

SECURITY AND LOCKS

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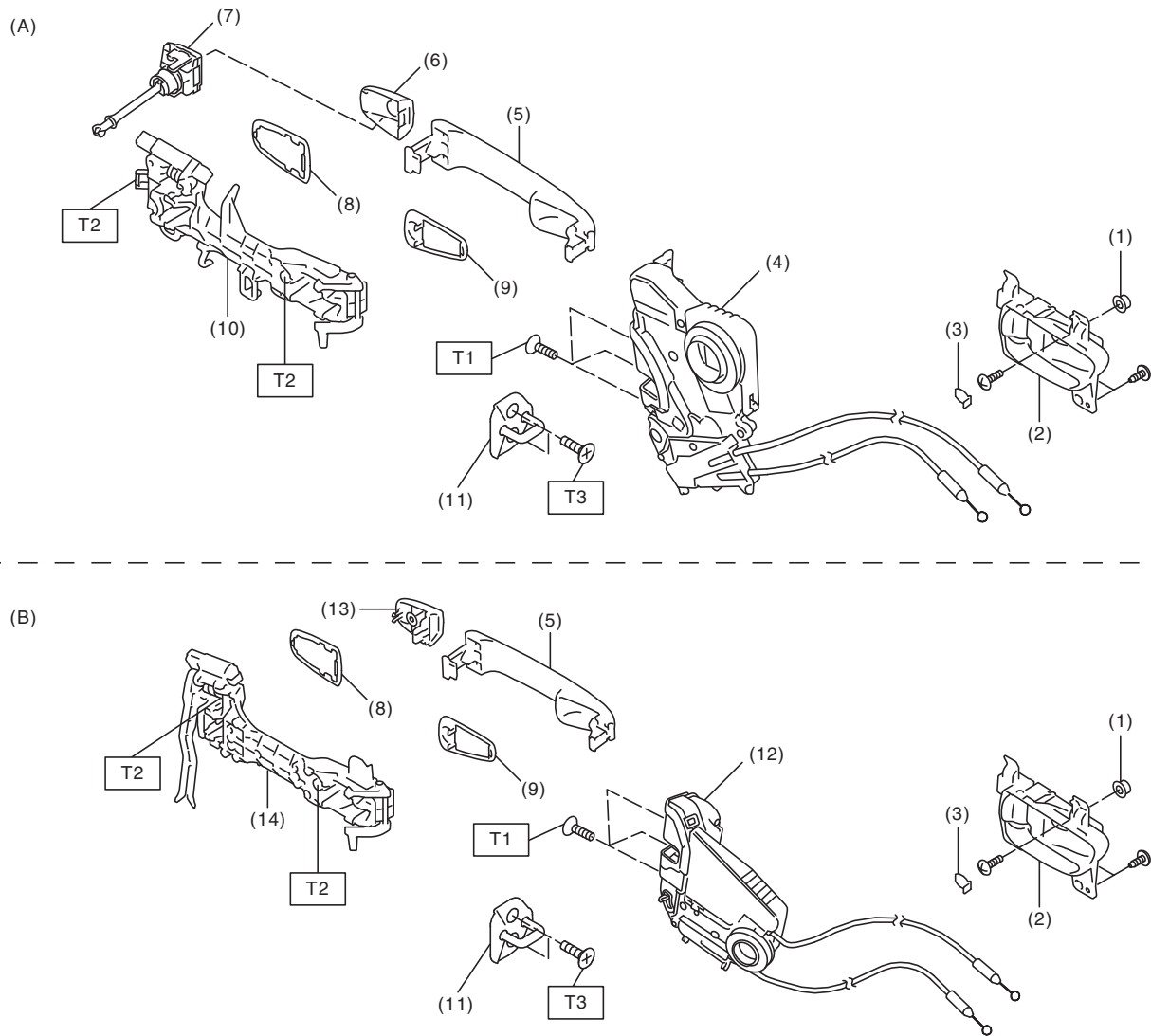
General Description

SECURITY AND LOCKS

1. General Description

A: COMPONENT

1. DOOR LOCK ASSEMBLY



SL-01439

(A) Front

(B) Rear

- | | |
|--|------------------------------------|
| (1) Grommet - screw | (8) Spacer - door handle outer B |
| (2) Remote ASSY - door | (9) Spacer - door handle outer A |
| (3) Cap remote | (10) Frame ASSY - front door outer |
| (4) Latch & actuator ASSY - front | (11) Striker - door |
| (5) Handle - door outer | (12) Latch & actuator ASSY - rear |
| (6) Cover - handle front outer | (13) Cover - handle rear outer |
| (7) Key lock - door (driver's seat only) | (14) Frame ASSY - rear door outer |

