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NOT FOR RESALE

CONTROL SYSTEMS

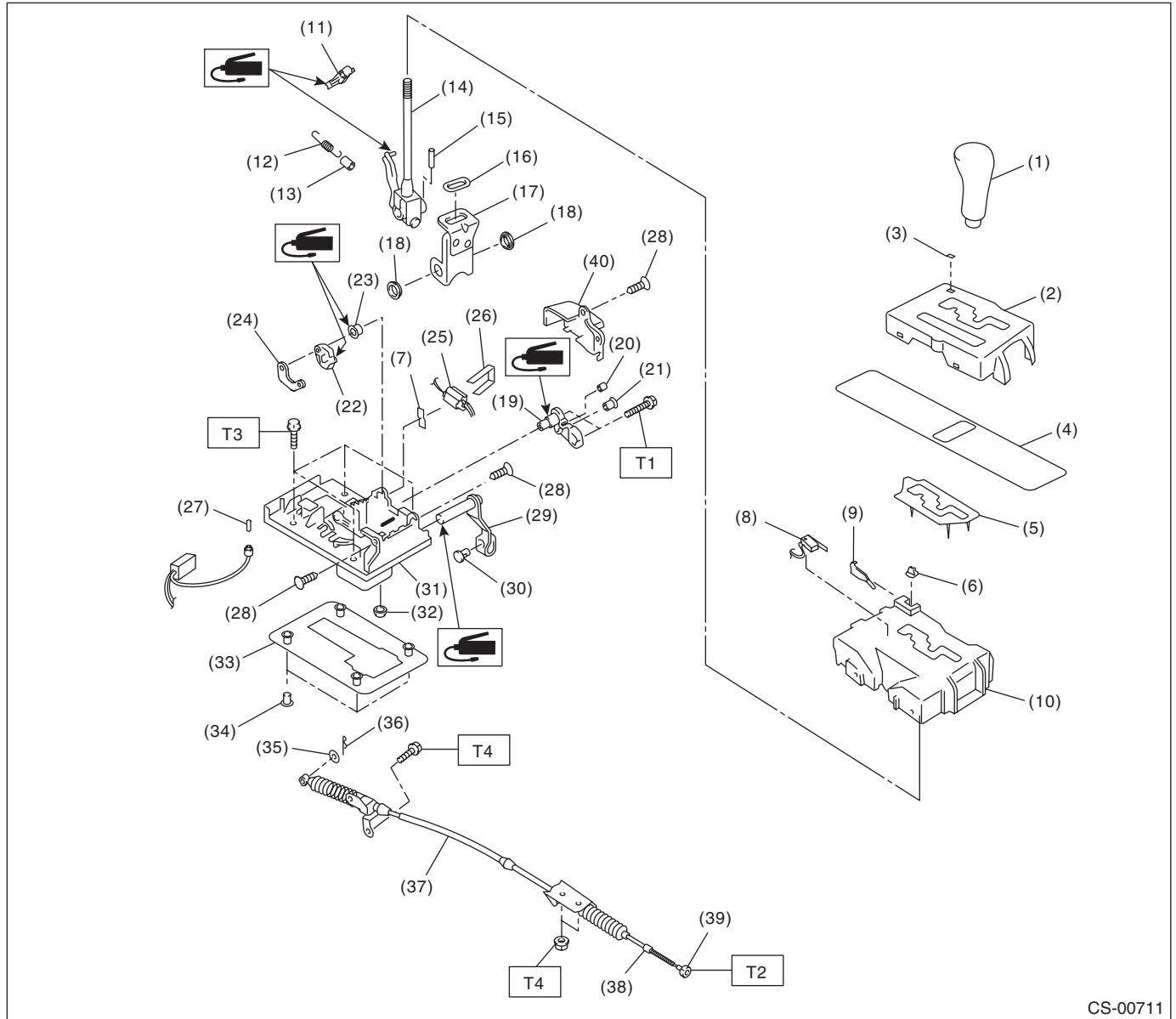
1. General Description

A: SPECIFICATION

Item		Specification
Swing torque of rod against lever	N (kgf, lbf)	3.7 (0.38, 0.84) or less

B: COMPONENT

1. AT SELECT LEVER



CS-00711

General Description

CONTROL SYSTEMS

(1) Grip	(17) Bracket	(32) Grommet
(2) Indicator cover	(18) Bushing	(33) Gasket
(3) Cover	(19) Lock plate B	(34) Spacer
(4) Blind	(20) Bushing	(35) Washer
(5) Cushion	(21) Bushing	(36) Snap pin
(6) Button	(22) Lock plate A	(37) Select cable
(7) Cushion	(23) Bushing	(38) Adjusting nut B
(8) P range switch	(24) Lock plate C	(39) Adjusting nut A
(9) Spring	(25) Shift lock solenoid	(40) Cover
(10) Guide plate	(26) Clamp	
(11) Detent arm	(27) Indicator bulb	
(12) Detent spring	(28) Clip	
(13) Tube	(29) Select lever arm	
(14) Selector lever COMPL	(30) Bushing COMPL	
(15) Spring pin	(31) Base plate	
(16) Bushing		

Tightening torque: N·m (kgf·m, ft·lb)

T1: 2.0 (0.2, 1.4)

T2: 7.5 (0.76, 5.5)

T3: 13 (1.3, 9.4)

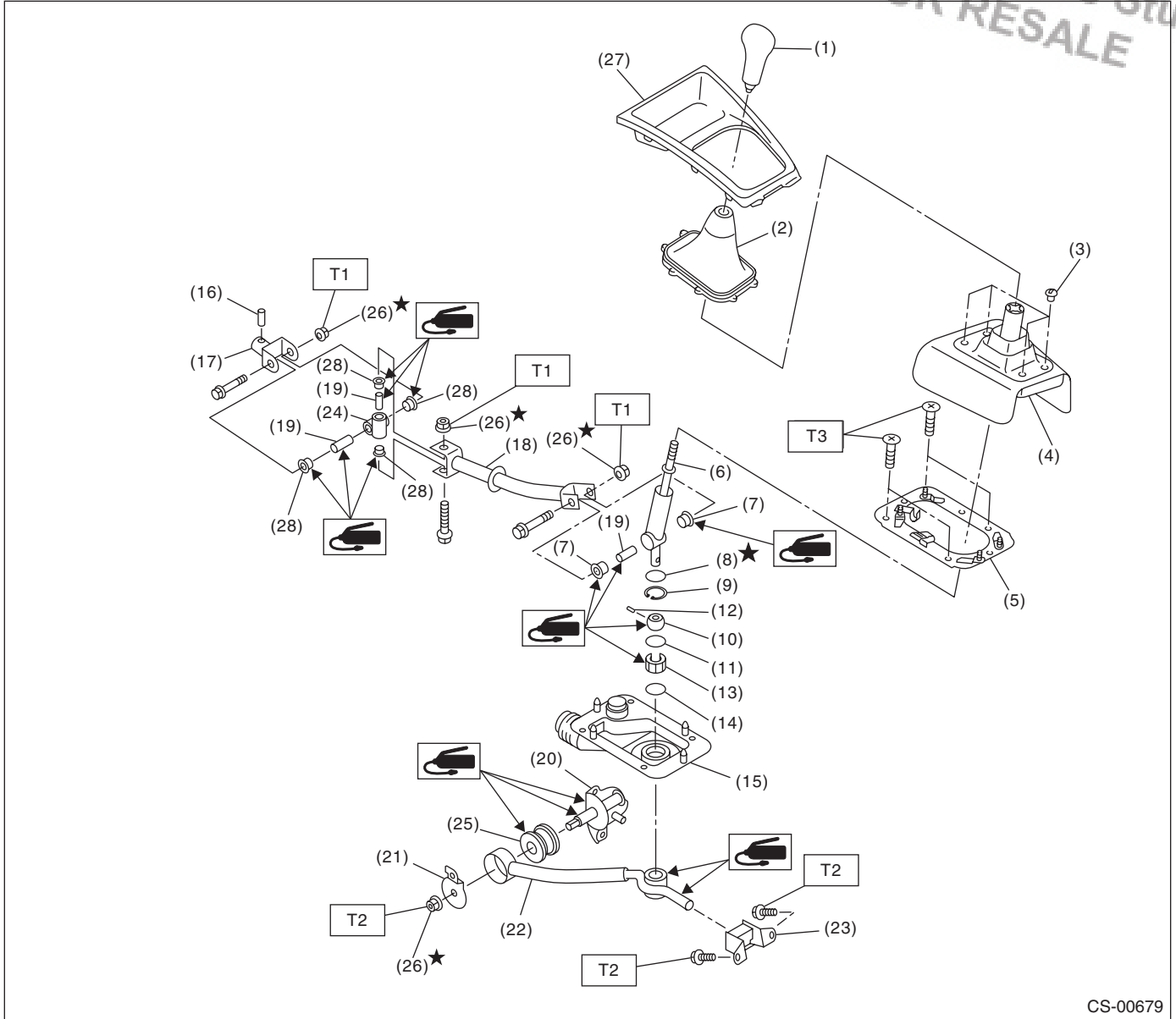
T4: 18 (1.8, 13.0)

General Description

CONTROL SYSTEMS

2. 5MT GEAR SHIFT LEVER

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CS-00679

- | | | |
|-----------------------------|-----------------|-----------------------|
| (1) Gear shift knob | (12) Spring pin | (23) Cushion rubber |
| (2) Console boot | (13) Bushing B | (24) Boss |
| (3) Clamp | (14) O-ring | (25) Bushing |
| (4) Boot and insulator ASSY | (15) Boot | (26) Self-locking nut |
| (5) Plate ASSY | (16) Spring pin | (27) Front cover |
| (6) Lever | (17) Joint | (28) Bushing |
| (7) Bushing | (18) Rod | |
| (8) Lock wire | (19) Spacer | |
| (9) Snap ring | (20) Bracket | |
| (10) Bushing | (21) Washer | |
| (11) O-ring | (22) Stay | |

Tightening torque: N·m (kgf-m, ft-lb)

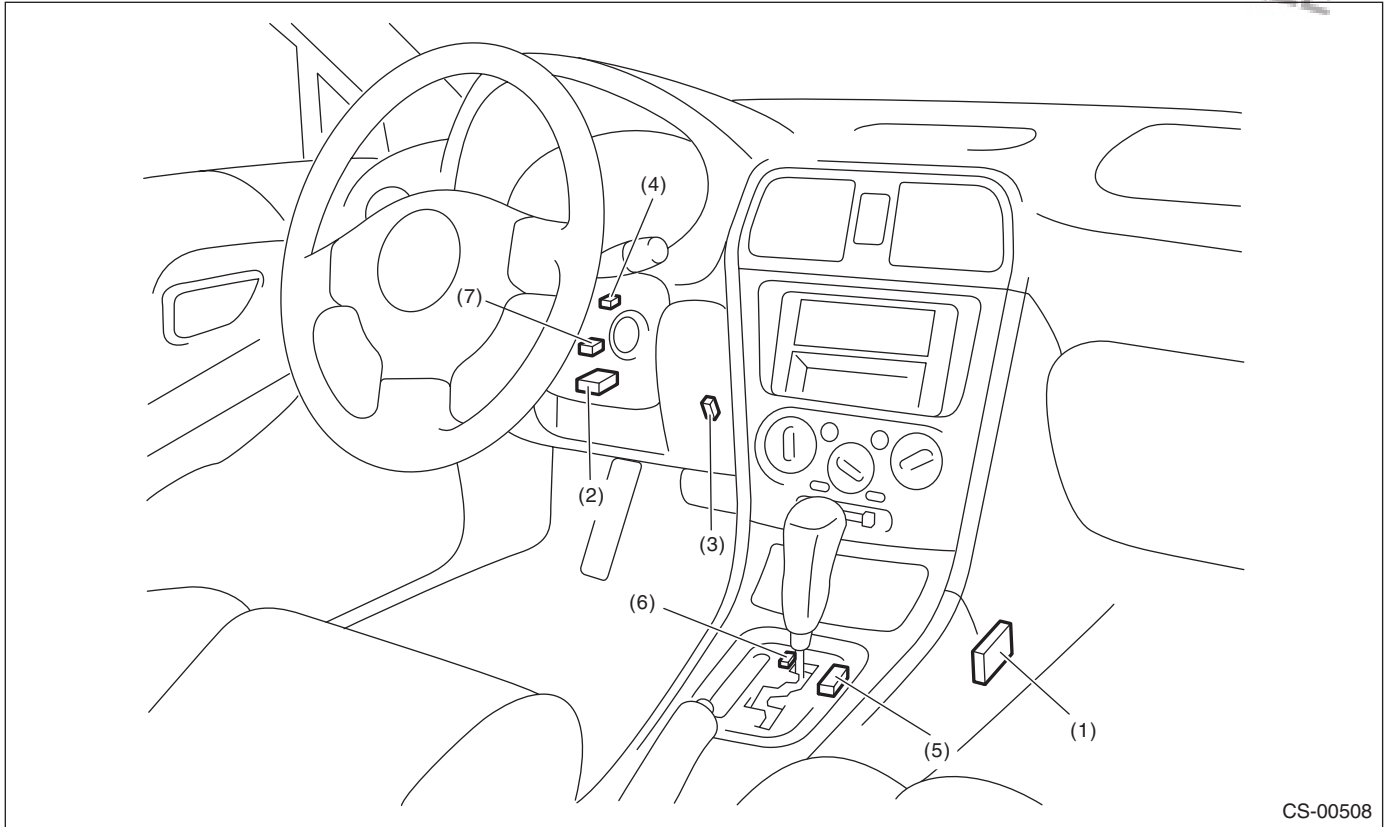
- T1: 12 (1.2, 8.9)**
T2: 18 (1.8, 13.0)
T3: 7.5 (0.76, 5.5)

C: CAUTION

- Wear appropriate work clothing, including a cap, protective goggles and protective shoes when performing any work.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust and dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- Use SUBARU genuine fluid, grease etc. or equivalent. Do not mix fluid, grease, etc. of different grades or manufacturers.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.
- Apply grease onto sliding or revolving surfaces before installation.
- Before installing O-rings or snap rings, apply sufficient amount of fluid to avoid damage and deformation.
- Before securing a part in a vise, place cushioning material such as wood blocks, aluminum plate or cloth between the part and the vise.
- Before disconnecting electrical connectors, be sure to disconnect the negative terminal from battery.

2. AT Shift Lock Control System

A: LOCATION



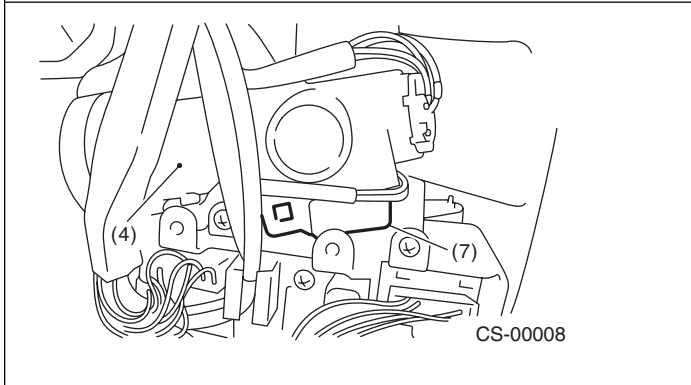
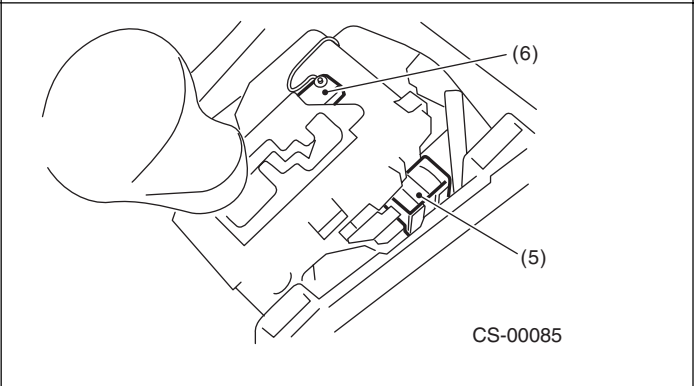
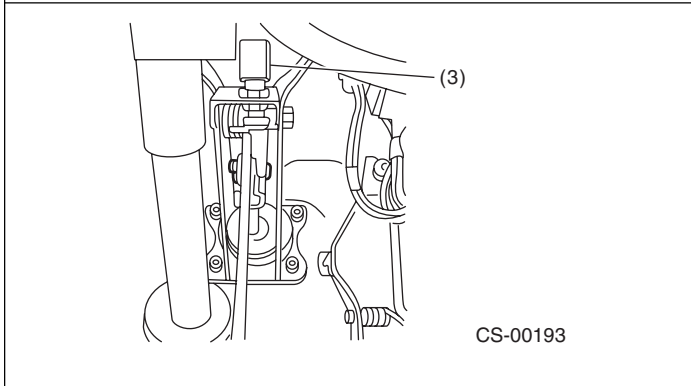
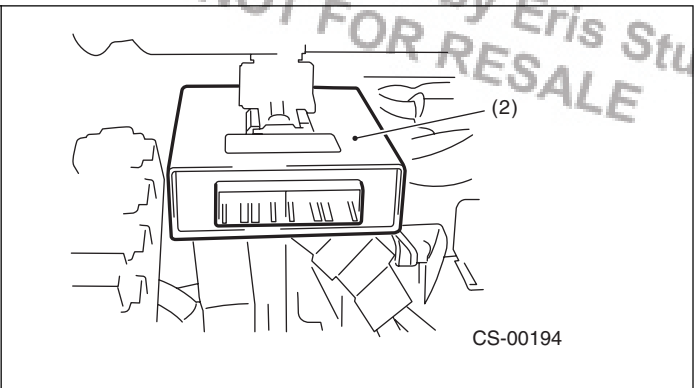
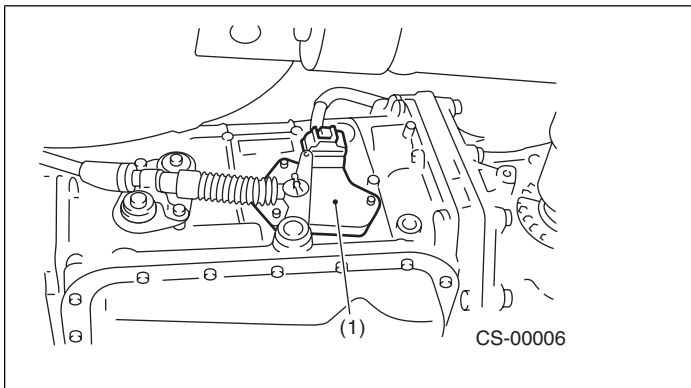
CS-00508

- | | | |
|--------------------------|-------------------------|-----------------------|
| (1) Inhibitor switch | (4) Key warning switch | (6) "P" range switch |
| (2) Body integrated unit | (5) Shift lock solenoid | (7) Key lock solenoid |
| (3) Stop light switch | | |

