

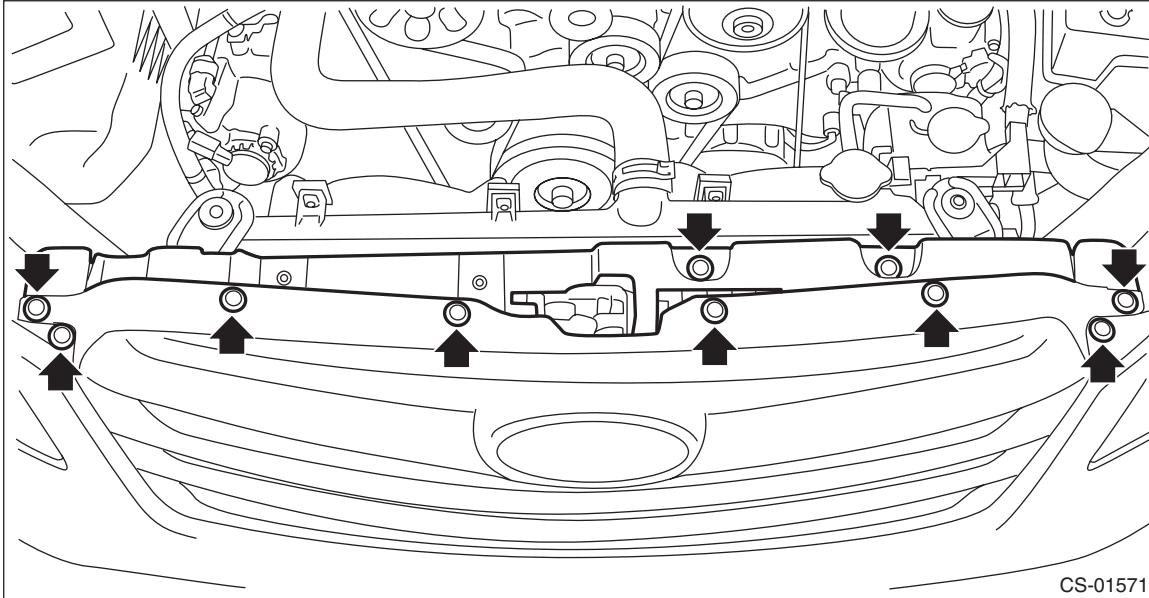
## 9. MT Gear Select Cable

### A: REMOVAL

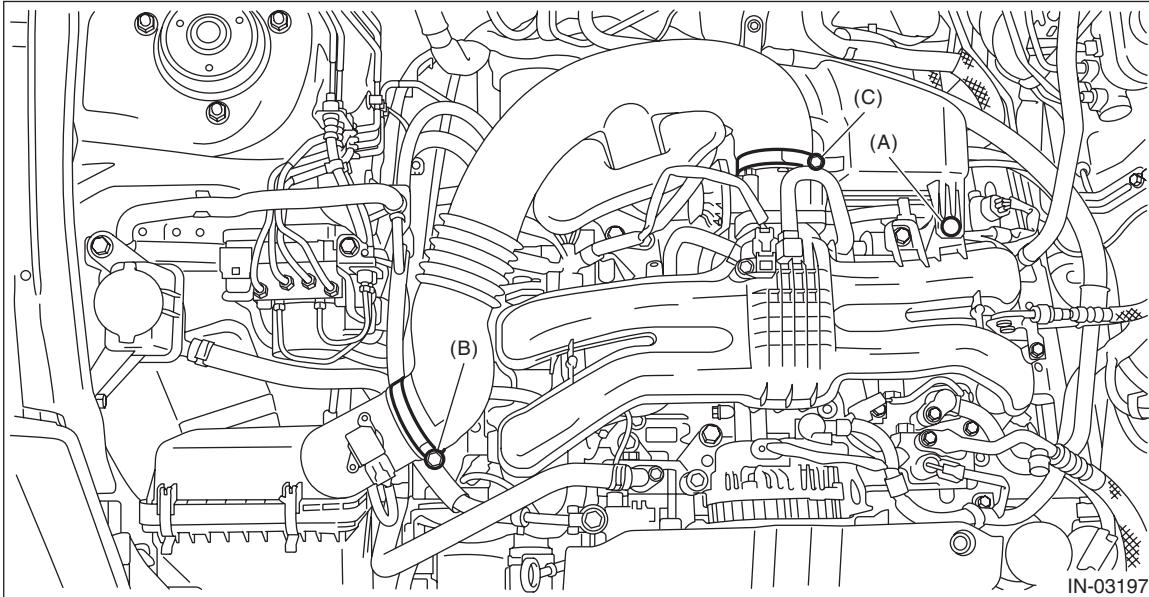
#### CAUTION:

Always use new MT gear select cable if the cable is removed from selector lever COMPL of transmission side.

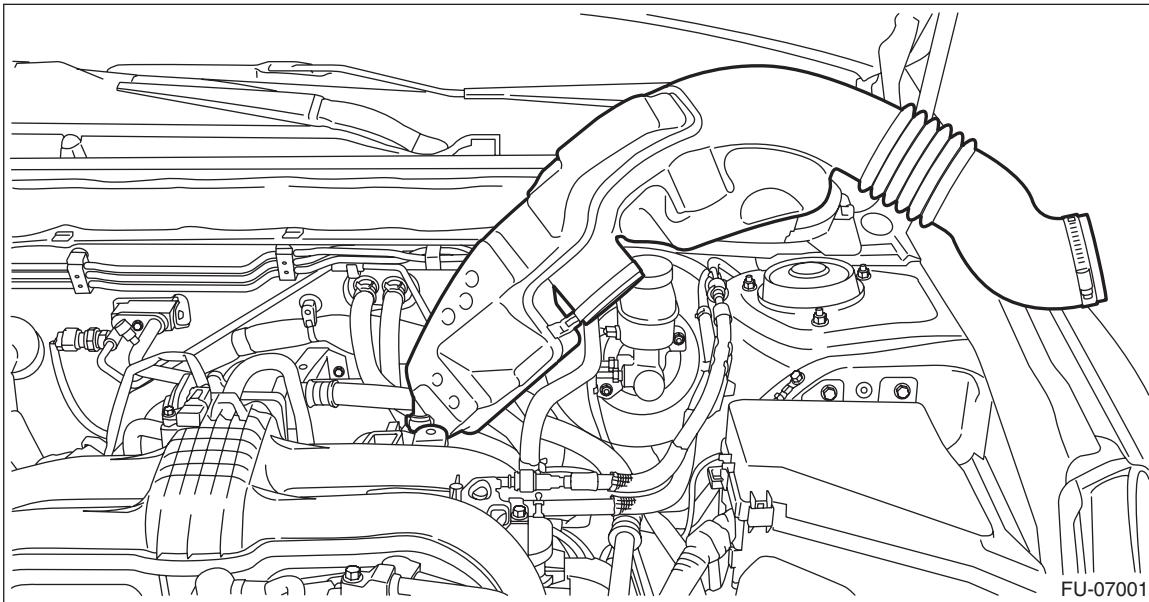
- 1) Disconnect the ground cable from battery.
- 2) Remove the air intake duct. <Ref. to IN(H4DO)-14, REMOVAL, Air Intake Duct.>
- 3) Remove the ten clips and remove the grille bracket.



- 4) Remove the radiator sub fan and fan motor. <Ref. to CO(H4DO)-40, REMOVAL, Radiator Sub Fan and Fan Motor.>
- 5) Remove the clip (A) from the air intake boot.
- 6) Loosen the clamp (B) connecting the air intake boot and air cleaner case (rear).
- 7) Loosen the clamp (C) which connects the air intake boot and throttle body.

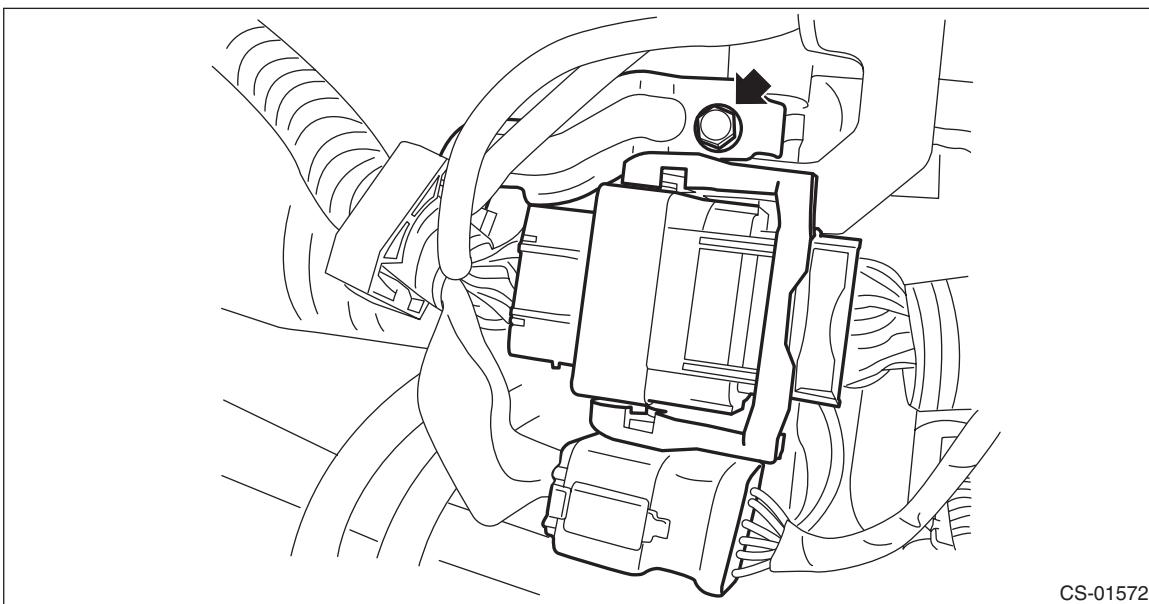


8) Remove the air intake boot from the throttle body, and move it to the left side wheel apron.



9) Remove the throttle body. <Ref. to FU(H4DO)-15, REMOVAL, Throttle Body.>

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



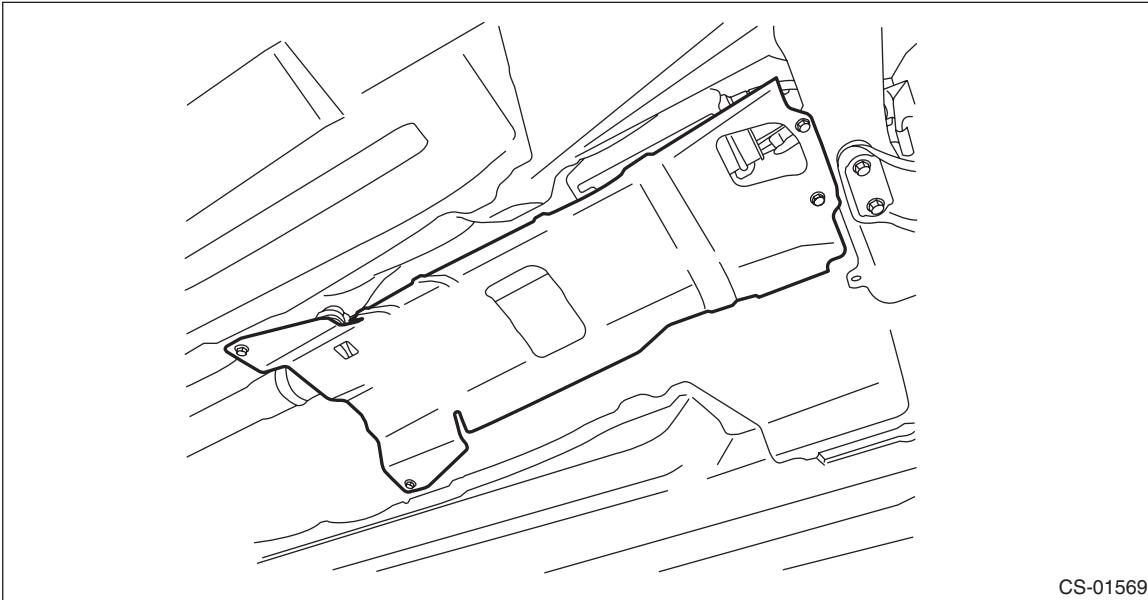
11) Lift up the vehicle.

12) Remove the center exhaust pipe. <Ref. to EX(H4DO)-12, REMOVAL, Center Exhaust Pipe.>

## MT Gear Select Cable

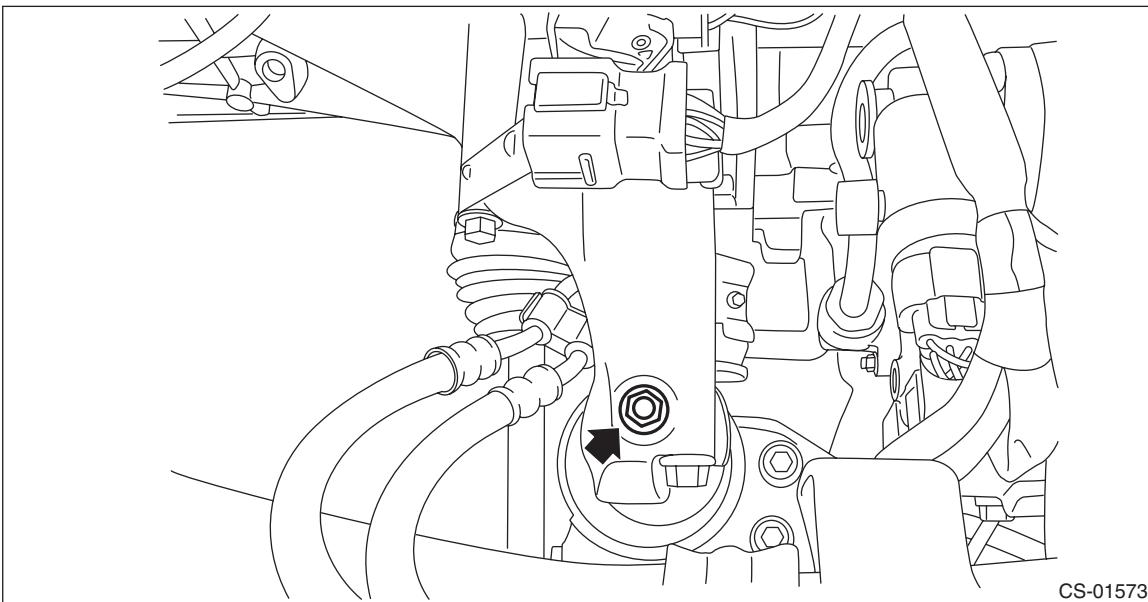
### CONTROL SYSTEMS

13) Remove the heat shield cover.