Tightening torque: N-m (kgf-m, ft-lb)

T1: 6.5 (0.66, 4.8)

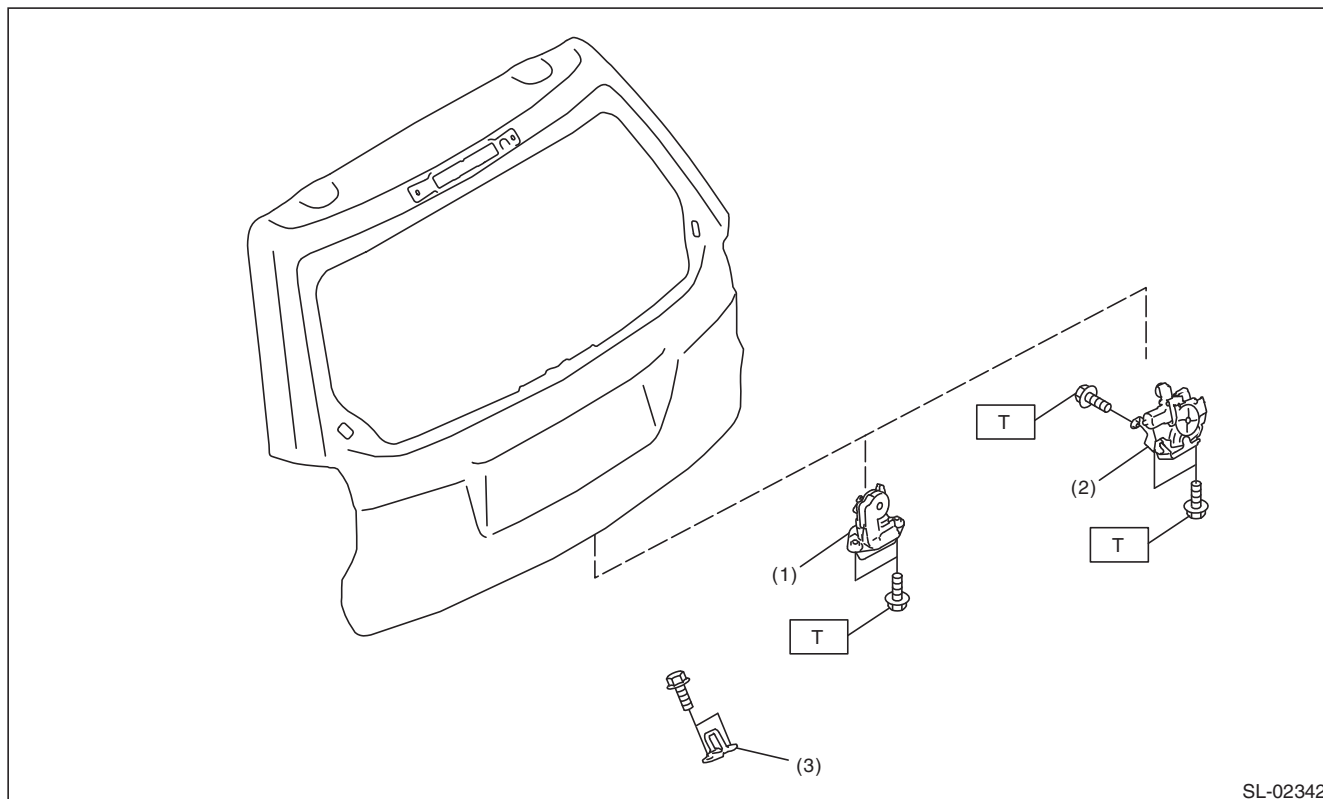
T2: 7.5 (0.76, 5.5)

T3: 18 (1.84, 13.3)