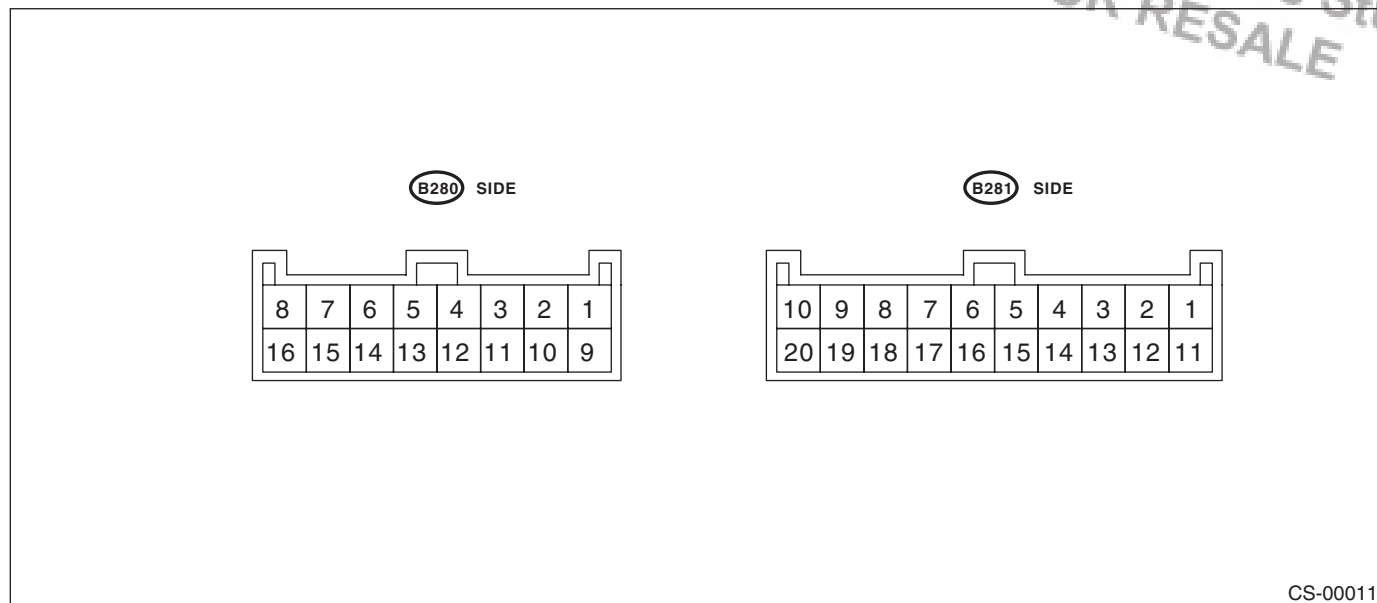
AT Shift Lock Control System

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B: ELECTRICAL SPECIFICATION



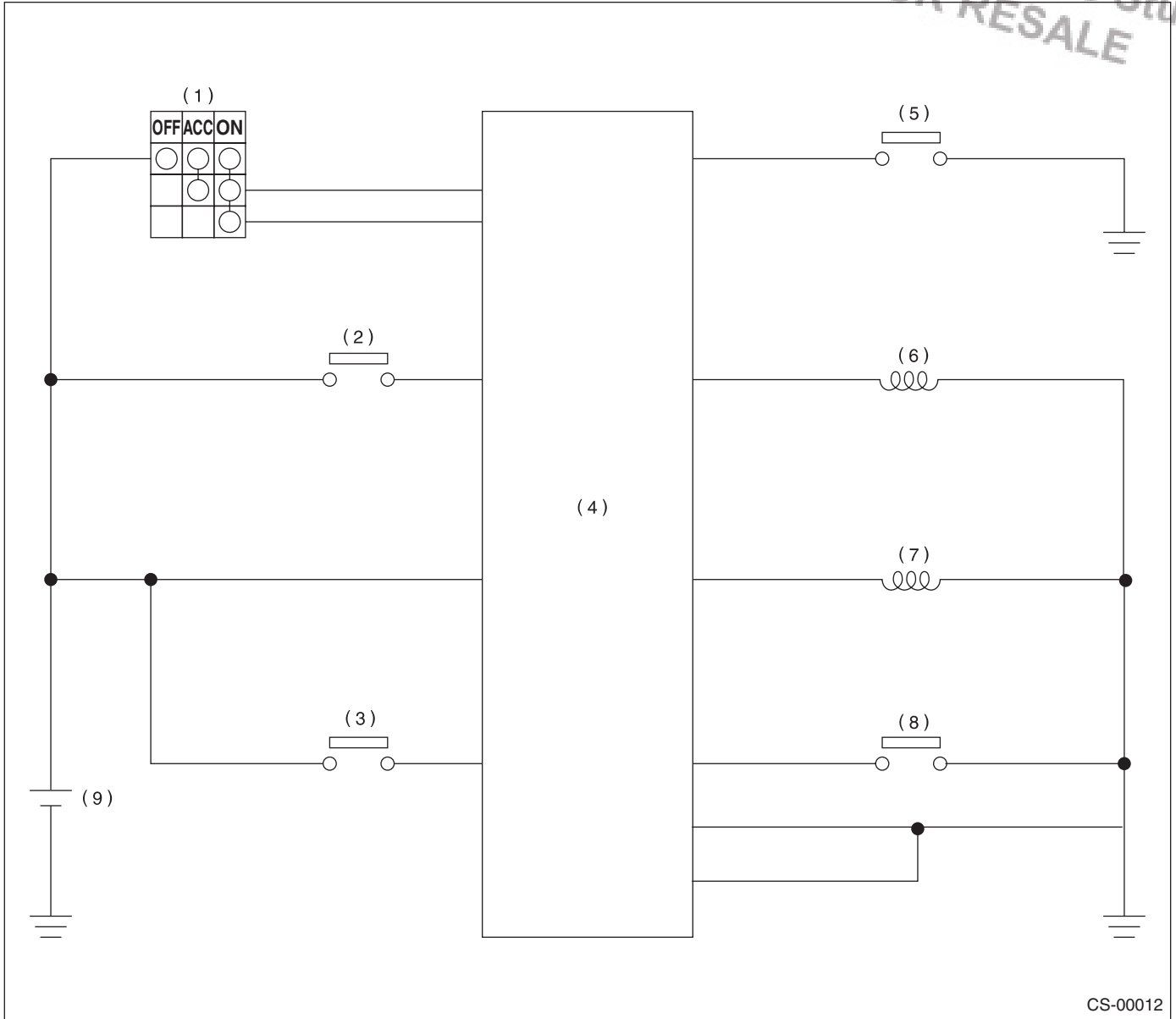
CS-00011

Item	To connector No.	Terminal No.	Input/Output signal
			Measured value and measuring conditions
Battery power supply	B280	2	9 — 16 V
Ignition power supply	B281	19	10 — 15 V when ignition switch is at ON or START.
Ignition power supply	B281	10	10 — 15 V when ignition switch is at ACC.
Inhibitor switch ("P" range)	B281	5	0 V when select lever is in "P" range. 9 — 16 V when select lever is in other positions than "P" range.
Stop light switch	B281	9	9 — 16 V when stop light switch is ON. 0 V when stop light switch is OFF.
"P" range switch	B281	6	0 V when select lever is in "P" range. 9 — 16 V when select lever is in other positions than "P" range.
Shift lock solenoid signal	B280	9	8.5 — 16 V when shift lock is released. 0 V when shift lock is operating.
Key warning switch signal	B281	20	9 — 16 V when key is inserted. 0 V when key is removed.
Key lock solenoid signal	B280	3	7.5 — 16 V when ignition switch is turned ON, with select lever in "P" range and brake switch ON. 0 V at other conditions than above.
Ground	B280	4	—
Ground	B280	13	—

AT Shift Lock Control System

CONTROL SYSTEMS

C: WIRING DIAGRAM



CS-00012

- | | | |
|------------------------|--------------------------|-------------------------|
| (1) Ignition switch | (4) Body integrated unit | (7) Shift lock solenoid |
| (2) Stop light switch | (5) Inhibitor switch | (8) "P" range switch |
| (3) Key warning switch | (6) Key lock solenoid | (9) Battery |

D: INSPECTION

1. SHIFT LOCK OPERATION

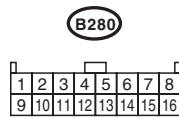
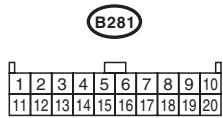
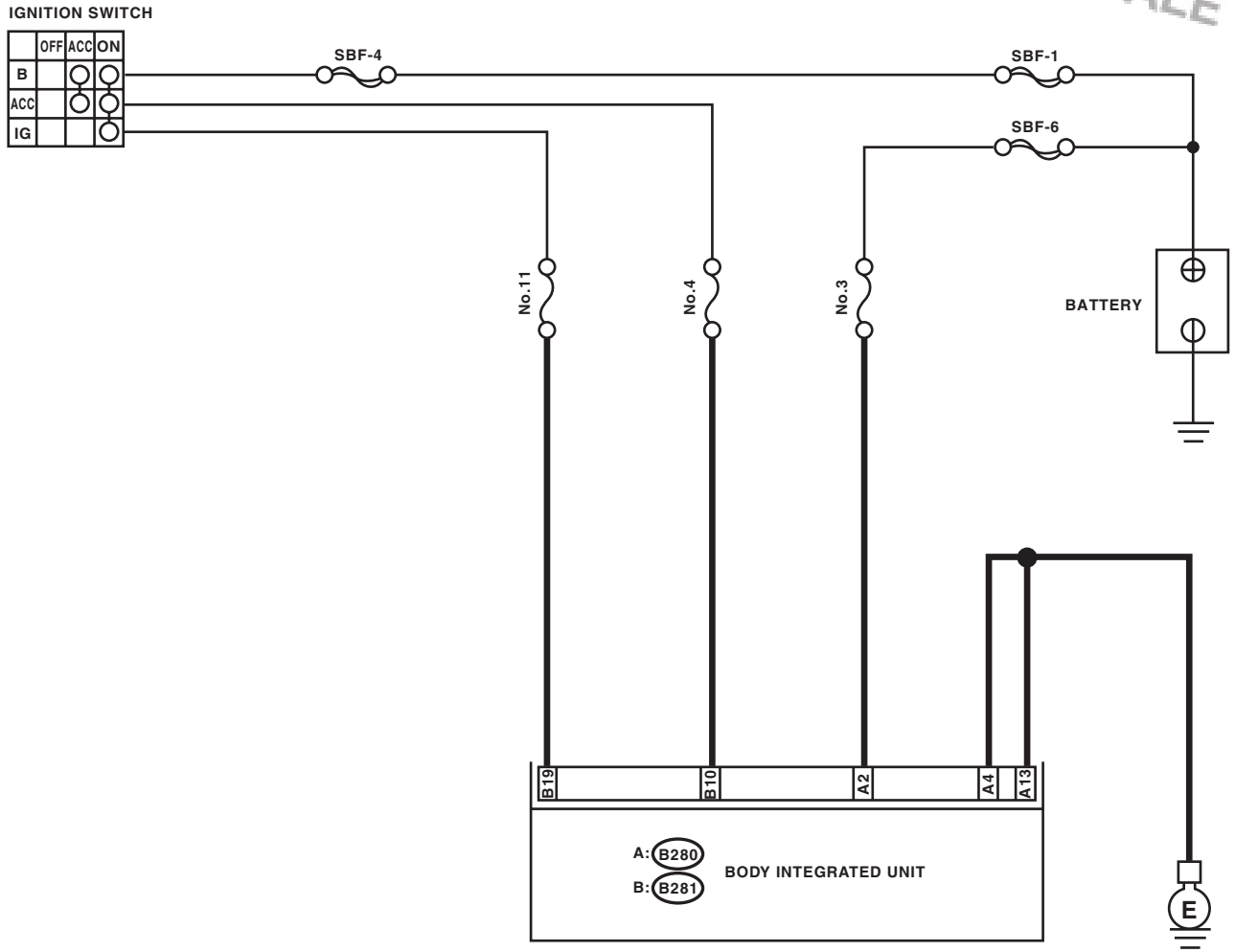
Step	Check	Yes	No
1 CHECK SHIFT LOCK. 1) Turn the ignition switch to ON. 2) Move the select lever to "P" range.	While brake pedal is not depressed, can the select lever move from "P" range to other ranges?	After inspecting "POWER SUPPLY AND GROUND CIRCUIT FOR BODY INTEGRATED UNIT", inspect "SHIFT LOCK OF SELECT LEVER DOES NOT OPERATE". <Ref. to CS-13, BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, AT Shift Lock Control System.> <Ref. to CS-17, SHIFT LOCK OF SELECT LEVER DOES NOT OPERATE, INSPECTION, AT Shift Lock Control System.>	Go to step 2.
2 CHECK SHIFT LOCK.	While brake pedal is depressed, can select lever move from "P" range to other ranges?	Go to step 3.	Inspect "SELECT LEVER CANNOT BE SHIFTED". <Ref. to CS-15, SELECT LEVER CANNOT BE SHIFTED, INSPECTION, AT Shift Lock Control System.>
3 CHECK STEERING LOCK.	When the select lever is set to except for "P" range, can the ignition switch be turned to the "LOCK" position?	Inspect "STEERING LOCK DOES NOT BE LOCKED OR RELEASED". <Ref. to CS-17, SHIFT LOCK OF SELECT LEVER DOES NOT OPERATE, INSPECTION, AT Shift Lock Control System.>	Go to step 4.

AT Shift Lock Control System

CONTROL SYSTEMS

	Step	Check	Yes	No
4	CHECK STEERING LOCK.	When the select lever is in the "P" range, can the ignition switch be turned to the "LOCK" position?	AT shift lock system is normal.	Inspect "STEERING LOCK DOES NOT BE LOCKED OR RELEASED". <Ref. to CS-17, SHIFT LOCK OF SELECT LEVER DOES NOT OPERATE, INSPECTION, AT Shift Lock Control System.>

2. BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT

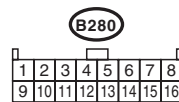
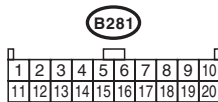
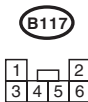
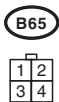
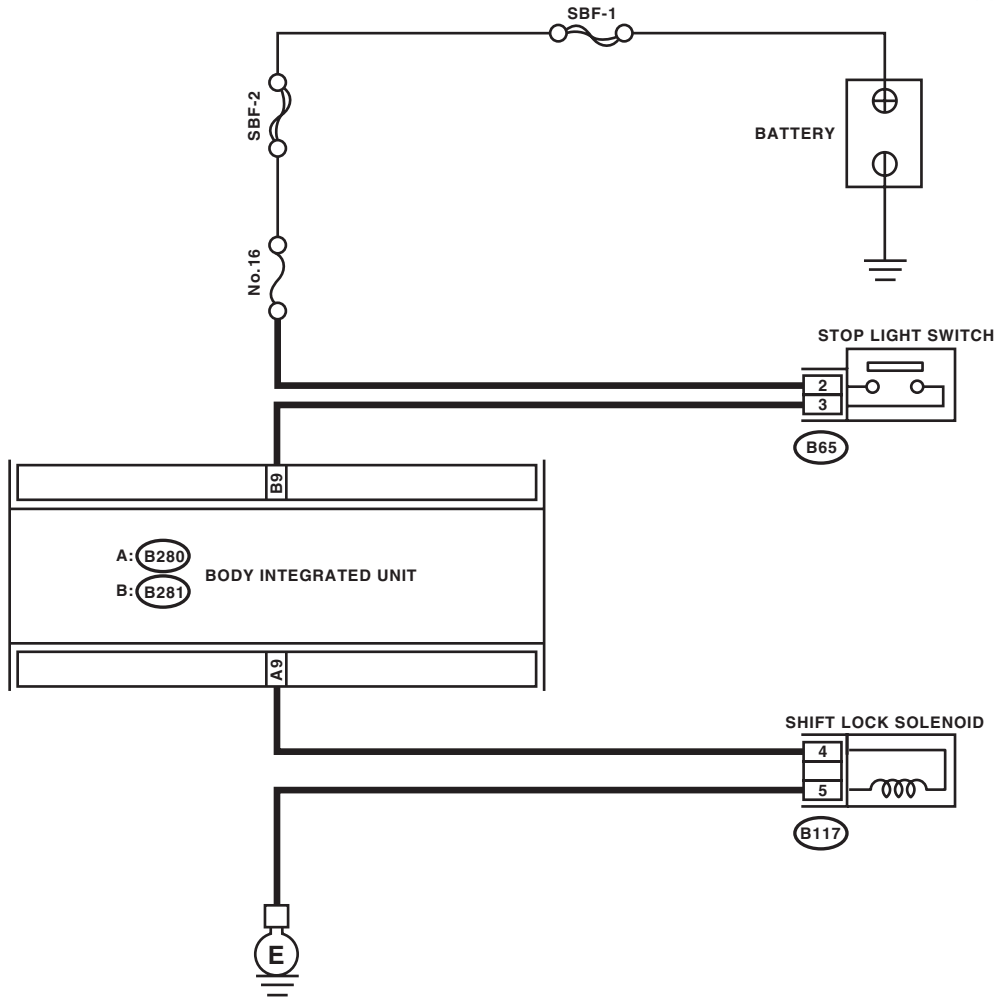


AT Shift Lock Control System

CONTROL SYSTEMS

Step	Check	Yes	No
1 CHECK FUSE. Remove the fuses No. 3, 4 and 11.	Are the fuses No. 3, 4 and 11 blown?	Replace the fuses No. 3, 4 and 11. If the replaced fuse No. 3, 4 or 11 blows out easily, repair the short circuit of harness between the fuse and body integrated unit.	Go to step 2.
2 CHECK HARNESS CONNECTOR BETWEEN BODY INTEGRATED UNIT AND CHASSIS GROUND. 1) Turn the ignition switch to OFF. 2) Measure the harness resistance between the body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B280) No. 4 — Chassis ground:</i> <i>(B280) No. 13 — Chassis ground:</i>	Is the resistance less than 1 Ω?	Go to step 3.	Repair the open circuit of harness between the body integrated unit and chassis ground.
3 CHECK BATTERY POWER SUPPLY. 1) Turn the ignition switch to ON. (engine OFF) 2) Check the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B280) No. 2 (+) — Chassis ground (-):</i>	Is the voltage 9 V or more?	Go to step 4.	Repair open circuit of the harness between battery and body integrated unit, and any poor contact in connectors.
4 CHECK IGNITION POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to ACC. 2) Check the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 10 (+) — Chassis ground (-):</i>	Is the voltage 9 V or more?	Go to step 5.	Repair open circuit of the harness between battery and body integrated unit, and any poor contact in connectors.
5 CHECK IGNITION POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 19 (+) — Chassis ground (-):</i>	Is the voltage 9 V or more?	Go to step 6.	Repair open circuit of the harness between battery and body integrated unit, and any poor contact in connectors.
6 CHECK POOR CONTACT.	Is there poor contact in connector?	Repair the poor contact.	Replace the body integrated unit.

3. SELECT LEVER CANNOT BE SHIFTED

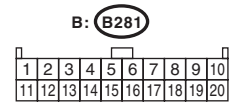
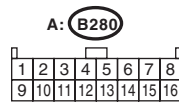
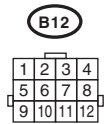
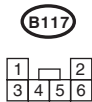
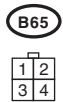
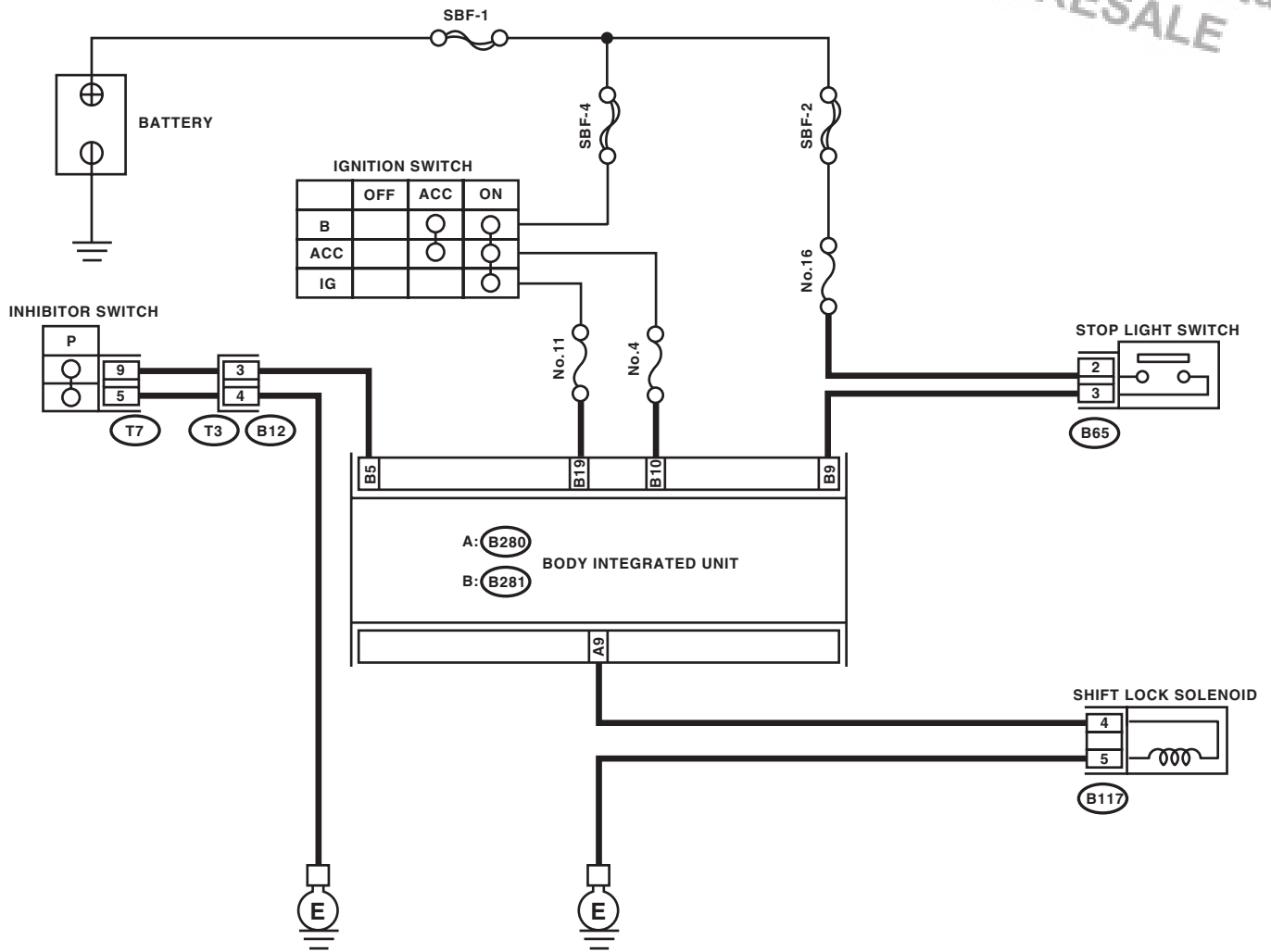


AT Shift Lock Control System

CONTROL SYSTEMS

Step	Check	Yes	No	
1	CHECK STOP LIGHT SWITCH. Depress the brake pedal.	Does the stop light illuminate?	Go to step 2.	Check the stop light system.
2	CHECK HARNESS BETWEEN STOP LIGHT SWITCH AND BODY INTEGRATED UNIT. 1) Turn the ignition switch to OFF. 2) Disconnect the connectors of body integrated unit and stop light switch. 3) Measure the resistance of harness between stop light switch and body integrated unit. Connector & terminal (B65) No. 3 — (B281) No. 9:	Is the resistance 1 MΩ or more?	Repair the open circuit of harness between body integrated unit and stop light switch.	Go to step 3.
3	CHECK HARNESS BETWEEN STOP LIGHT SWITCH AND BODY INTEGRATED UNIT. Measure the resistance of harness between stop light switch and chassis ground. Connector & terminal (B65) No. 3 — Chassis ground:	Is the resistance less than 1 Ω?	Repair the short circuit of harness between body integrated unit and stop light switch.	Go to step 4.
4	CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND SHIFT LOCK SOLENOID. 1) Disconnect the connector of shift lock solenoid. 2) Measure the harness resistance between the body integrated unit and shift lock solenoid. Connector & terminal (B117) No. 4 — (B280) No. 9:	Is the resistance 1 MΩ or more?	Repair the open circuit of harness between body integrated unit and shift lock solenoid.	Go to step 5.
5	CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND SHIFT LOCK SOLENOID. Measure the resistance of harness between shift lock solenoid and chassis ground. Connector & terminal (B117) No. 4 — Chassis ground:	Is the resistance less than 1 Ω?	Repair the short circuit of harness between body integrated unit and shift lock solenoid.	Go to step 6.
6	CHECK HARNESS BETWEEN SHIFT LOCK SOLENOID AND CHASSIS GROUND. Measure the resistance of harness between shift lock solenoid and chassis ground. Connector & terminal (B117) No. 5 — Chassis ground:	Is the resistance 1 MΩ or more?	Repair open circuit of harness between shift lock solenoid and chassis ground.	Go to step 7.
7	CHECK SHIFT LOCK SOLENOID. Measure the resistance of the shift lock solenoid connector terminals. Terminals No. 4 — No. 5:	Is the resistance between 20 — 40 Ω?	Go to step 8.	Replace the shift lock solenoid.
8	CHECK SHIFT LOCK SOLENOID. Connect the battery to connector terminal of shift lock solenoid, and operate the solenoid. Terminals No. 4 (+) — No. 5 (-):	Is the shift lock solenoid operating properly?	Go to step 9.	Replace the shift lock solenoid.
9	CHECK POOR CONTACT.	Is there poor contact in connector?	Repair the poor contact.	Replace the body integrated unit.