14) Lower the vehicle.

15) Remove the nuts from left and right transmission mounting brackets.



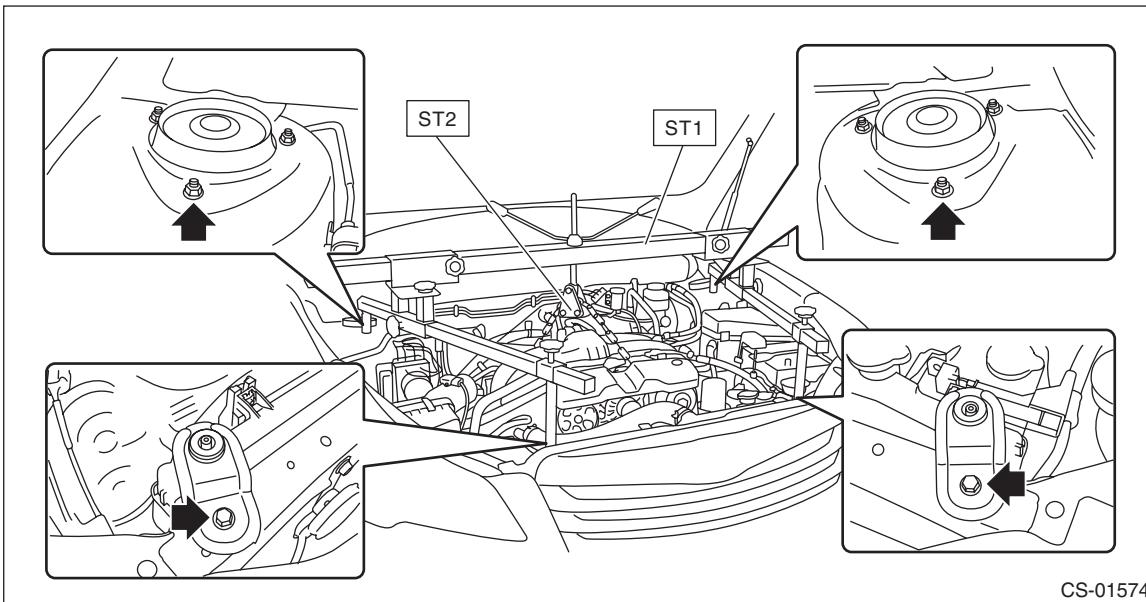
16) Set the ST1 and ST2 to vehicle.

ST1 99099AJ000 ENGINE HANGER

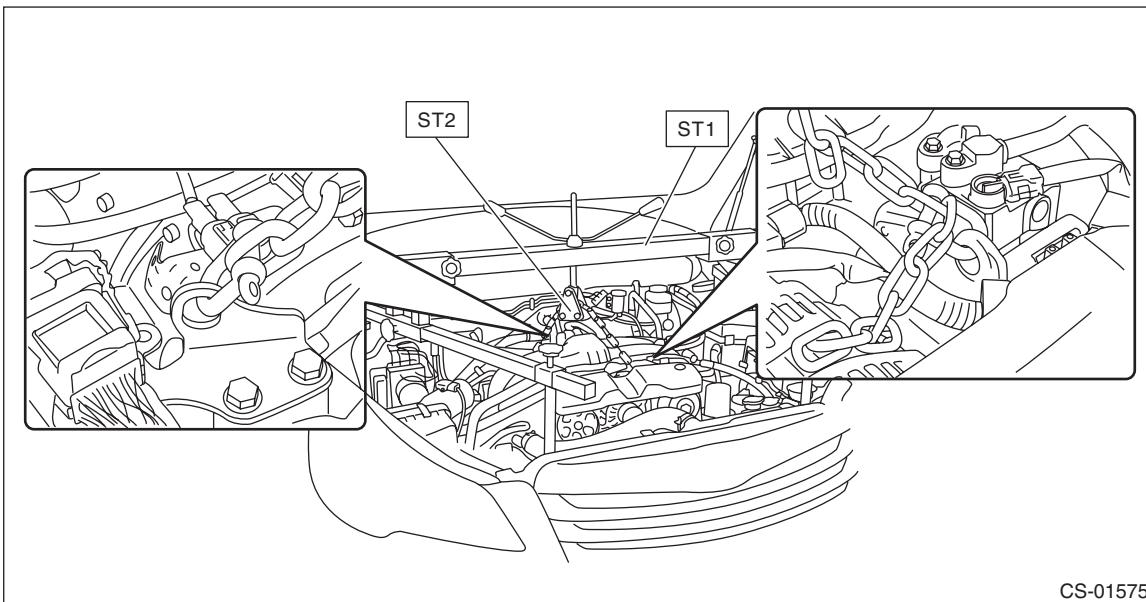
ST2 99099AJ010 CHAIN BALANCER

**CAUTION:**

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



CS-01574

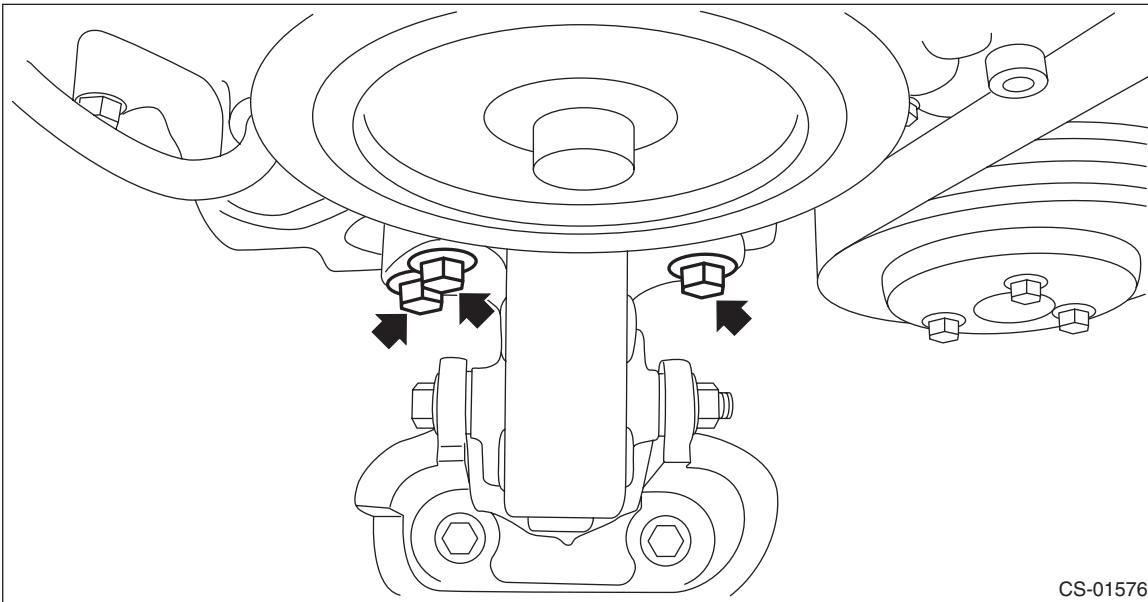


CS-01575

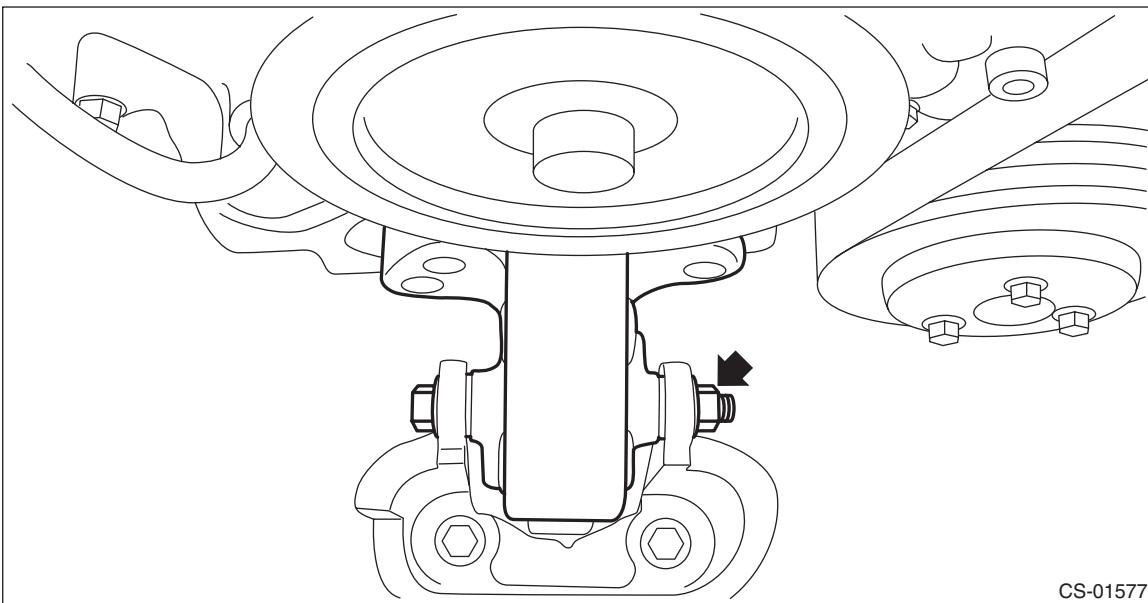
## MT Gear Select Cable

### CONTROL SYSTEMS

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

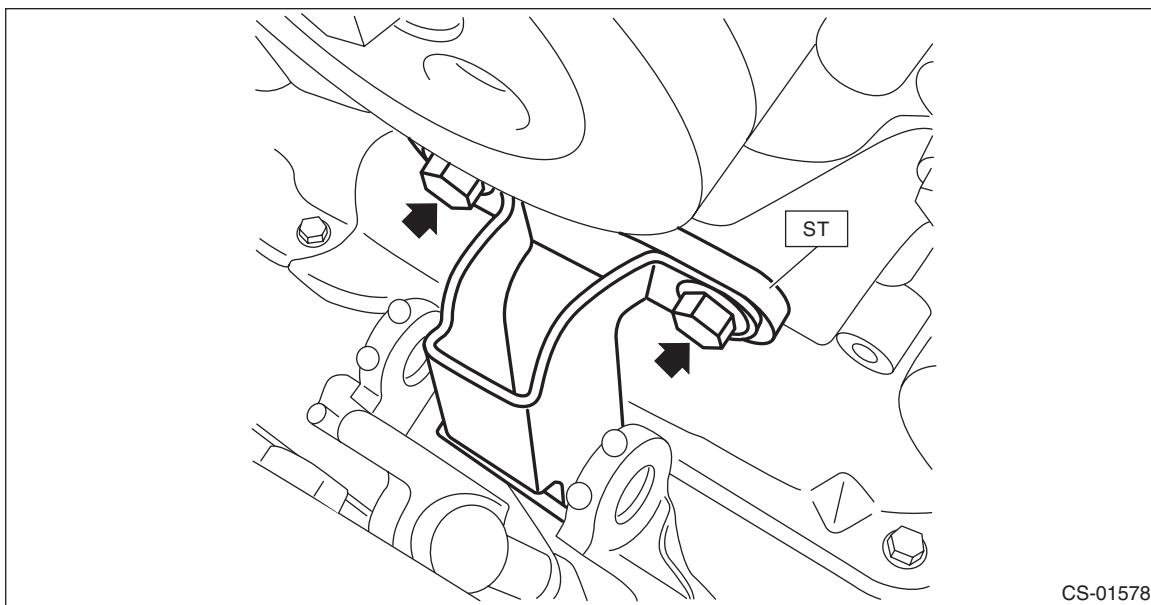


18) Remove the engine mounting nut and bolt to remove the engine mounting.



19) Temporarily attach ST by using two bolts.

ST 41099AJ130 SPECIAL TOOL FB



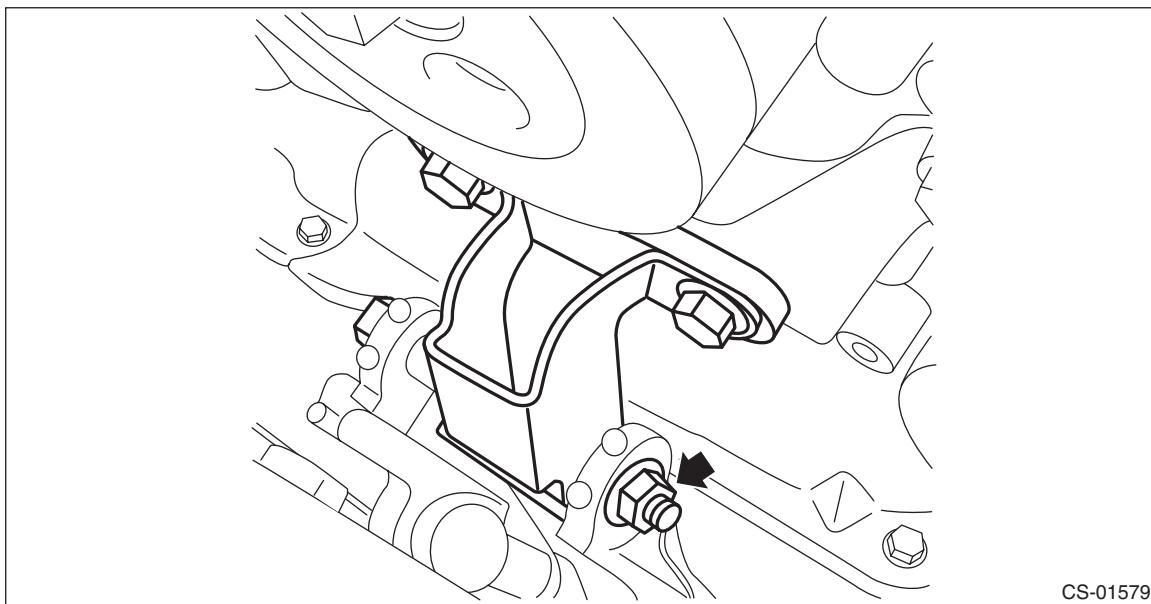
20) Lift up the engine unit high enough to install the bolt and nut to vehicle.