General Description

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2. REAR GATE LOCK



- (1) Latch & actuator - rear gate
(2) Power rear gate auto closer

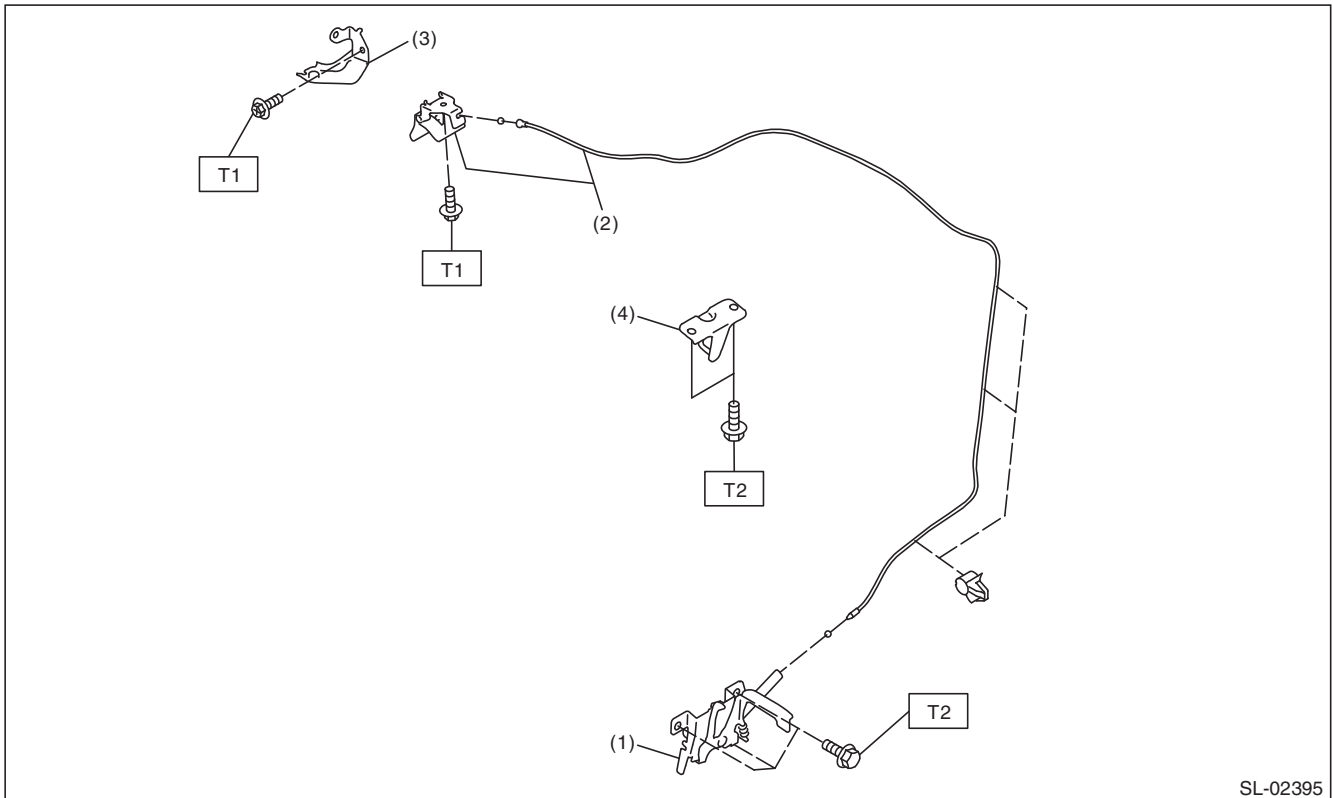
- (3) Striker - rear gate

Tightening torque: N-m (kgf-m, ft-lb)
T: 25 (2.55, 18.4)

General Description

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3. FRONT HOOD LOCK



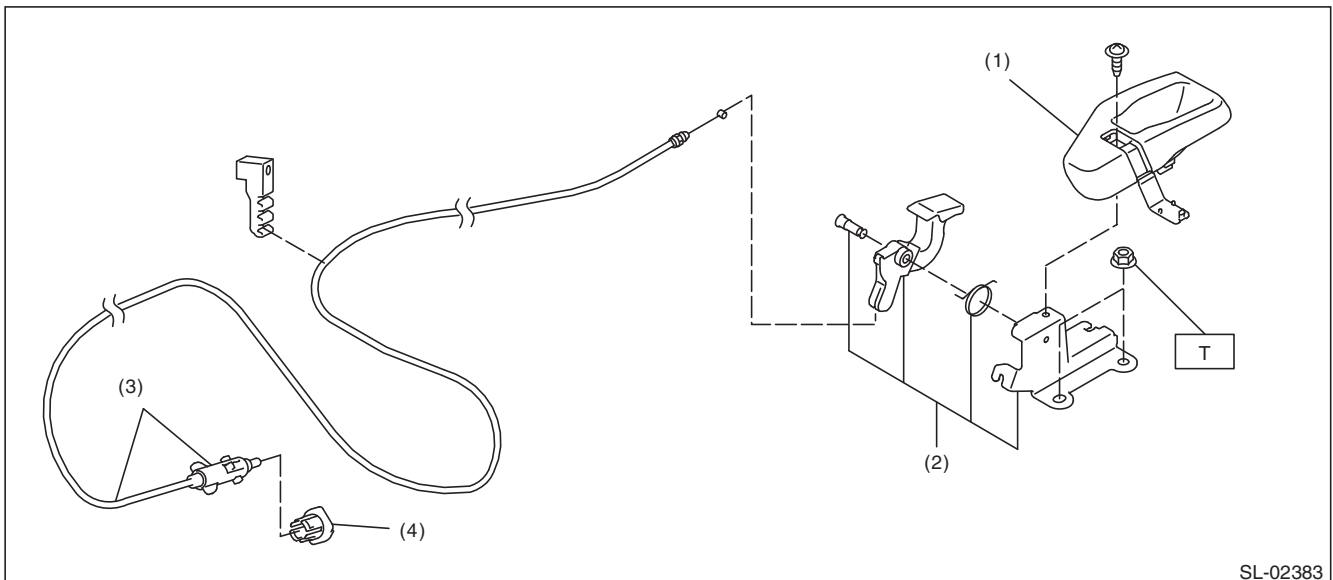
- | | |
|----------------------------|-----------------------------|
| (1) Lock ASSY - front hood | (3) Bracket - opener handle |
| (2) Cable - front hood | (4) Striker - front hood |