4. SHIFT LOCK OF SELECT LEVER DOES NOT OPERATE



AT Shift Lock Control System

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Step	Check	Yes	No	
1	CHECK INHIBITOR SWITCH. 1) Turn the ignition switch to ON. (engine OFF) 2) Move the select lever from "P" to "1" range.	Do the combination meter select indicator light match the select lever "P", "R", "N", "3", "2" and "1" range?	Go to step 2.	Adjust inhibitor switch and select cable.
2	CHECK IGNITION POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 19 (+) — Chassis ground (-):</i>	Is the voltage 9 V or more?	Go to step 3.	Repair open circuit of the harness between battery and body integrated unit, and any poor contact in connectors.
3	CHECK HARNESS BETWEEN INHIBITOR SWITCH AND BODY INTEGRATED UNIT. 1) Turn the ignition switch to OFF. 2) Disconnect the connectors of transmission harness and body integrated unit. 3) Measure the harness resistance between the body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 5 — Chassis ground:</i>	Is the resistance less than 1 Ω ?	Repair the short circuit of harness between body integrated unit and transmission connector.	Go to step 4.
4	CHECK HARNESS BETWEEN INHIBITOR SWITCH AND BODY INTEGRATED UNIT. Measure the harness resistance between body integrated unit and inhibitor switch. <i>Connector & terminal</i> <i>(B12) No. 3 — (B281) No. 5:</i>	Is the resistance 1 M Ω or more?	Repair the open circuit of the harness between the body integrated unit and transmission connector.	Go to step 5.
5	CHECK HARNESS BETWEEN INHIBITOR SWITCH AND CHASSIS GROUND. Measure the harness resistance between the body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B12) No. 4 — Chassis ground:</i>	Is the resistance less than 1 Ω ?	Go to step 6.	Repair the open circuit of harness between the body integrated unit and chassis ground.
6	CHECK INHIBITOR SWITCH. 1) Move the select lever to "P" range. 2) Measure the resistance between transmission harness connector terminals. <i>Connector & terminal</i> <i>(T3) No. 3 — No. 4:</i>	Is the resistance 1 M Ω or more?	Repair or replace inhibitor switch.	Go to step 7.
7	CHECK OUTPUT SIGNAL OF BODY INTEGRATED UNIT. 1) Connect all the connectors. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 5 (+) — Chassis ground (-):</i>	Is the voltage 9 — 16 V?	Go to step 8.	Go to step 16.
8	CHECK STOP LIGHT SWITCH. Depress the brake pedal.	Does the stop light illuminate?	Go to step 9.	Check the stop light system.
9	CHECK HARNESS BETWEEN STOP LIGHT SWITCH AND AT SHIFT LOCK CONTROL MODULE. 1) Depress the brake pedal. 2) Measure the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 9 (+) — Chassis ground (-):</i>	Is the voltage 9 V or more?	Go to step 10.	Repair the harness for open or short circuit between body integrated unit and stop light switch.

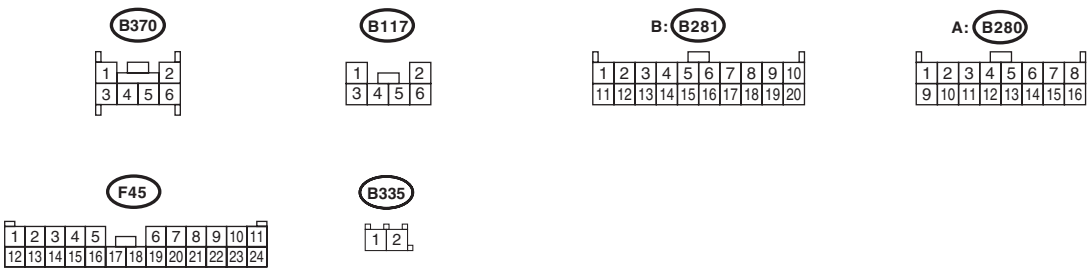
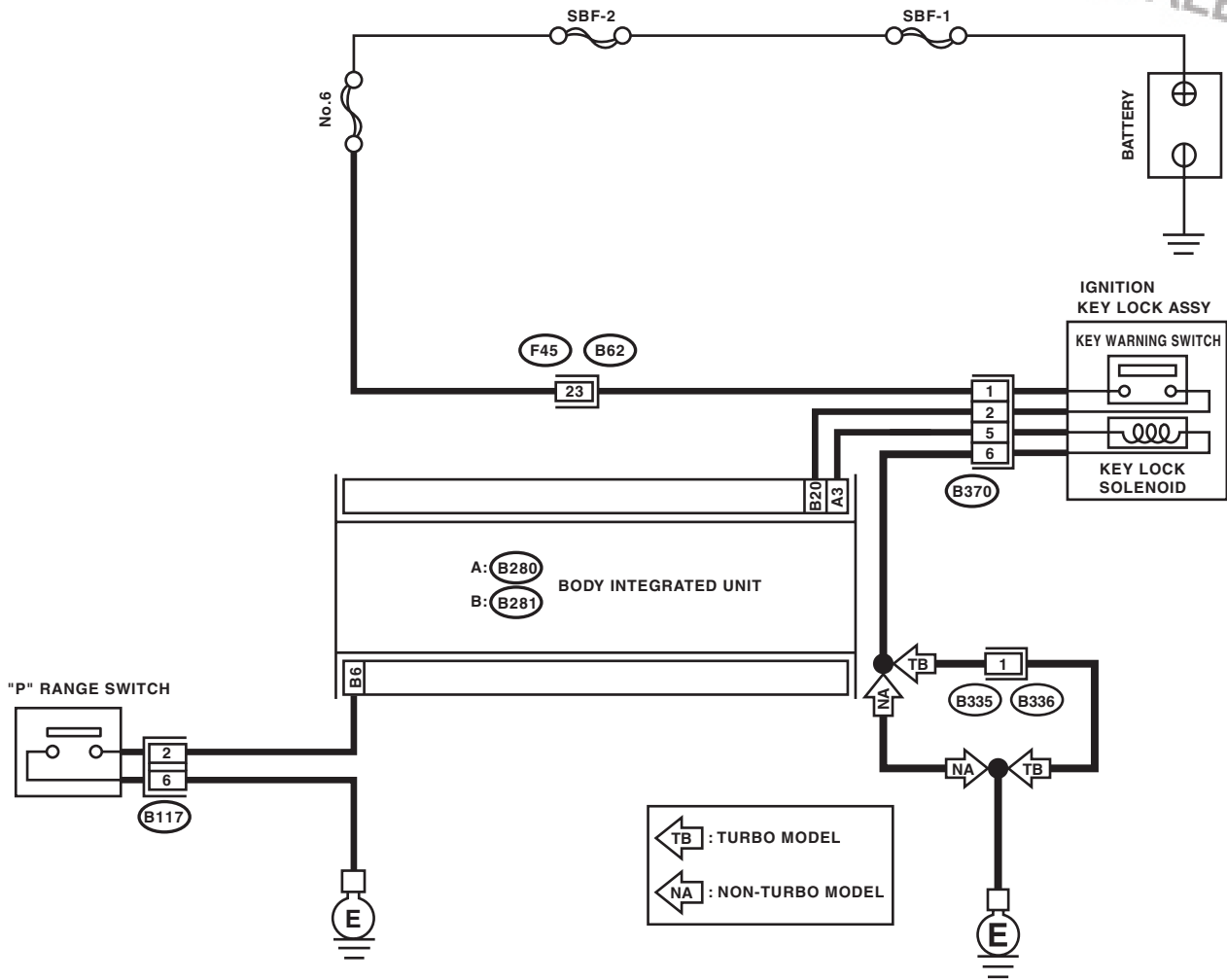
AT Shift Lock Control System

Step	Check	Yes	No
10 CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND SHIFT LOCK SOLENOID. 1) Turn the ignition switch to OFF. 2) Disconnect the connectors of shift lock solenoid and body integrated unit. 3) Measure the harness resistance between the body integrated unit and shift lock solenoid. <i>Connector & terminal</i> <i>(B280) No. 9 — (B117) No. 4:</i>	Is the resistance 1 M Ω or more?	Repair the open circuit of harness between body integrated unit and shift lock solenoid.	Go to step 11.
11 CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND SHIFT LOCK SOLENOID. Measure the resistance of harness between shift lock solenoid and chassis ground. <i>Connector & terminal</i> <i>(B280) No. 9 — Chassis ground:</i>	Is the resistance less than 10 Ω ?	Go to step 12.	Repair the short circuit of harness between body integrated unit and shift lock solenoid.
12 CHECK HARNESS BETWEEN SHIFT LOCK SOLENOID AND CHASSIS GROUND. Measure the resistance of harness between shift lock solenoid and chassis ground. <i>Connector & terminal</i> <i>(B117) No. 5 — Chassis ground:</i>	Is the resistance less than 1 Ω ?	Go to step 13.	Repair open circuit of harness between shift lock solenoid and chassis ground.
13 CHECK SHIFT LOCK SOLENOID. Measure the resistance of the shift lock solenoid connector terminals. <i>Terminals</i> <i>No. 4 — No. 5:</i>	Is the resistance between 20 — 40 Ω ?	Go to step 14.	Replace the shift lock solenoid.
14 CHECK SHIFT LOCK SOLENOID. Connect the battery to connector terminal of shift lock solenoid, and operate the solenoid. <i>Terminals</i> <i>No. 4 (+) — No. 5 (-):</i>	Is the shift lock solenoid operating properly?	Go to step 15.	Replace the shift lock solenoid.
15 CHECK OUTPUT SIGNAL FOR AT SHIFT LOCK CONTROL MODULE. 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between body integrated unit and chassis ground. <i>Connector & terminal</i> <i>(B280) No. 9 (+) — Chassis ground (-):</i>	Is the voltage 8.5 V or more?	Go to step 16.	Replace the body integrated unit.
16 CHECK POOR CONTACT.	Is there poor contact in connector?	Repair the poor contact.	Replace the body integrated unit.

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5. STEERING LOCK DOES NOT LOCK OR RELEASE



CS-00810

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	Step	Check	Yes	No
1	<p>CHECK HARNESS BETWEEN BATTERY AND KEY WARNING SWITCH.</p> <p>1) Disconnect the connector of key warning switch.</p> <p>2) Measure the voltage of harness between key warning switch and chassis ground.</p> <p>Connector & terminal (B370) No. 1 (+) — Chassis ground (-):</p>	Is the voltage 9 — 16 V?	Go to step 2.	Repair the open or short circuit of harness between battery and key warning switch.
2	<p>CHECK KEY WARNING SWITCH.</p> <p>Measure the resistance between connector terminals of key warning switch.</p> <p>Terminals No. 1 — No. 2:</p>	Is the resistance 1 M Ω or more?	Replace the key warning switch.	Go to step 3.
3	<p>CHECK KEY WARNING SWITCH.</p> <p>1) Remove the key.</p> <p>2) Measure the resistance between connector terminals of key warning switch.</p> <p>Terminals No. 1 — No. 2:</p>	Is the resistance 1 M Ω or more?	Go to step 4.	Replace the key warning switch.
4	<p>CHECK HARNESS BETWEEN AT SHIFT LOCK CONTROL MODULE AND KEY WARNING SWITCH.</p> <p>1) Disconnect the body integrated unit connector.</p> <p>2) Measure the voltage between body integrated unit and chassis ground.</p> <p>Connector & terminal (B281) No. 20 (+) — Chassis ground (-):</p>	Is the voltage 9 V or more?	Go to step 5.	Repair the open circuit of harness between body integrated unit and key warning switch.
5	<p>CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND KEY LOCK SOLENOID.</p> <p>1) Disconnect the connector key lock solenoid.</p> <p>2) Measure the resistance of harness between body integrated unit and key lock solenoid.</p> <p>Connector & terminal (B370) No. 5 — (B280) No. 3:</p>	Is the resistance 1 M Ω or more?	Repair the open circuit of harness between body integrated unit and key lock solenoid.	Go to step 6.
6	<p>CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND KEY LOCK SOLENOID.</p> <p>Measure the harness resistance between the body integrated unit and chassis ground.</p> <p>Connector & terminal (B280) No. 3 — Chassis ground:</p>	Is the resistance 1 Ω or more?	Go to step 7.	Repair the short circuit of harness between body integrated unit and key lock solenoid.
7	<p>CHECK HARNESS BETWEEN KEY LOCK SOLENOID AND CHASSIS GROUND.</p> <p>Measure the resistance of the harness between key lock solenoid and chassis ground.</p> <p>Connector & terminal (B370) No. 6 — Chassis ground:</p>	Is the resistance less than 10 Ω ?	Go to step 8.	Repair open circuit of harness between key lock solenoid and chassis ground.
8	<p>CHECK KEY LOCK SOLENOID.</p> <p>Measure the resistance of key lock solenoid connector terminals.</p> <p>Terminals No. 5 — No. 6:</p>	Is the resistance between 4 — 8 Ω ?	Go to step 9.	Replace the key lock solenoid.
9	<p>CHECK HARNESS BETWEEN "P" RANGE SWITCH AND CHASSIS GROUND.</p> <p>Measure the resistance of harness between "P" range switch and chassis ground.</p> <p>Connector & terminal (B117) No. 2 — Chassis ground:</p>	Is the resistance less than 1 Ω ?	Go to step 10.	Repair the short circuit of harness between "P" range switch and body integrated unit.

AT Shift Lock Control System

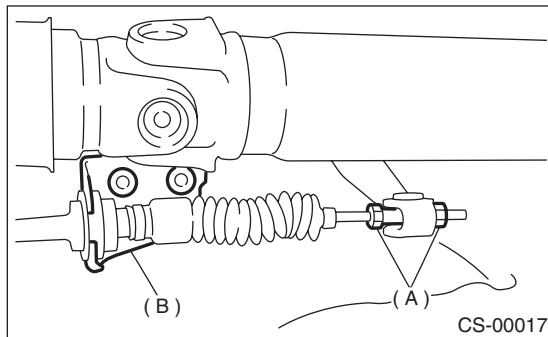
CONTROL SYSTEMS

Step	Check	Yes	No
10 CHECK HARNESS BETWEEN AT SHIFT LOCK CONTROL MODULE AND “P” RANGE SWITCH. 1) Disconnect the connector of the “P” range switch. 2) Measure the resistance of harness between the body integrated unit and the “P” range switch. <i>Connector & terminal (B117) No. 2 — (B281) No. 6:</i>	Is the resistance 1 MΩ or more?	Repair the open circuit of harness between the body integrated unit and the “P” range switch.	Go to step 11.
11 CHECK HARNESS BETWEEN “P” RANGE SWITCH AND CHASSIS GROUND. Measure the resistance of harness between “P” range switch and chassis ground. <i>Connector & terminal (B117) No. 6 — Chassis ground:</i>	Is the resistance 1 MΩ or more?	Repair the open circuit of harness between “P” range switch and chassis ground.	Go to step 12.
12 CHECK “P” RANGE SWITCH. 1) Move the select lever to “P” range. 2) Measure the resistance between “P” range switch connector terminals. <i>Terminals No. 2 — No. 6:</i>	Is the resistance less than 1 Ω?	Go to step 13.	Replace the “P” range switch.
13 CHECK “P” RANGE SWITCH. 1) Shift the select lever to except for “P” range. 2) Measure the resistance between “P” range switch connector terminals. <i>Terminals No. 2 — No. 6:</i>	Is the resistance 1 MΩ or more?	Go to step 14.	Replace the “P” range switch.
14 CHECK OUTPUT SIGNAL OF BODY INTEGRATED UNIT. 1) Disconnect all the connectors. 2) Turn the ignition switch to ON. (engine OFF) 3) Move the select lever to “P” range. 4) Depress the brake pedal. 5) Measure the voltage between body integrated unit connector and chassis ground. <i>Connector & terminal (B280) No. 3 (+) — Chassis ground (-):</i>	Is the voltage 7.5 — 16 V?	Go to step 15.	Replace the body integrated unit.
15 CHECK POOR CONTACT.	Is there poor contact in connector?	Repair the poor contact.	Replace the body integrated unit.

3. Select Lever

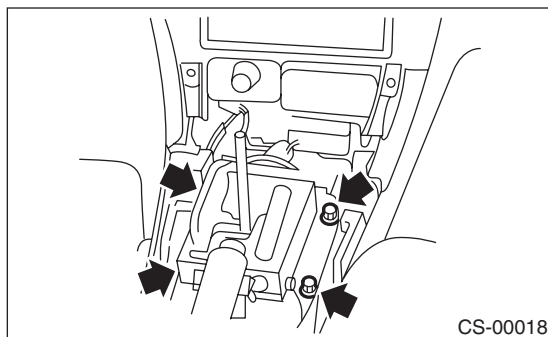
A: REMOVAL

- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from the battery.
- 3) Set the select lever to "N" range.
- 4) Lift up the vehicle.
- 5) Remove the rear exhaust pipe and muffler.
 - SOHC model
<Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, REMOVAL, Muffler.>
 - DOHC Turbo model
<Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>
- 6) Disconnect the cable from select lever and then remove the cable bracket.



- (A) Adjusting nut
(B) Cable bracket

- 7) Lower the lift.
- 8) Remove the console box. <Ref. to EI-46, REMOVAL, Console Box.>
- 9) Disconnect the connectors, and then remove the four bolts to take out the select lever from vehicle body.

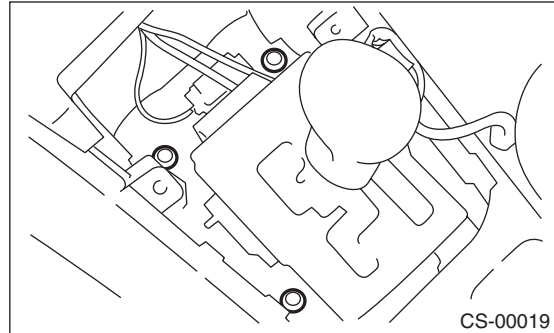


B: INSTALLATION

- 1) Set the select lever to vehicle body.
- 2) Tighten the four bolts to install the select lever to vehicle body, and then connect the connector.