**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, slightly shake the engine unit while lifting up.



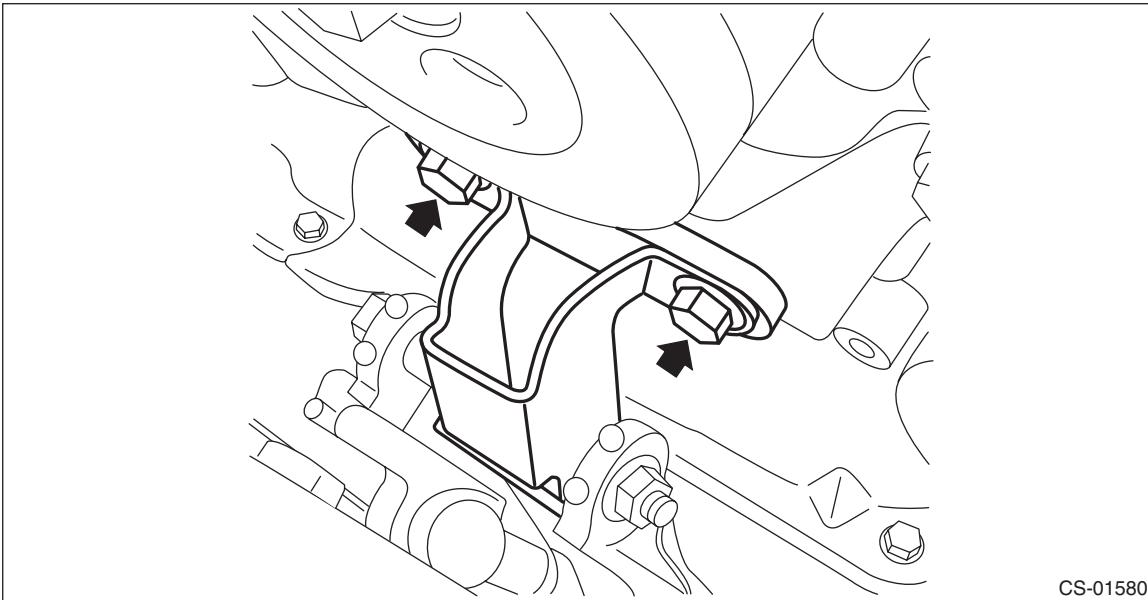
## MT Gear Select Cable

### CONTROL SYSTEMS

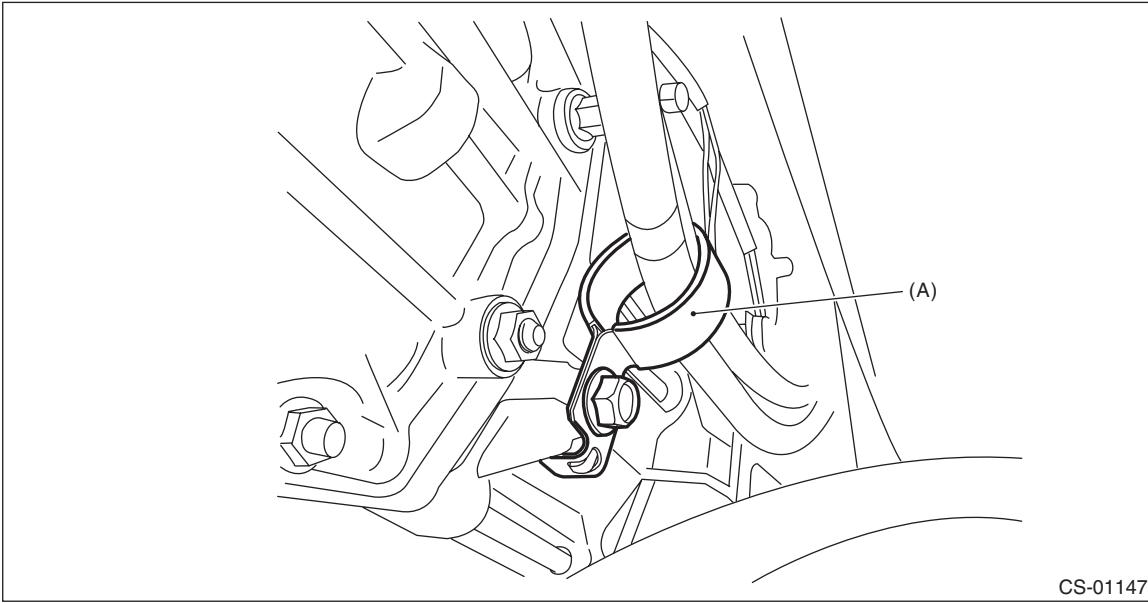
- 21) Tighten the mounting bolts on the engine side.

**Tightening torque:**

25 N·m (2.5 kgf·m, 18.4 ft-lb)



- 22) Rotate the handle of the ST (ENGINE HANGER) to loosen the sling chain.
- 23) Lift up the vehicle.
- 24) Set the transmission jack to the transmission.
- 25) Remove the clamp cable and take out the MT gear select cable from the clamp.

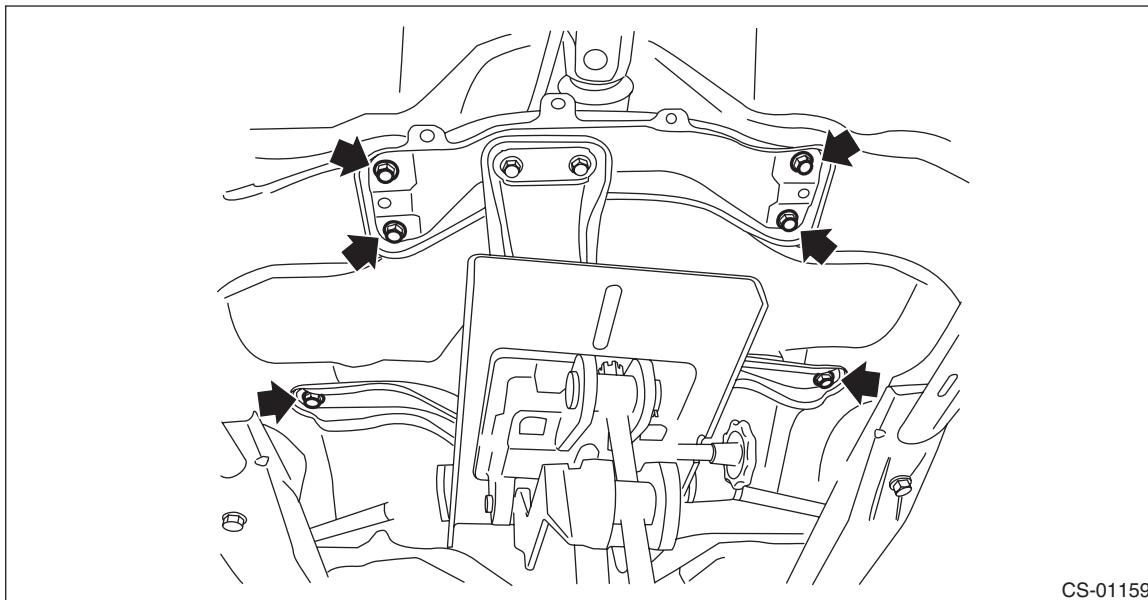


(A) Clamp cable

26) Remove the mounting bolts from the front crossmember and rear crossmember, and lower the transmission.

**CAUTION:**

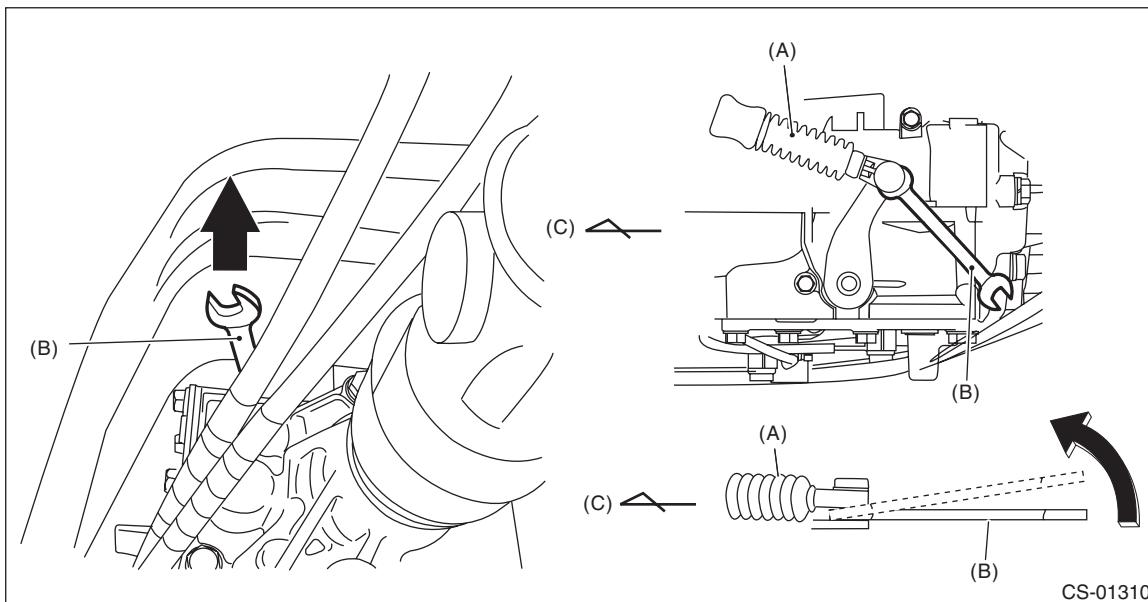
When lowering the transmission, make sure that the transmission jack does not come off from the transmission.



27) Insert a spanner between the selector lever COMPL and the MT gear select cable and remove the MT gear select cable by raising the handle.

**NOTE:**

- Use a spanner with 11 to 13 in size.
- The thickness of the spanner must not exceed 6 mm (0.2 in).



(A) MT gear select cable

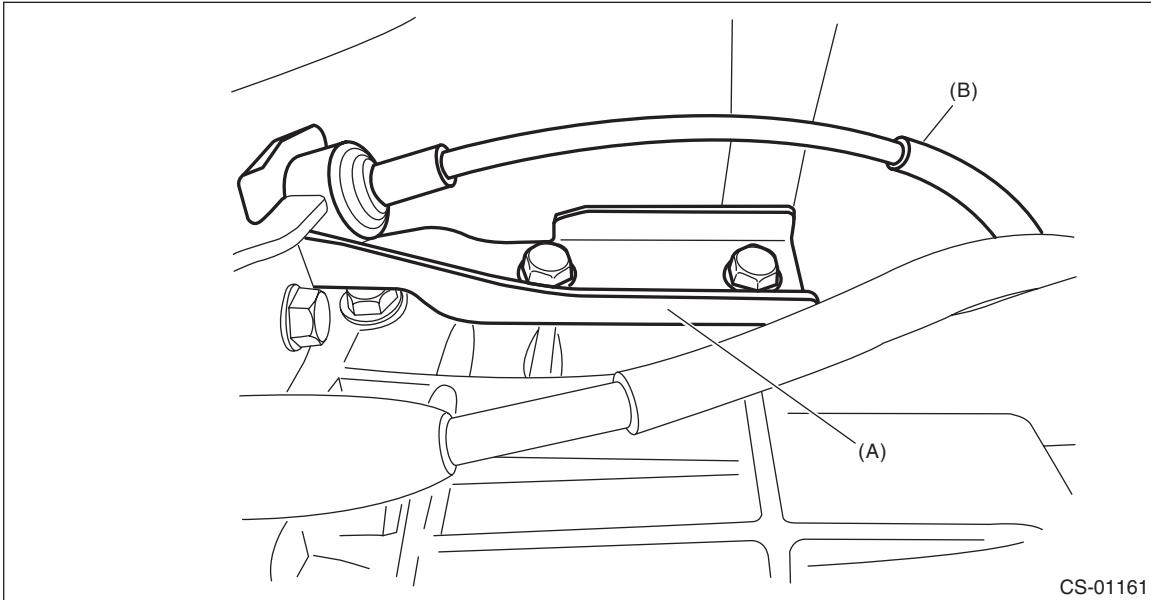
(B) Spanner

(C) Forward

## MT Gear Select Cable

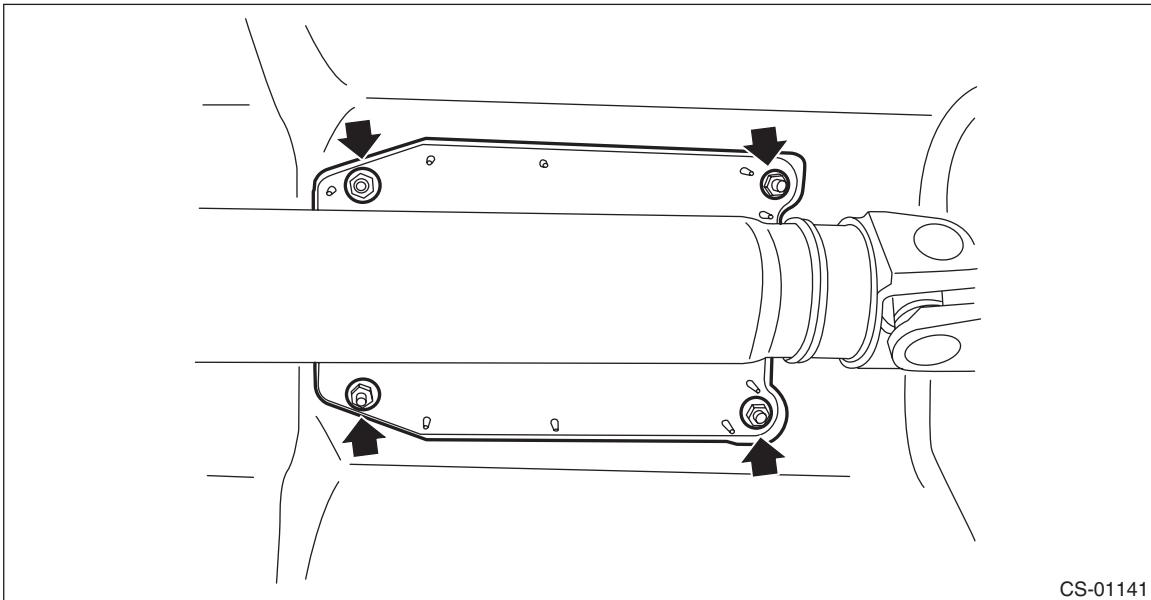
### CONTROL SYSTEMS

28) Remove the MT gear select cable and select bracket as a single unit from the transmission body.



