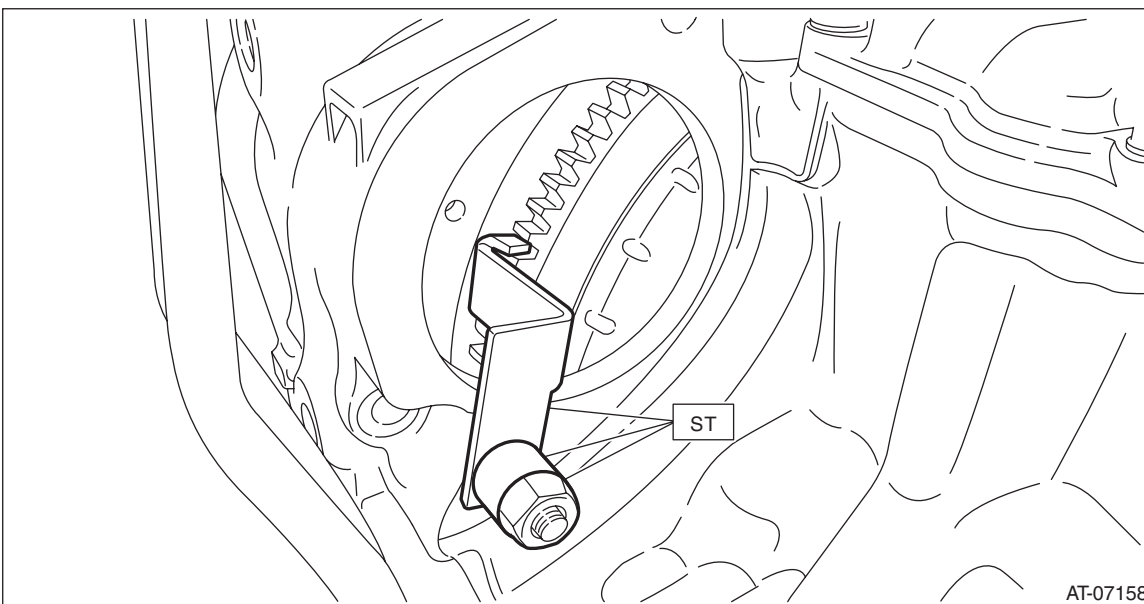
- Be careful not to drop bolts into converter housing.
- Be careful not to damage the mounting bolts.



14) Make sure the torque converter moves freely by rotating with finger through the starter installation hole.

15) Attach the ST to the converter case.

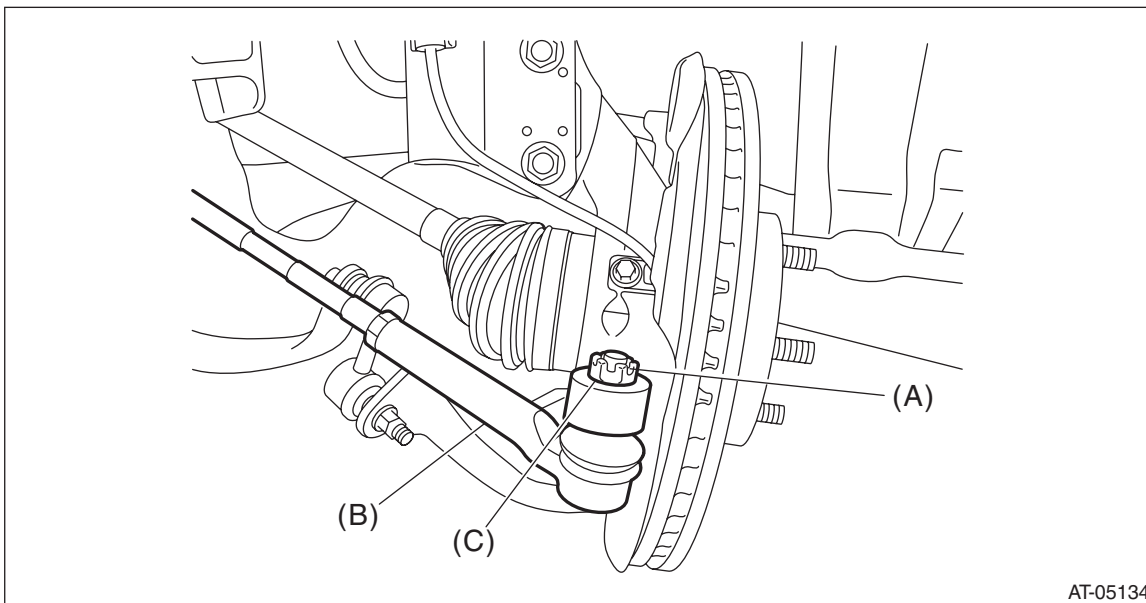
ST 498277200 STOPPER SET



Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

16) After pulling off the cotter pin and removing the castle nut, use a puller to remove the tie-rod end from the knuckle arm.



- (A) Cotter pin
- (B) Tie-rod end
- (C) Castle nut

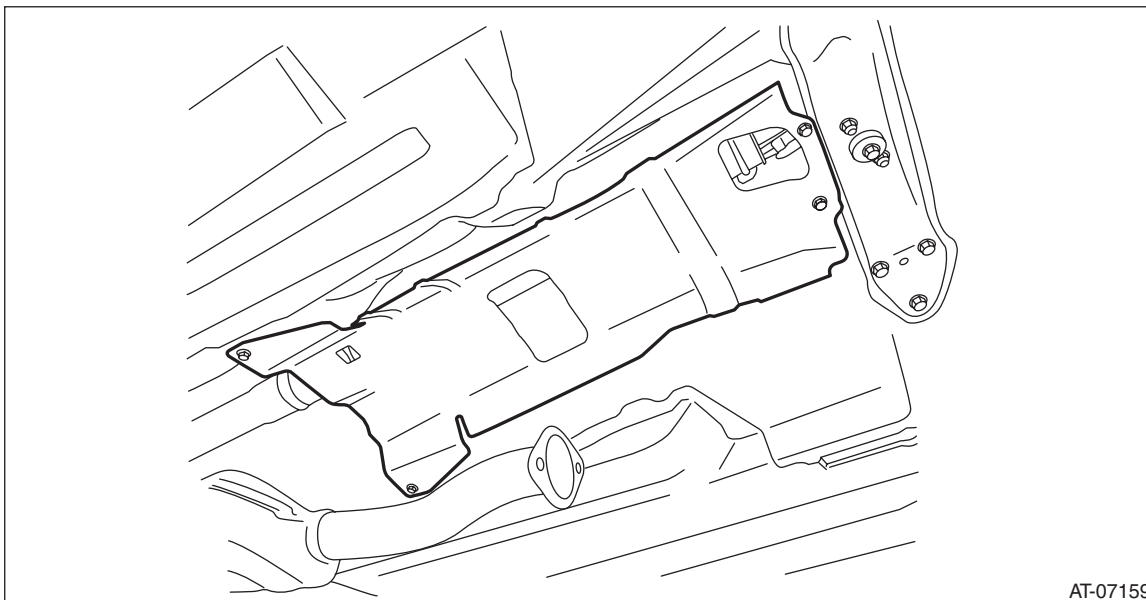
17) Lift up the vehicle.

18) Remove the under cover.

19) Remove the center exhaust pipe. <Ref. to EX(H4DO)-13, REMOVAL, Center Exhaust Pipe.>

20) Remove the CVTF drain plug to drain CVTF. <Ref. to CVT-37, REPLACEMENT, CVTF.>

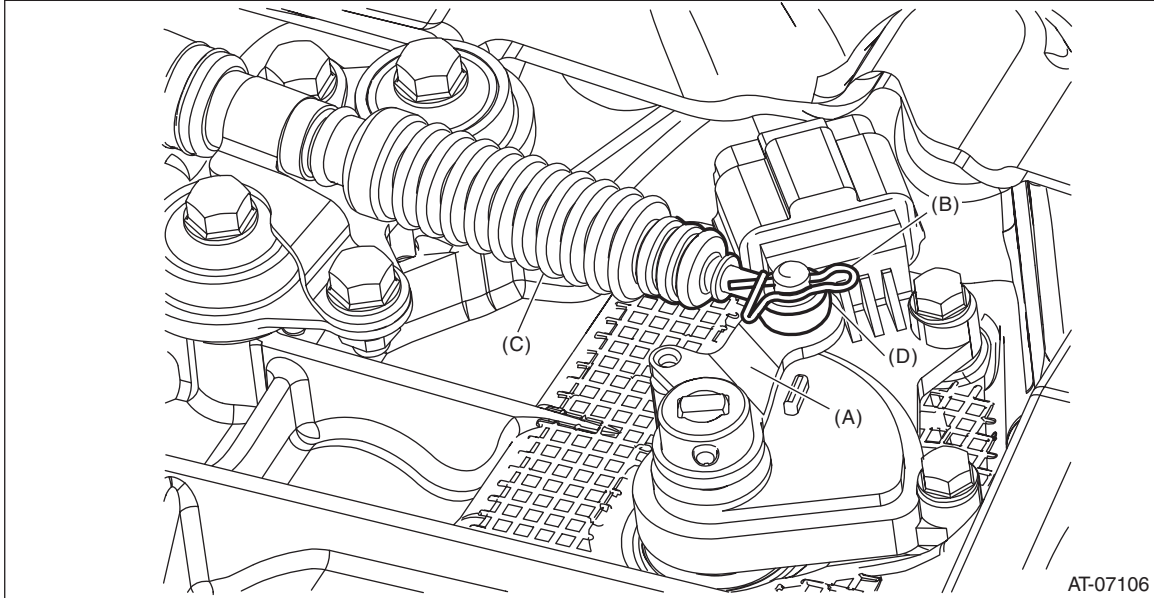
21) Remove the center exhaust cover.



Automatic Transmission Assembly

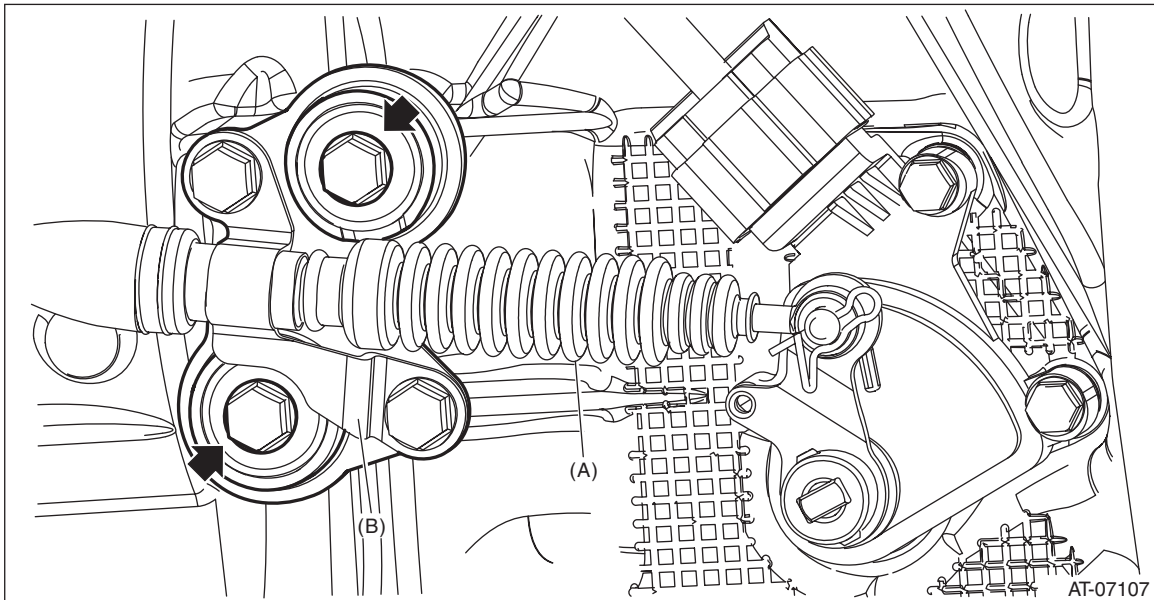
CONTINUOUSLY VARIABLE TRANSMISSION

22) Remove the snap pin and washer from shifter arm and remove the select cable from shifter arm.



- (A) Shifter arm
- (B) Snap pin
- (C) Select cable
- (D) Washer

23) Remove the plate assembly from the transmission case.



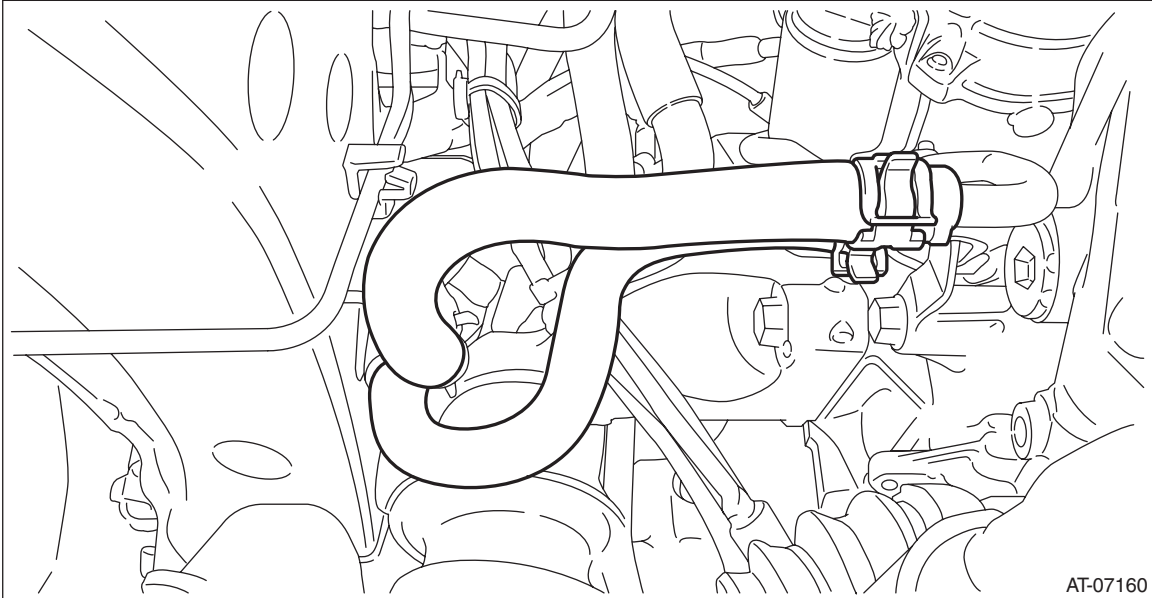
- (A) Select cable
- (B) Plate ASSY

24) Drain differential gear oil. <Ref. to CVT-42, REPLACEMENT, Differential Gear Oil.>

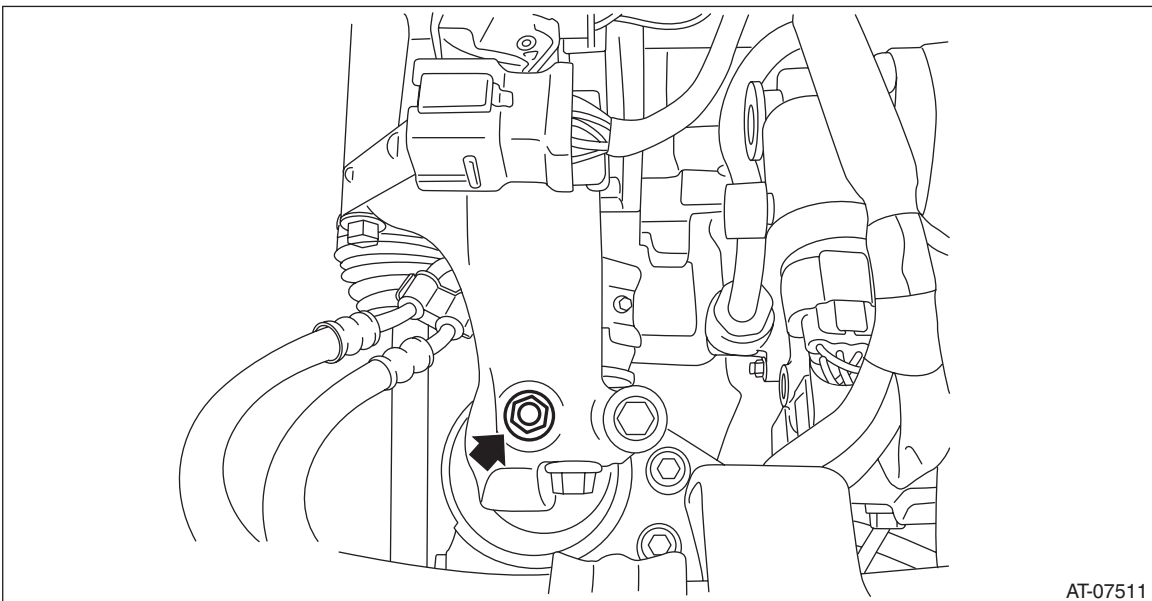
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

- 25) Remove the CVTF CVT inlet hose and CVTF CVT outlet hose.