Tightening torque:

13 N·m (1.3 kgf-m, 9.4 ft-lb)



- 3) Install the console box. <Ref. to EI-46, INSTALLATION, Console Box.>
- 4) Set the select lever to "N" range.
- 5) Lift up the vehicle.
- 6) Set the select lever to "N" range.
- 7) Insert the tip of inner cable into connector hole of the select lever, and affix the outer cable end to the bracket.

Tightening torque:

18 N·m (1.8 kgf-m, 13.0 ft-lb)

- 8) Adjust the select cable position. <Ref. to CS-28, ADJUSTMENT, Select Cable.>
- 9) After the completion of adjustment, confirm that the select lever operates properly at all range positions.
- 10) Install the rear exhaust pipe and muffler.
 - SOHC model
<Ref. to EX(H4SO)-8, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, INSTALLATION, Muffler.>
 - DOHC Turbo model
<Ref. to EX(H4DOTC)-15, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, INSTALLATION, Muffler.>
- 11) Inspect the following items. When a malfunction is found in the inspection, adjust the select cable and inhibitor switch. <Ref. to CS-28, ADJUSTMENT, Select Cable.> <Ref. to 4AT-46, ADJUSTMENT, Inhibitor Switch.>

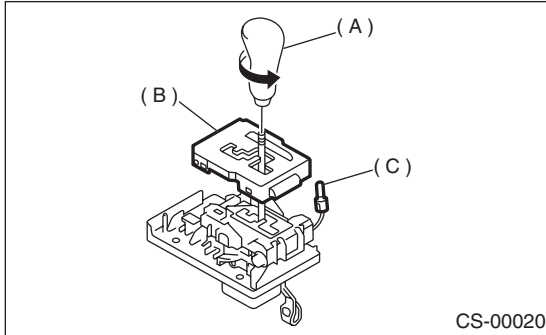
- (1) Engine starts when the select lever is in "P" and "N" range, but not in other ranges.
- (2) Back-up light illuminates when the select lever is in the "R" range, but not in other ranges.
- (3) Select lever and indicator positions are matched.

C: DISASSEMBLY

- 1) Remove the gasket.
- 2) Remove the grip.
- 3) Remove the indicator light, and then remove the indicator cover.

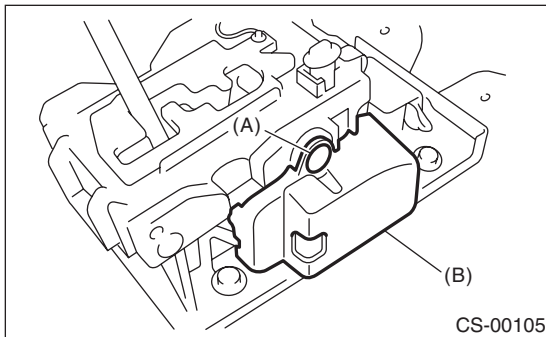
NOTE:

Be careful not to damage the indicator light during removal.



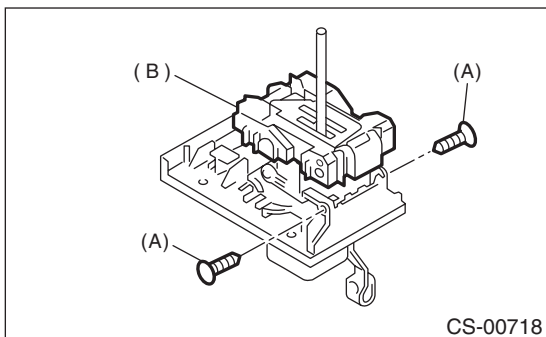
- (A) Grip
- (B) Indicator cover
- (C) Indicator light

- 4) Remove the blind.
- 5) Remove the cover.



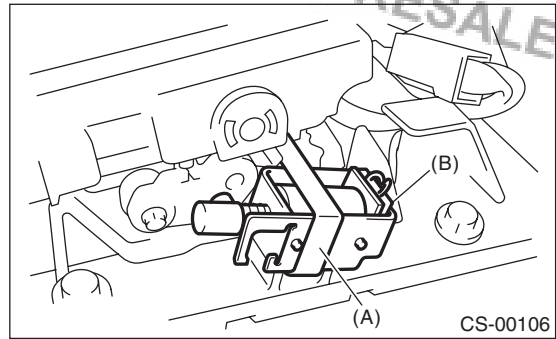
- (A) Clip
- (B) Cover

- 6) Remove the clips and then remove the guide plate.



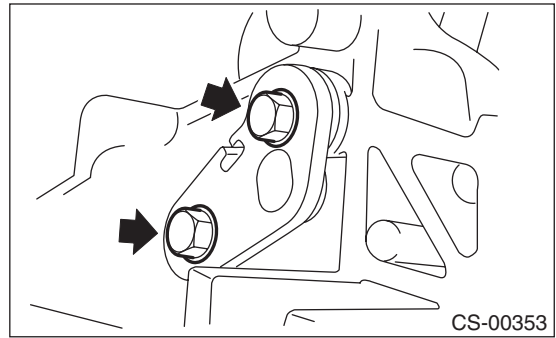
- (A) Clip
- (B) Guide plate

- 7) Remove the clamp and remove the shift lock solenoid.

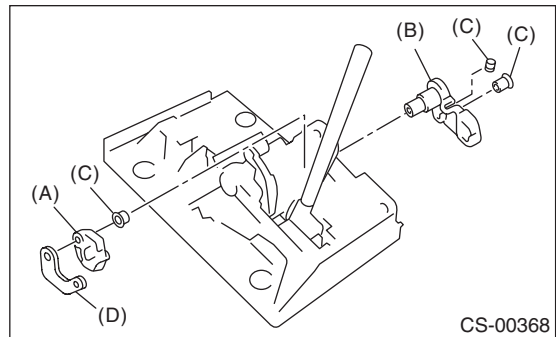


- (A) Clamp
- (B) Shift lock solenoid

- 8) Remove the bolts which secure the lock plate B.

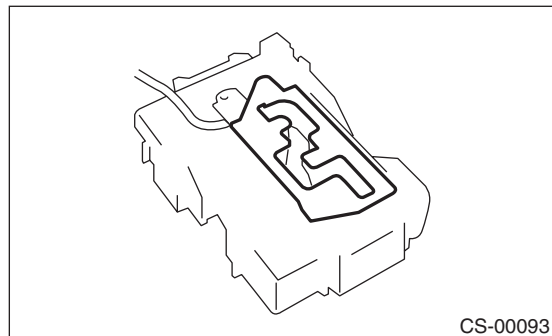


- 9) Remove the lock plates A, B, and C and the bushings.

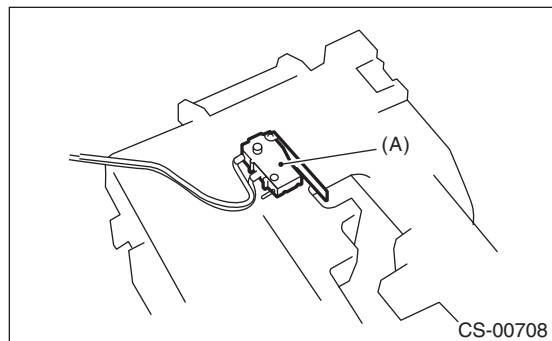


- (A) Lock plate A
- (B) Lock plate B
- (C) Bushing
- (D) Lock plate C

10) Remove the cushion plate.

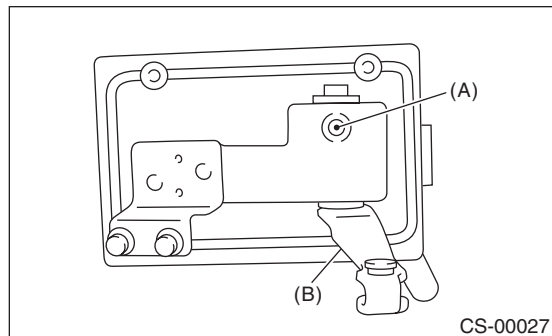


11) Remove the "P" range switch.



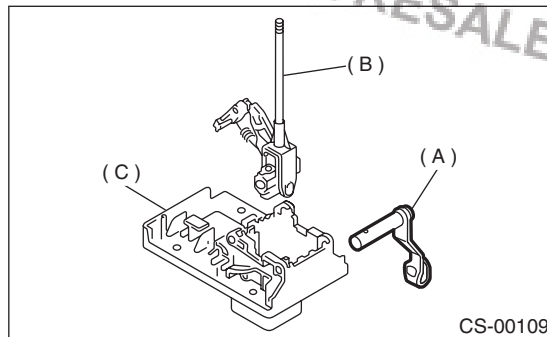
(A) "P" range switch

12) Remove the grommet and then extract the spring pin.



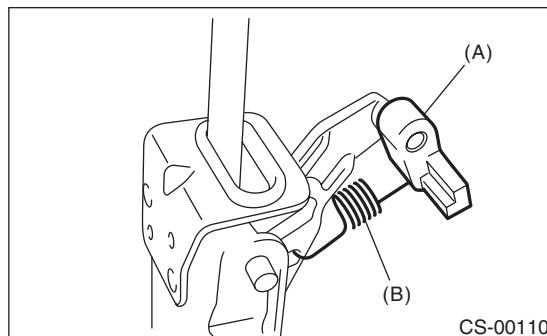
(A) Spring pin
(B) Select lever arm

13) Remove the select lever arm and remove the select lever assembly from the plate.



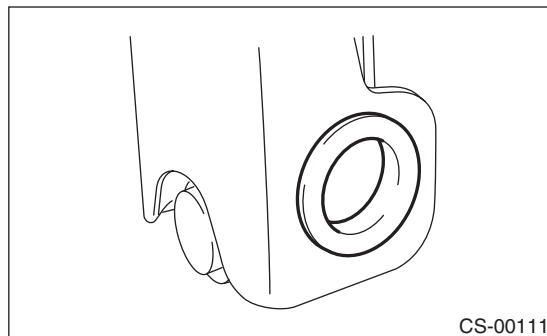
(A) Select lever arm
(B) Select lever ASSY
(C) Plate

14) Remove the detent spring and remove the detent arm.



(A) Detent arm
(B) Detent spring

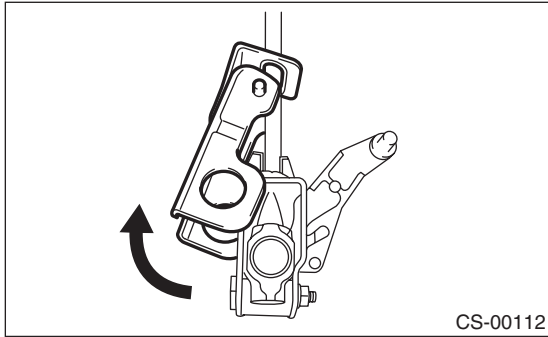
15) Remove the select lever assembly bushing from the bracket.



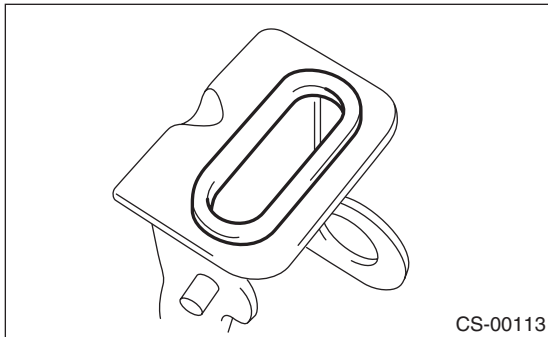
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CONTROL SYSTEMS

16) Remove the bracket from the select lever assembly.



17) Remove the bushing from the bracket.



D: ASSEMBLY

- 1) Clean all the parts before assembly.
- 2) Apply grease to each part of select lever. <Ref. to CS-2, AT SELECT LEVER, COMPONENT, General Description.>

Lock plate:

SUNCALL GREASE (Part No. 002948040)

Except for lock plate:

KOPR-KOTE (Part No. 003603001) or equivalent

- 3) Assemble in the reverse order of disassembly.
- 4) After completing installation, shift the select lever from "P" range to "1" range, then check whether the select indicator and select lever matches, whether the pointer and position mark matches, and check the operating force.

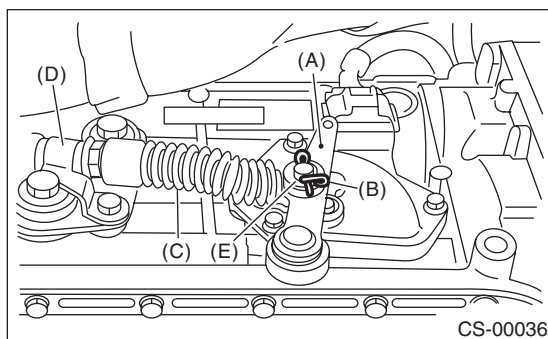
E: INSPECTION

- 1) Check the removed parts for deformation, damage and wear. Repair or replace if defective.
- 2) Confirm the select lever ASSY operating condition before assembling. Normal if it operates smoothly.

4. Select Cable

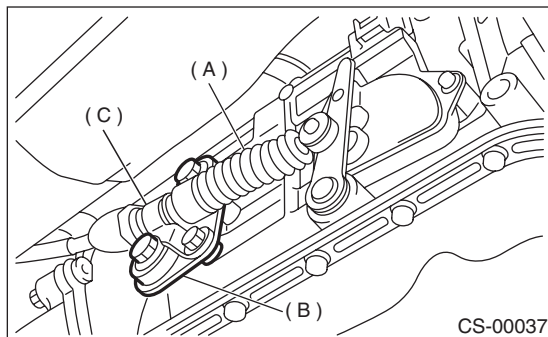
A: REMOVAL

- 1) Set the vehicle on a lift.
- 2) Set the select lever to "N" range.
- 3) Disconnect the ground cable from the battery.
- 4) Lift up the vehicle.
- 5) Remove the front, center and rear exhaust pipes and the muffler. (SOHC model)
<Ref. to EX(H4SO)-4, REMOVAL, Front Exhaust Pipe.> <Ref. to EX(H4SO)-7, REMOVAL, Center Exhaust Pipe.> <Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, REMOVAL, Muffler.>
- 6) Remove the center and rear exhaust pipes and the muffler. (DOHC Turbo model)
<Ref. to EX(H4DOTC)-10, REMOVAL, Center Exhaust Pipe.> <Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>
- 7) Remove the snap pin and washer from range select lever.



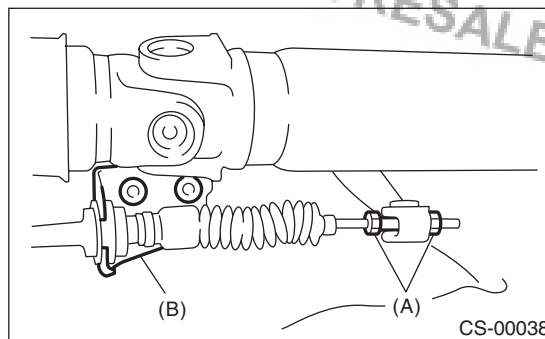
- (A) Range select lever
- (B) Snap pin
- (C) Select cable
- (D) Clamp
- (E) Washer

- 8) Remove the plate assembly from the transmission case.



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

- 9) Disconnect the cable from select lever and then remove the cable bracket.



- (A) Adjusting nut
- (B) Cable bracket

- 10) Remove the select cable from plate assembly.

B: INSTALLATION

- 1) Install the select cable to plate assembly.

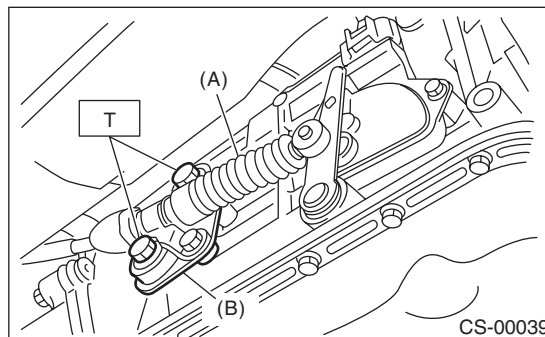
Tightening torque:

18 N·m (1.8 kgf-m, 13.0 ft-lb)

- 2) Install the select cable to range select lever.
- 3) Install the plate assembly to transmission.

Tightening torque:

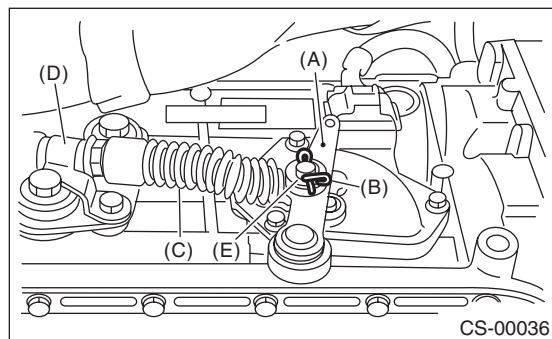
T: 24.5 N·m (2.5 kgf-m, 18.1 ft-lb)



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

CONTROL SYSTEMS

4) Install the washer and snap pin to range select lever.



- (A) Range select lever
- (B) Snap pin
- (C) Select cable
- (D) Clamp
- (E) Washer

5) Insert the tip of inner cable into connector hole of the select lever, and affix the outer cable end to the bracket.

Tightening torque:

18 N·m (1.8 kgf·m, 13.0 ft·lb)

6) Move the select lever to the “N” range, then adjust the select cable position. <Ref. to CS-28, ADJUSTMENT, Select Cable.>

7) Install the front, center and rear exhaust pipes, and the muffler. (SOHC model)

<Ref. to EX(H4SO)-5, INSTALLATION, Front Exhaust Pipe.> <Ref. to EX(H4SO)-7, INSTALLATION, Center Exhaust Pipe.> <Ref. to EX(H4SO)-8, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, INSTALLATION, Muffler.>

8) Install the center, rear exhaust pipes and the muffler. (DOHC Turbo model)

<Ref. to EX(H4DOTC)-11, INSTALLATION, Center Exhaust Pipe.> <Ref. to EX(H4DOTC)-15, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, INSTALLATION, Muffler.>

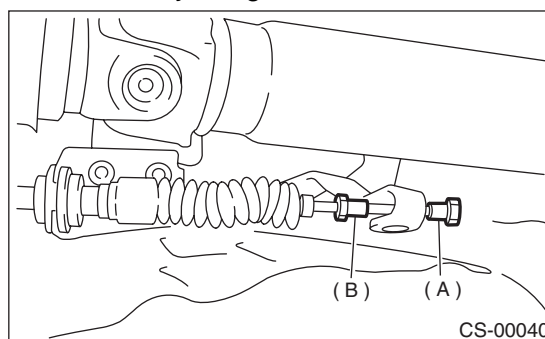
C: INSPECTION

Check the removed cable and replace if damaged, rusty or having problems.

- 1) Check the cable for smooth operation.
- 2) Check the inner cable for damage and rust.
- 3) Check the outer cable for damage, bends and cracks.
- 4) Check the boot for damage, cracks and deterioration.
- 5) Move the select lever from “P” to “1” range. Check the existence of feel to contact the detents in each range. If the detents cannot be felt or the position pointer is improperly aligned, adjust the cable.

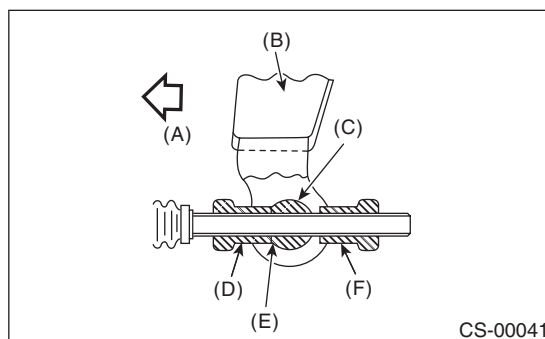
D: ADJUSTMENT

- 1) Set the vehicle on a lift.
- 2) Set the select lever to “N” range.
- 3) Lift up the vehicle.
- 4) Remove the rear exhaust pipe and muffler.
 - SOHC model
<Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, REMOVAL, Muffler.>
 - DOHC Turbo model
<Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>
- 5) Loosen the adjusting nuts on both sides.



- (A) Adjusting nut A
- (B) Adjusting nut B

6) Turn adjusting nut B until it lightly touches the connector.