- (A) Select bracket
- (B) MT gear select cable

29) Remove the plate cable assembly.



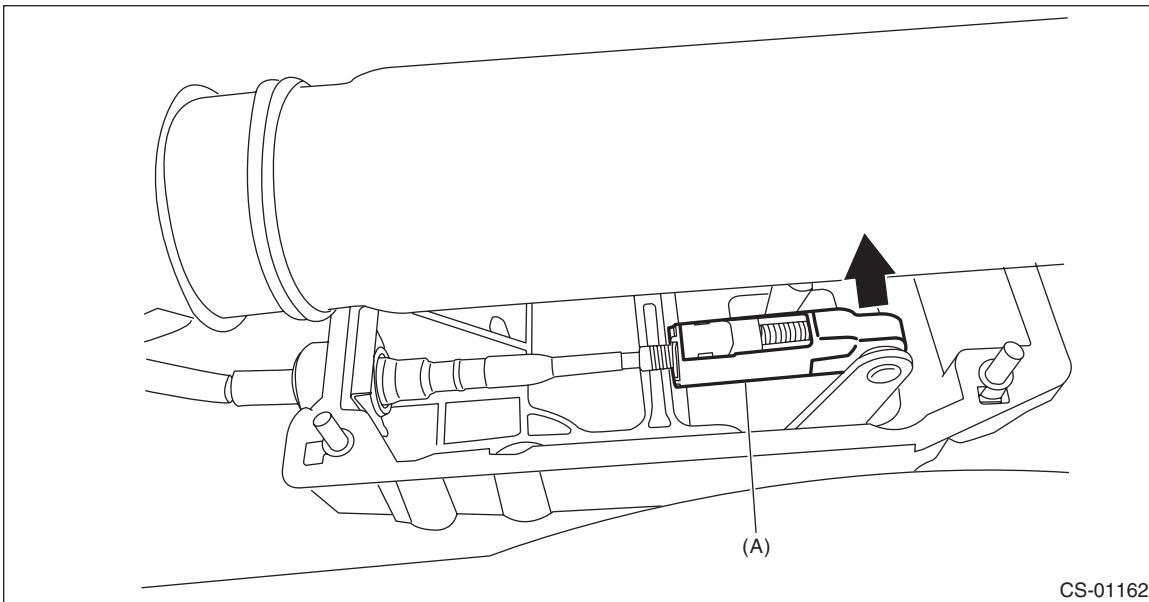
30) Disconnect the MT gear select cable.

**CAUTION:**

**Be careful not to deform the cable inner.**

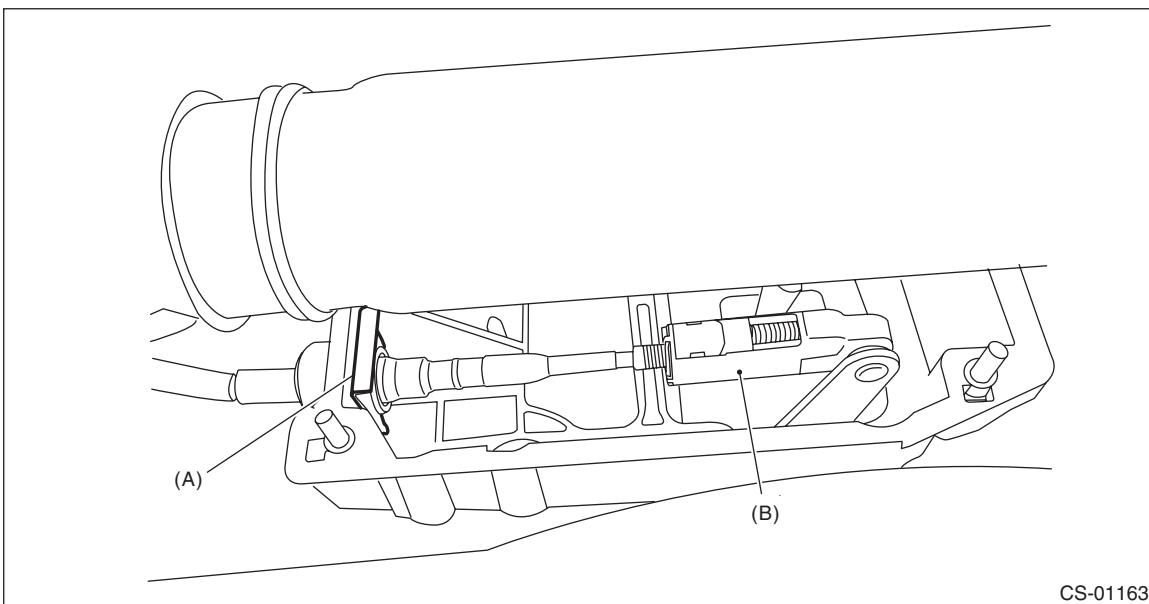
**NOTE:**

Push the MT gear select cable in the direction of arrow, and remove it.



(A) MT gear select cable

31) Remove the clamp which holds the MT gear select cable.



(A) Clamp

(B) MT gear select cable

32) Pull out the MT gear select cable from the cover cable assembly.

**CAUTION:**

**Do not bend the MT gear select cable sharply.**

## B: INSTALLATION

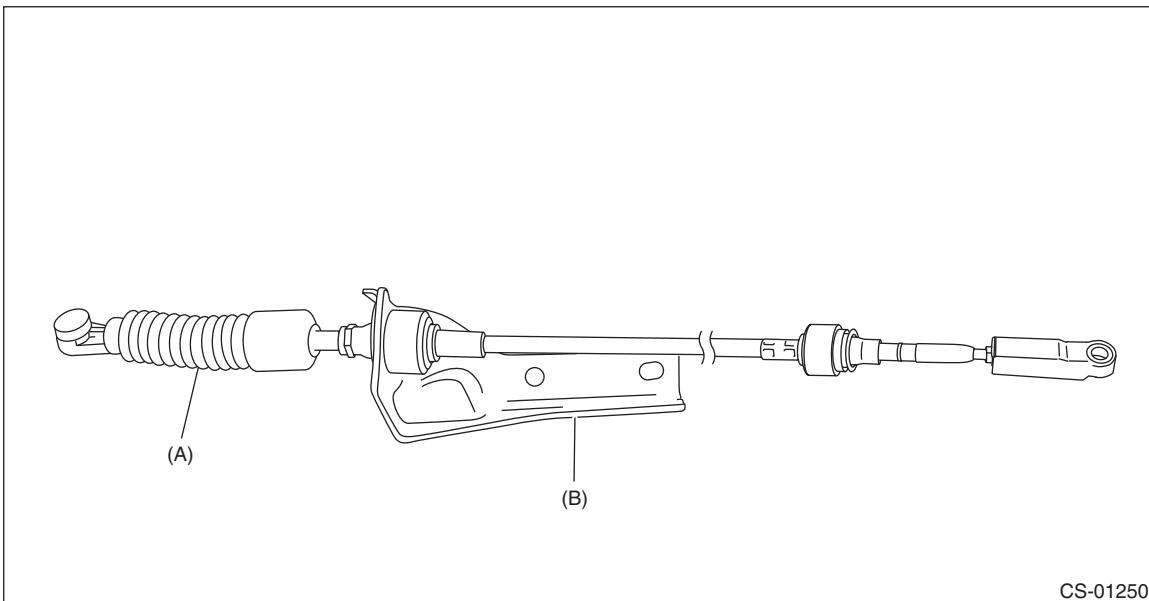
### CAUTION:

- Always use new MT gear select cable if the cable is removed from selector lever COMPL of transmission side.
- Do not bend the MT gear select cable sharply.
- Do not twist the inner cable excessively.

1) Remove the MT gear select cable from the select bracket.

### CAUTION:

Check for assembling position before removing the MT gear select cable from the select bracket.



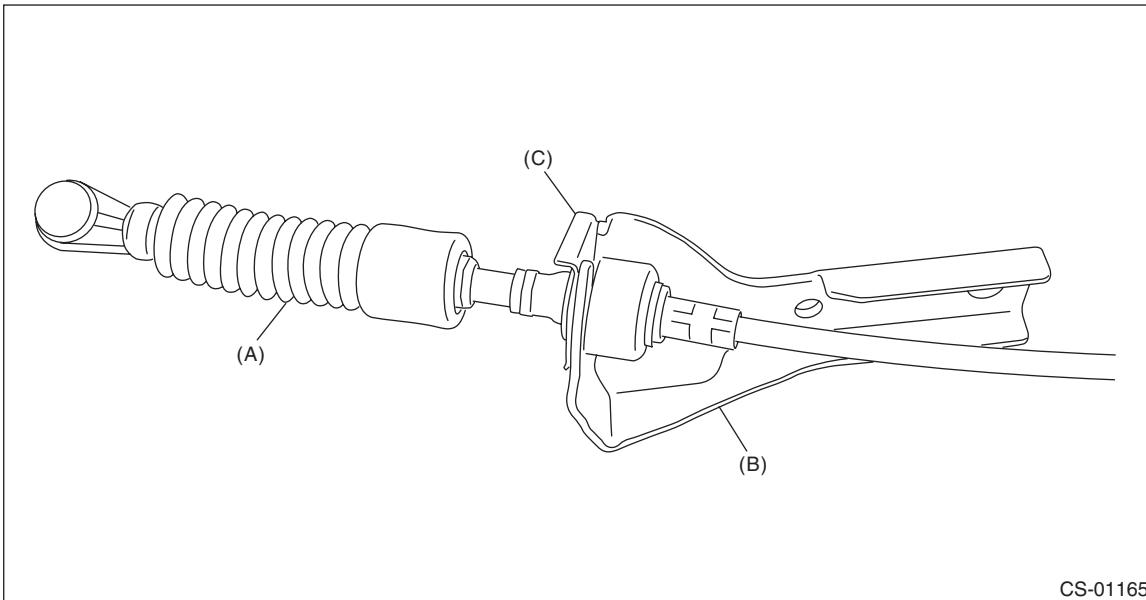
(A) MT gear select cable

(B) Select bracket

2) Set to the new MT gear select cable to the select bracket and secure it with the clamp.

**CAUTION:**

Be careful not to mistake the MT gear select cable installing direction.



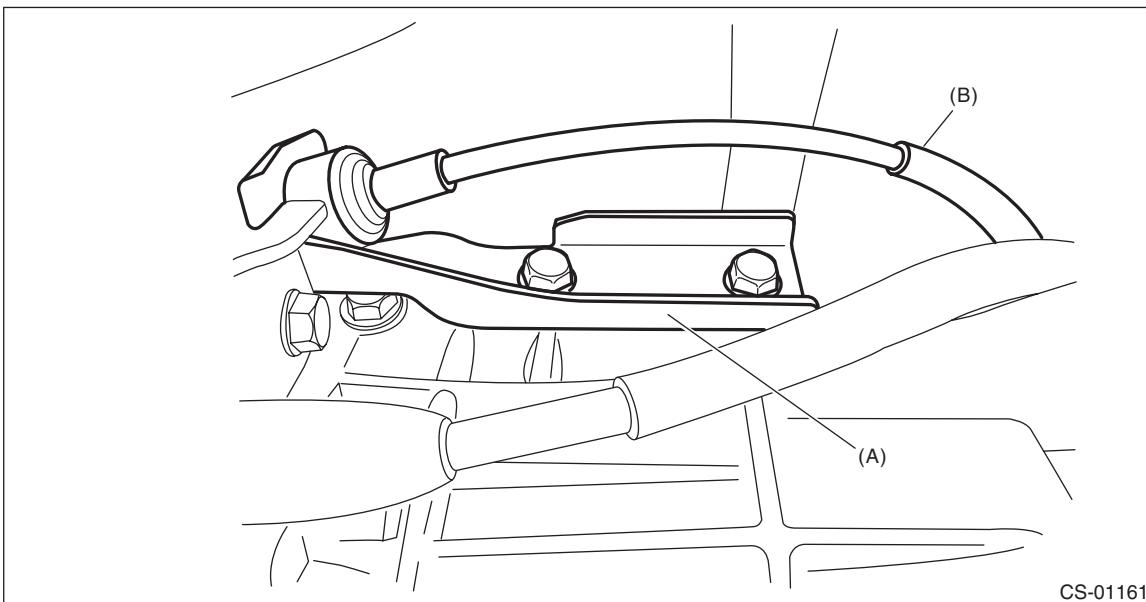
CS-01165

- (A) MT gear select cable
- (B) Select bracket
- (C) Clamp

3) Install the MT gear select cable and select bracket as a single unit to the transmission body.