- 26) Remove the universal joint. <Ref. to PS-20, REMOVAL, Universal Joint.>
27) Remove the propeller shaft. <Ref. to DS-10, REMOVAL, Propeller Shaft.>
28) Remove the stabilizer link.
29) Disconnect the lower arm ball joint and housing.
30) Pull out the front drive shaft from transmission using a crowbar.
31) Holding the joint of front drive shaft from transmission side, pull out the drive shaft from transmission with care not to stretch the boot.
32) Lower the vehicle.
33) Remove the nuts from left and right transmission mounting brackets.



- 34) Remove the radiator main fan and radiator sub fan. <Ref. to CO(H4DO)-35, REMOVAL, Radiator Main Fan and Fan Motor.> <Ref. to CO(H4DO)-38, REMOVAL, Radiator Sub Fan and Fan Motor.>

Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

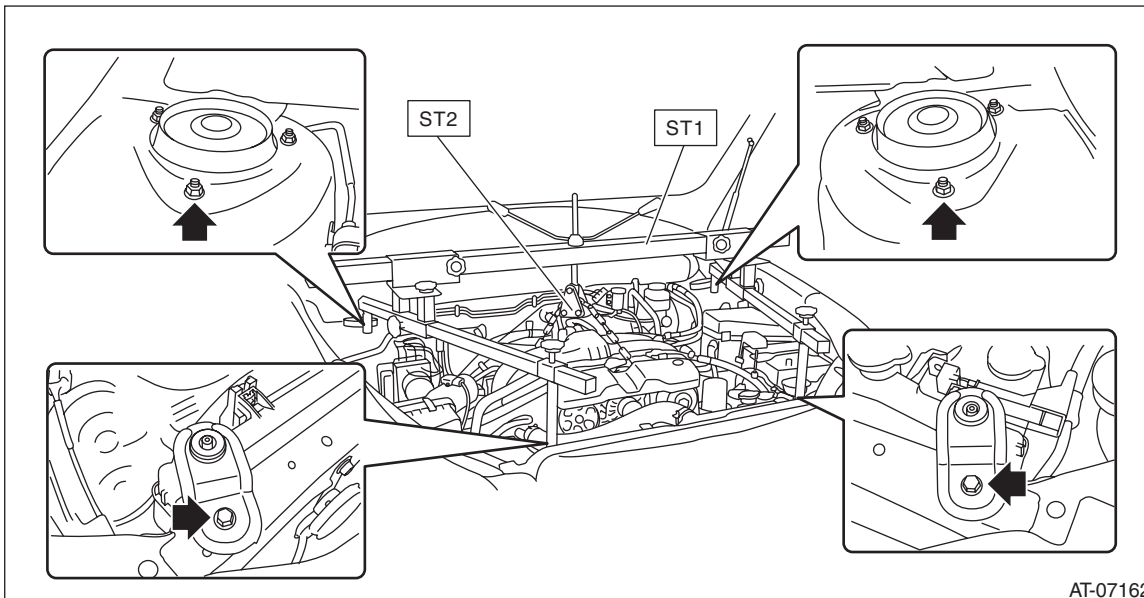
35) Set the ST1 and ST2 to vehicle.

ST1 99099AJ000 ENGINE HANGER

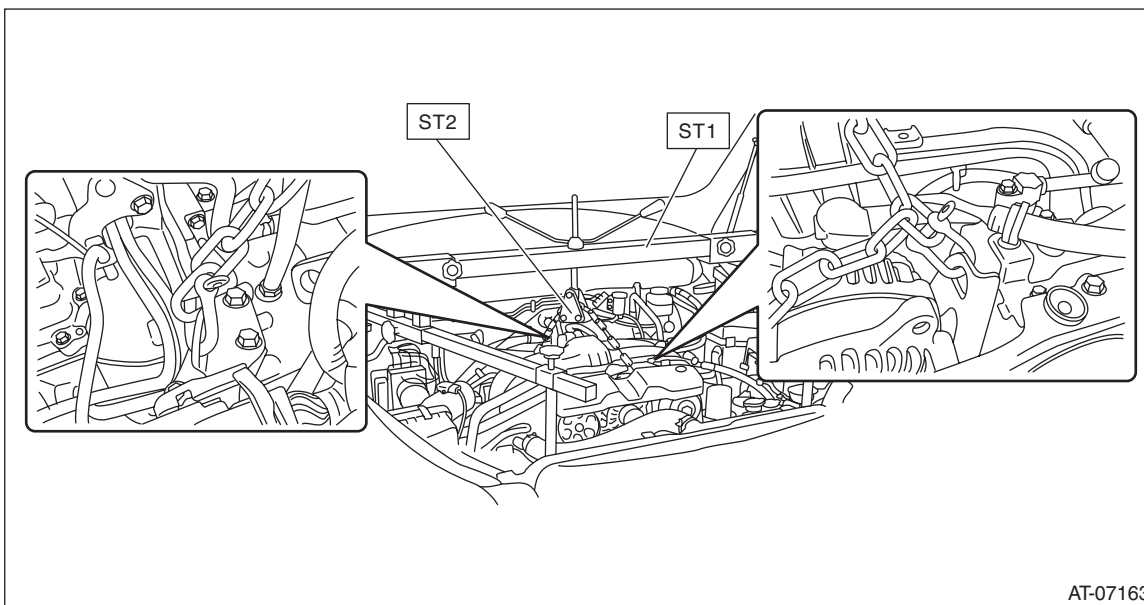
ST2 99099AJ010 CHAIN BALANCER

CAUTION:

- Set so that the chain sling does not contact the engine parts.
- Set the arms of ST (ENGINE HANGER) at the locations shown in the figure.



AT-07162

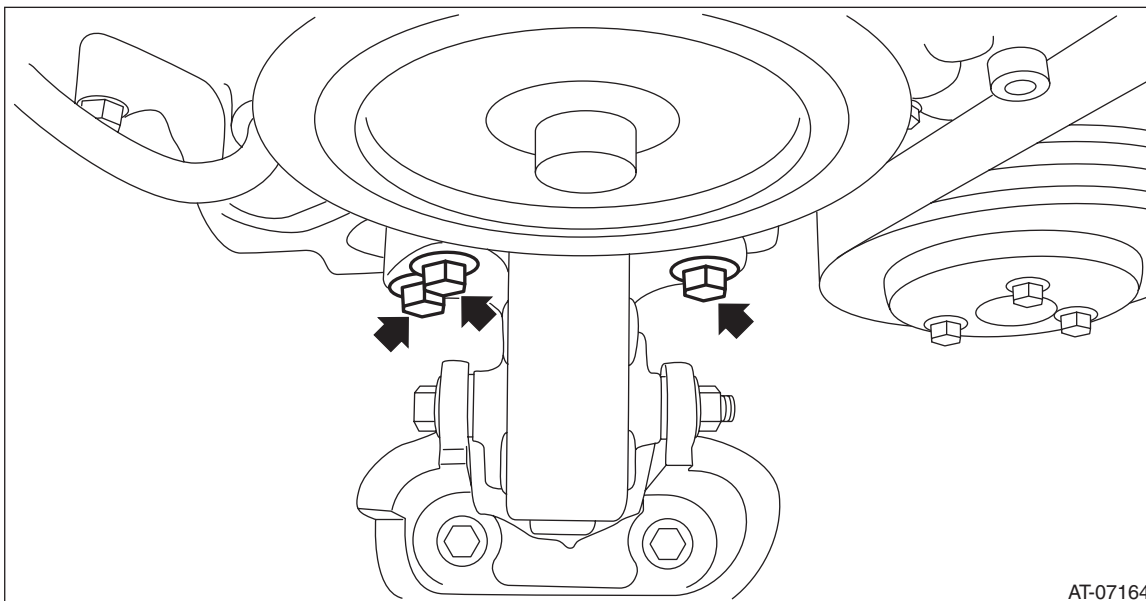


AT-07163

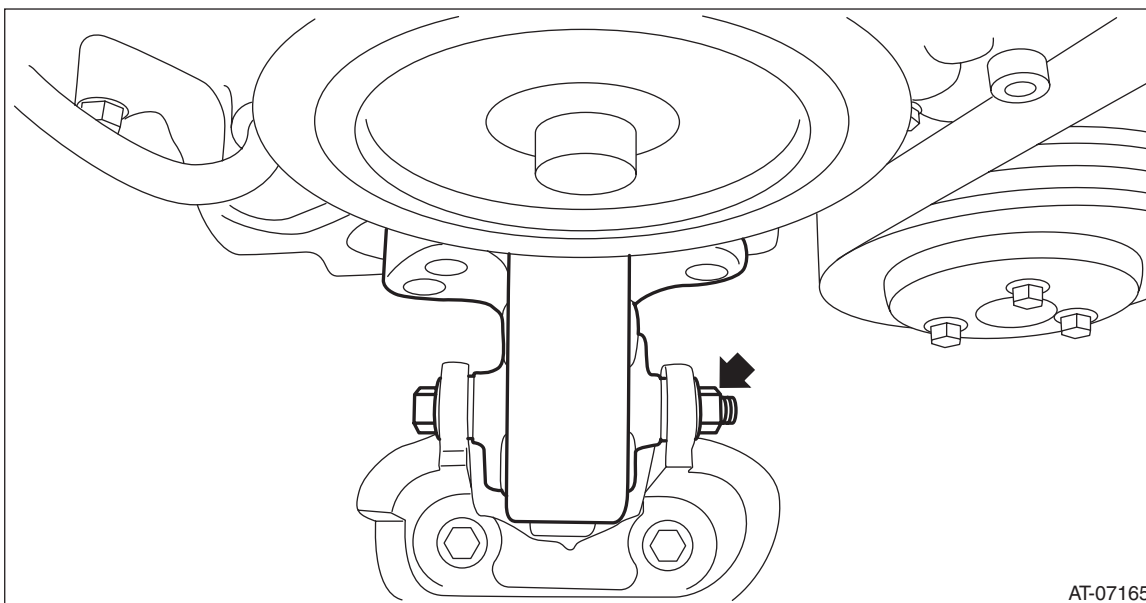
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

36) Lift the engine slightly and remove the engine mounting bolts.



37) Remove the engine mounting nut and bolt to remove the front cushion rubber.

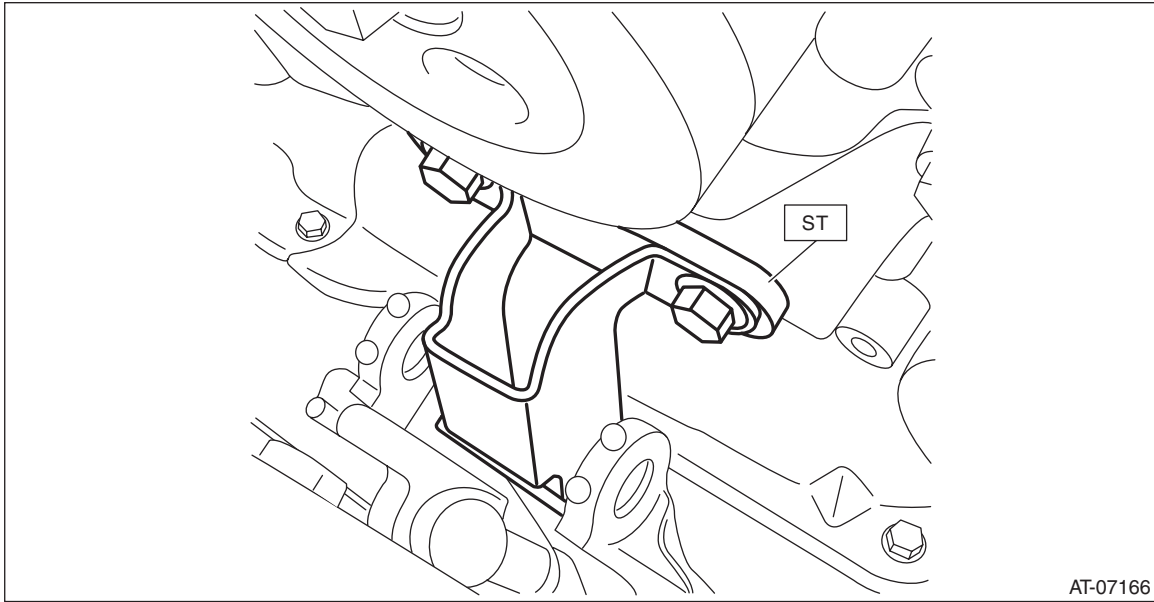


Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

38) Temporarily attach ST by using two bolts.