Tightening torque: N·m (kgf-m, ft-lb)

T1: 7.5 (0.76, 5.5)

T2: 33 (3.36, 24.3)

4. FUEL FLAP OPENER



- | | |
|--------------------------|-----------------------|
| (1) Cover - handle | (3) Cable ASSY - fuel |
| (2) Pull handle - opener | (4) Holder |

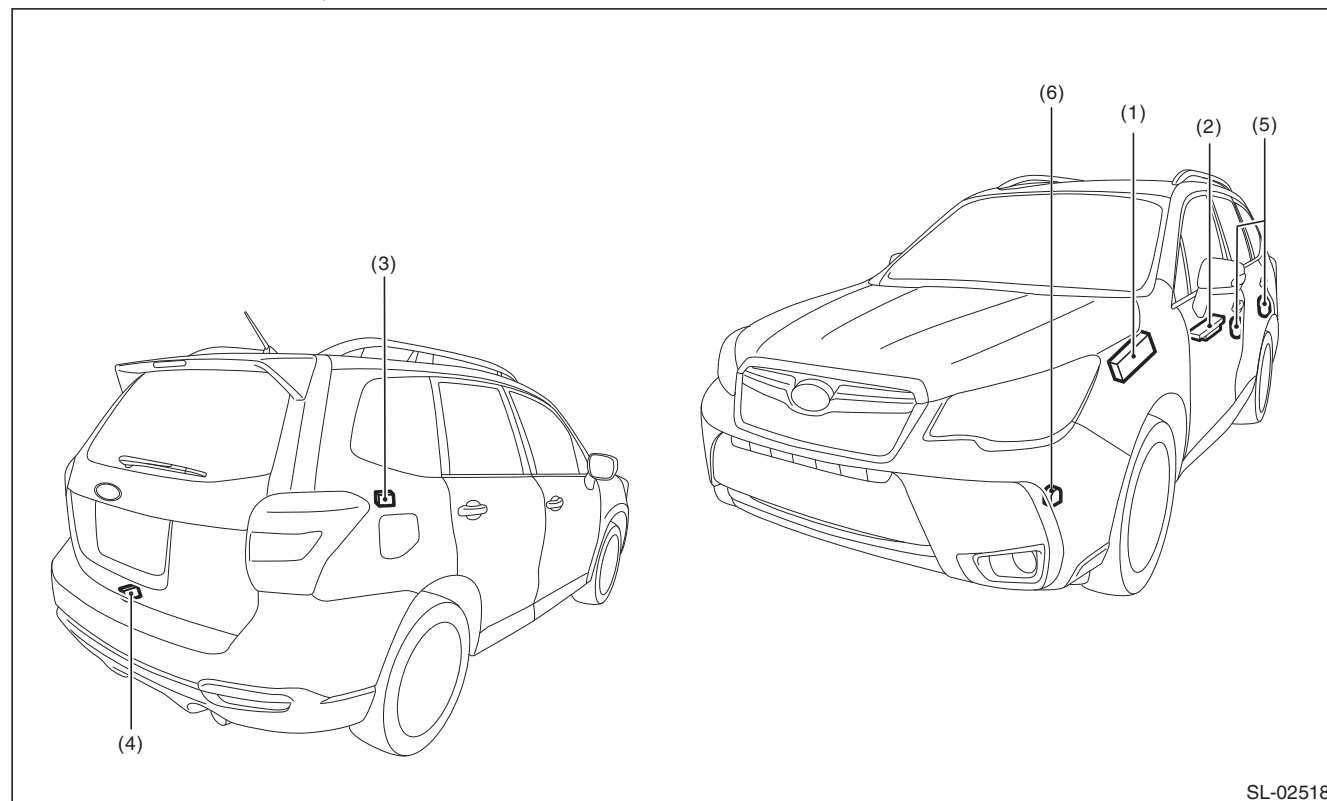
Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.76, 5.5)

5. KEYLESS ENTRY SYSTEM

NOTE:

Except for model with keyless access.