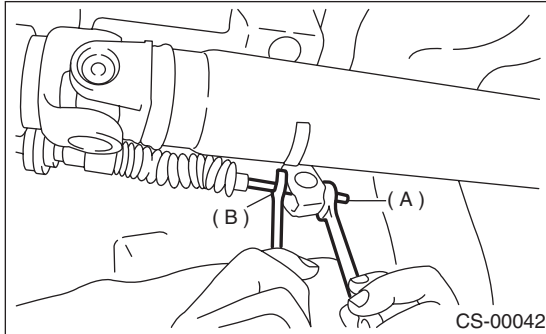


- (A) Front side
- (B) Select lever
- (C) Connector
- (D) Adjusting nut B
- (E) Contact point
- (F) Adjusting nut A

7) Set a spanner wrench to adjusting nut B so that it does not rotate, and then tighten the adjusting nut A.

Tightening torque:

7.5 N·m (0.76 kgf-m, 5.5 ft-lb)



(A) Adjusting nut A

(B) Adjusting nut B

8) After the completion of adjustment, confirm that the select lever operates normally at all ranges.

9) Install in the reverse order of removal.

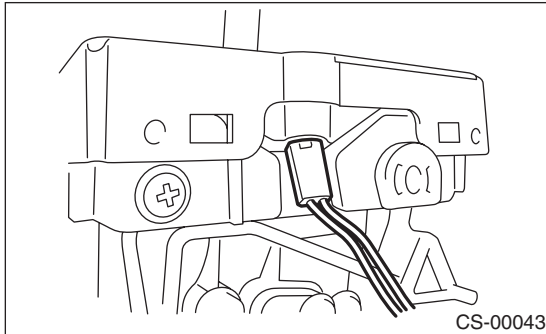
AT Shift Lock Solenoid and "P" Range Switch

CONTROL SYSTEMS

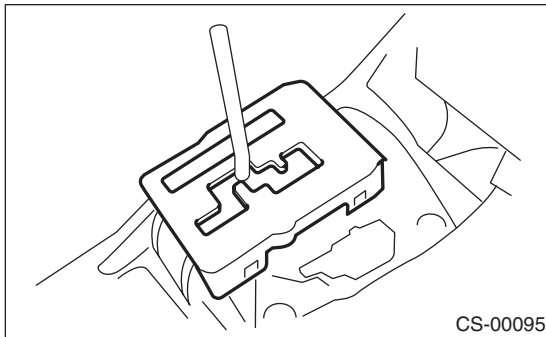
5. AT Shift Lock Solenoid and "P" Range Switch

A: REMOVAL

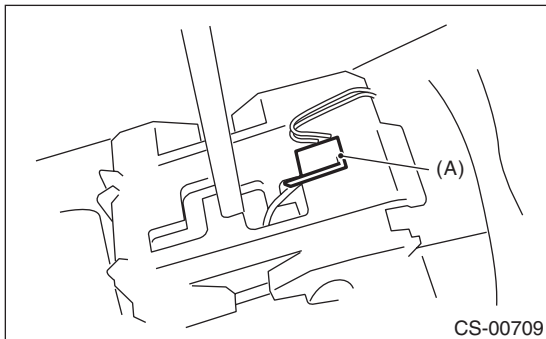
- 1) Disconnect the ground cable from the battery.
- 2) Remove the console box. <Ref. to EI-46, REMOVAL, Console Box.>
- 3) Disconnect the connector.
- 4) Remove the grip.
- 5) Remove the indicator valve from the indicator cover.



- 6) Remove the indicator cover.

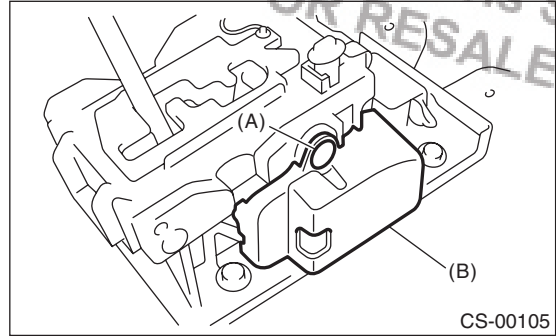


- 7) Remove the blind.
- 8) Remove the cushion.
- 9) Remove the "P" range switch.



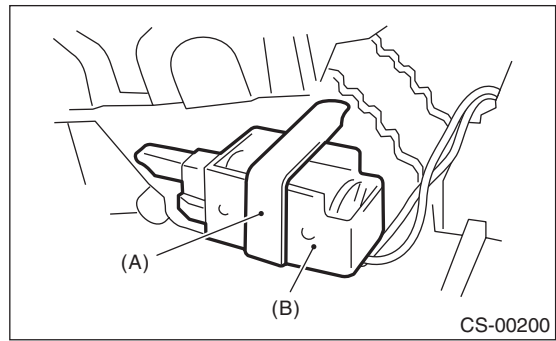
(A) "P" range switch

- 10) Remove the cover.



(A) Clip
(B) Cover

- 11) Remove the clamp and remove the shift lock solenoid.



(A) Clamp
(B) Shift lock solenoid

B: INSTALLATION

Install in the reverse order of removal.

AT Shift Lock Solenoid and "P" Range Switch

CONTROL SYSTEMS

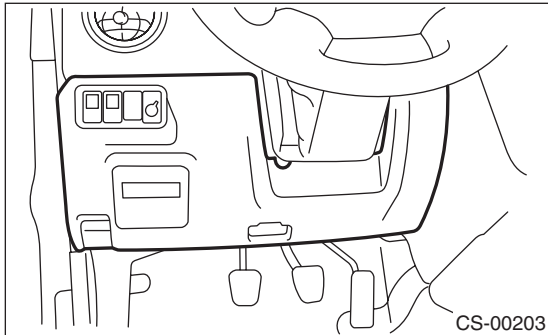
C: INSPECTION

	Step	Check	Yes	No
1	CHECK SHIFT LOCK SOLENOID. Measure the resistance of shift lock solenoid connector terminals. <i>Terminals</i> <i>No. 4 — No. 5:</i>	Is the resistance between 7 — 18 Ω ?	Go to step 2.	Replace the shift lock solenoid and "P" range switch assembly.
2	CHECK SHIFT LOCK SOLENOID. Connect the battery to shift lock solenoid connector terminal, and then operate the solenoid. <i>Terminals</i> <i>No. 4 (+) — No. 5 (-):</i>	Does the shift lock solenoid operate normally?	Go to step 3.	Replace the shift lock solenoid and "P" range switch assembly.
3	CHECK "P" RANGE SWITCH. 1) Move the select lever to "P" range. 2) Measure the resistance between "P" range switch connector terminals.	Is the resistance less than 1 Ω ?	Go to step 4.	Replace the "P" range switch.
4	CHECK "P" RANGE SWITCH. 1) Shift the select lever to except for "P" range. 2) Measure the resistance between "P" range switch connector terminals.	Is the resistance 1 M Ω or more?	Normal operation	Replace the "P" range switch.

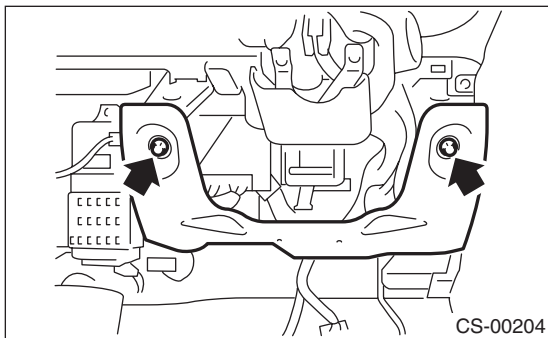
6. Body Integrated Unit

A: REMOVAL

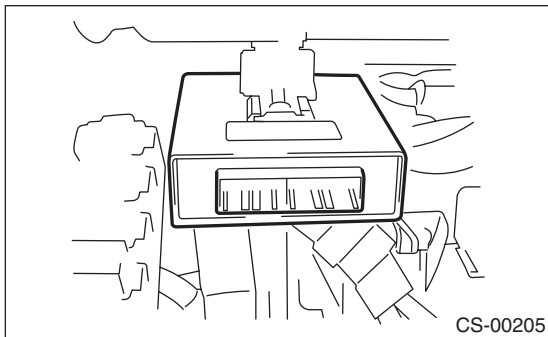
- 1) Disconnect the ground cable from the battery.
- 2) Remove the lower cover.



- 3) Remove the knee bolster.



- 4) Disconnect the connector from body integrated unit.
- 5) Remove the body integrated unit.



B: INSTALLATION

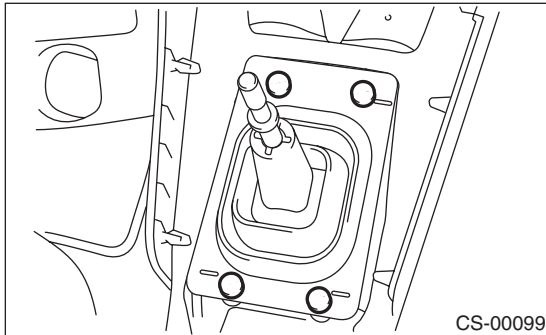
Install in the reverse order of removal.

7. MT Gear Shift Lever

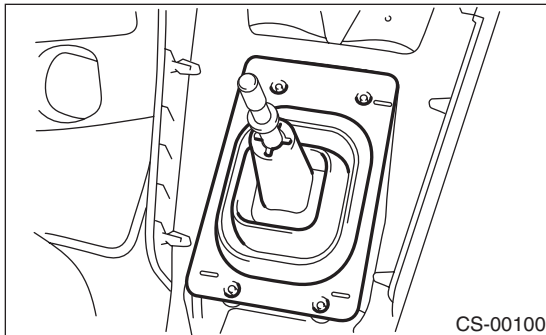
A: REMOVAL

1. 5MT

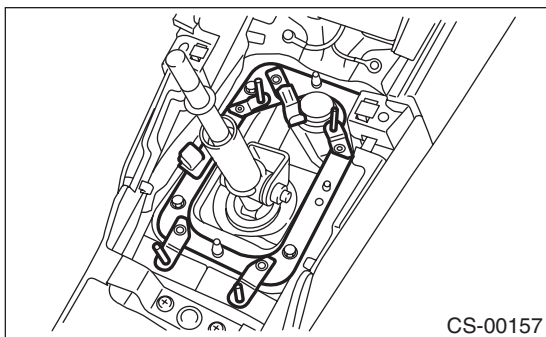
- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from the battery.
- 3) Remove the gear shift knob.
- 4) Remove the console box. <Ref. to EI-46, REMOVAL, Console Box.>
- 5) Remove the clamp.



- 6) Remove the bushing and insulator assembly.

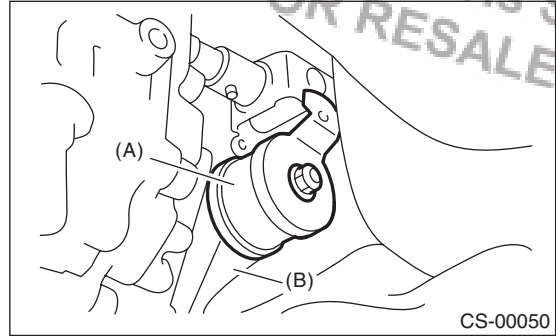


- 7) Remove the plate assembly from the vehicle body.



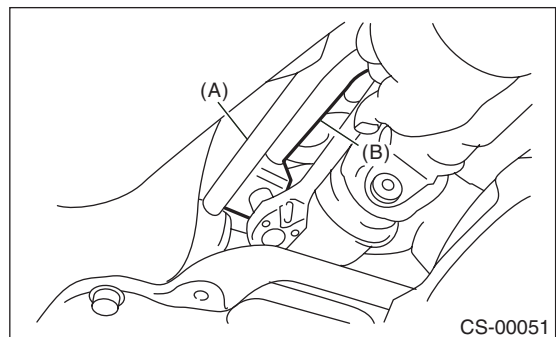
- 8) Lift up the vehicle.
- 9) Remove the rear exhaust pipe and muffler.
 - SOHC model
<Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, REMOVAL, Muffler.>
 - DOHC Turbo Model
<Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>

- 10) Remove the stay from transmission bracket.



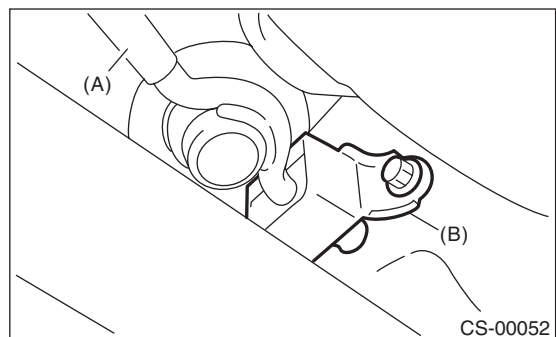
- (A) Stay
- (B) Transmission bracket

- 11) Remove the rod from joint.



- (A) Stay
- (B) Rod

- 12) Remove the cushion rubber from the vehicle body.

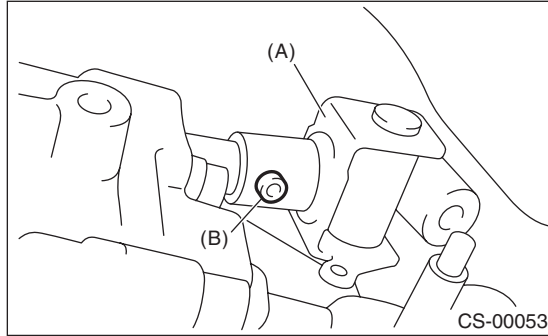


- (A) Stay
- (B) Cushion rubber

MT Gear Shift Lever

CONTROL SYSTEMS

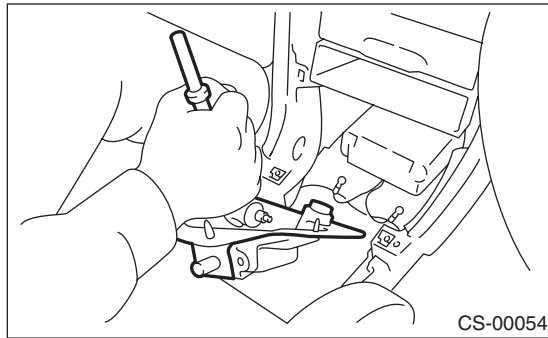
13) Extract the spring pin and remove the joint.



- (A) Joint
- (B) Spring pin

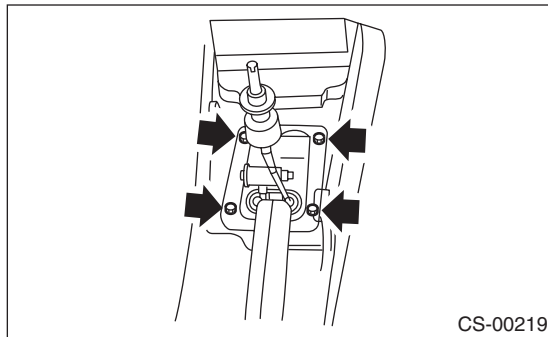
14) Lower the vehicle.

15) Remove the gear shift lever.



2. 6MT

- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from the battery.
- 3) Remove the gear shift knob.
- 4) Remove the console box front. <Ref. to EI-46, REMOVAL, Console Box.>
- 5) Remove the boot plate from the vehicle body.



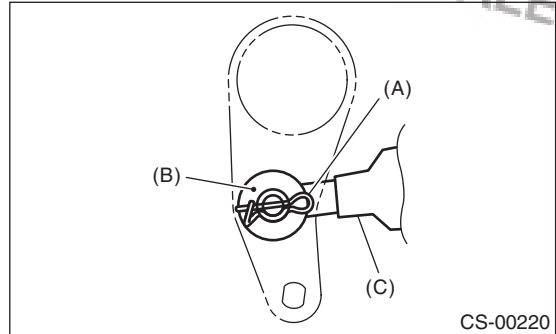
6) Lift up the vehicle.

7) Remove the under cover.

8) Remove the rear exhaust pipe and muffler. <Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>

9) Remove the crossmember. <Ref. to 6MT-31, REMOVAL, Transmission Mounting System.>

10) Remove the snap pin and washer, and remove the reverse check cable from the reverse check lever.

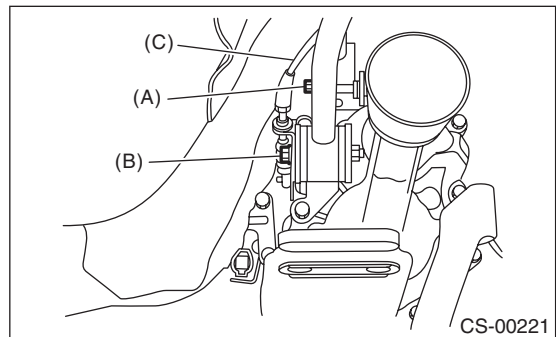


- (A) Snap pin
- (B) Washer
- (C) Reverse check cable

11) Move the transmission to the right side of the vehicle, and remove the joint COMPL, stay bolts and reverse check cable.

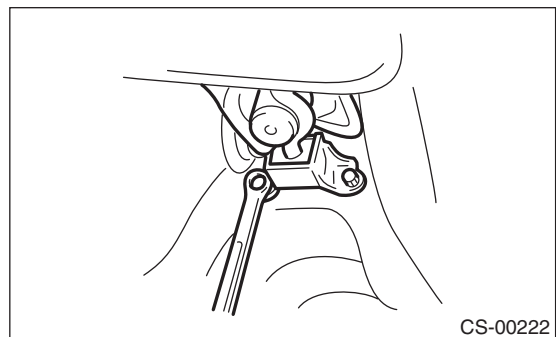
NOTE:

If the transmission is not moved aside, the joint COMPL and stay bolts may contact the body and cause damage.



- (A) Joint COMPL bolt
- (B) Stay bolt
- (C) Reverse check cable

12) Remove the cushion rubber from the vehicle body.



13) Lower the vehicle.

14) Remove the gear shift lever.

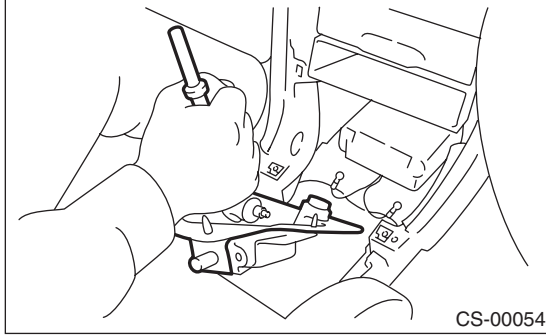
B: INSTALLATION

1. 5MT

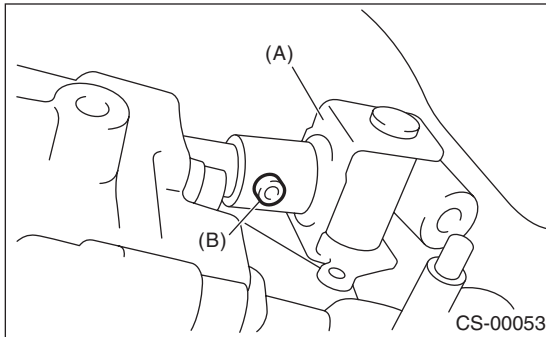
- 1) Install the joint to the transmission and secure with a spring pin.
- 2) Insert the gear shift lever from the room side.

NOTE:

After inserting the rod and stay, temporarily position them on the transmission mount.



- 3) Lift up the vehicle.
- 4) Install the joint to the shifter arm.
- 5) Insert the spring pin.

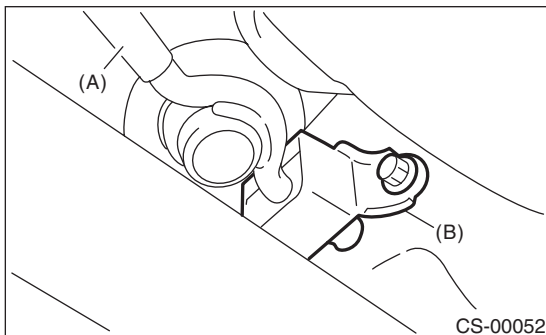


- (A) Joint
- (B) Spring pin

- 6) Mount the cushion rubber on the vehicle body.

Tightening torque:

18 N·m (1.8 kgf-m, 13.0 ft-lb)

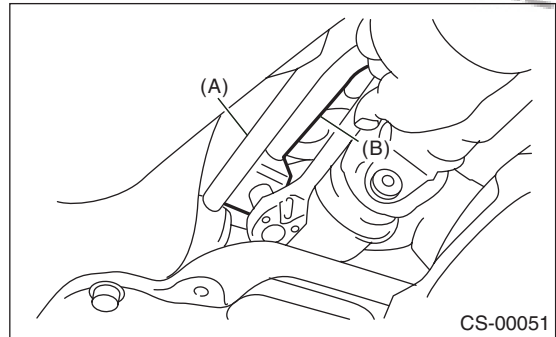


- (A) Stay
- (B) Cushion rubber

- 7) Connect the rod to the joint.