ST 41099AJ130 SPECIAL TOOL FB



AT-07166

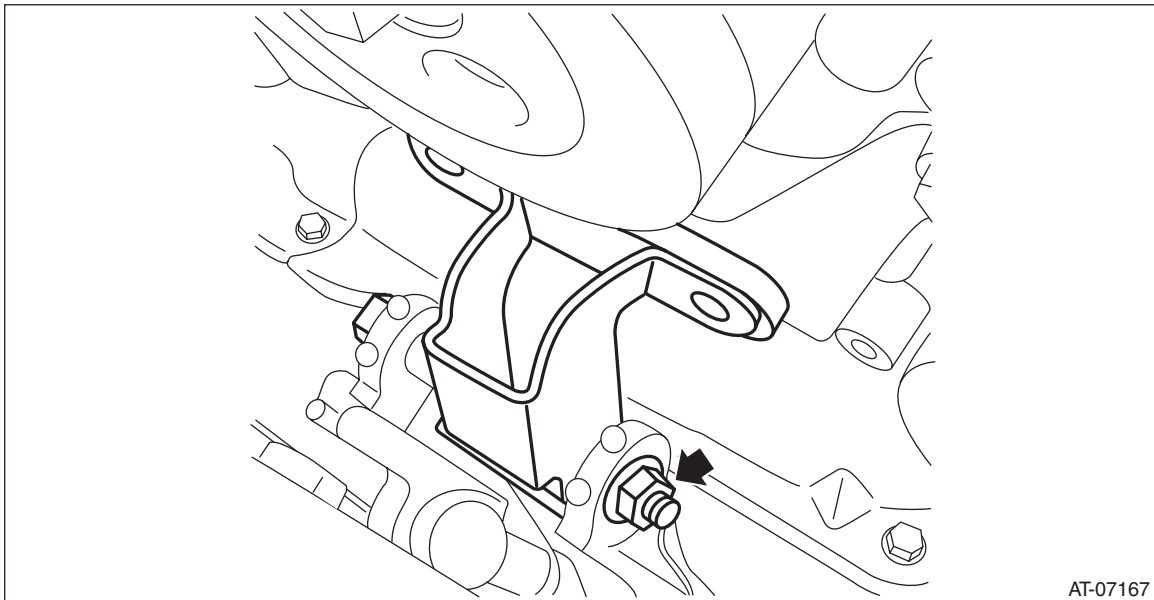
39) Lift up the engine unit high enough to install the bolt and nut to vehicle.

CAUTION:

Do not lift up higher than enough level to install the ST to avoid damage to the hoses and pipes inside the engine room.

NOTE:

- If it is difficult to pull out the stud bolt from transmission mounting bracket, shake the engine unit slightly while lifting up.



AT-07167

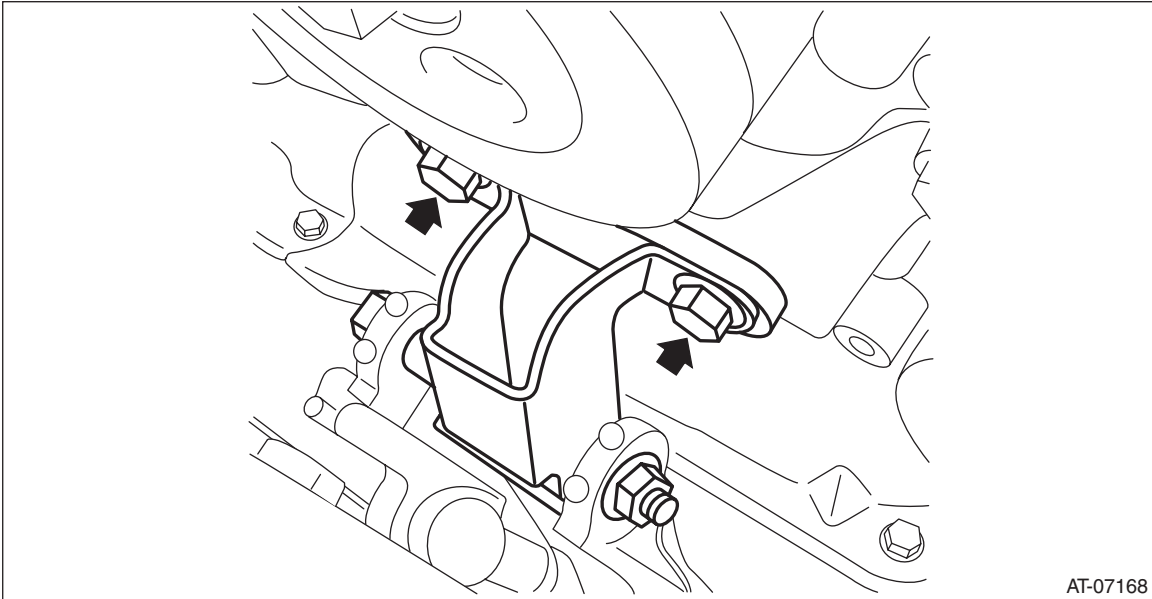
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

40) Tighten the mounting bolts on the engine side.

Tightening torque:

25 N·m (2.5 kgf-m, 18.4 ft-lb)

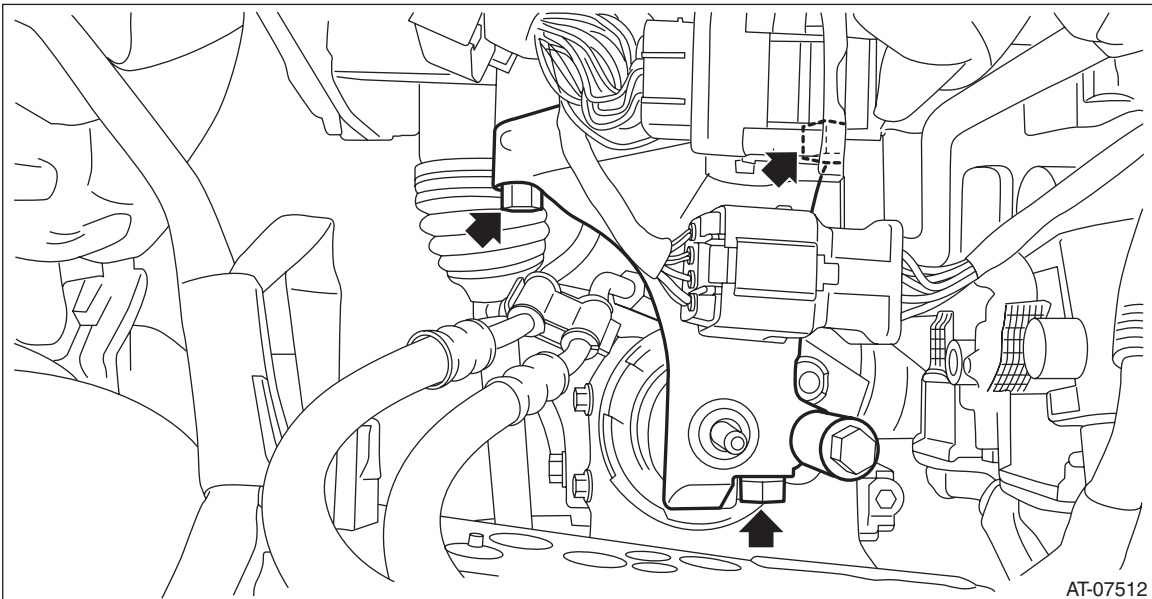


41) Remove the ST (ENGINE HANGER).

42) Remove the left and right transmission mounting brackets.

NOTE:

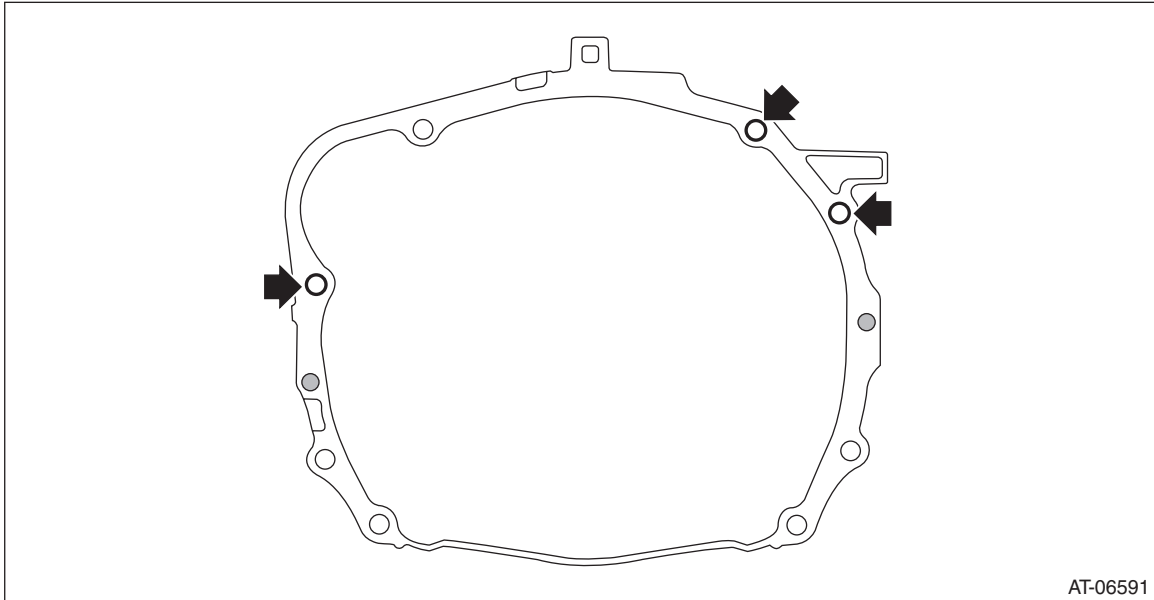
First, remove the transmission mounting bracket on the right side of vehicle, and then tilt the engine unit to remove the left transmission mounting bracket.



Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

43) Remove the three transmission connecting bolts.

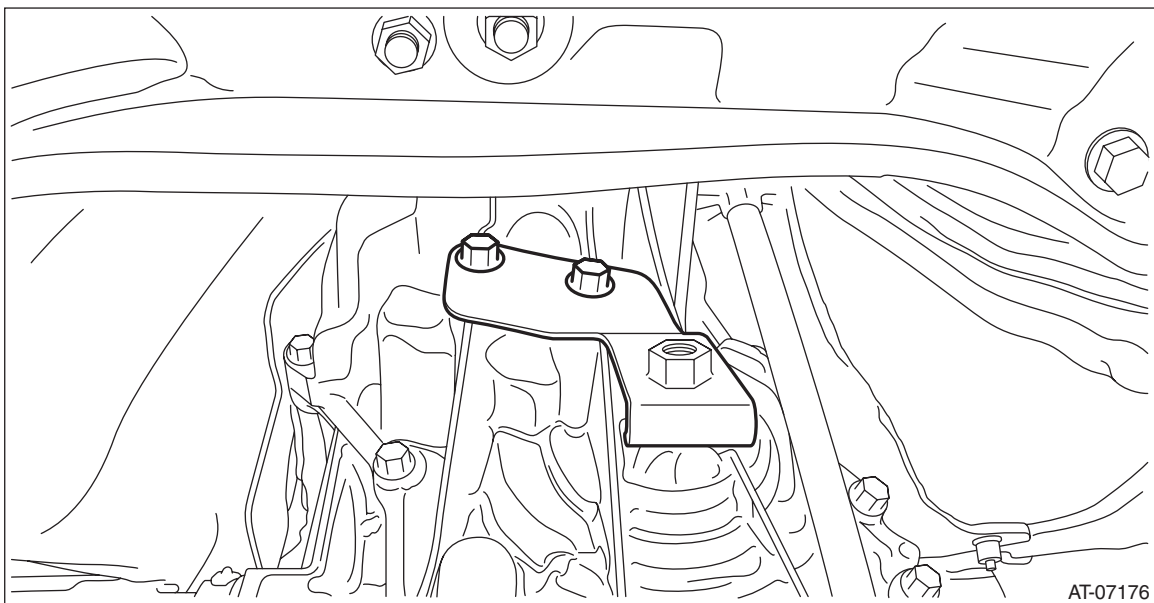


44) Set the ST (ENGINE HANGER) again to loosen the chain sling.

45) Lift up the vehicle.

46) Set the transmission jack under the transmission.

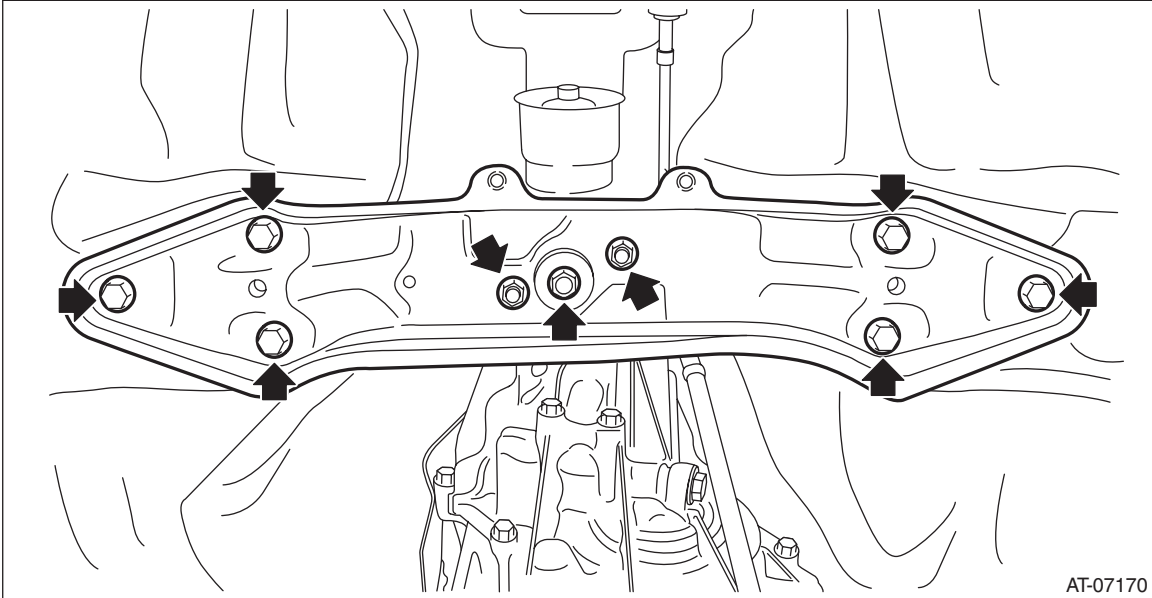
47) Remove the hanger bracket.



Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

48) Remove the rear crossmember.