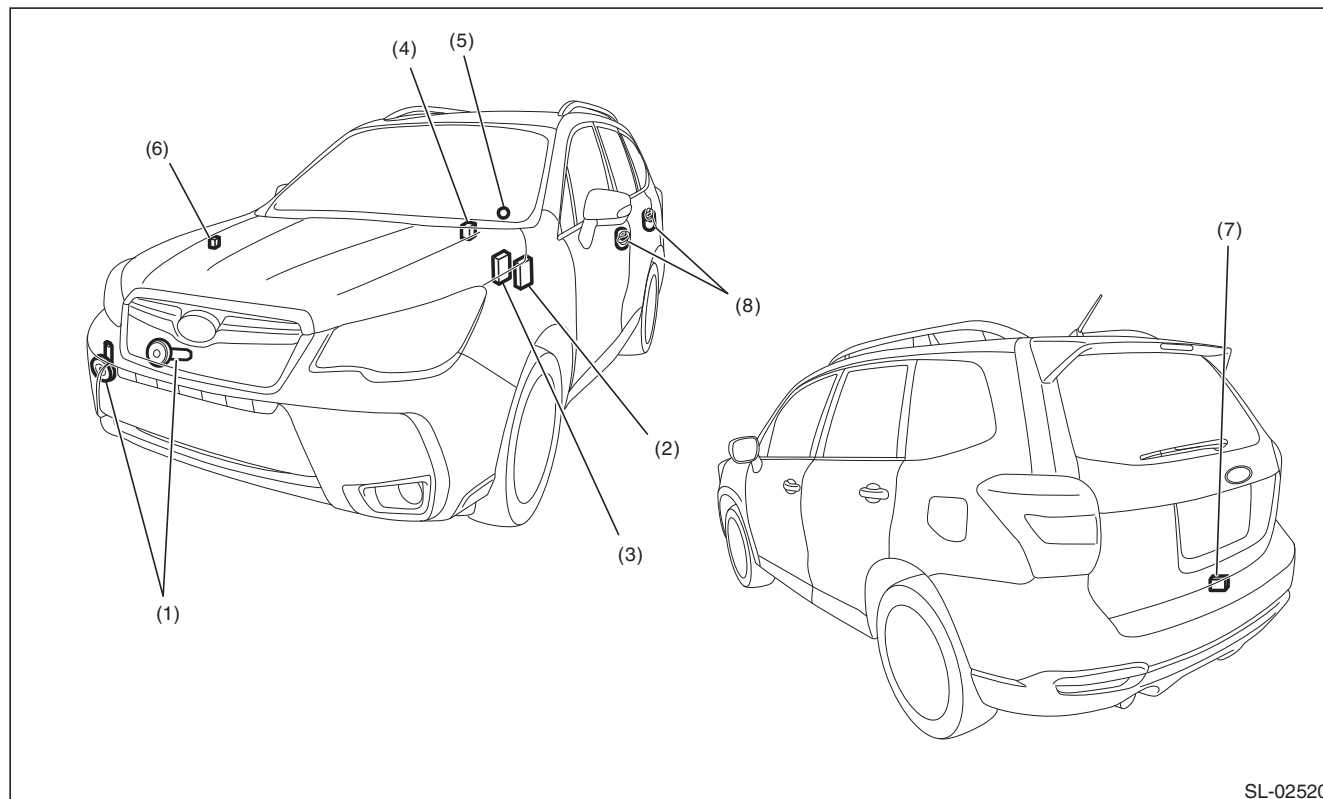
SL-02518

- | | | |
|------------------------------|----------------------------------|--------------------|
| (1) Body integrated unit | (3) Keyless entry control module | (5) Door switch |
| (2) Power window main switch | (4) Rear gate latch switch | (6) Keyless buzzer |