Tightening torque:

12 N·m (1.2 kgf-m, 8.9 ft-lb)

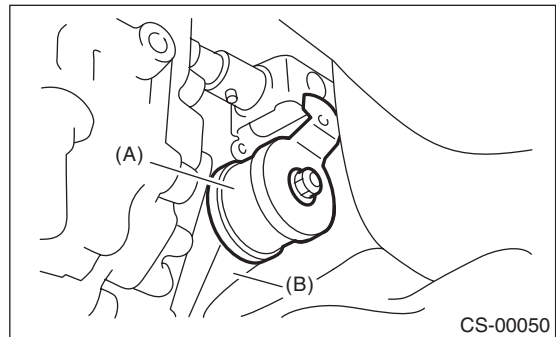


- (A) Stay
- (B) Rod

- 8) Connect the stay to the transmission bracket.

Tightening torque:

18 N·m (1.8 kgf-m, 13.0 ft-lb)



- (A) Stay
- (B) Transmission bracket

- 9) Install the rear exhaust pipe and muffler.

- SOHC model
<Ref. to EX(H4SO)-8, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-9, INSTALLATION, Muffler.>
- DOHC Turbo model
<Ref. to EX(H4DOTC)-15, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, INSTALLATION, Muffler.>

- 10) Lower the vehicle.

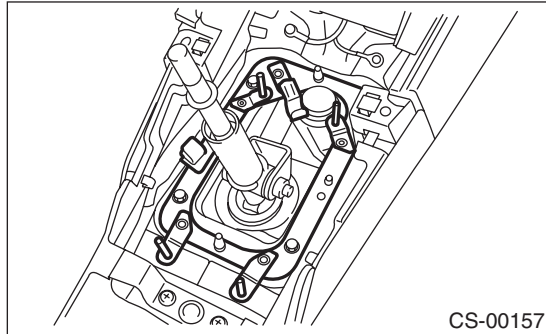
MT Gear Shift Lever

CONTROL SYSTEMS

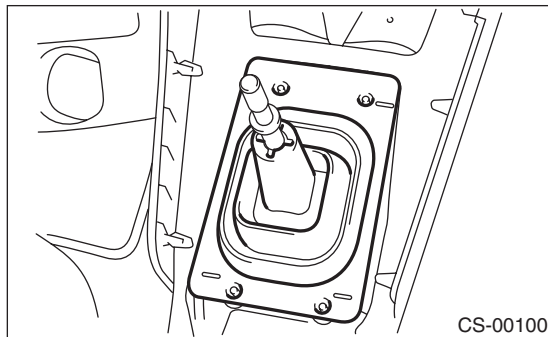
11) Install the plate assembly to the vehicle body.

Tightening torque:

7.5 N·m (0.76 kgf-m, 5.5 ft-lb)



12) Install the boot and insulator assembly to the vehicle body in the proper direction.



13) Install the clamp.

14) Install the console box. <Ref. to EI-46, INSTALLATION, Console Box.>

2. 6MT

1) Insert the gear shift lever from the room side.

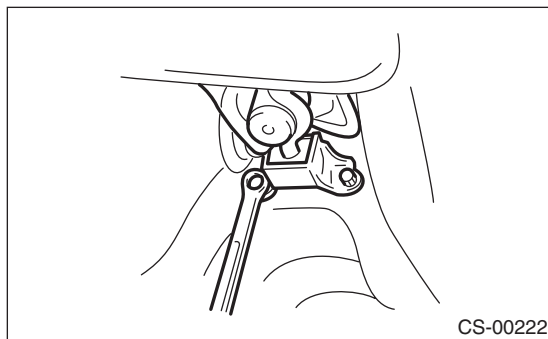
NOTE:

After inserting the rod and stay, temporarily position them on the transmission mount.

2) Mount the cushion rubber on the vehicle body.

Tightening torque:

18 N·m (1.8 kgf-m, 13.0 ft-lb)

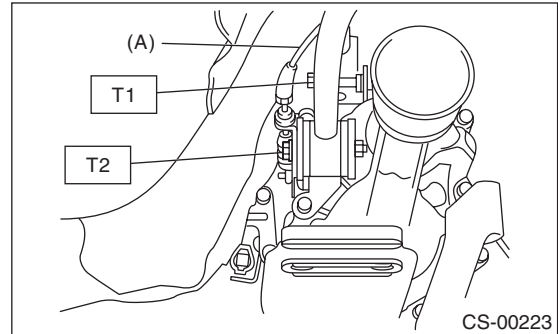


3) Move the transmission to the right side of the vehicle, then attach the joint COMPL and stay.

Tightening torque:

T1:11.8 N·m (1.2 kgf-m, 8.7 ft-lb)

T2:32 N·m (3.3 kgf-m, 23.6 ft-lb)



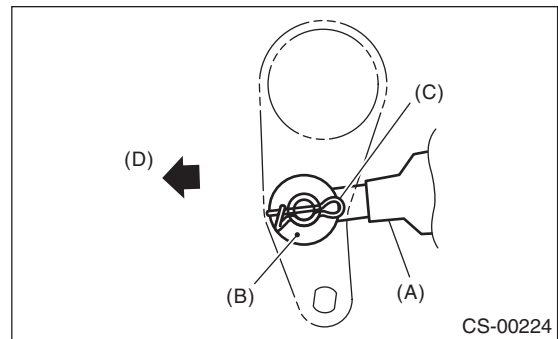
(A) Reverse check cable

4) Install the crossmember. <Ref. to 6MT-31, INSTALLATION, Transmission Mounting System.>

5) Attach the reverse check cable end, washer and snap pin to the reverse check lever.

NOTE:

- Make sure to attach the snap pin in proper direction.
- Before installation, perform adjustment of the reverse check cable. <Ref. to CS-48, ADJUSTMENT, Reverse Check Cable.>



(A) Reverse check cable

(B) Washer

(C) Snap pin

(D) Front side

6) Install the rear exhaust pipe and muffler. <Ref. to EX(H4DOTC)-15, INSTALLATION, Rear Exhaust Pipe.>, <Ref. to EX(H4DOTC)-17, INSTALLATION, Muffler.>

7) Install the under cover.

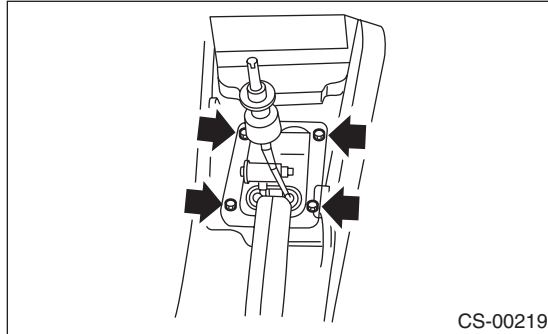
8) Install the boot plate.

NOTE:

Install the inner boot taking care not to twist it.

Tightening torque:

7.5 N·m (0.76 kgf·m, 5.5 ft·lb)



CS-00219

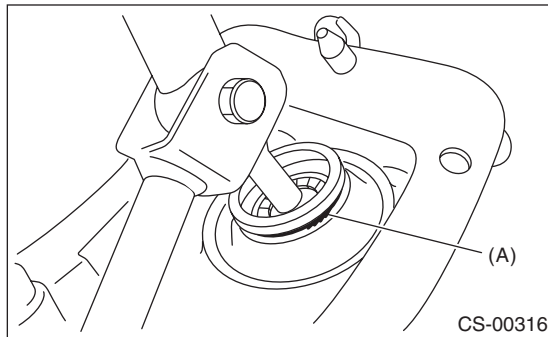
9) Install the console box. <Ref. to EI-46, INSTALLATION, Console Box.>

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

C: DISASSEMBLY

1. 5MT

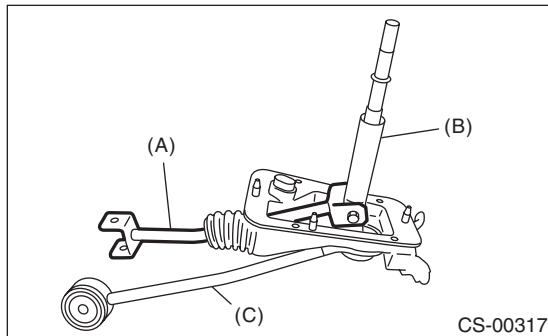
1) Remove the lock wires.



CS-00316

(A) Lock wire

2) Remove the rod from lever.

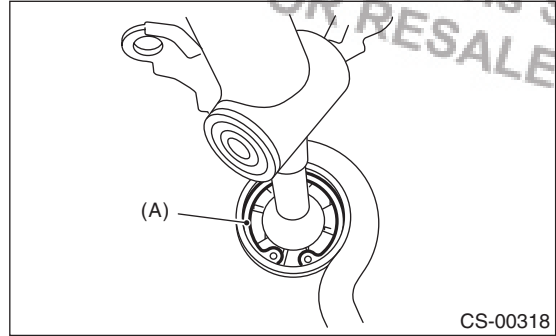


CS-00317

- (A) Rod
- (B) Lever
- (C) Stay

3) Separate the rod and inner boot.

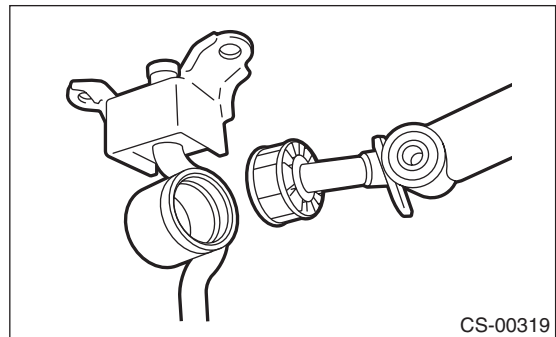
4) Remove the snap ring from the stay.



CS-00318

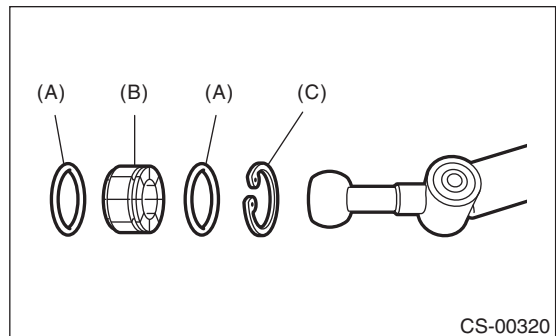
(A) Snap ring

5) Separate the gear shift lever and the stay.



CS-00319

6) Remove the boot, bushing and snap ring from gear shift lever.



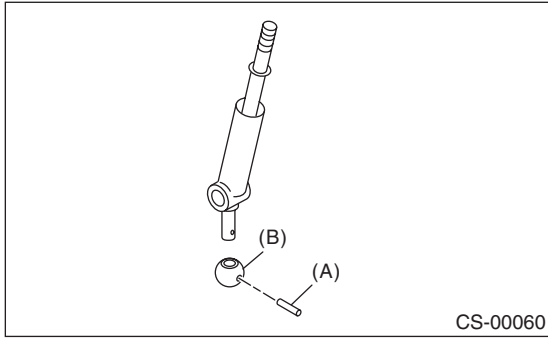
CS-00320

- (A) O-ring
- (B) Bushing
- (C) Snap ring

MT Gear Shift Lever

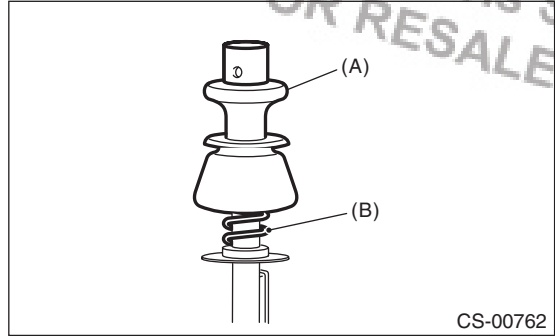
CONTROL SYSTEMS

7) Remove the spring pin, and then remove the bushing and snap ring.



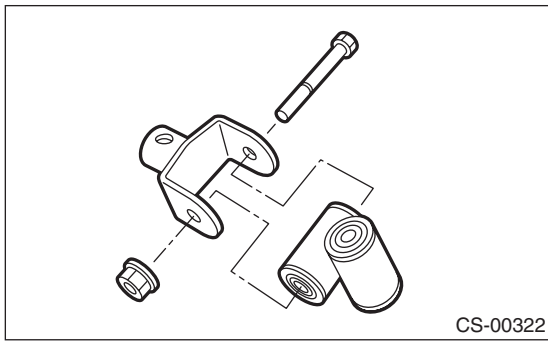
- (A) Spring pin
- (B) Bushing

2) Remove the slider and spring.



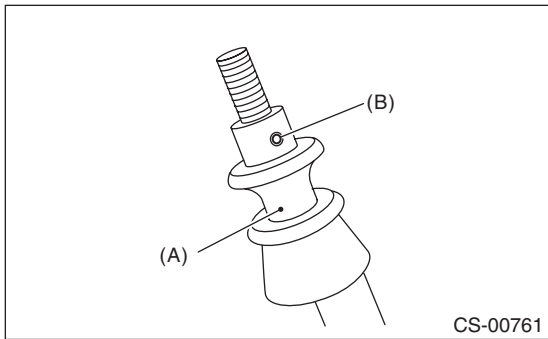
- (A) Slider
- (B) Spring

8) Remove the boss from the joint.



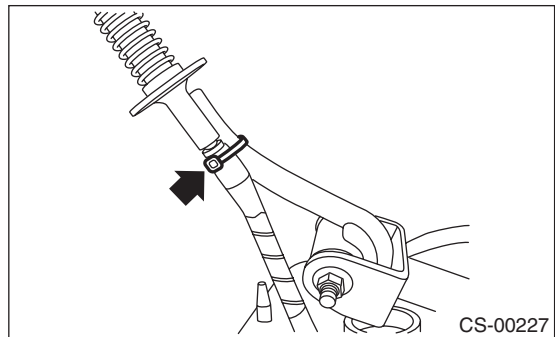
2. 6MT

1) Remove the spring pin from the slider.

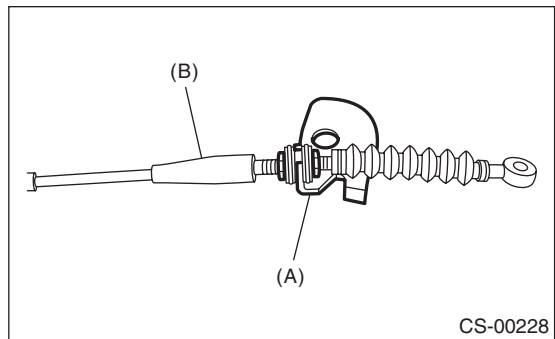


- (A) Slider
- (B) Spring pin

3) Cut the band clip.

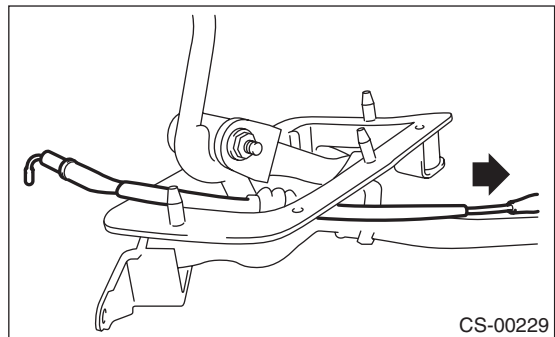


4) Remove the reverse check cable from the cable plate.



- (A) Cable plate
- (B) Reverse check cable

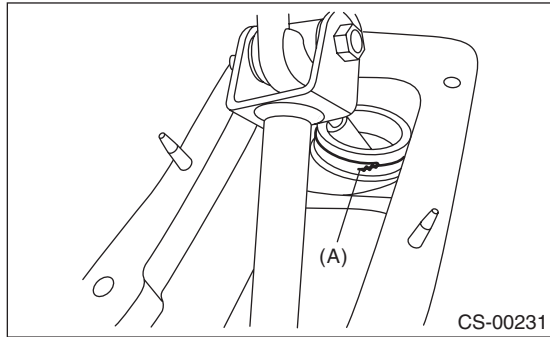
5) Remove the reverse check cable from the gear shift assembly.



6) Disassemble the lock wire.

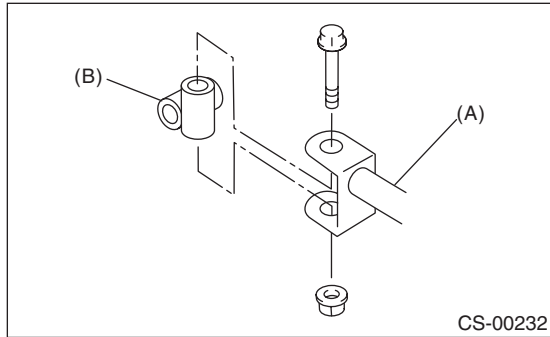
NOTE:

Do not reuse the lock wire.



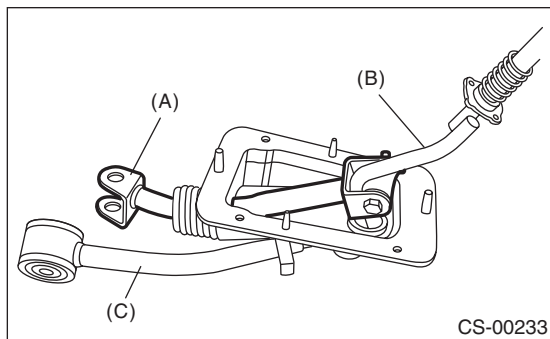
(A) Lock wire

7) Remove the boss from the rod.



(A) Rod
(B) Boss

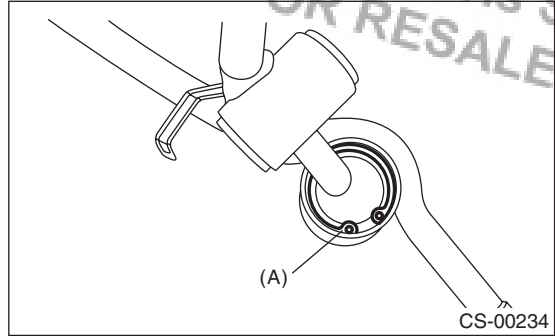
8) Remove the rod from lever.



(A) Rod
(B) Lever
(C) Stay

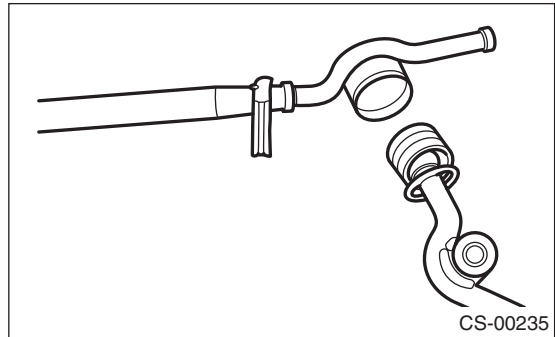
9) Separate the rod and inner boot.

10) Remove the snap ring from the stay.

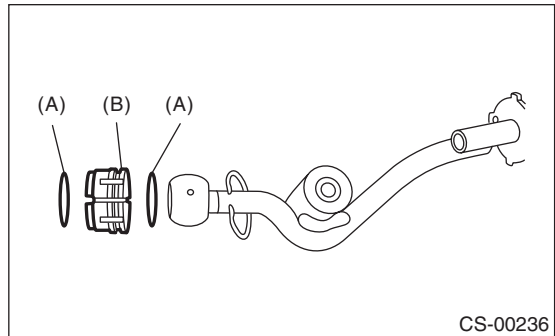


(A) Snap ring

11) Separate the gear shift lever and the stay.



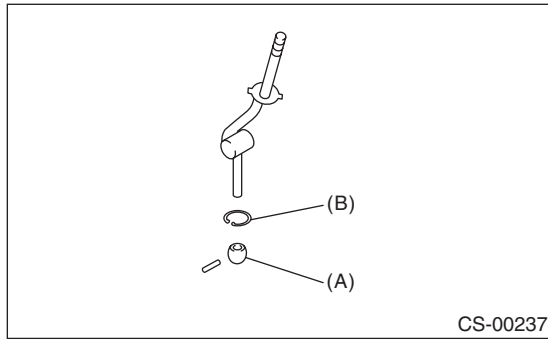
12) Remove the boot and bushing from the gear shift lever.



(A) O-ring
(B) Bushing

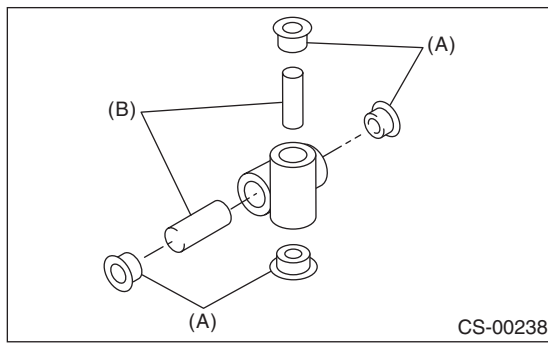
CONTROL SYSTEMS

13) Remove the spring pin, and then remove the bushing and snap ring.