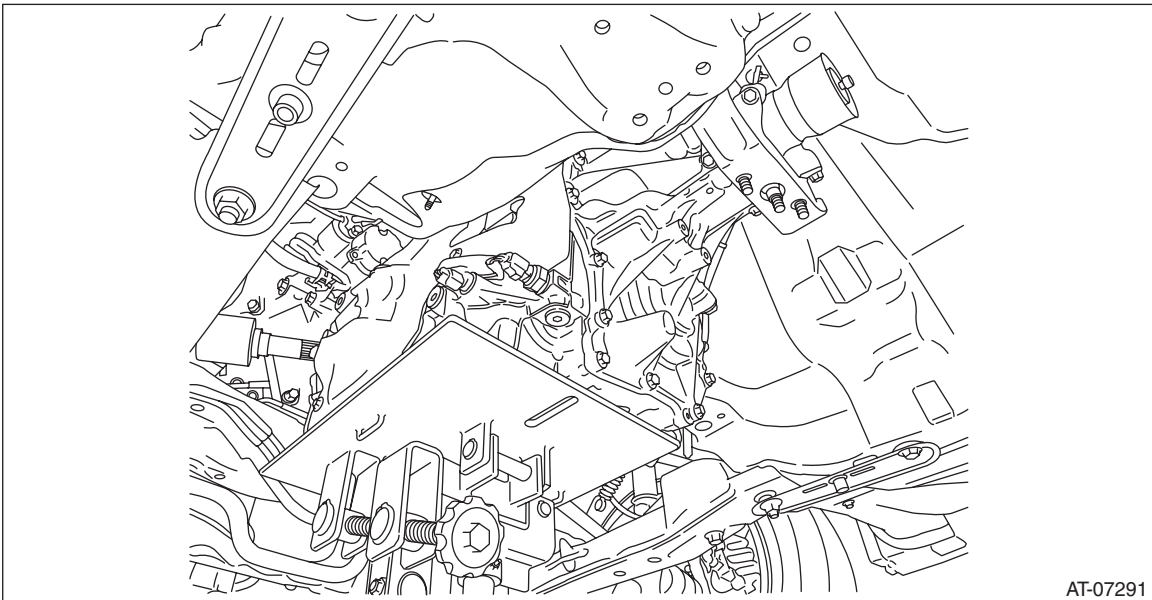
49) Lower the transmission rear end (dust cover rear end).

CAUTION:

When lowering the transmission rear end, be careful not to let the converter case and steering mechanical parts contact each other.

NOTE:

Lower the transmission rear end by approx. 80 mm (3.1 in) (reference).

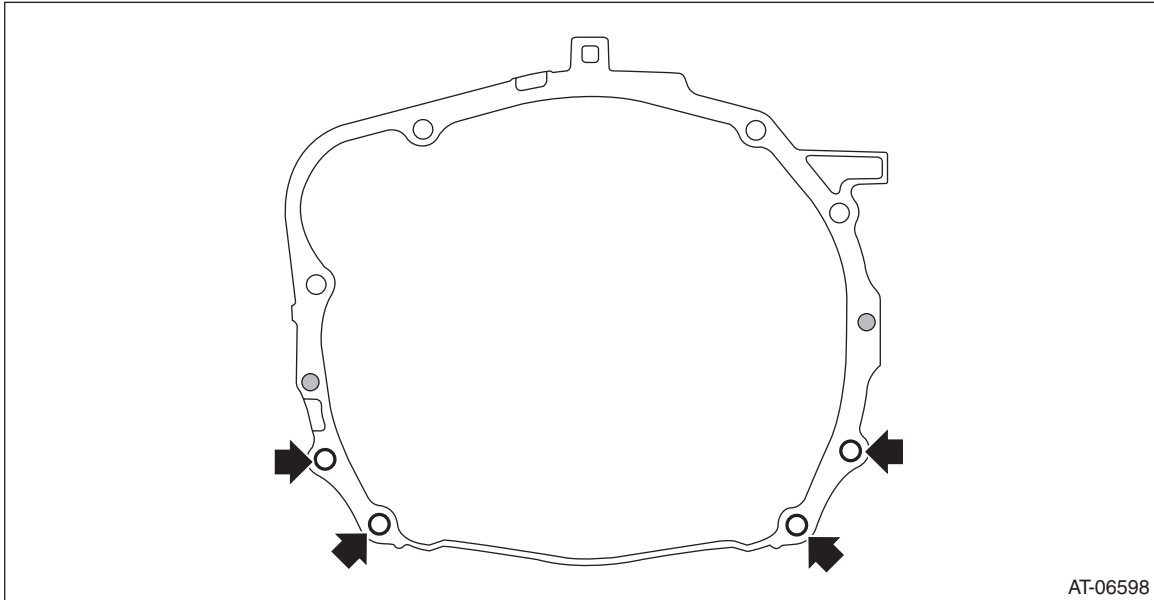


50) Rotate the handle of ST (ENGINE HANGER) to apply tension to the chain sling.

Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

51) Remove the two transmission connecting bolts and two nuts (lower side).

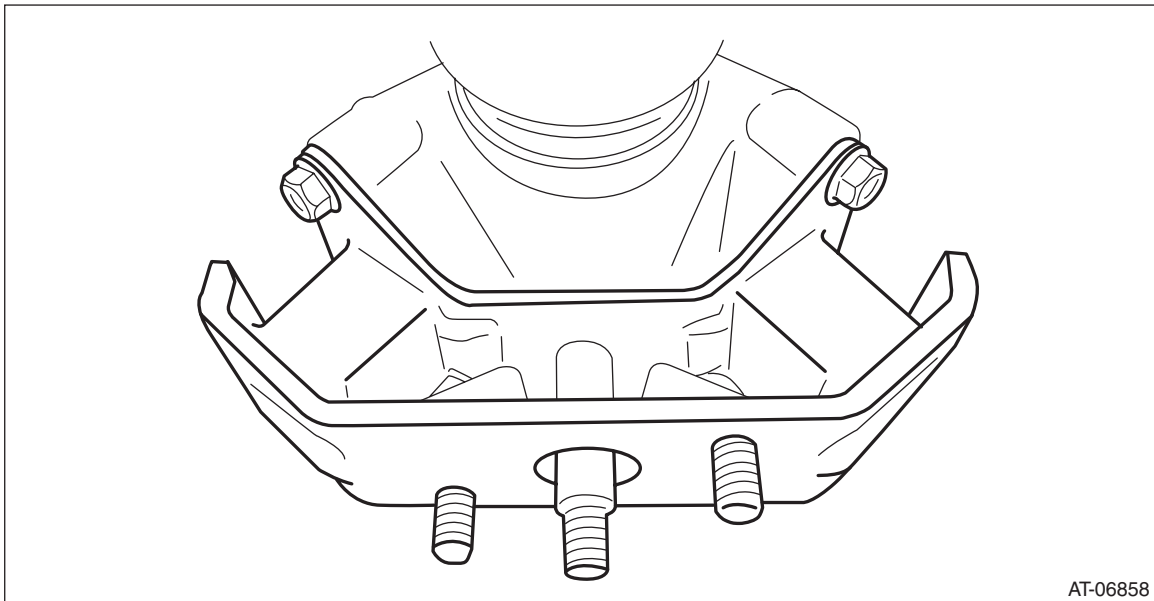


52) Remove the transmission assembly.

NOTE:

Remove it while moving the transmission jack up and down so that the engine and transmission remain directly aligned.

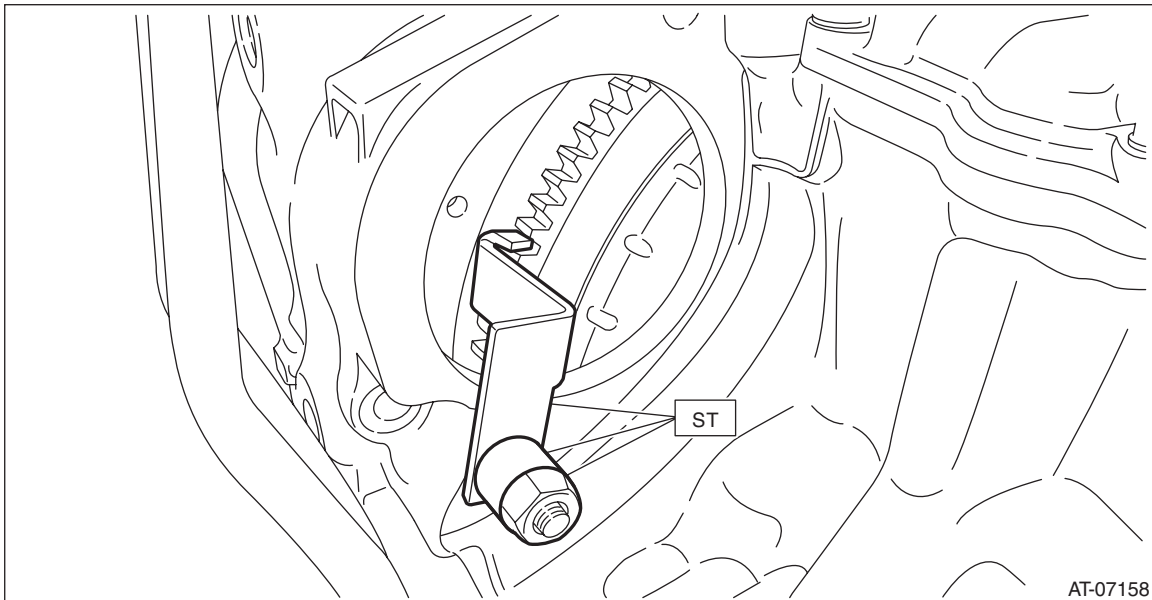
53) Remove the cushion rubber.



B: INSTALLATION

1) Attach the ST to converter case.

ST 498277200 STOPPER SET



2) Replace the front differential side retainer oil seal. <Ref. to CVT-90, REPLACEMENT, Differential Side Retainer Oil Seal.>

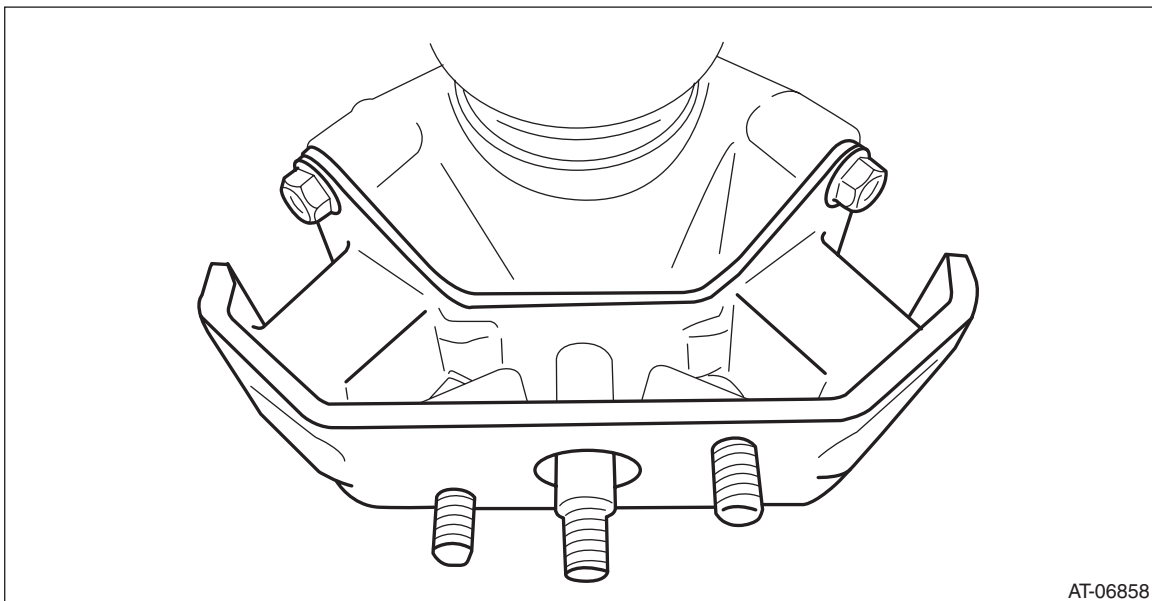
NOTE:

- Be sure to replace the differential side retainer oil seal with a new part whenever the front drive shaft is removed from the transmission.
- When a new differential side retainer oil seal has been installed, replacement is not required.

3) Install the cushion rubber on the transmission.

Tightening torque:

40 N·m (4.1 kgf-m, 29.5 ft-lb)



4) Mount the transmission onto the transmission jack.

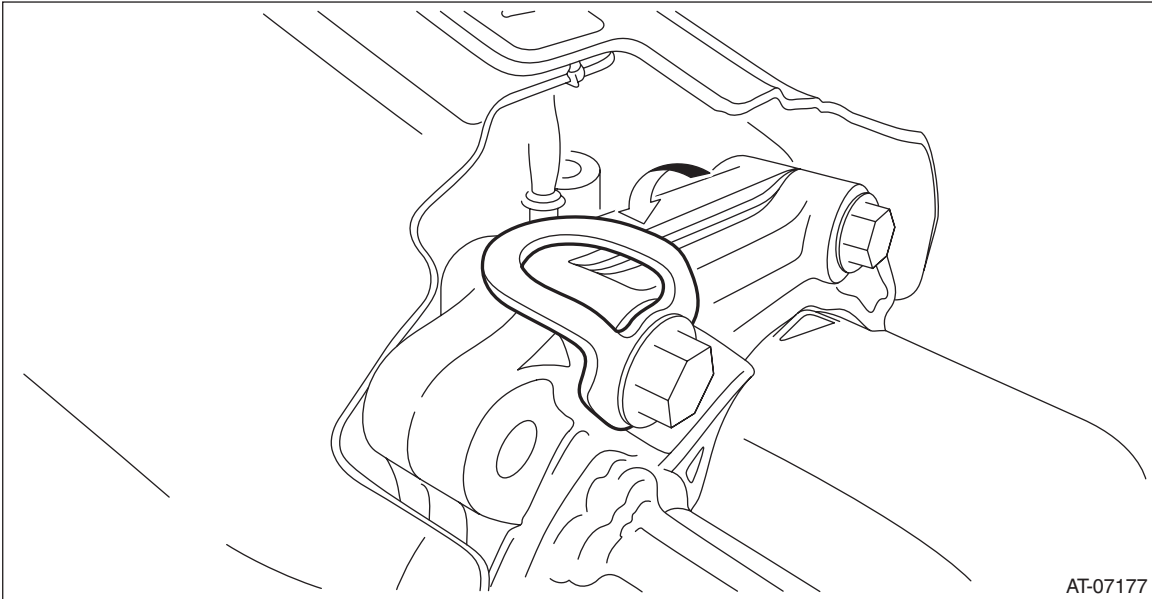
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

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

CAUTION:

Do not apply extra overload or impact to the transmission case.



6) While lifting up the transmission gradually, install the transmission to the engine.

CAUTION:

This operation requires at least two persons.