General Description

SECURITY AND LOCKS

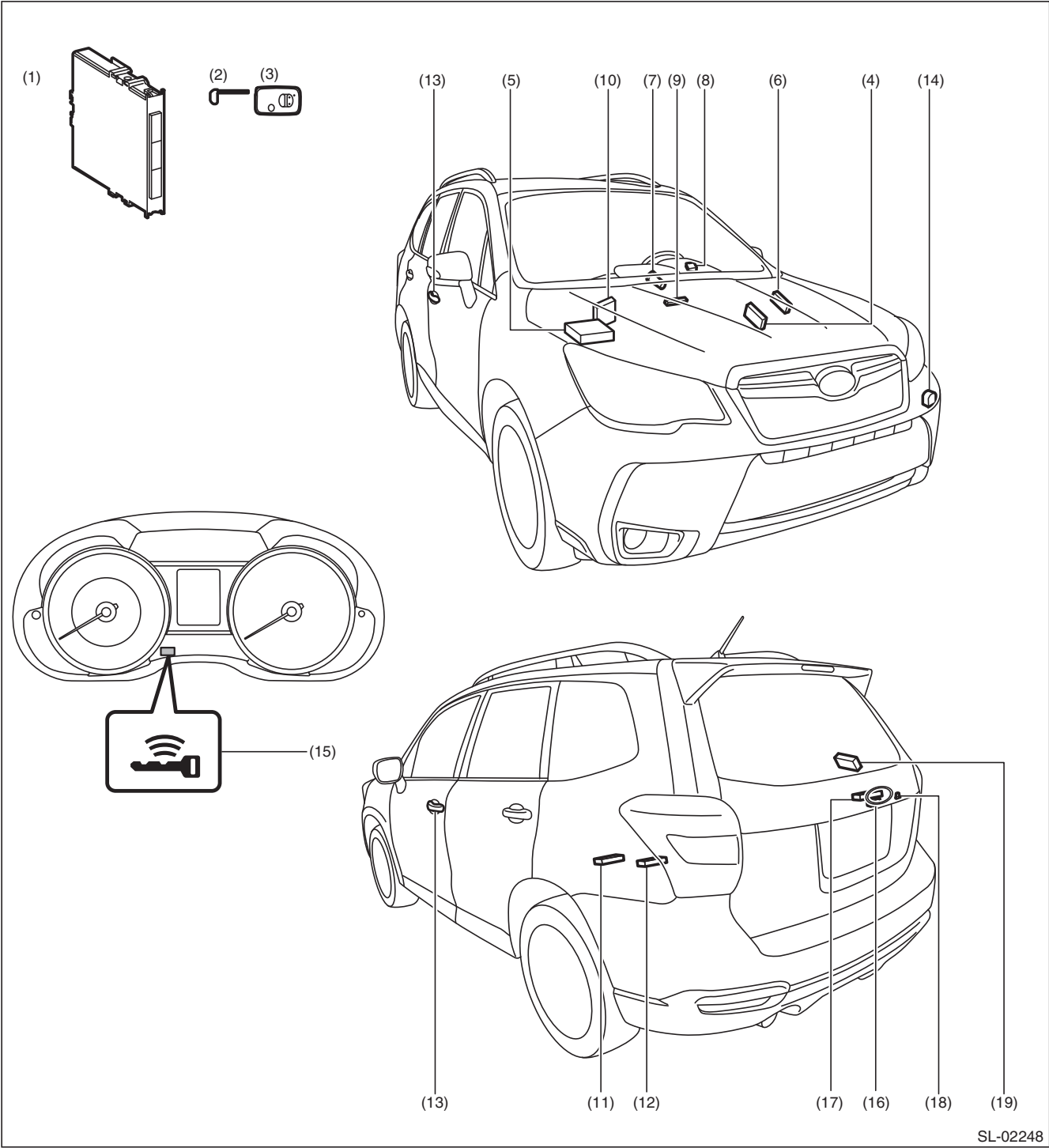
6. SECURITY SYSTEM



- | | | |
|---|---|----------------------------|
| (1) Horn | (4) Turn signal and hazard module | (7) Rear gate latch switch |
| (2) Body integrated unit | (5) Security indicator light (in combination meter) | (8) Door switch |
| (3) Impact sensor (driver's seat instrument panel side) (dealer option) | (6) Horn relay (in main fuse box) | |

7. KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM

NOTE:
Except for model without keyless access.