**Tightening torque:**

18 N·m (1.8 kgf-m, 13.3 ft-lb)



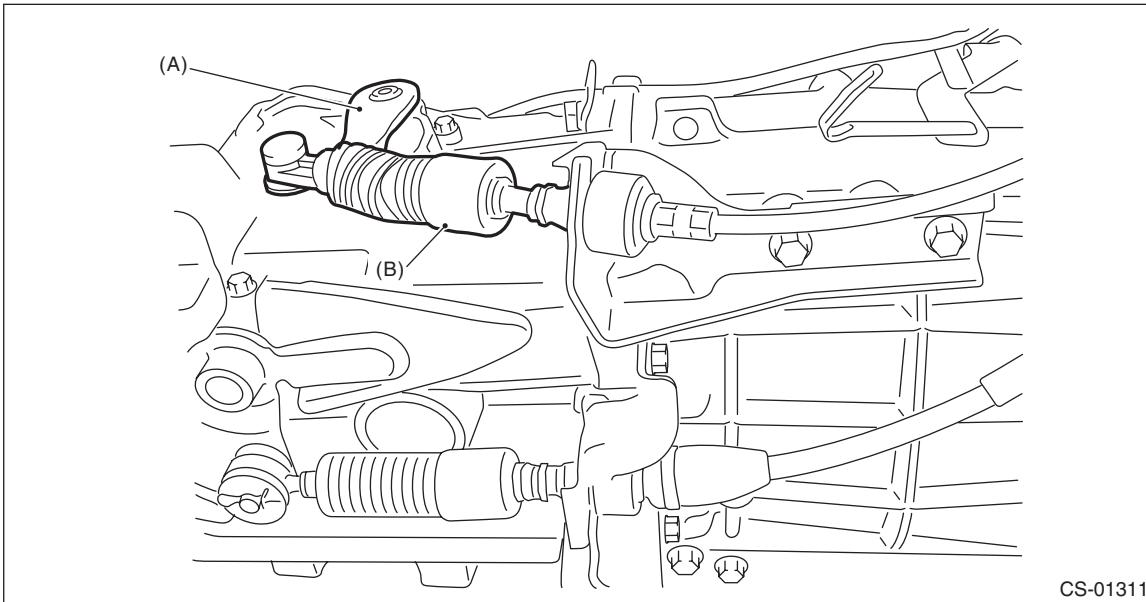
CS-01161

- (A) Select bracket
- (B) MT gear select cable

# MT Gear Select Cable

## CONTROL SYSTEMS

4) Install the MT gear select cable to the select lever COMPL.



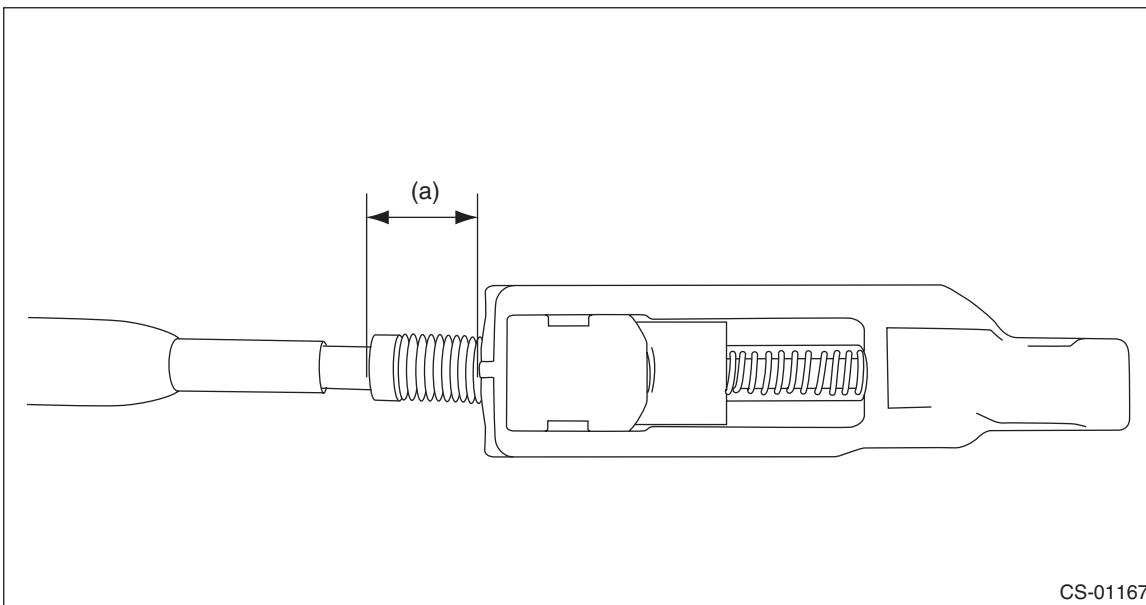
(A) Selector lever COMPL

(B) MT gear select cable

5) Measure the exposed length (a) of MT gear select cable. If out of specification, adjust the MT gear select cable. <Ref. to CS-97, ADJUSTMENT, MT Gear Select Cable.>

**Exposed length (a) of MT gear select cable:**

Specification: 11 mm (0.4 in)

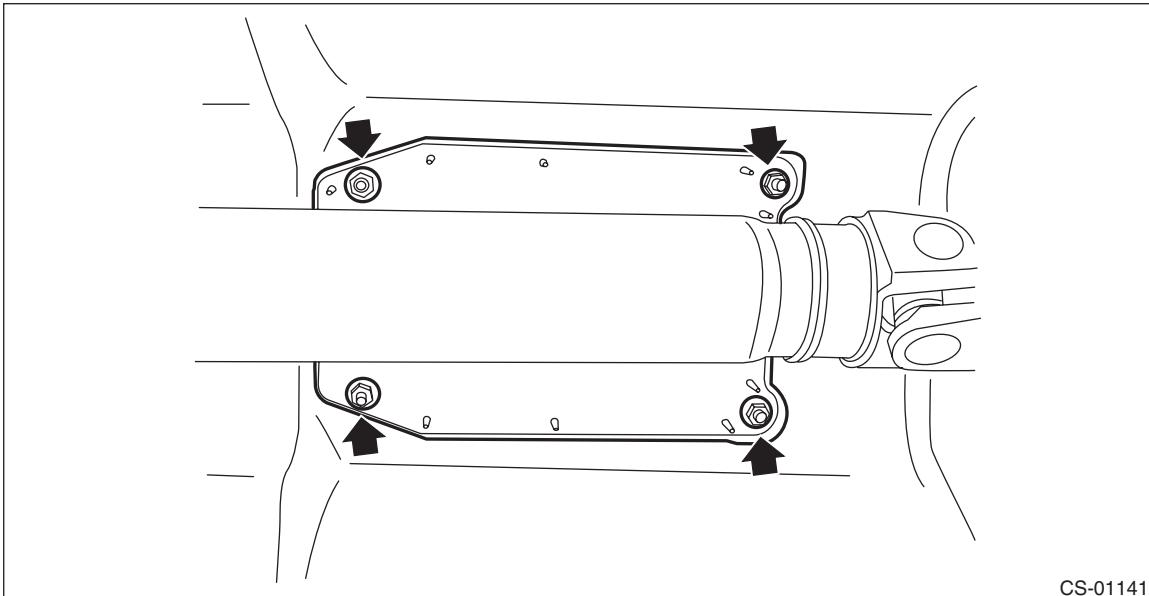


6) Connect the MT gear select cable.

7) Install the plate cable assembly.

**Tightening torque:**

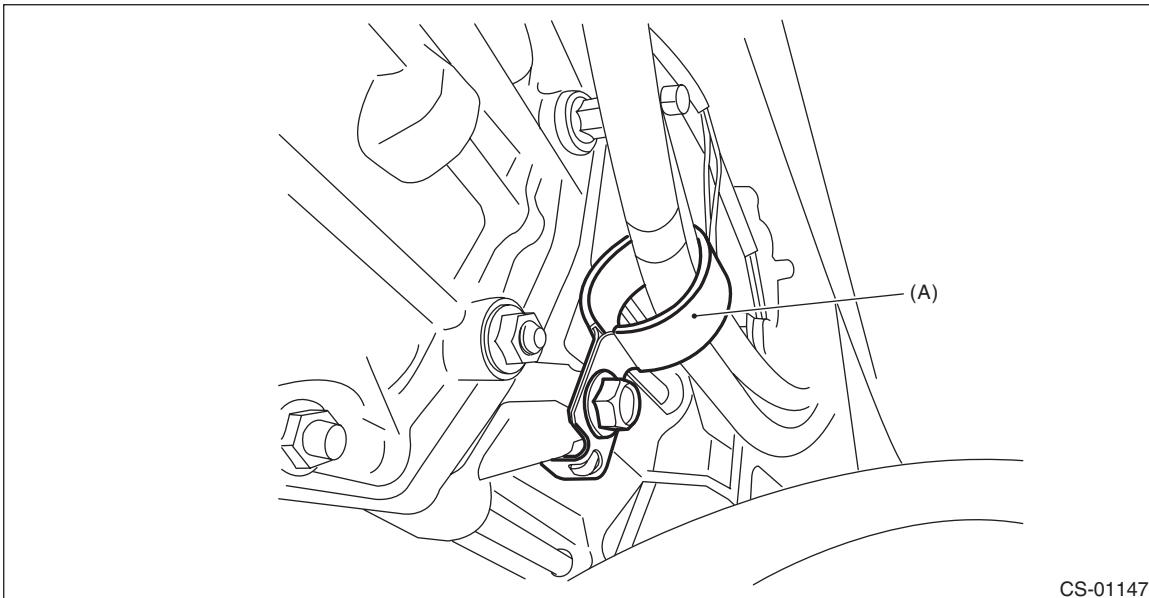
**7.5 N·m (0.8 kgf·m, 5.5 ft-lb)**



8) Insert the MT gear select cable into clamp cable, and install to the transmission.

**Tightening torque:**

**18 N·m (1.8 kgf·m, 13.3 ft-lb)**



(A) Clamp cable

## MT Gear Select Cable

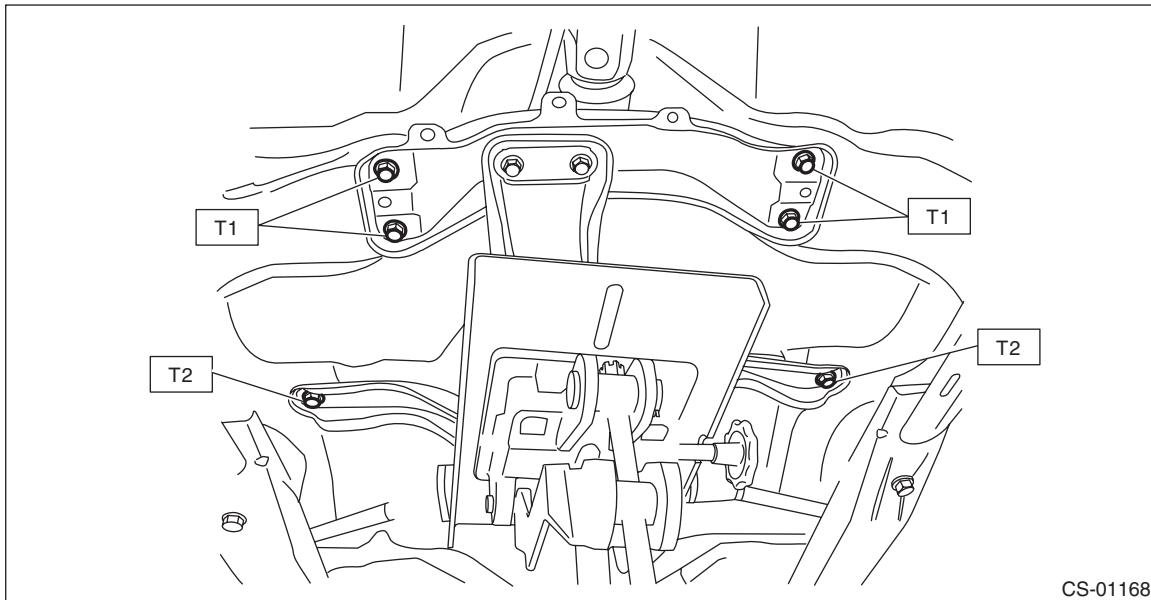
### CONTROL SYSTEMS

9) Raise the transmission jack, install the front crossmember and rear crossmember.

#### ***Tightening torque:***

**T1: 75 N·m (7.6 kgf-m, 55.3 ft-lb)**

**T2: 140 N·m (14.3 kgf-m, 103.3 ft-lb)**



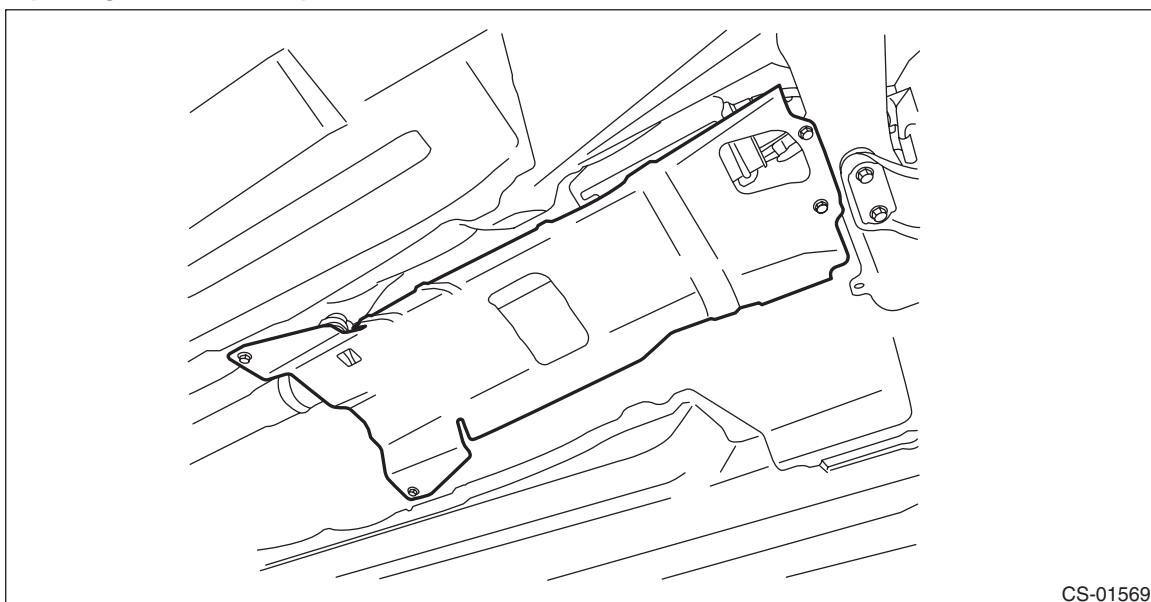
10) Rotate the handle of ST (ENGINE HANGER) to apply tension to the sling chain.

11) Take out the transmission jack.

12) Install the heat shield cover.