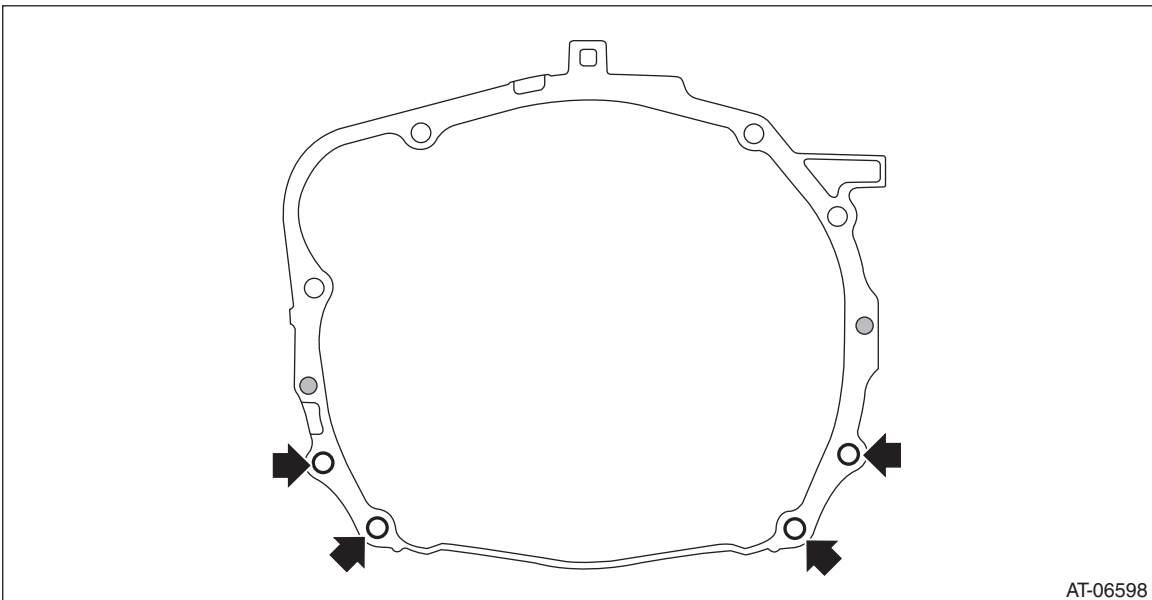
NOTE:

Keep the engine level.

7) Install the two engine connecting bolts and two nuts (lower side).

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



Automatic Transmission Assembly

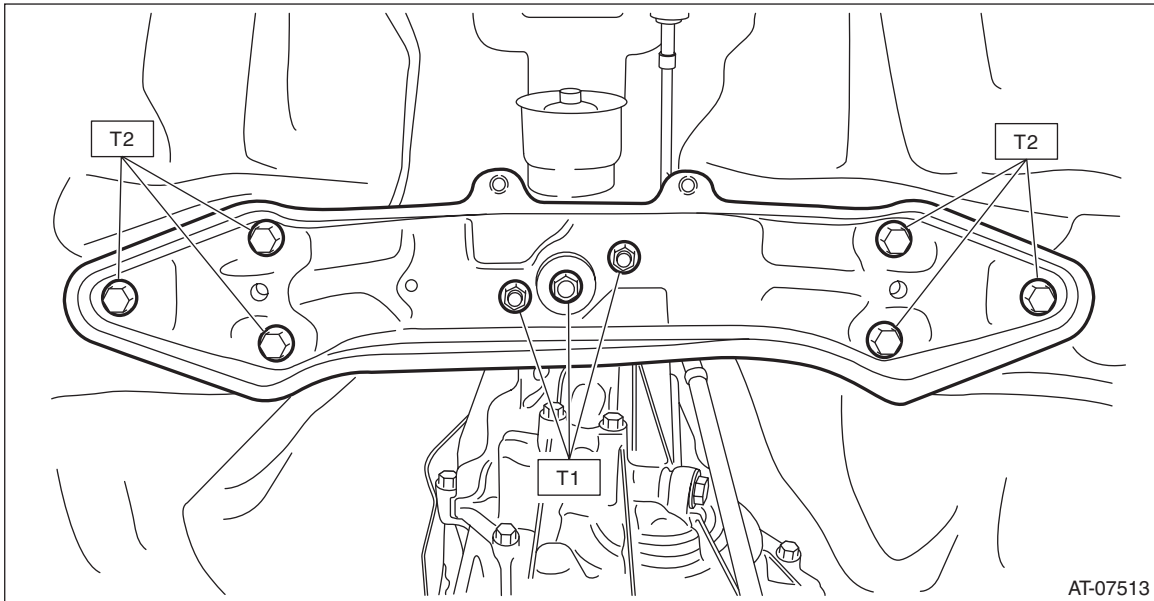
CONTINUOUSLY VARIABLE TRANSMISSION

8) Secure the transmission rear crossmember to the vehicle body.

Tightening torque:

T1: 35 N·m (3.6 kgf-m, 25.8 ft-lb)

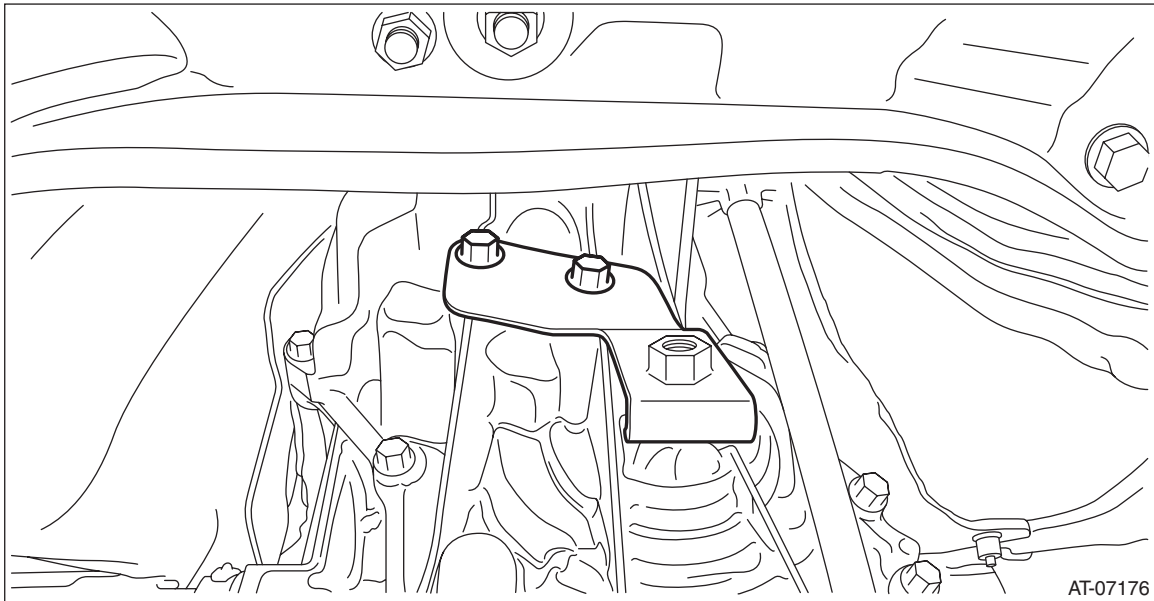
T2: 75 N·m (7.6 kgf-m, 55.3 ft-lb)



9) Install the hanger bracket.

Tightening torque:

23 N·m (2.3 kgf-m, 17.0 ft-lb)



10) Remove the transmission jack.

11) Lower the vehicle.

12) Remove the ST (ENGINE HANGER).

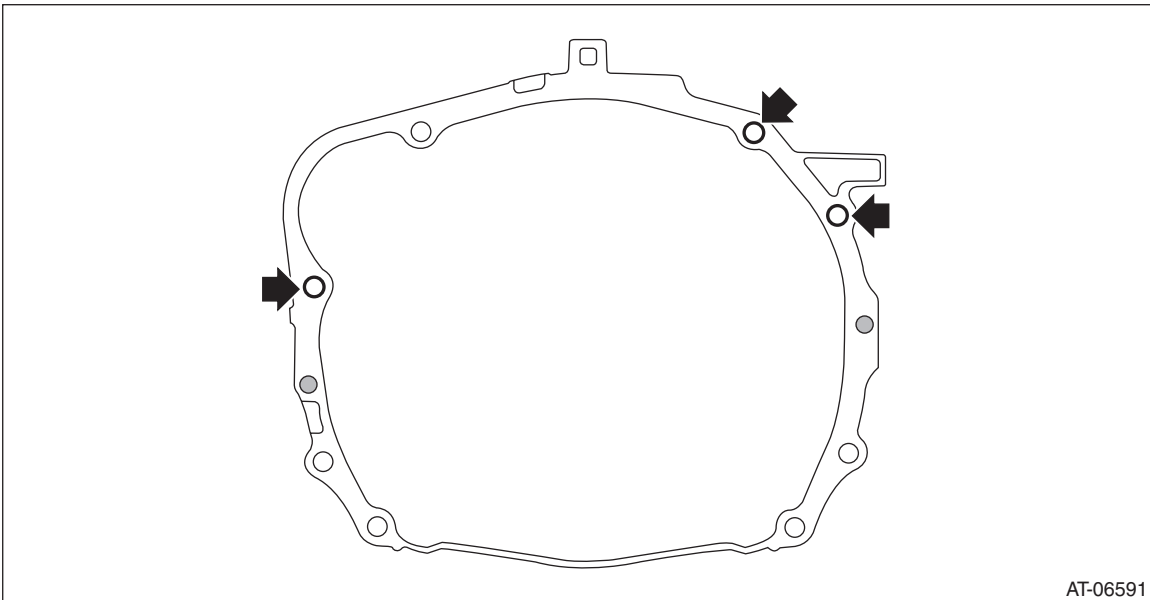
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

13) Install the three engine mounting bolts (upper side).

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)



AT-06591

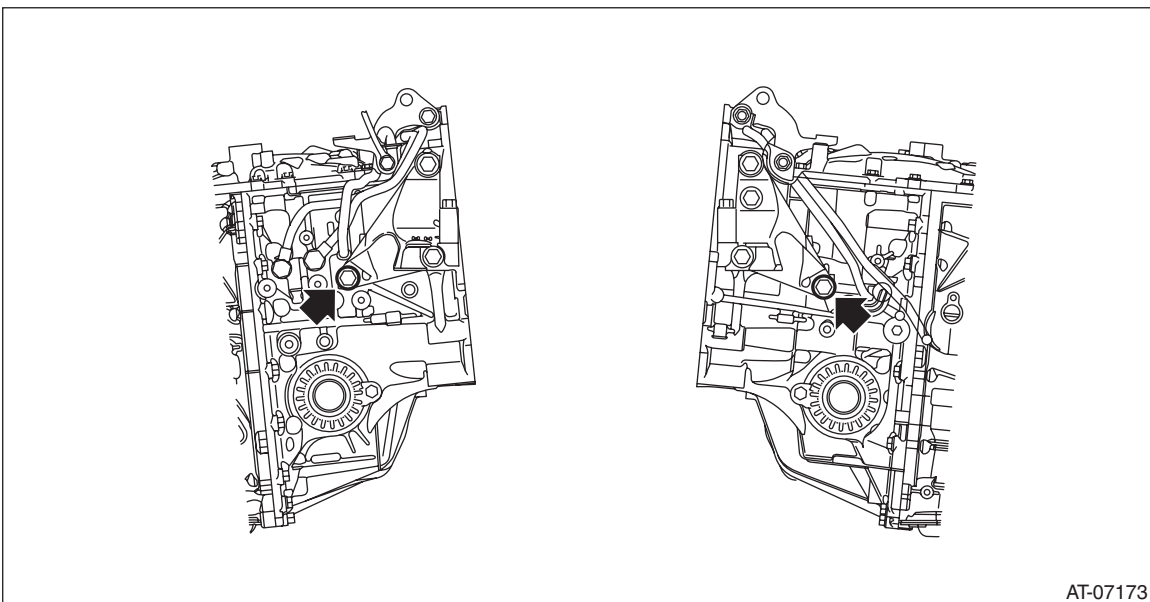
14) Install the left and right transmission mounting brackets.

NOTE:

- Install to the left side of vehicle first because the engine inclines to the left.
- Temporarily tighten the bolt arrowed in the figure.

Tightening torque:

75 N·m (7.6 kgf-m, 55.3 ft-lb)



AT-07173

Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

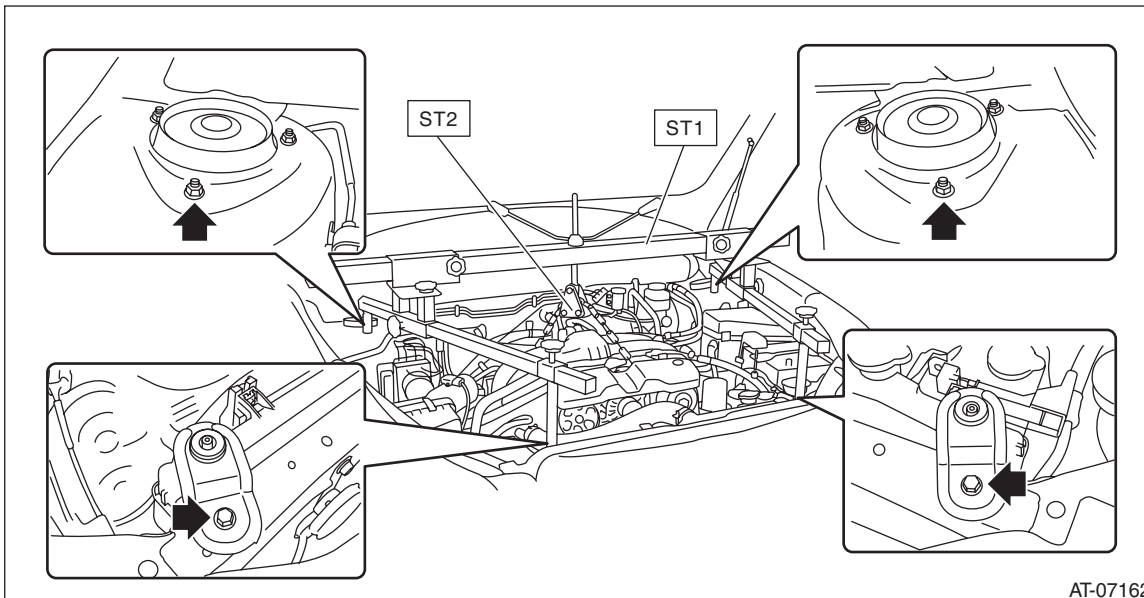
15) Set the ST to vehicle body and lift up the engine unit slightly.

ST1 99099AJ000 ENGINE HANGER

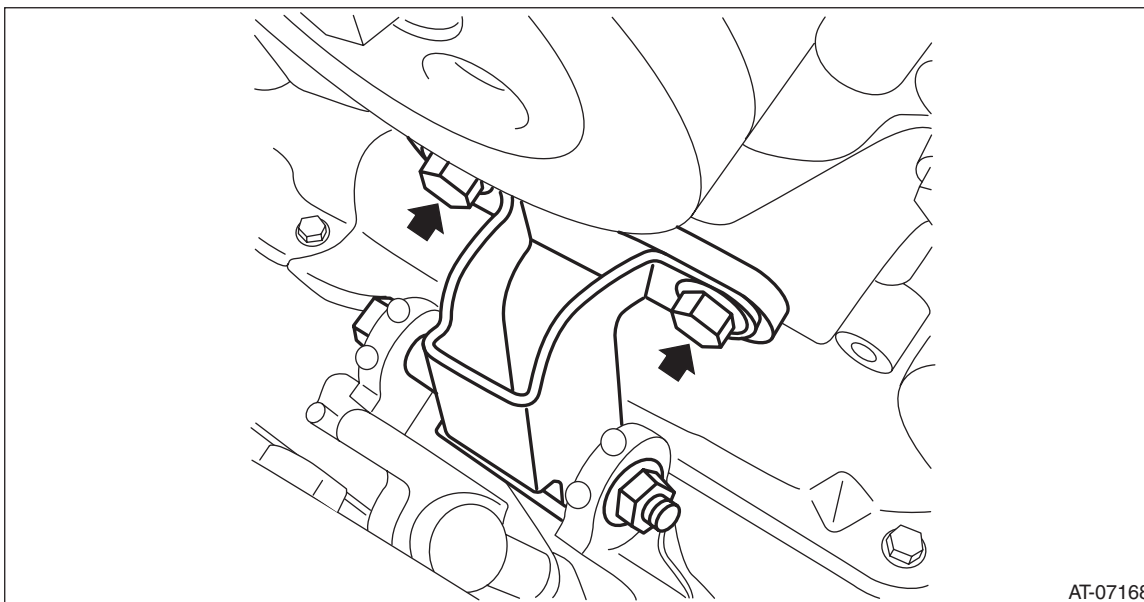
ST2 99099AJ010 CHAIN BALANCER

CAUTION:

- Set so that the chain sling does not contact the engine parts.
- Set the arms of ST (ENGINE HANGER) at the locations shown in the figure.