General Description

SECURITY AND LOCKS

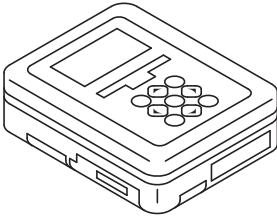
- | | | |
|---------------------------------|--|-------------------------------|
| (1) Keyless access CM | (8) Steering lock CM | (15) Access key warning light |
| (2) Mechanical key | (9) Front interior antenna | (16) Rear gate opener button |
| (3) Access key | (10) ECM (non-turbo model) | (17) Rear exterior antenna |
| (4) TCM | (11) Center interior antenna | (18) Rear lock button |
| (5) ECM (turbo model) | (12) Rear interior antenna | (19) Receiver |
| (6) Body integrated unit | (13) Front outer handle (front exterior antenna) | |
| | – Touch sensor (lock) | |
| | – Touch sensor (unlock) | |
| (7) Push button ignition switch | (14) Access buzzer | |

B: CAUTION

- Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
- Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
- Connect the connectors securely during reassembly.
- After reassembly, make sure that the each component operates normally.
- If any immobilizer related part has been replaced, make sure to register the immobilizer.
- Do not use any electrical test equipment on the airbag system wiring harnesses and connector circuits.
- Be careful not to damage the airbag system wiring harness when servicing the ignition key cylinder.
- If the steering wheel and steering angle sensor (steering roll connector) are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-23, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

C: PREPARATION TOOL

1. SPECIAL TOOL

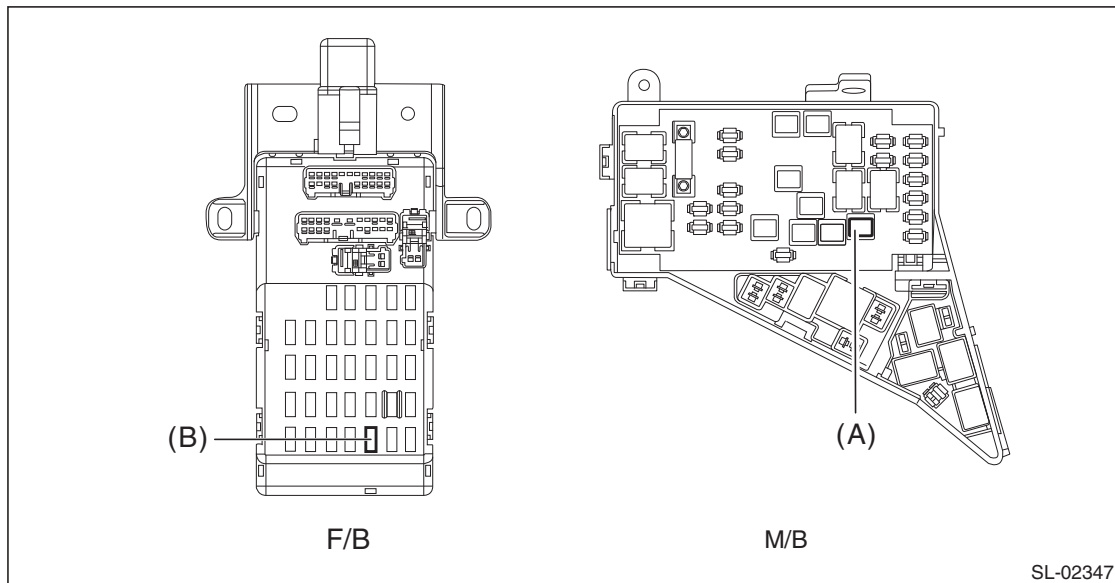
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system. NOTE: For detailed operation procedures of SUBARU SELECT MONITOR III KIT, refer to “PC application help for Subaru Select Monitor”.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Drill	Used for replacing ignition key lock.
Reverse tap	Used for replacing ignition key lock.
TORX® T30	Used for removing and installing door outer handle cover and frame assembly.
Clip remover	Used for removing trim clip.

2. Relay and Fuse

A: LOCATION



Main fuse box	Fuse 50 A (keyless access CM)	(A)
Relay & fuse box	Fuse 7.5 A (body integrated unit)	(B)

NOTE:

For other related fuses, refer to the wiring diagram. <Ref. to WI-24, Power Supply Circuit.>

Relay and Fuse

SECURITY AND LOCKS

B: INSPECTION

1. CHECK FUSE

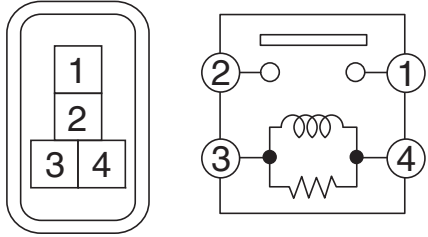
- 1) Remove the fuse and inspect visually.
- 2) If the fuse is blown out, replace the fuse.