#### ***Tightening torque:***

**18 N·m (1.8 kgf-m, 13.3 ft-lb)**

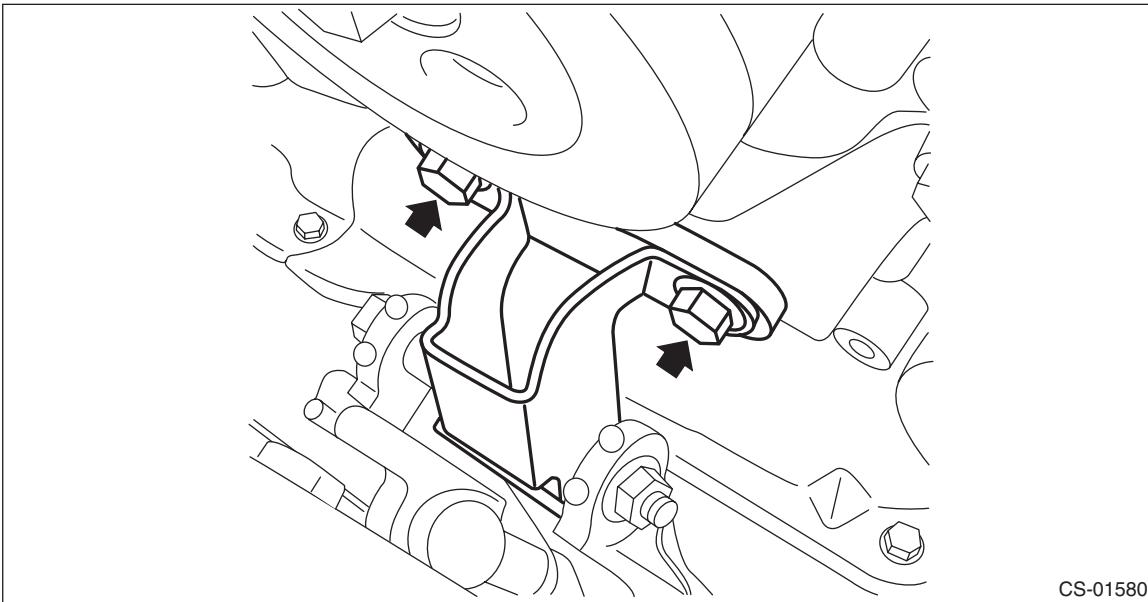


13) Install the center exhaust pipe. <Ref. to EX(H4DO)-12, INSTALLATION, Center Exhaust Pipe.>

14) Lower the vehicle.

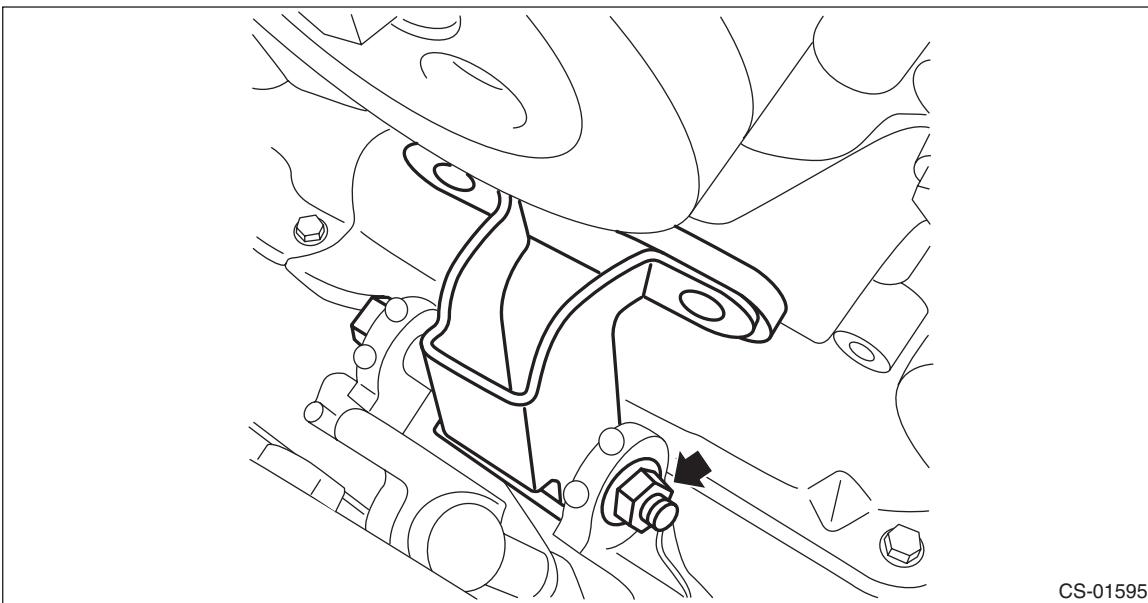
15) Rotate the handle of ST (ENGINE HANGER) to lift up the engine slightly.

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



CS-01580

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

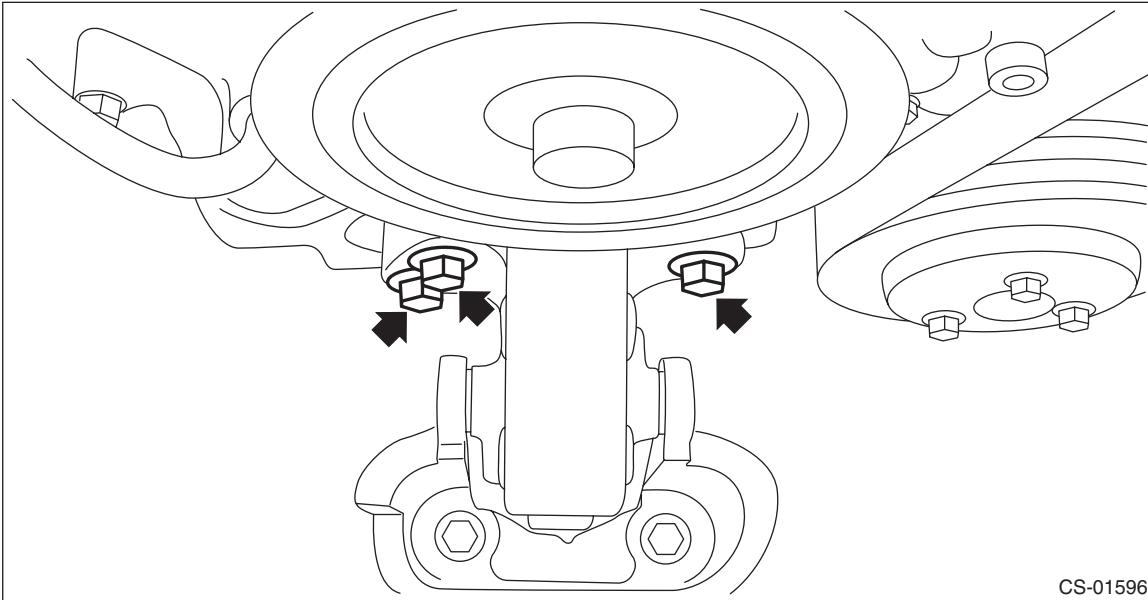


CS-01595

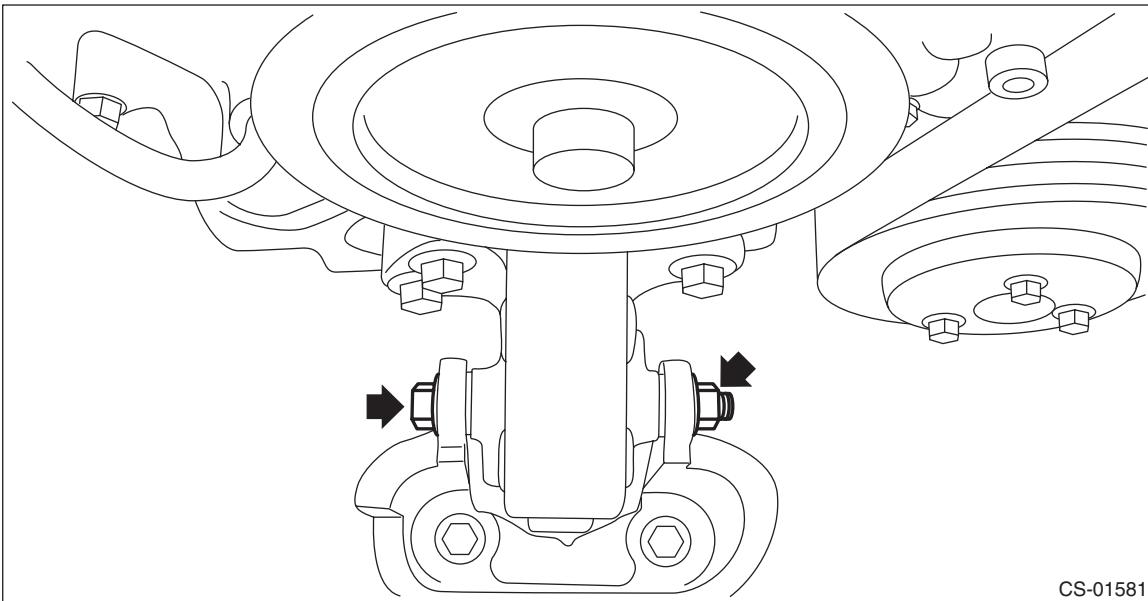
## MT Gear Select Cable

### CONTROL SYSTEMS

18) Temporarily attach the front engine mounting with bolts.



19) Install the bolt and nut to the front engine mounting.

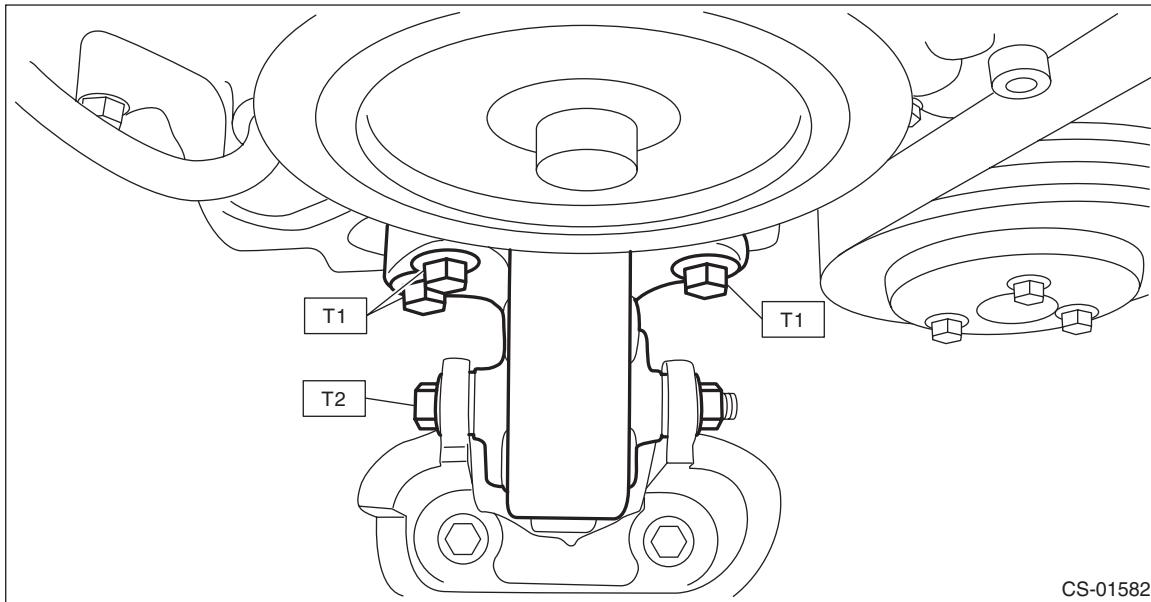


20) Tighten the bolts and nuts of front engine mounting.

**Tightening torque:**

**T1: 25 N·m (2.5 kgf-m, 18.4 ft-lb)**

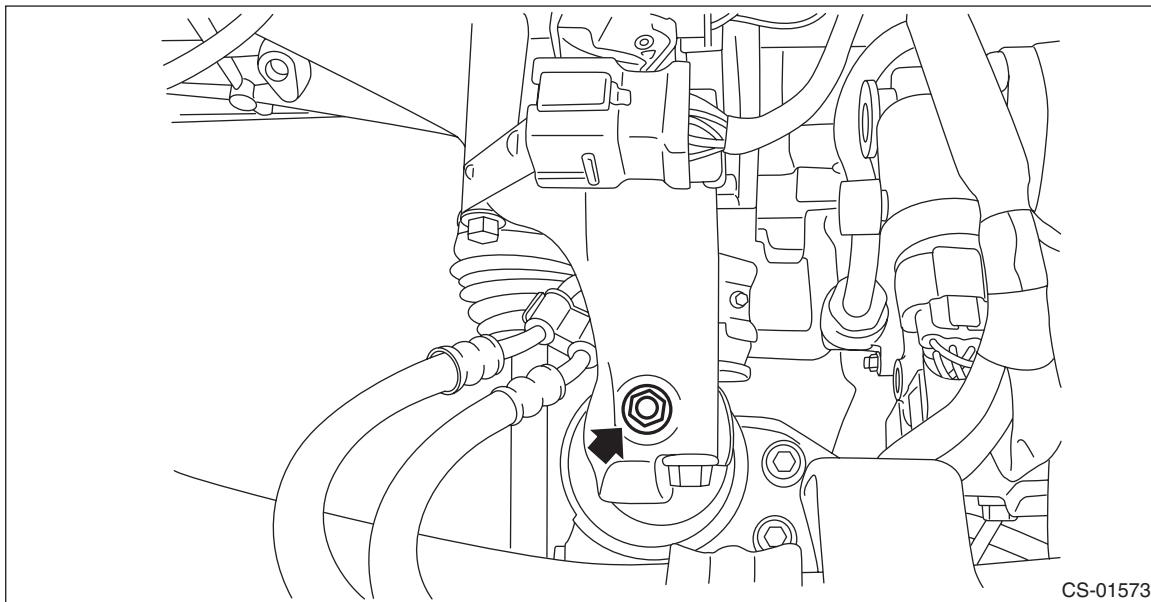
**T2: 45 N·m (4.6 kgf-m, 33.2 ft-lb)**



21) Attach the nuts to the left and right transmission mounting brackets.