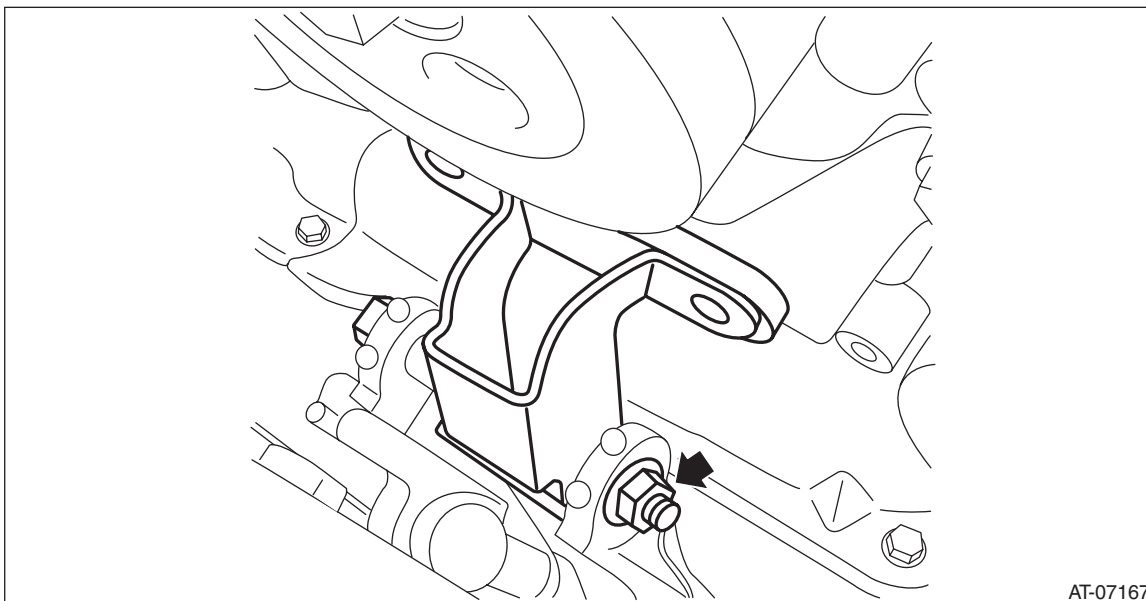
16) Remove the bolts from ST (SPECIAL TOOL FB).



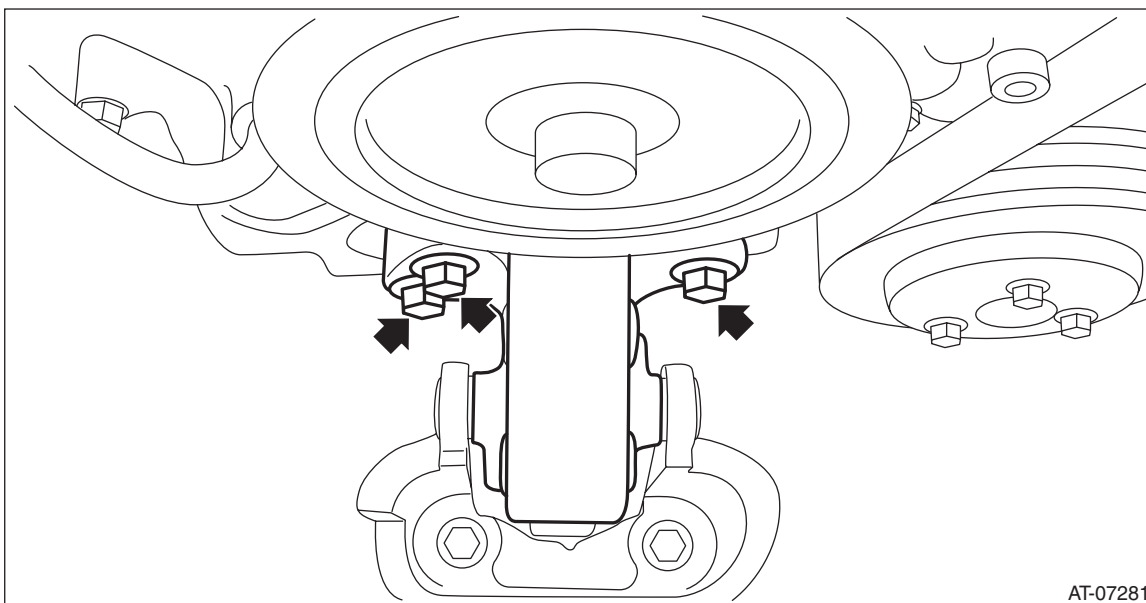
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

17) Remove the bolt and nut to remove ST (SPECIAL TOOL FB).



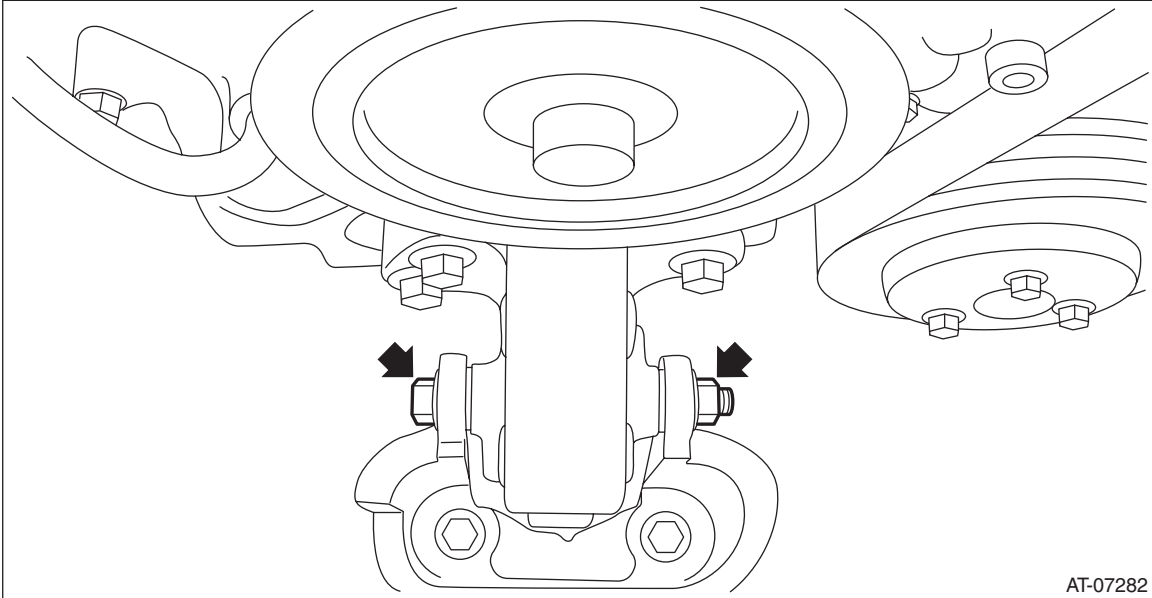
18) Temporarily attach the front cushion rubber with bolts.



Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

19) Install the bolt and nut to the front cushion rubber.



20) Tighten the bolts and nuts of front cushion rubber.

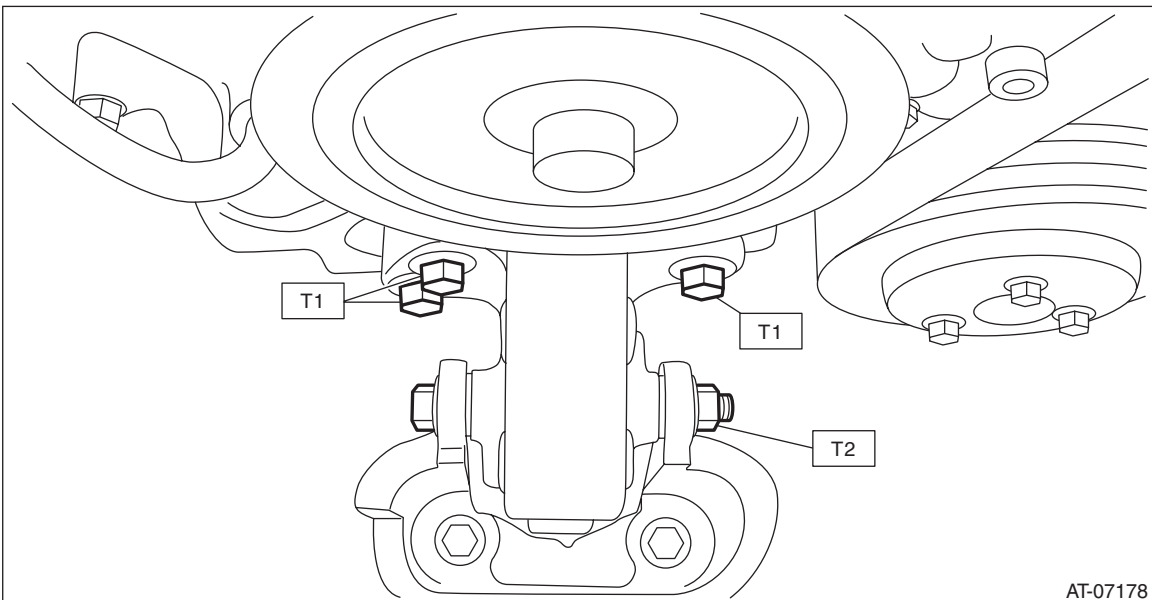
NOTE:

Always start tightening from the bolts on the engine side.

Tightening torque:

T1: 25 N·m (2.5 kgf-m, 18.4 ft-lb)

T2: 45 N·m (4.6 kgf-m, 33.2 ft-lb)



21) Remove the ST (ENGINE HANGER and CHAIN SLING).

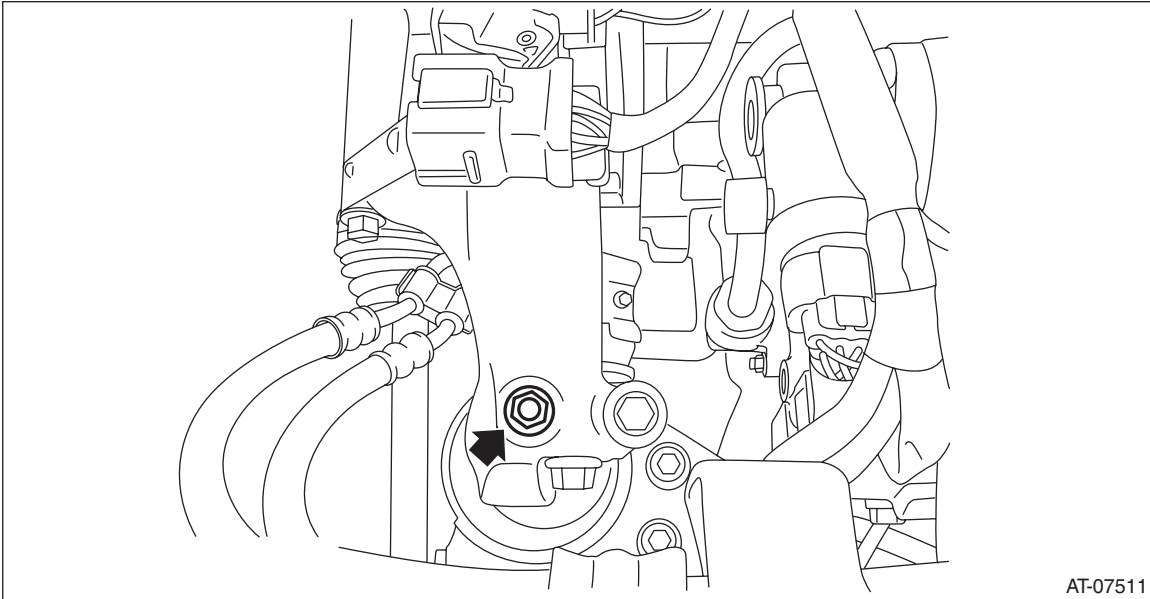
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

22) Install the nut to the transmission mounting bracket.

Tightening torque:

45 N·m (4.6 kgf-m, 33.2 ft-lb)



AT-07511

23) Install the main fan and sub fan.

24) Remove the ST (STOPPER SET) from converter case.

25) Match the torque converter screw hole with drive plate hole to install the bolt.

CAUTION:

- Do not drop the mounting bolt in the converter housing.
- Do not damage the mounting bolt.

Tightening torque:

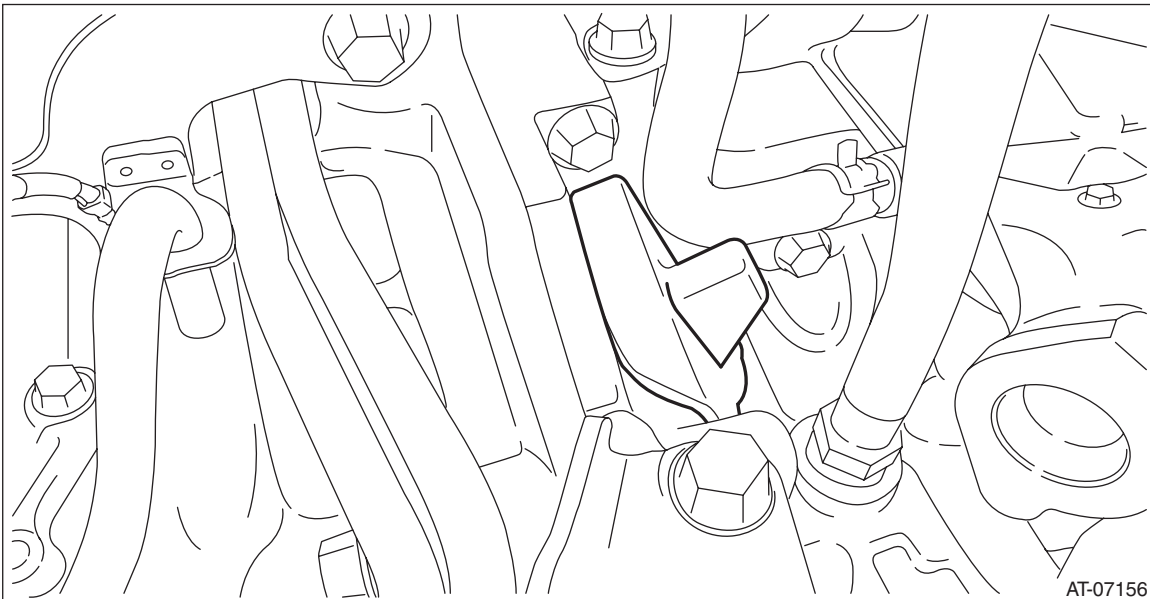
25 N·m (2.5 kgf-m, 18.4 ft-lb)

26) Install the remaining three bolts by rotating the crank pulley a little at a time in the same direction as engine revolution.