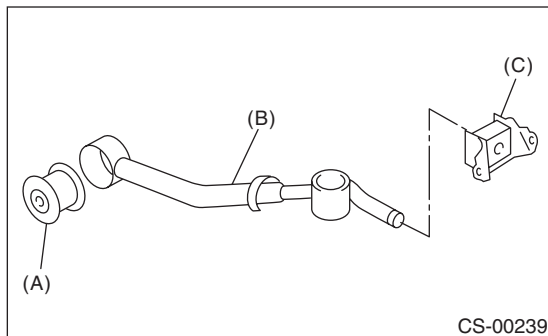
- (A) Bushing
- (B) Snap ring

14) Remove the bushing and spacer from the boss.



- (A) Bushing
- (B) Spacer

15) Remove the bushing and cushion rubber from the stay.



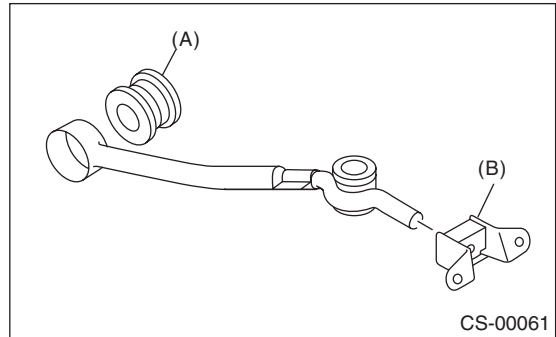
- (A) Bushing
- (B) Stay
- (C) Cushion rubber

D: ASSEMBLY

1. 5MT

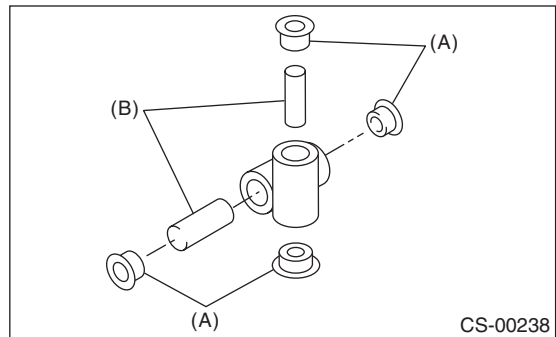
NOTE:

- Clean all the parts before assembly.
 - Apply grease [KOPR-KOTE (Part No. 003603001) or equivalent] to each part.
- 1) Mount the bushing and cushion rubber to the stay.



- (A) Bushing
- (B) Cushion rubber

2) Install the bushing and spacer to boss.

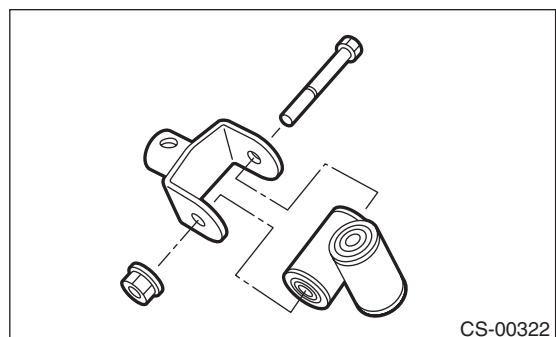


- (A) Bushing
- (B) Spacer

3) Using new self-locking nuts, install the boss to the joint.

Tightening torque:

12 N·m (1.2 kgf-m, 8.9 ft-lb)

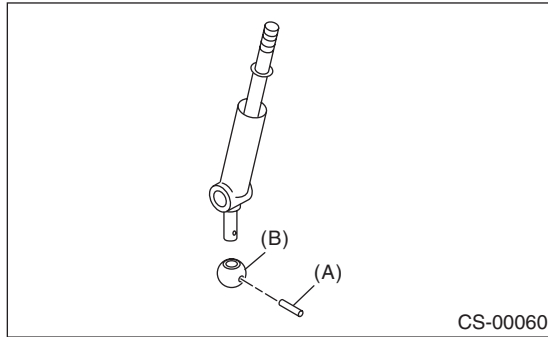


CS-00322

4) Install the snap ring to gear shift lever and install the bushing.

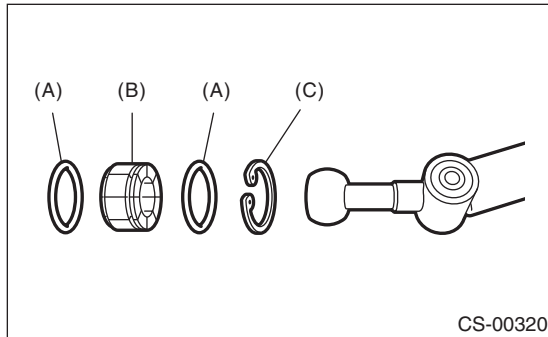
NOTE:

Apply grease to the bushing.



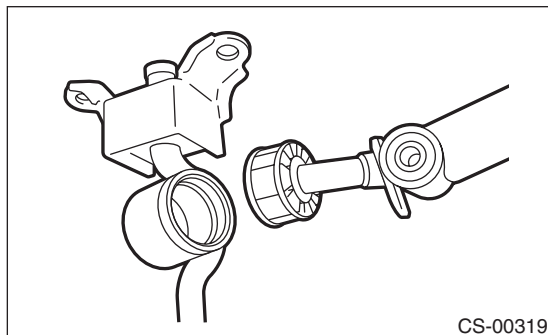
- (A) Spring pin
- (B) Bushing

5) Apply grease to the bushing and O-ring, and then install to gear shift lever.

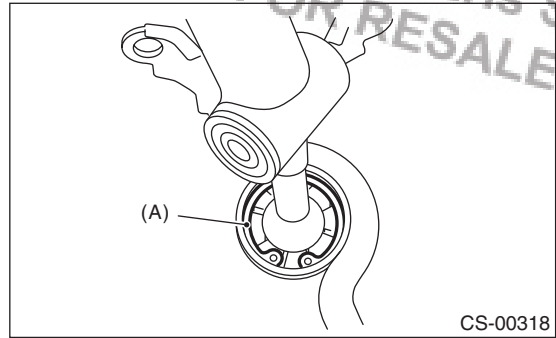


- (A) O-ring
- (B) Bushing
- (C) Snap ring

6) Apply sufficient grease into boss, and then install the gear shift lever to the stay.



7) Install the washer and snap ring.



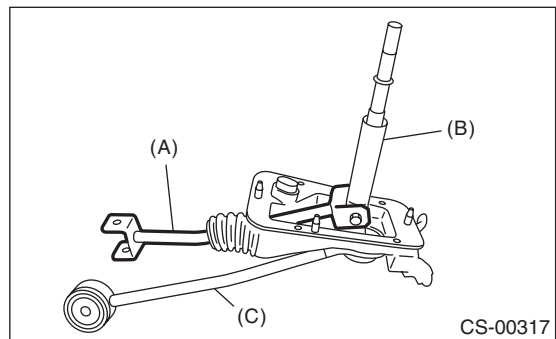
- (A) Snap ring

8) Insert the gear shift lever and rod into boot hole.

9) Install the rod.

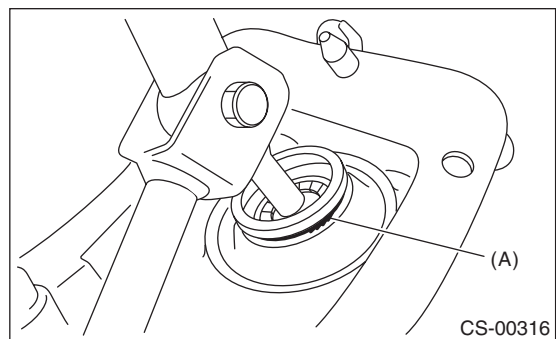
Tightening torque:

12 N·m (1.2 kgf-m, 8.9 ft-lb)



- (A) Rod
- (B) Lever
- (C) Stay

10) Install a new lock wire.



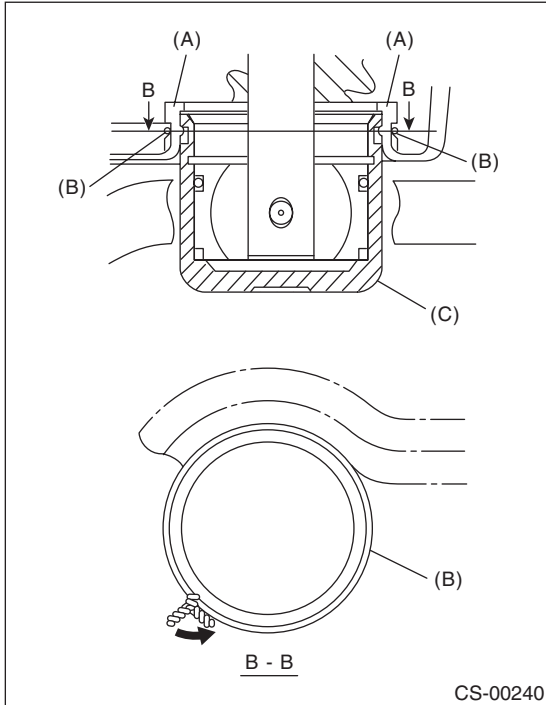
- (A) Lock wire

MT Gear Shift Lever

CONTROL SYSTEMS

NOTE:

- Install the lock wire to the stay groove.
- Bend the extra wire to the same direction of lock wire winding.



- (A) Inner boot
- (B) Lock wire
- (C) Stay

11) Check the swing torque of rod linked with the gear shift lever.

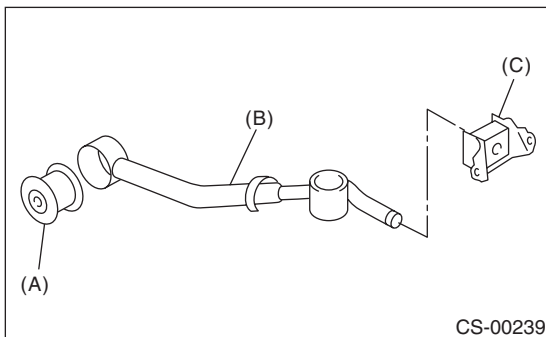
12) Check that the part moves smoothly, with no excessive play.

2. 6MT

NOTE:

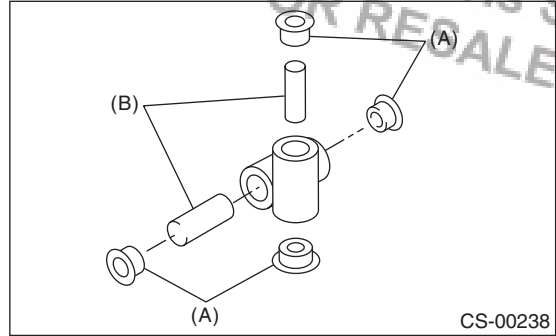
- Clean all the parts before assembly.
- Apply NIGTIGHT LYW NO. 2 grease or the equivalent to each part.

1) Mount the bushing and cushion rubber to the stay.



- (A) Bushing
- (B) Stay
- (C) Cushion rubber

2) Install the bushing and spacer to boss.

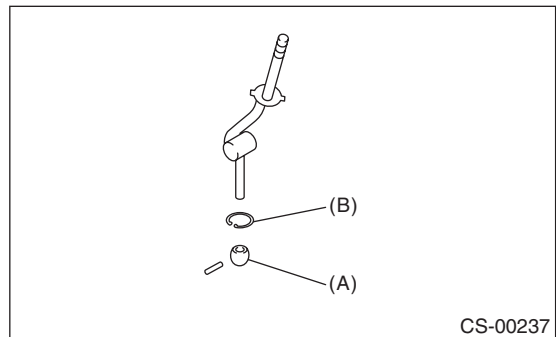


- (A) Bushing
- (B) Spacer

3) Install the snap ring to gear shift lever and install the bushing.

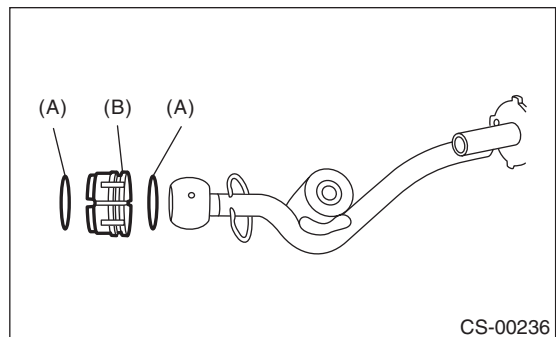
NOTE:

Apply grease to the bushing.



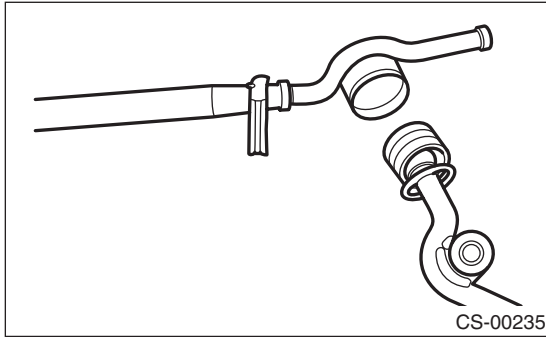
- (A) Bushing
- (B) Snap ring

4) Apply grease to the bushing and O-ring, and then install to gear shift lever.

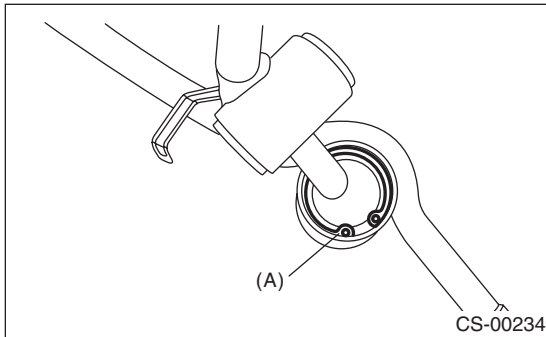


- (A) O-ring
- (B) Bushing

5) Apply sufficient grease to the boss, and then install the gear shift lever to the stay.



6) Install the washer and snap ring.



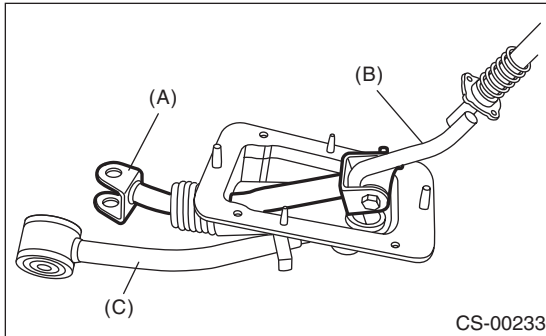
(A) Snap ring

7) Insert the gear shift lever and rod into boot hole.

8) Install the rod.

Tightening torque:

11.8 N·m (1.2 kgf-m, 8.7 ft-lb)

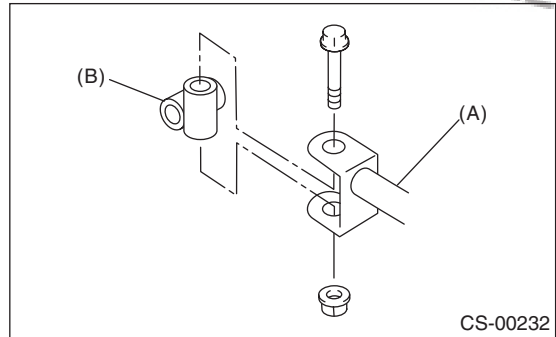


(A) Rod
(B) Lever
(C) Stay

9) Attach the boss to the rod.

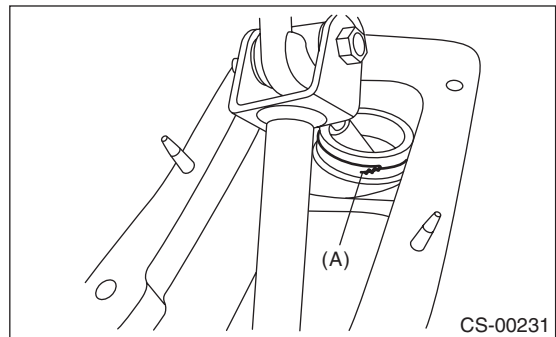
Tightening torque:

11.8 N·m (1.2 kgf-m, 8.7 ft-lb)



(A) Rod
(B) Boss

10) Install a new lock wire.



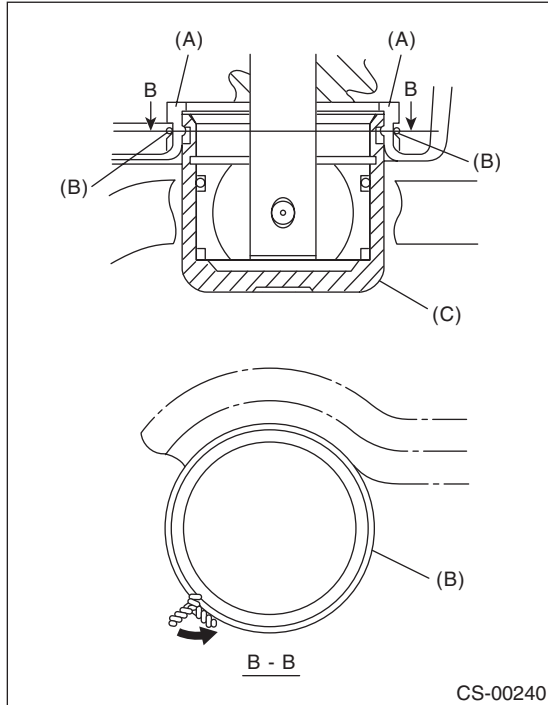
(A) Lock wire

MT Gear Shift Lever

CONTROL SYSTEMS

NOTE:

- Install the lock wire to the stay groove.
- Bend the extra wire to the same direction of lock wire winding.



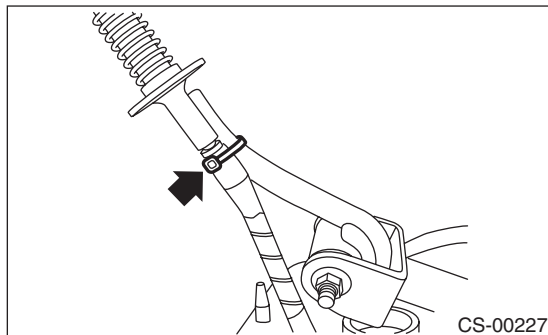
- (A) Inner boot
- (B) Lock wire
- (C) Stay

11) Insert the reverse check cable into the boot hole.

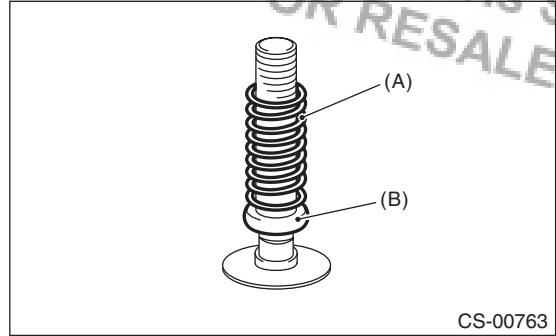
12) Insert the reverse check cable into the gear shift assembly, and fix in place with a band clip.

NOTE:

- Cut the excess band clip.
- Make sure that the reverse check cable is inserted into the gearshift lever with no gaps.



13) Attach the seat cushion and spring.

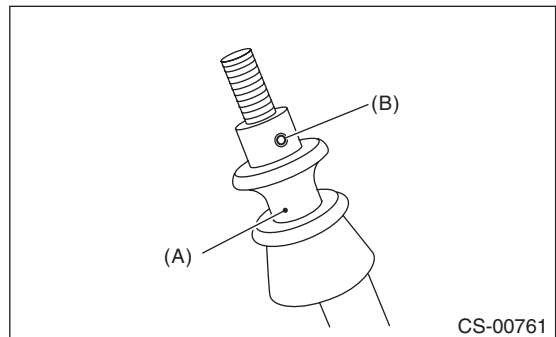


- (A) Spring
- (B) Seat cushion

14) Use a spring pin to hold the slider and end of the reverse check cable in place.

NOTE:

Apply grease to the moving part of slider.

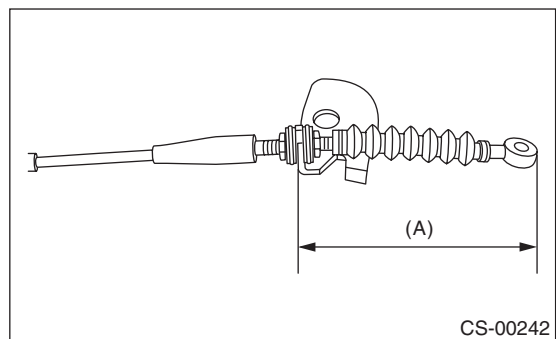


- (A) Slider
- (B) Spring pin

15) While pulling the cable (the slider is lowered), adjust the length between the cable plate end and the reverse check cable to 84 mm (3.31 in), and tighten the locknut.