**Tightening torque:**

**45 N·m (4.6 kgf-m, 33.2 ft-lb)**



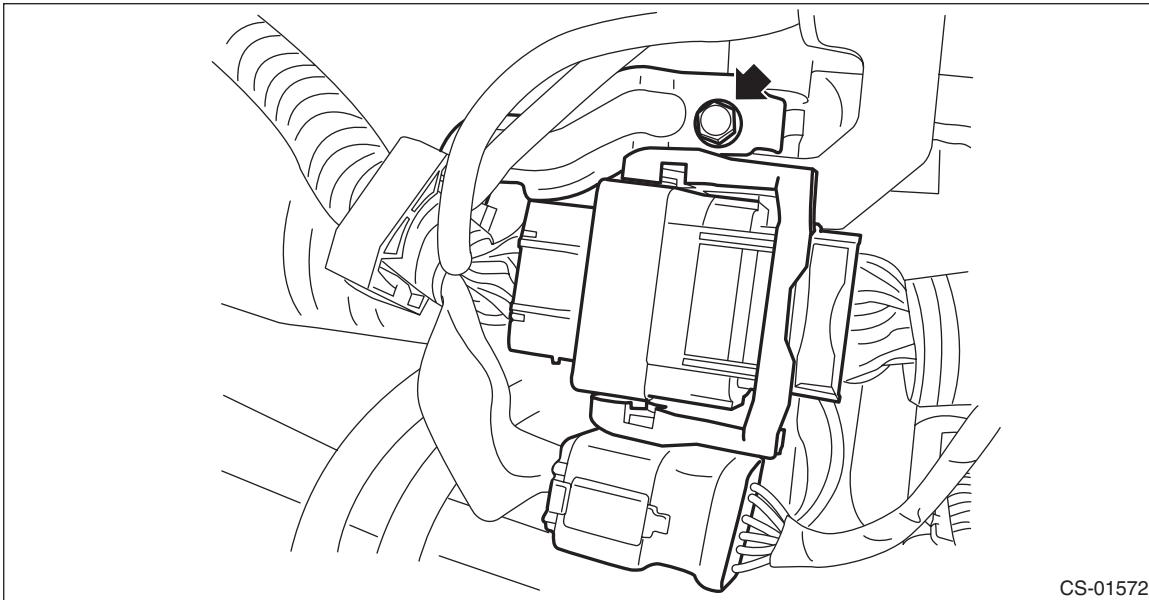
## MT Gear Select Cable

### CONTROL SYSTEMS

22) Connect the engine harness connectors, and install harness bracket to the engine hanger rear.

**Tightening torque:**

7.5 N·m (0.8 kgf·m, 5.5 ft-lb)

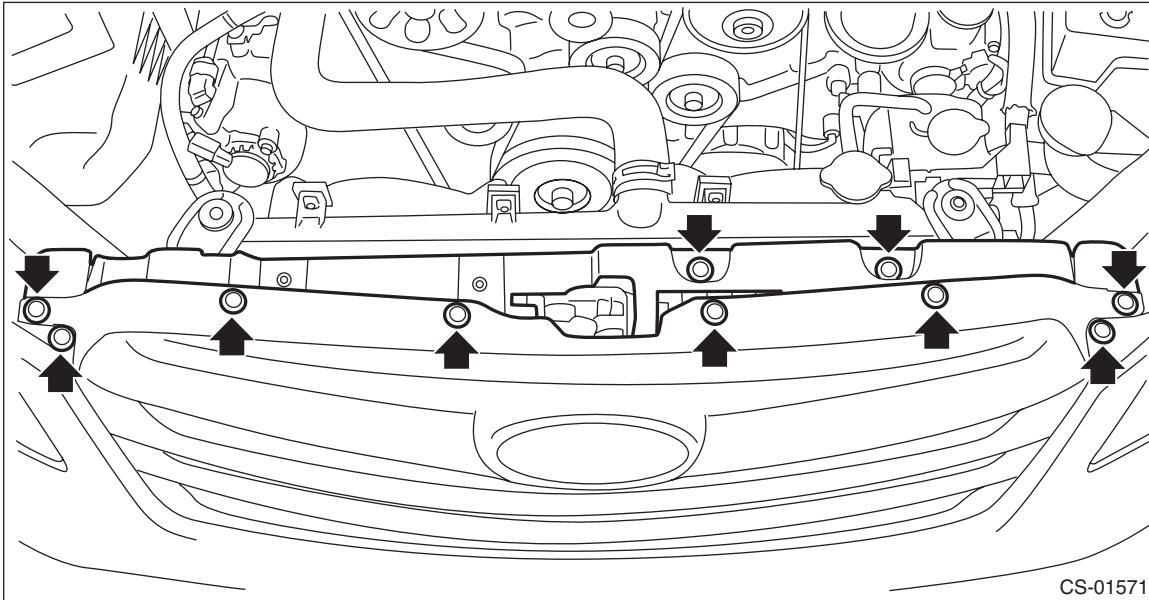


23) Install the throttle body. <Ref. to FU(H4DO)-17, INSTALLATION, Throttle Body.>

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

25) Install the radiator sub fan and fan motor. <Ref. to CO(H4DO)-41, INSTALLATION, Radiator Sub Fan and Fan Motor.>

26) Attach the grille bracket.



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

28) Connect the battery ground terminal.

29) Adjust the detent of the MT gear shift lever. <Ref. to CS-67, ADJUSTMENT, MT Gear Shift Lever.>

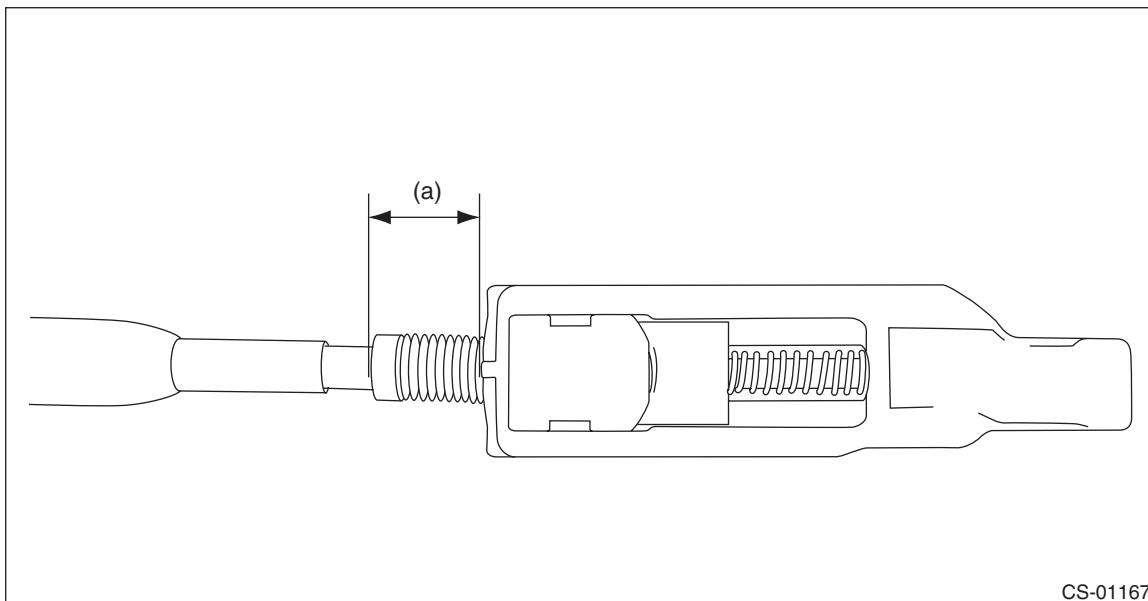
30) Make sure the gears can be shifted accurately into each gear.

## C: INSPECTION

1) Check that exposed length (a) of MT gear select cable is within specification.

**Exposed length (a) of MT gear select cable:**

**Specification: 11 mm (0.4 in)**



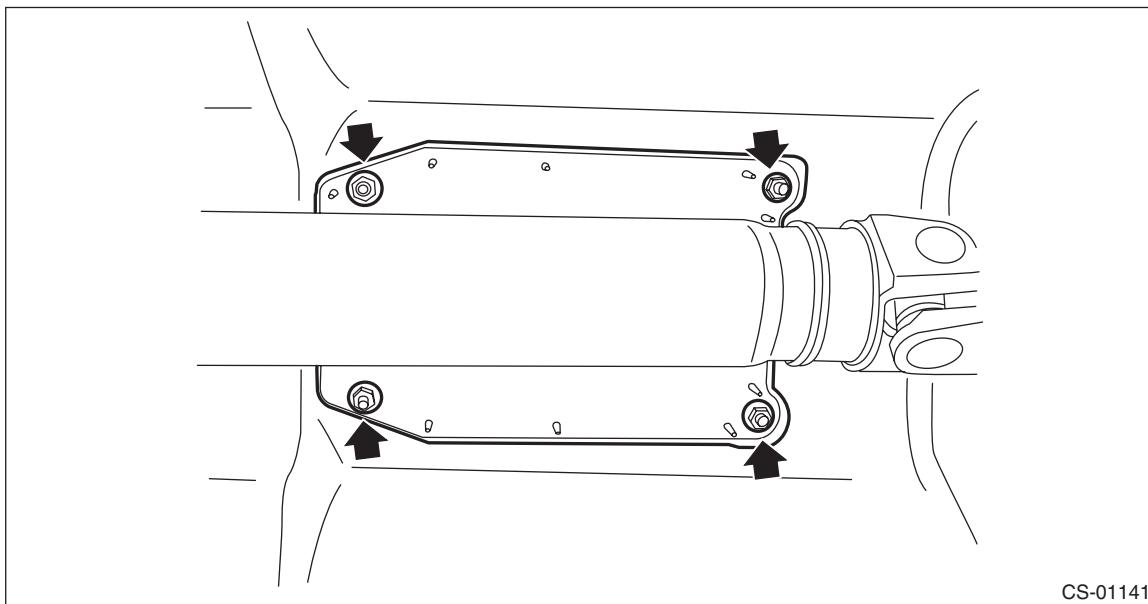
2) If it is not within the specification, perform the adjustment. <Ref. to CS-97, ADJUSTMENT, MT Gear Select Cable.>

## D: ADJUSTMENT

**NOTE:**

Two person are required to perform the MT gear select cable adjustment. (Only the step 7) requires two workers.)

- 1) Loosen the detent bolt of the MT gear shift lever. <Ref. to CS-67, ADJUSTMENT, MT Gear Shift Lever.>
- 2) Move the shift lever to the 6th.
- 3) Remove the plate cable assembly.



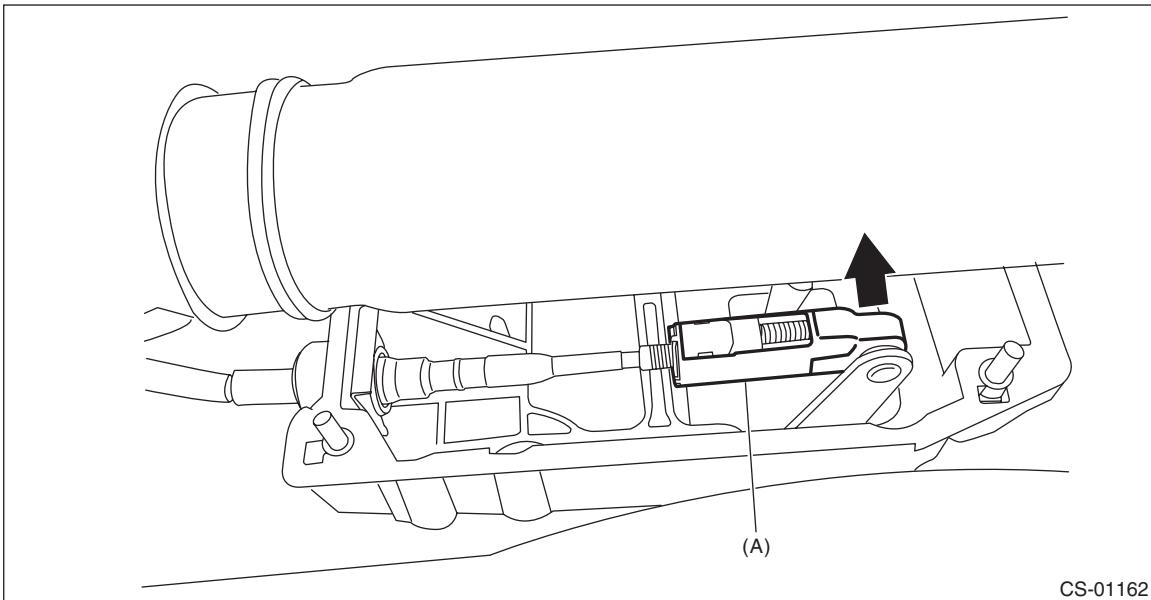
## MT Gear Select Cable

### CONTROL SYSTEMS

4) Disconnect the MT gear select cable.

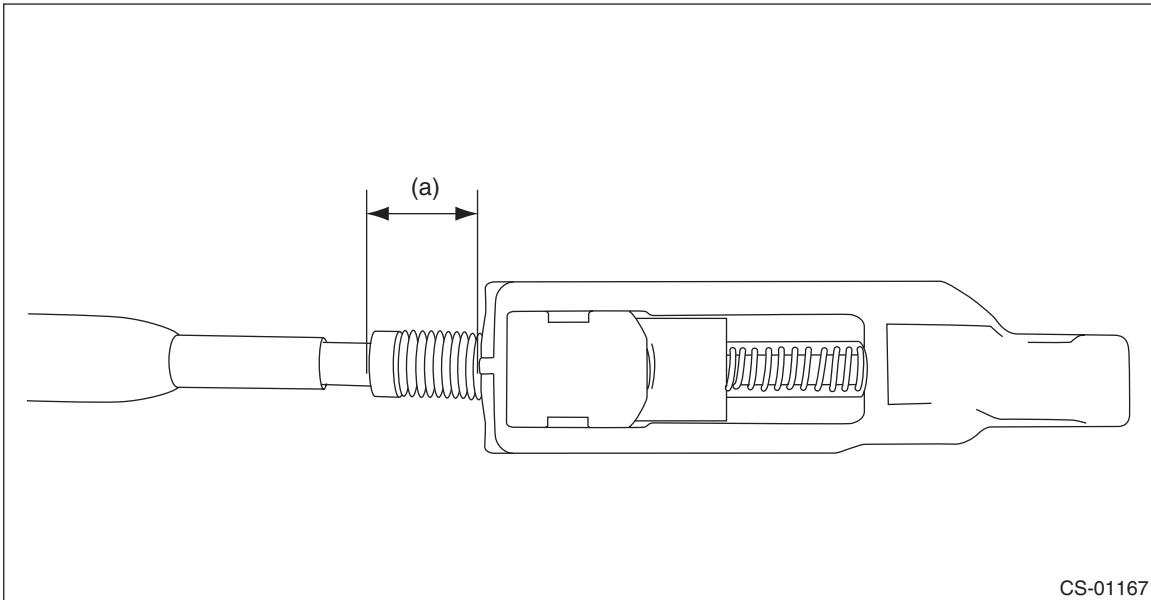
NOTE:

Push the MT gear select cable in the direction of arrow, and remove it.