Tightening torque:

25 N·m (2.5 kgf-m, 18.4 ft-lb)

27) Install the service hole plug.



AT-07156

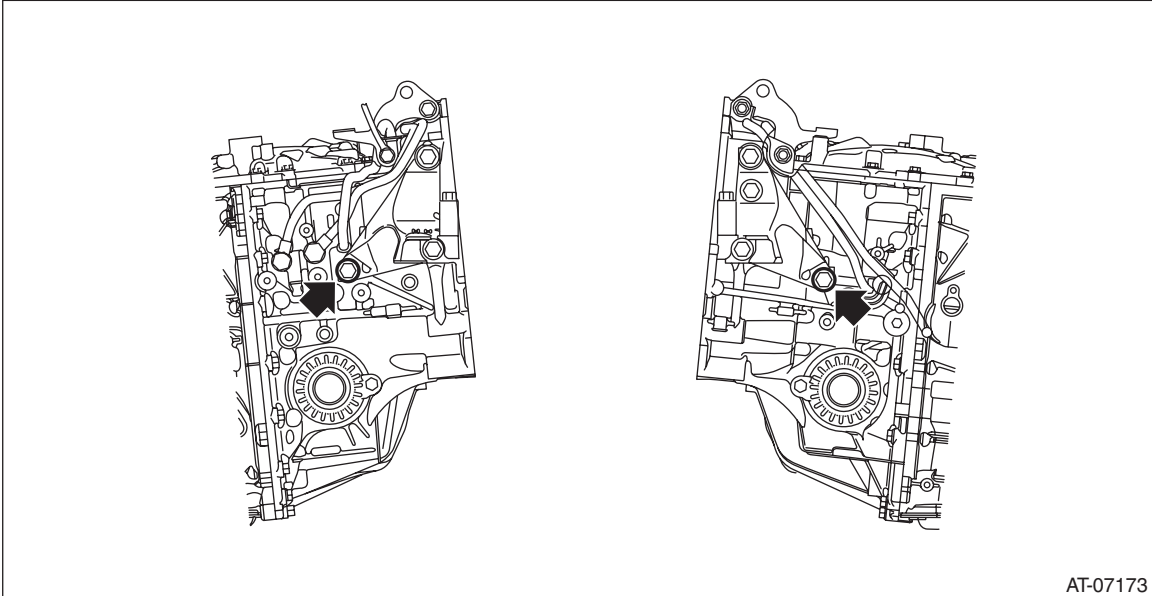
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

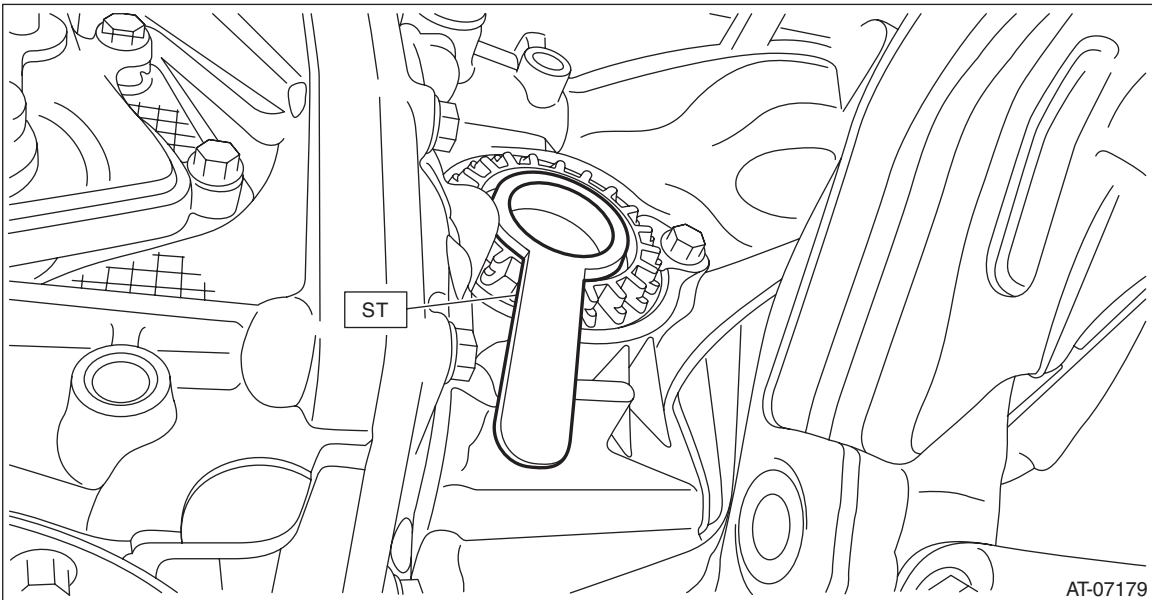
- 28) Install the starter. <Ref. to SC(H4DO)-10, INSTALLATION, Starter.>
- 29) Lift up the vehicle.
- 30) Tighten the single mounting bolt of transmission mounting bracket.

Tightening torque:

75 N·m (7.6 kgf-m, 55.3 ft-lb)



- 31) Set the ST to side retainer.
- ST 28399SA010 OIL SEAL PROTECTOR



- 32) Replace the circlip of the drive shaft with a new part.
- 33) Insert the front drive shaft spline section into transmission and remove the ST (OIL SEAL PROTECTOR).
- 34) Insert the drive shaft into the transmission securely by pressing the housing from outside of the vehicle.

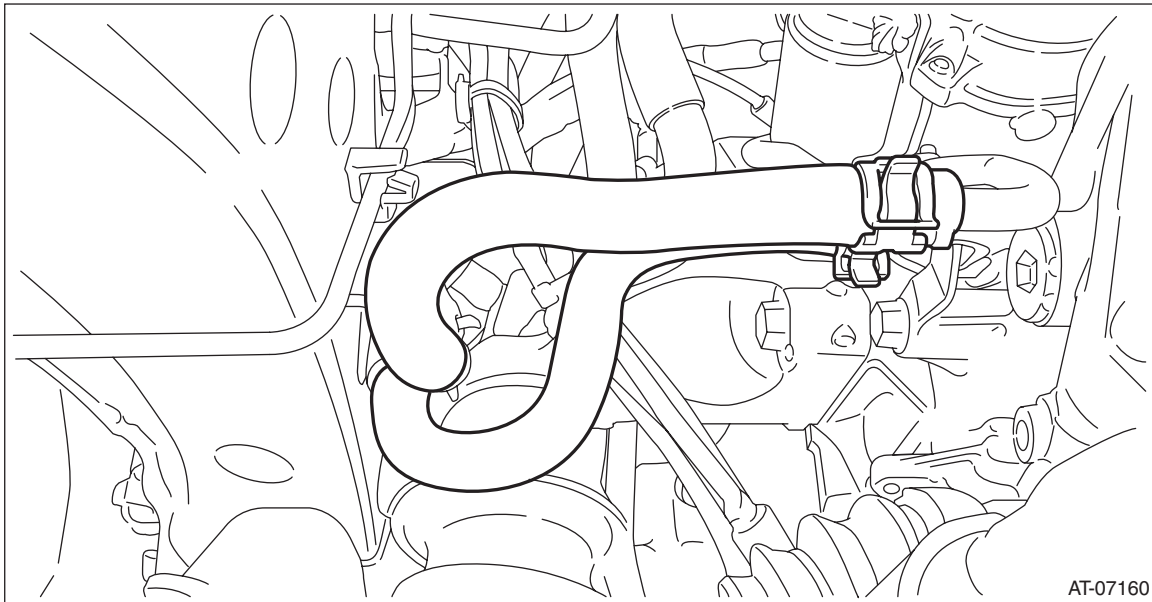
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

35) Install the CVTF CVT inlet hose and CVTF CVT outlet hose.

NOTE:

Use new CVTF CVT inlet hose and CVTF CVT outlet hose.



36) Insert the ball joint into housing and secure with bolt.

Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)

CAUTION:

- Do not apply grease to the tapered portion of ball stud.
- Before tightening, make sure the lower side of housing and stepped section of ball joint are in contact.

37) Install the stabilizer link.

Tightening torque:

60 N·m (6.1 kgf-m, 44.3 ft-lb)

38) Connect the tie-rod end and knuckle arm, and attach the castle nut.

Tightening torque:

27 N·m (2.75 kgf-m, 19.9 ft-lb)

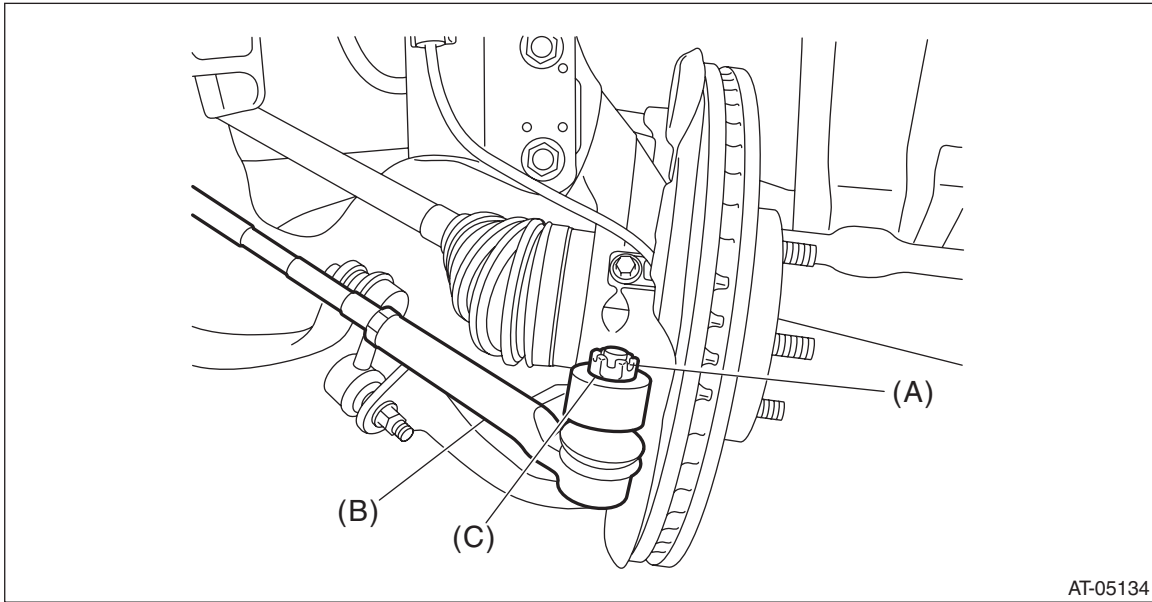
CAUTION:

When connecting, do not hit the cap at the bottom of tie-rod end with hammer.

Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

39) After tightening the castle nut to the specified tightening torque, tighten it further within 60° until the cotter pin hole is aligned with slot in the nut. Fit the cotter pin into the nut, and then bend the pin to lock.



- (A) Cotter pin
- (B) Tie-rod end
- (C) Castle nut

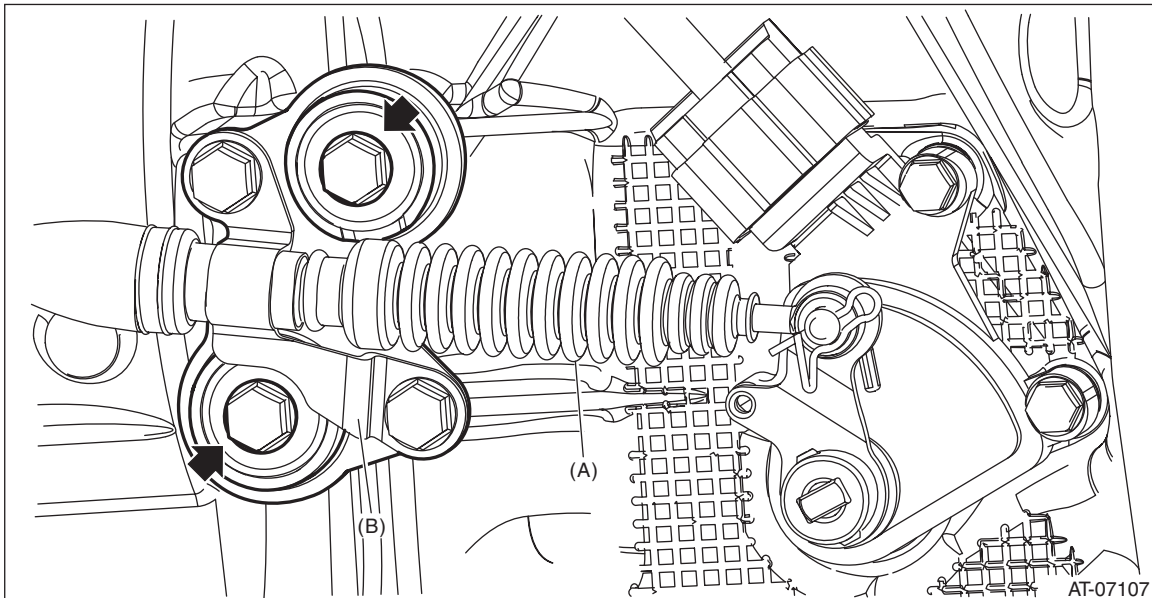
40) Install the propeller shaft. <Ref. to DS-11, INSTALLATION, Propeller Shaft.>

41) Install the universal joint. <Ref. to PS-21, INSTALLATION, Universal Joint.>

42) Install the plate assembly to transmission.