Tightening torque:

6 N·m (0.6 kgf·m, 4.4 ft·lb)

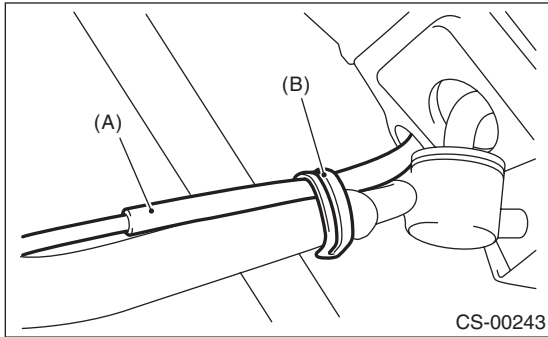


- (A) 84 mm (3.31 in)

16) Fix the reverse check cable to the stay clip.

NOTE:

Install the reverse check cable on top of the stay.

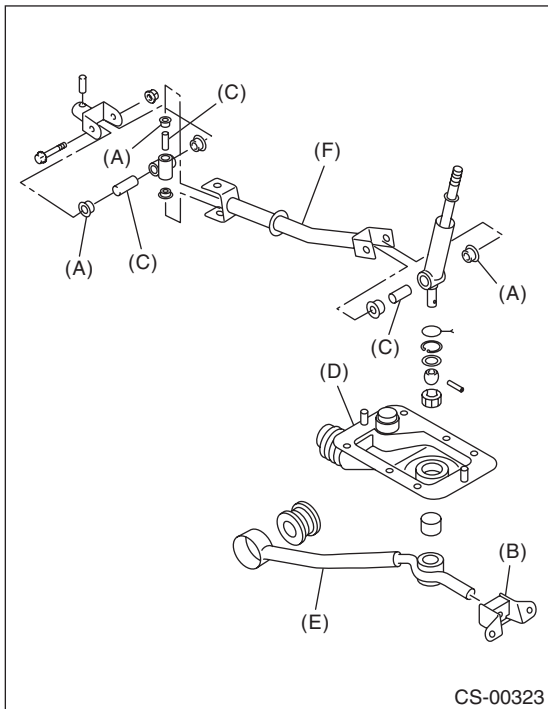


- (A) Reverse check cable
- (B) Clip

E: INSPECTION

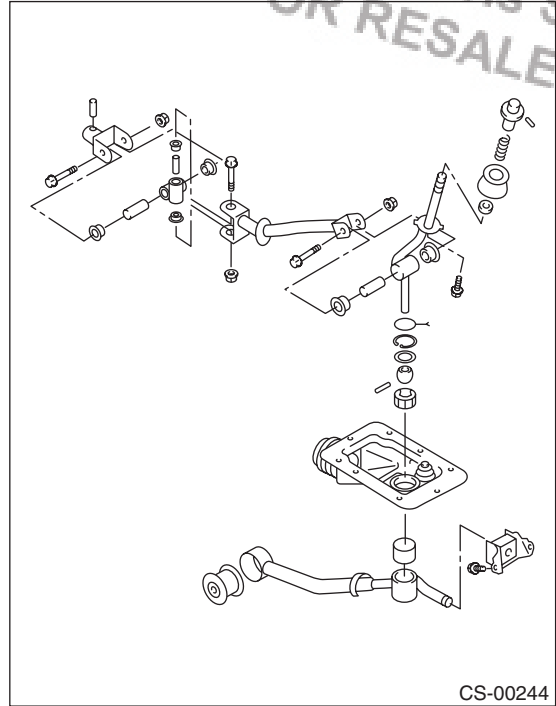
1) Check the removed parts (bushing, cushion rubber, spacer, boot, stay and rod, etc.) for deformation, damage and wear. If necessary, correct or replace faulty parts.

- 5MT



- (A) Bushing
- (B) Cushion rubber
- (C) Spacer
- (D) Boot
- (E) Stay
- (F) Rod

- 6MT

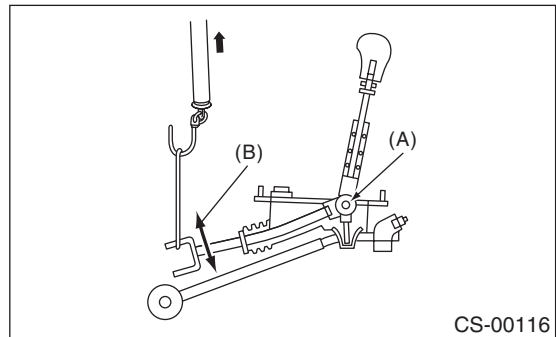


2) Check the swing torque of rod linked with the gear shift lever.

If the torque exceeds the specifications, replace the bushing or retighten nuts.

Swing torque:

3.7 N (0.38 kgf, 0.84 lbf) or less

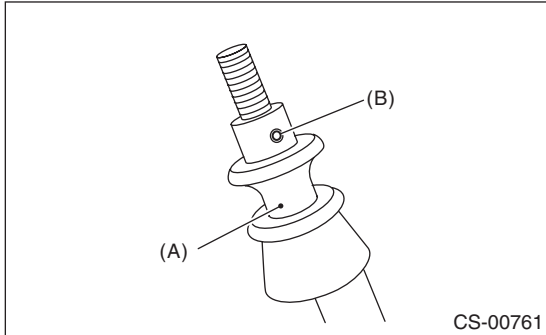


- (A) Pivot
- (B) Swing torque

8. Reverse Check Cable

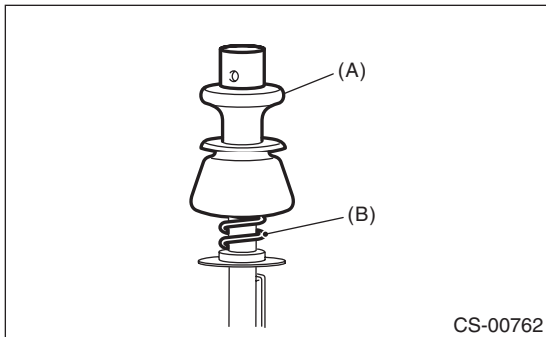
A: REMOVAL

- 1) Set the vehicle on a lift.
- 2) Remove the gear shift knob.
- 3) Remove the console box front. <Ref. to EI-46, REMOVAL, Console Box.>
- 4) Remove the spring pin from the slider.



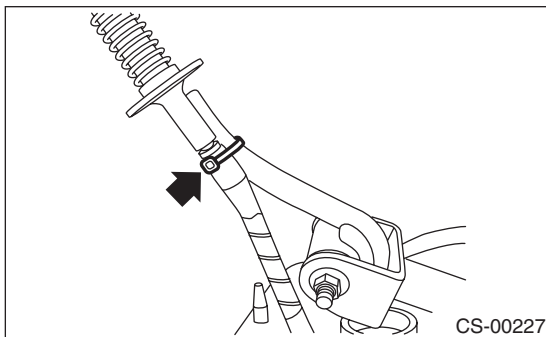
- (A) Slider
- (B) Spring pin

- 5) Remove the slider and spring.



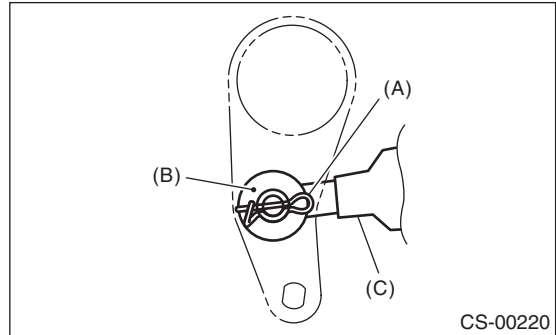
- (A) Slider
- (B) Spring

- 6) Cut the band clip, and separate the reverse check cable from the gear shift lever.



- 7) Lift up the vehicle.
- 8) Remove the under cover.
- 9) Remove the rear exhaust pipe and muffler. <Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>

- 10) Remove the crossmember. <Ref. to 6MT-31, REMOVAL, Transmission Mounting System.>
- 11) Remove the snap pin and washer, and separate the reverse check cable from the reverse check lever.

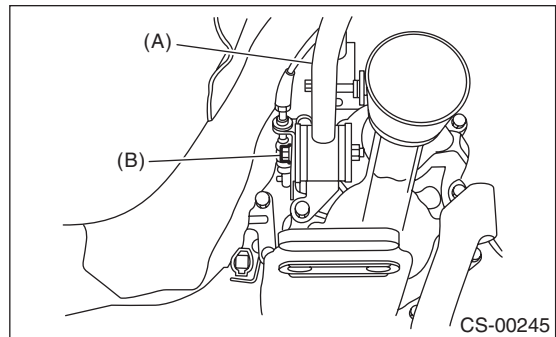


- (A) Snap pin
- (B) Washer
- (C) Reverse check cable

- 12) Move the transmission to the right side of the vehicle, and remove the stay bolts and reverse check cable.

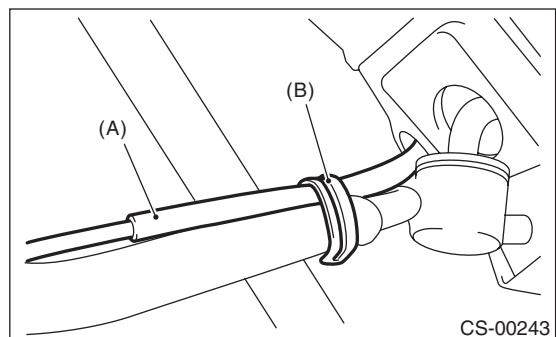
NOTE:

If the transmission is not moved aside, the stay bolts may contact the body and cause damage.



- (A) Stay
- (B) Stay bolt

- 13) Lift the stay clip, and separate the stay and the reverse check cable.



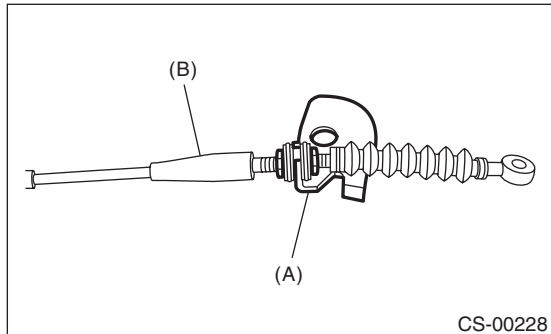
- (A) Reverse check cable
- (B) Clip

14) Pull out the reverse check cable from underside of the vehicle to remove it.

NOTE:

Be careful not to damage the inner boot.

15) Loosen the locknut, and remove the reverse check cable from the cable plate.

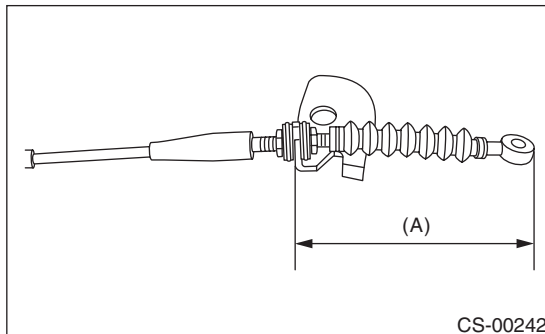


(A) Cable plate
(B) Reverse check cable

3) While pulling the cable (the slider is lowered), adjust the length between the cable plate end and the reverse check cable to 84 mm (3.31 in), and tighten the locknut.

Tightening torque:

6 N·m (0.6 kgf·m, 4.4 ft·lb)



(A) 84 mm (3.31 in)

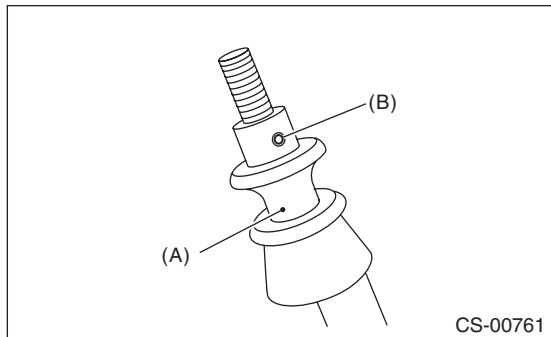
B: INSTALLATION

1) Insert the reverse check cable into the inner boot hole from underside of the vehicle.

2) Using the spring pin, fix the end of reverse check cable and slider.

NOTE:

Apply grease to the moving part of slider.

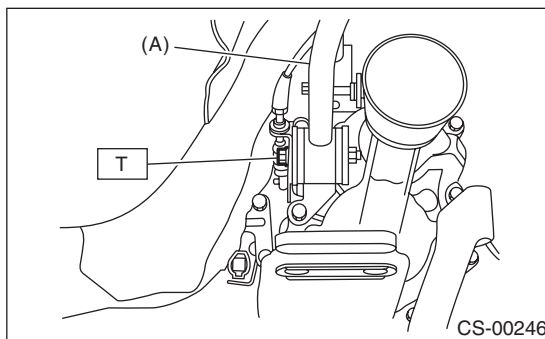


(A) Slider
(B) Spring pin

4) Move the transmission to the right side, and attach the stay.

Tightening torque:

T:32 N·m (3.3 kgf·m, 23.6 ft·lb)



(A) Stay

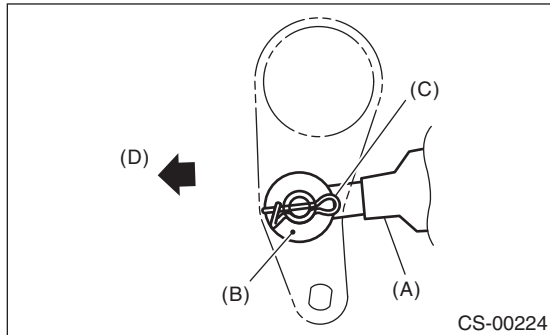
Reverse Check Cable

CONTROL SYSTEMS

5) Attach the reverse check cable, washer and snap pin to the reverse check lever.

NOTE:

Make sure to attach the snap pin in proper direction.

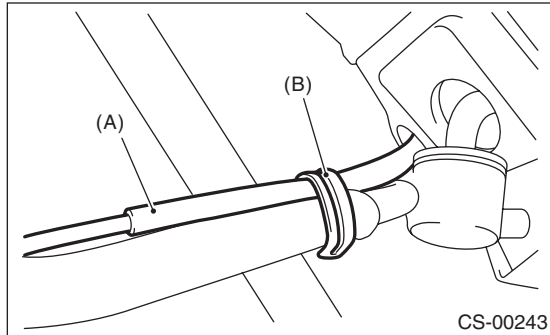


- (A) Reverse check cable
- (B) Washer
- (C) Snap pin
- (D) Front side

6) Fix the reverse check cable to the stay clip.

NOTE:

Attach the reverse check cable on top of the stay.



- (A) Reverse check cable
- (B) Clip

7) Install the rear exhaust pipe and muffler. <Ref. to EX(H4DOTC)-15, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, INSTALLATION, Muffler.>

8) Install the console box. <Ref. to EI-46, INSTALLATION, Console Box.>

C: INSPECTION

1) Make sure the slider moves smoothly. If it does not move, adjust the reverse check cable, or check the slider for damage. <Ref. to CS-48, ADJUSTMENT, Reverse Check Cable.>

2) Check that the gear shifts into reverse position when the slider is pulled up. If the gear does not shift into reverse, adjust the reverse check cable. <Ref. to CS-48, ADJUSTMENT, Reverse Check Cable.>

3) Check that the gear is not shifted to the reverse when the slider is not lifted. If the gear shifts into reverse, adjust or replace the reverse check cable. <Ref. to CS-48, ADJUSTMENT, Reverse Check Cable.>

D: ADJUSTMENT

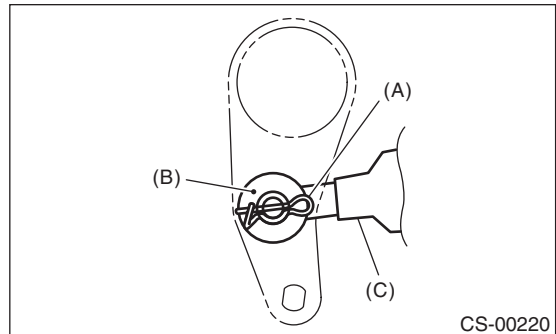
1) Set the vehicle on a lift.

2) Remove the under cover.

3) Remove the rear exhaust pipe and muffler. <Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, REMOVAL, Muffler.>

4) Remove the crossmember. <Ref. to 6MT-31, REMOVAL, Transmission Mounting System.>

5) Remove the snap pin and washer, and separate the reverse check cable from the reverse check lever.

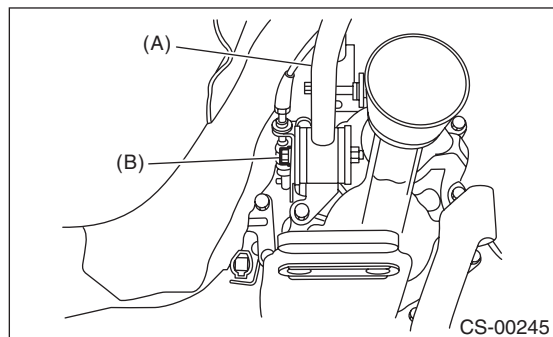


- (A) Snap pin
- (B) Washer
- (C) Reverse check cable

6) Move the transmission to the right side, and remove the stay bolts and reverse check cable.

NOTE:

If the transmission is not moved aside, the stay bolts may contact the body and cause damage.

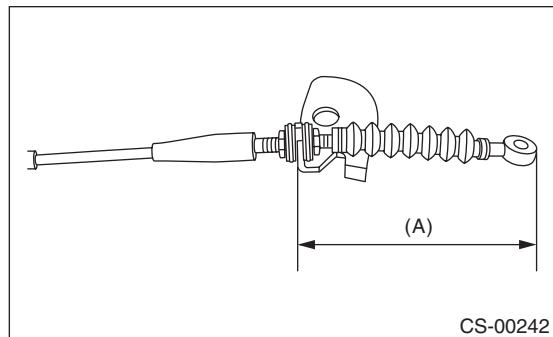


- (A) Stay
- (B) Stay bolt

7) While pulling the cable (the slider is lowered), adjust the length between the cable plate end and the reverse check cable to 84 mm (3.31 in), and tighten the locknut.

Tightening torque:

6 N·m (0.6 kgf·m, 4.4 ft·lb)

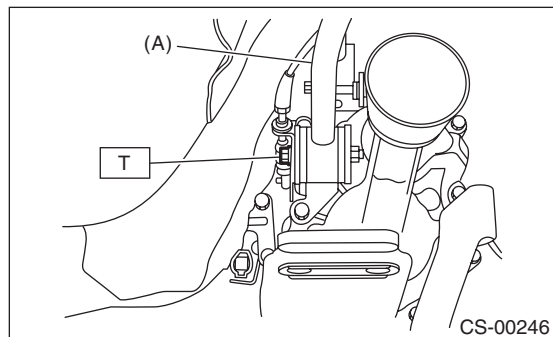


- (A) 84 mm (3.31 in)

8) Move the transmission to the right side, and attach the stay.

Tightening torque:

T:32 N·m (3.3 kgf·m, 23.6 ft·lb)



- (A) Stay

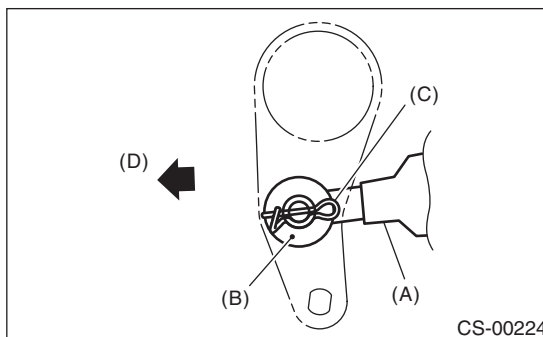
9) Install the crossmember. <Ref. to 6MT-31, INSTALLATION, Transmission Mounting System.>

10) Install the rear exhaust pipe and muffler. <Ref. to EX(H4DOTC)-15, INSTALLATION, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-17, INSTALLATION, Muffler.>

11) Attach the reverse check cable, washer and snap pin to the reverse check lever.

NOTE:

Make sure to attach the snap pin in proper direction.



- (A) Reverse check cable
- (B) Washer
- (C) Snap pin
- (D) Front side

12) Install the under cover.

9. General Diagnostic Table

A: INSPECTION

Symptom	Corrective action
Starter does not run.	Adjust the select cable and inhibitor switch, or inspect the circuit.
Back-up light does not illuminate.	Adjust the select cable and inhibitor switch, or inspect the circuit.
AT shift lock system does not operate normally.	Adjust the select cable and inhibitor switch, or inspect the circuit.
Gear cannot be shifted into reverse. (6MT)	Adjust the reverse check cable.
Gear can be shifted into reverse without pulling up the slider. (6MT)	Adjust or replace the reverse check cable.
Slider cannot be pulled up, or the slider is stucked in a pulled up position. (6MT)	<ul style="list-style-type: none">• Inspect the transmission reverse check system.• Adjust or replace the reverse check cable.