(A) MT gear select cable

5) Measure the exposed length (a) of MT gear select cable.



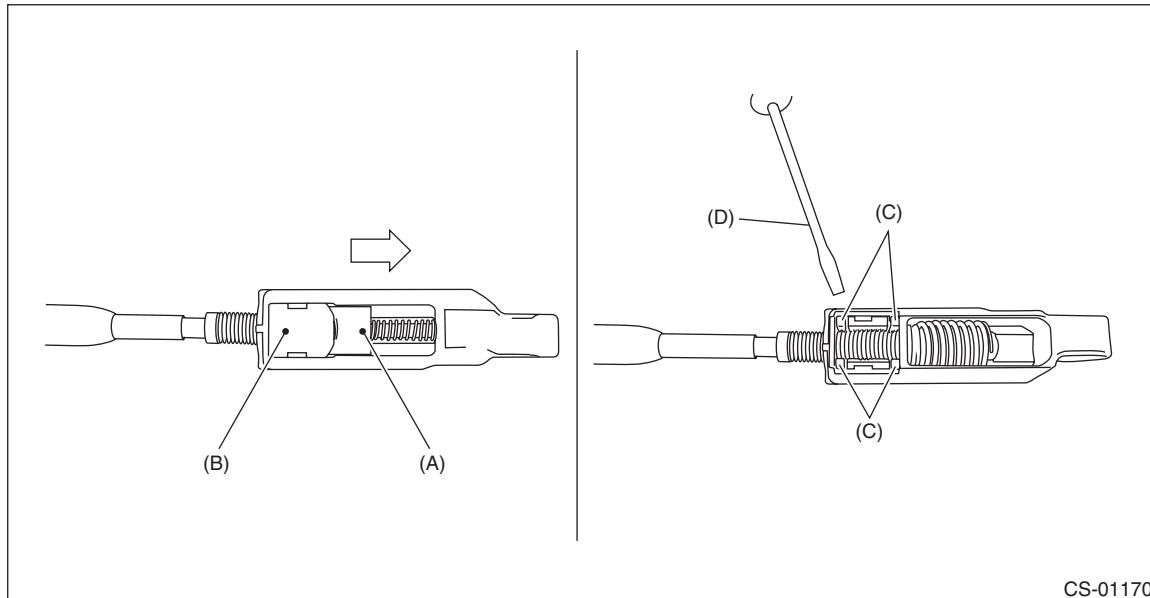
6) With the slider (green) moved in the direction of arrow, release the lock piece (pink) using a flat tip screwdriver or equivalent tool.

**CAUTION:**

**Lock piece is easily damaged for the resin. If the lock piece is damaged, replace the MT gear select cable with a new one.**

**NOTE:**

Rotate the MT gear select cable to 180 degrees, slide the slider in the direction of the arrow and push the claw of lock piece.

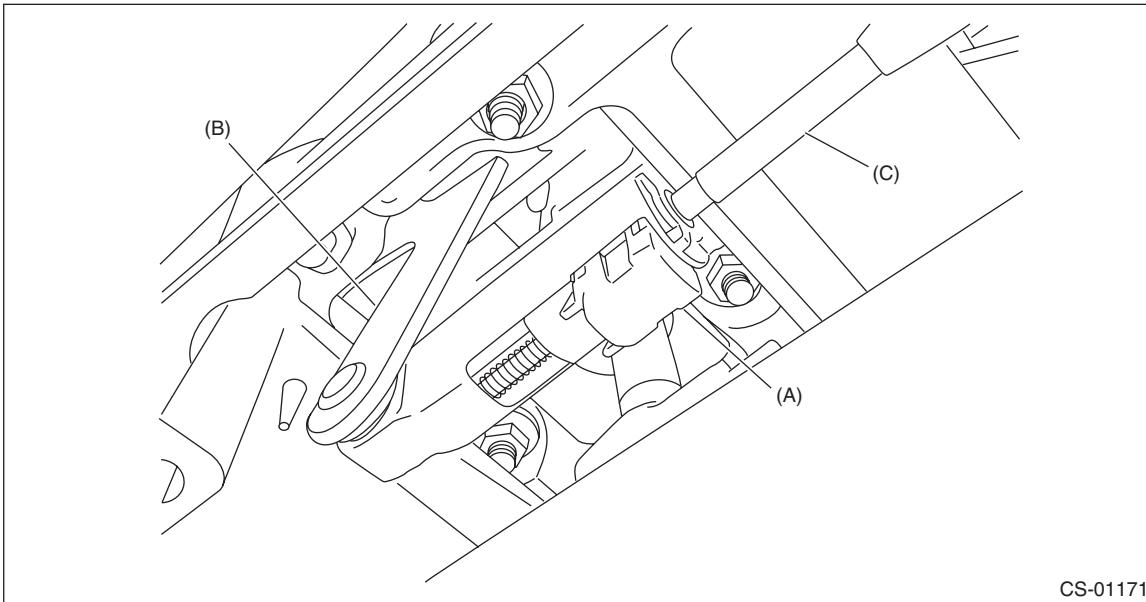


- (A) Slider
- (B) Lock piece
- (C) Claw
- (D) Flat tip screwdriver

# MT Gear Select Cable

## CONTROL SYSTEMS

7) Connect the MT gear select cable to the select lever, with the lock piece released.

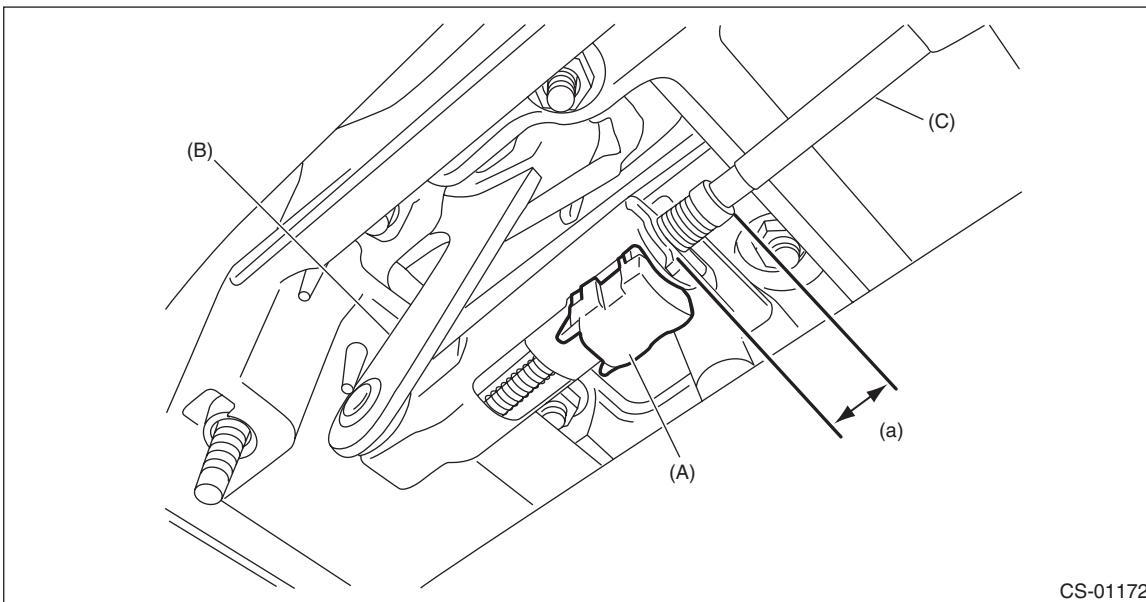


- (A) Lock piece
- (B) Select lever
- (C) MT gear select cable

8) Move the shift lever to the reverse side, keep the exposed length (a) of MT gear select cable to 11 mm (0.4 in), and push the lock piece.

NOTE:

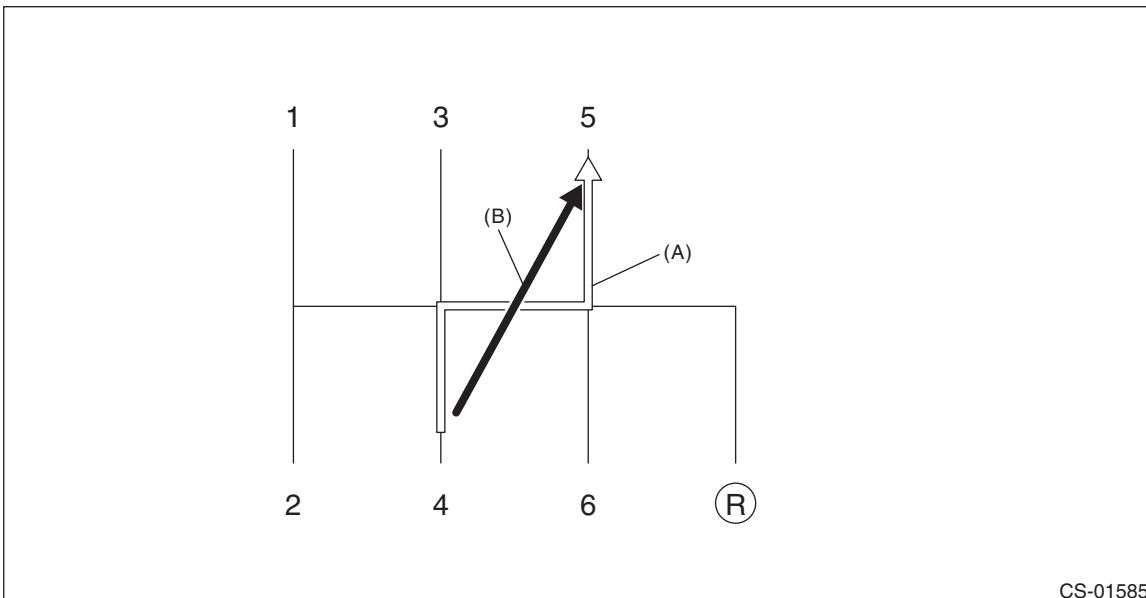
While pulling up the gear shift lever assembly slider, operate the lever to the reverse side.



- (a) Exposed length 11 mm (0.4 in)
- (A) Lock piece
- (B) Select lever
- (C) MT gear select cable

9) Shift to 5th  $\longleftrightarrow$  6th and reverse, and check for stuck.

10) Check that the shift lever can move along the cranking line when operating the lever from 4th to 5th gear with a load applied toward the 6th gear.



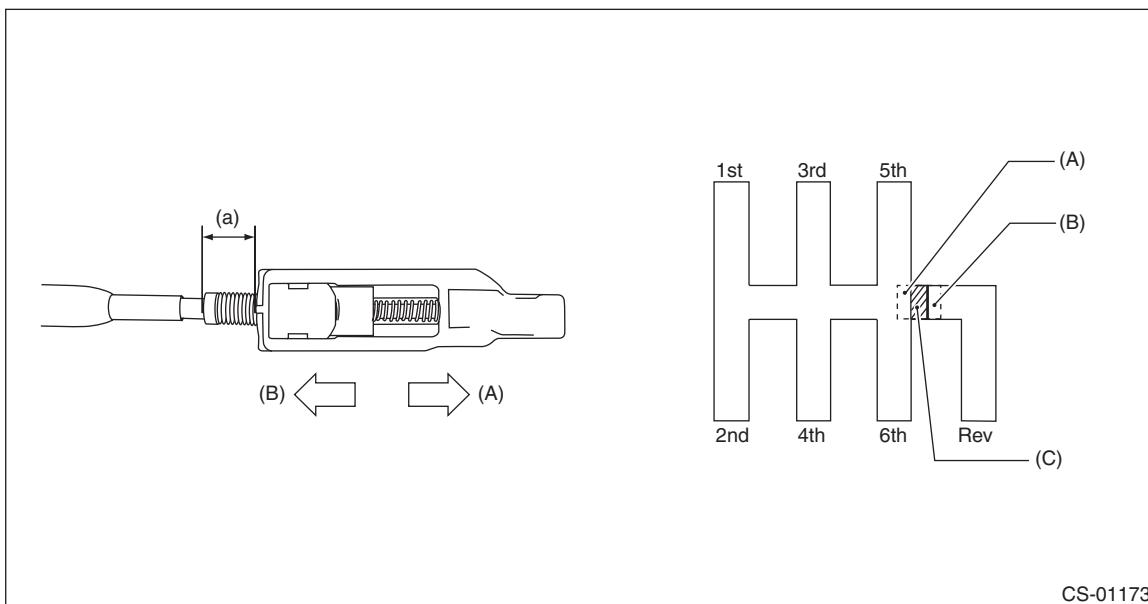
(A) Cranking operation

(B) Load direction

# MT Gear Select Cable

## CONTROL SYSTEMS

11) If the shift operation is not smooth, readjust the exposed length (a) of the MT gear select cable referring to the figure below.



- (a) Exposed length of MT gear select cable
- (A) Extend direction of exposed length of MT gear select cable
- (B) Shorten direction of exposed length of MT gear select cable
- (C) Specification of exposed length (a)

- If 5th or 6th gear cannot be selected when cable is pressed to reverse lock bracket:  
→ Extend the exposed length (a) of MT gear select cable.
- If the shift lever does not move along the cranking line when it is operated from 4th → 5th gear:  
→ Shorten the exposed length (a) of MT gear select cable.

### NOTE:

If it cannot adjust, replace the MT gear select cable.

12) Adjust the detent of the MT gear shift lever. <Ref. to CS-67, ADJUSTMENT, MT Gear Shift Lever.>

13) If no fault is found in the shift and select operation, restore the vehicle.