Tightening torque:

25 N·m (2.5 kgf-m, 18.4 ft-lb)

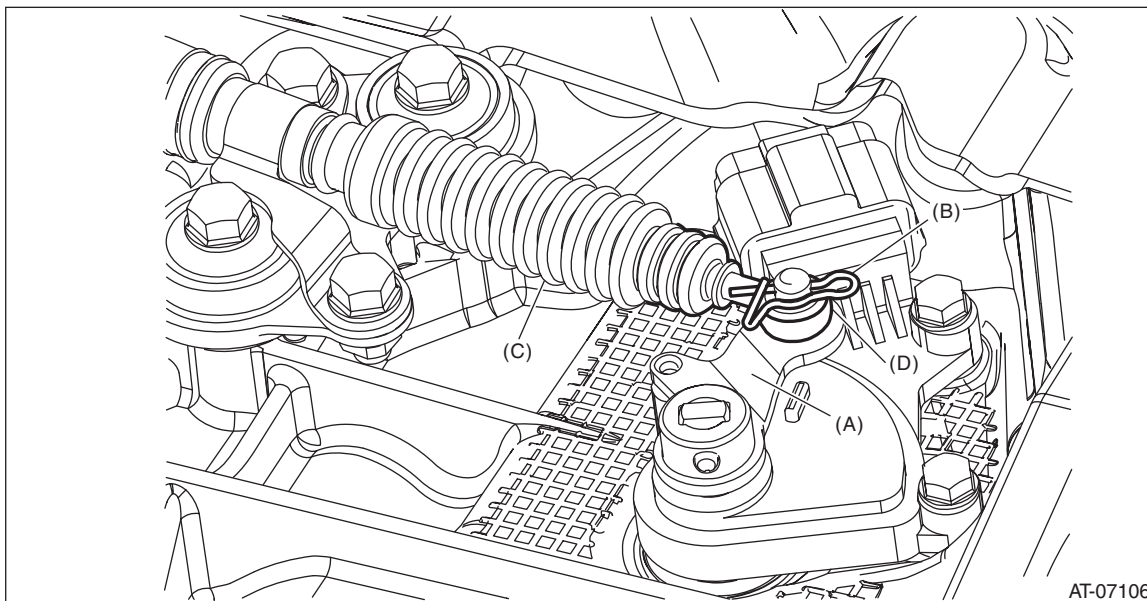


- (A) Select cable
- (B) Plate ASSY

Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

43) Install the washer and snap pin to the shifter arm.

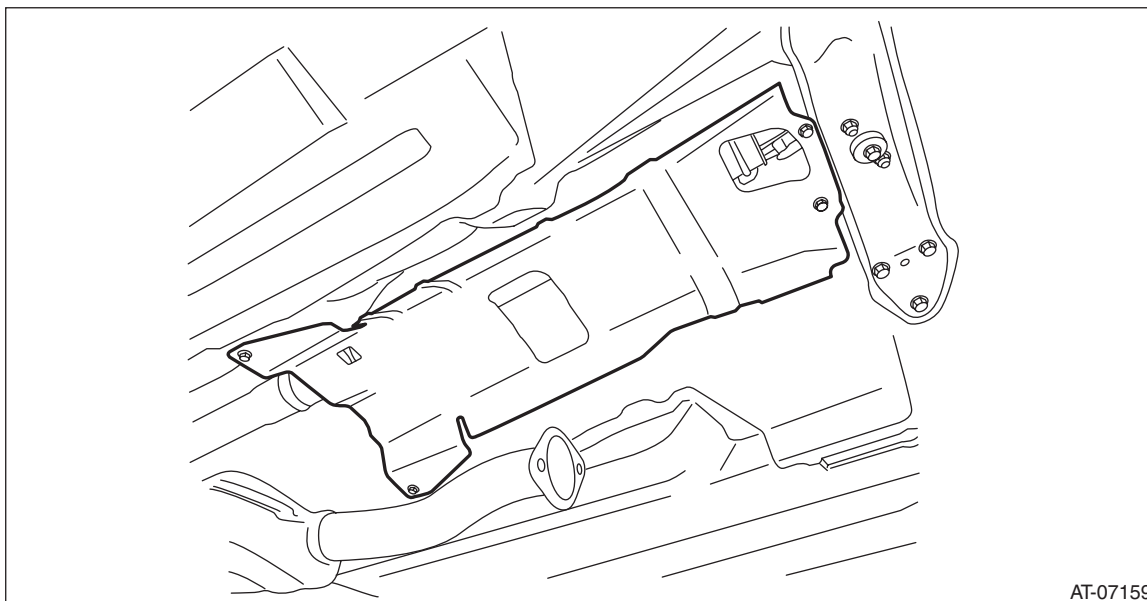


- (A) Shifter arm
- (B) Snap pin
- (C) Select cable
- (D) Washer

44) Install the center exhaust cover.

Tightening torque:

18 N·m (1.8 kgf-m, 13.3 ft-lb)



45) Install the center exhaust pipe. <Ref. to EX(H4DO)-13, INSTALLATION, Center Exhaust Pipe.>

46) Install the under cover.

47) Lower the vehicle.

48) Connect the engine harness.

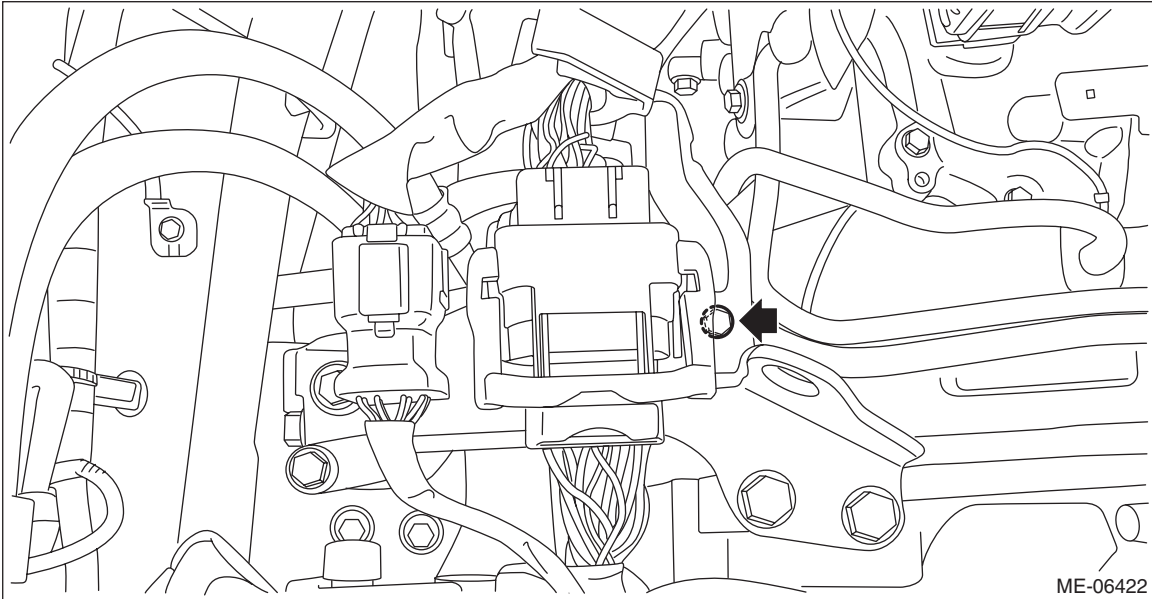
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

49) Attach the harness connector bracket.

Tightening torque:

7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

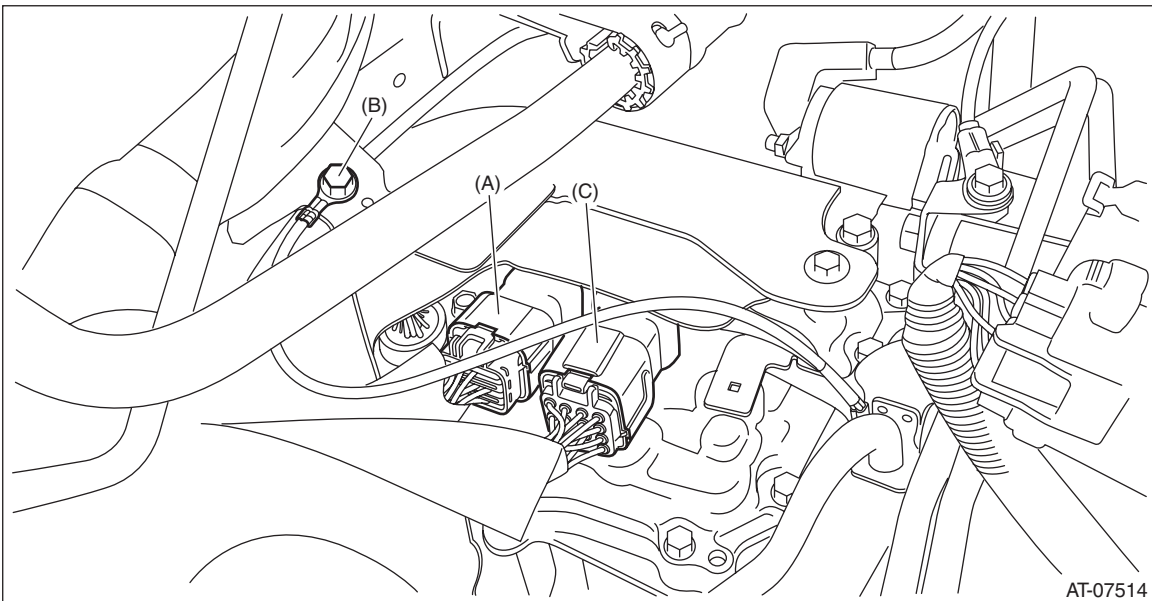


50) Connect the following harness connectors.

- Transmission harness connectors
- Transmission radio ground terminal
- Inhibitor harness connector

Tightening torque:

13 N·m (1.3 kgf-m, 9.6 ft-lb)



- (A) Transmission harness connectors
- (B) Transmission radio ground terminal
- (C) Inhibitor harness connector

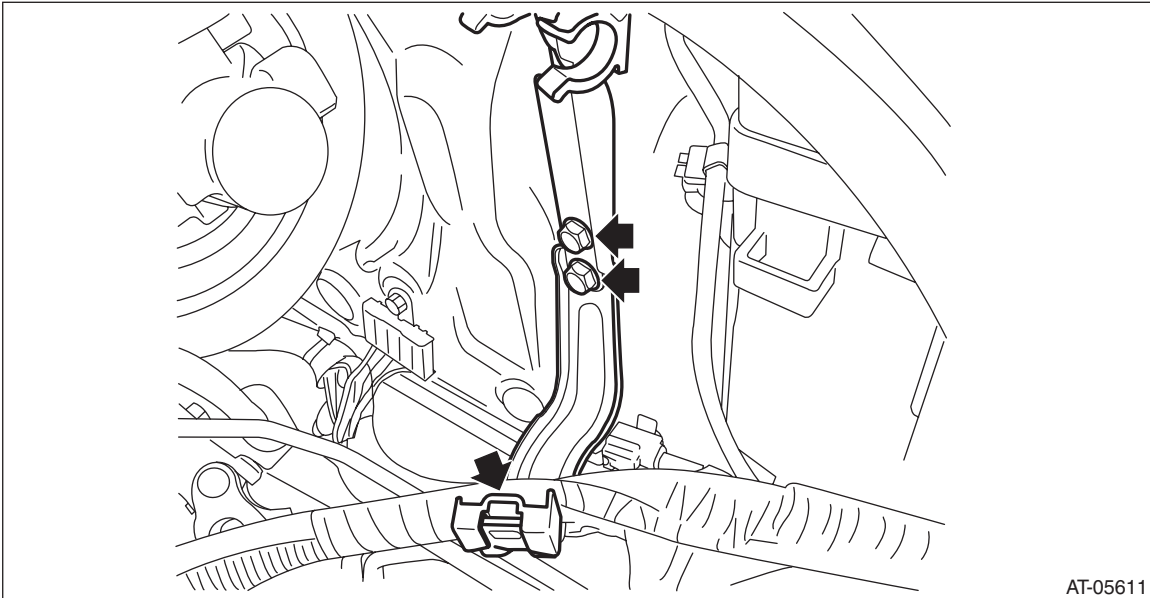
Automatic Transmission Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

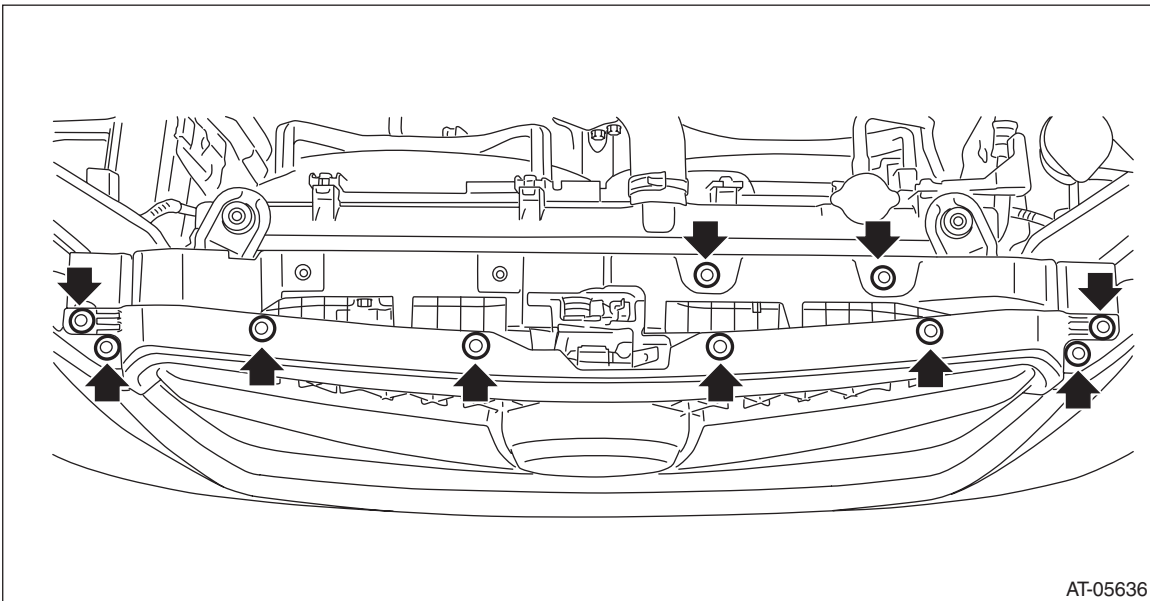
51) Install the battery cable bracket, and install the battery cable clip to the bracket.

Tightening torque:

7.5 N·m (0.76 kgf-m, 5.5 ft-lb)



52) Attach the grille bracket.



53) Install the air intake boot assembly. <Ref. to IN(H4DO)-13, INSTALLATION, Air Intake Boot.>

54) Install the air intake duct. <Ref. to IN(H4DO)-14, INSTALLATION, Air Intake Duct.>

55) Install the front wheels. <Ref. to WT-4, INSTALLATION, Tire and Wheel.>

56) Connect the battery ground terminal.

57) Refill differential gear oil to adjust the differential gear oil amount. <Ref. to CVT-40, Differential Gear Oil.>

58) Refill CVTF to adjust the CVTF amount. <Ref. to CVT-35, CVTF.>

59) Perform the operation for clearing AT learning value. <Ref. to CVT(diag)-19, Clear Memory Mode.>

60) Perform the operation of AT learning mode. <Ref. to CVT(diag)-21, Learning Control.>

61) Execute the rear differential inspection mode. <Ref. to DI-80, Rear Differential Inspection Mode.>

CAUTION:

Always execute the rear differential inspection mode at the replacement of the following.

- Replacement of transmission assembly
- Replacement of front differential hypoid gear set

62) Perform the road test to make sure there is no fault. <Ref. to CVT-45, INSPECTION, Road Test.>