NOTE:

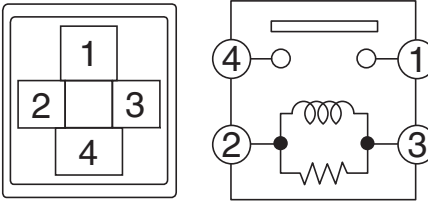
If the fuse is blown again, check the system wiring harness.

2. CHECK RELAY

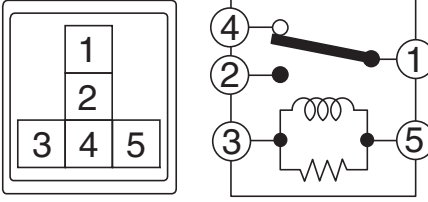
- 1) Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

LI-01273

Terminal No.	Inspection conditions	Standard	Circuit
1 — 4	Always	1 MΩ or more	
1 — 4	Apply battery voltage between terminals 2 and 3.	Less than 1 Ω	

AC-02796

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	
1 — 4	Always	Less than 1 Ω	
1 — 2	Apply battery voltage between terminals 3 and 5.	Less than 1 Ω	

SL-01566

- 2) Replace the relay if the inspection result is not within the standard value.

3. Door Lock Control System

A: WIRING DIAGRAM

Refer to "Keyless Entry System" in the wiring diagram. <Ref. to WI-289, WIRING DIAGRAM, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

1. BODY INTEGRATED UNIT

Refer to "Control Module I/O Signal" of "BODY CONTROL SYSTEM (DIAGNOSTICS)" section. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	Reference
The door lock control system does not operate.	1. Remove and visually inspect the following fuses. • No. 3 (in fuse & relay box) • No. 7 (in fuse & relay box) • No. 15 (in fuse & relay box) (K/L)	If the fuse is blown out, replace the fuse with a new part. When there is no defective with the fuse, check the power supply and ground circuit. <Ref. to SL-12, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	2. Check the power supply and ground circuit for body integrated unit.	<Ref. to SL-12, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the door lock switch and the circuit.	<Ref. to SL-12, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>
	4. Check the rear gate opener button and the circuit.	<Ref. to SL-13, CHECK REAR GATE OPENER BUTTON CIRCUIT, INSPECTION, Door Lock Control System.>
	5. Check the door lock actuator and the circuit.	<Ref. to SL-14, CHECK DOOR LOCK ACTUATOR AND CIRCUIT, INSPECTION, Door Lock Control System.>
A specific door lock actuator does not operate.	Check the door lock actuator and circuit.	<Ref. to SL-14, CHECK DOOR LOCK ACTUATOR AND CIRCUIT, INSPECTION, Door Lock Control System.>

Door Lock Control System

SECURITY AND LOCKS

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

Step	Check	Yes	No
1 CHECK POWER SUPPLY. 1) Disconnect the connector of body integrated unit. 2) Measure the voltage between the body integrated unit connector and chassis ground. Connector & terminal <i>(i84) No. 6 (+) — Chassis ground (-):</i> <i>(i171) No. 1 (+) — Chassis ground (-):</i> <i>(B281) No. 7 (+) — Chassis ground (-): (K/L)</i>	Is the voltage 9 V or more?	Go to step 2.	Check the harness for open or short circuit between body integrated unit and fuse.
2 CHECK GROUND CIRCUIT. Measure the resistance between the body integrated unit connector and chassis ground. Connector & terminal <i>(i84) No. 1 — Chassis ground:</i> <i>(i171) No. 29 — Chassis ground:</i> <i>(B280) No. 1 — Chassis ground:</i> <i>(B281) No. 31 — Chassis ground: (K/L)</i>	Is the resistance less than 10 Ω ?	The power supply and ground circuit are OK.	Repair or replace the harness.

3. CHECK DOOR LOCK SWITCH

Step	Check	Yes	No
1 CHECK CURRENT DATA. Using the Subaru Select Monitor, display the data of «Manual lock SW input». NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the display switch between OFF $\longleftrightarrow$ ON when each door lock switch is moved to LOCK?	Go to step 2.	Go to step 3.
2 CHECK DOOR LOCK SWITCH. From the condition in step 1), operate each door lock switch (driver's and passenger's) in the UNLOCK direction.	Does the display switch between OFF $\longleftrightarrow$ ON?	The door lock switch is OK.	Go to step 4.
3 CHECK POWER WINDOW MAIN SWITCH (DOOR LOCK SWITCH). 1) Disconnect the power window main switch (door lock switch) connector. 2) Measure the continuity between terminals when moving the power window main switch (door lock switch) in LOCK direction. Connector & terminal Driver's seat <i>(D7) No. 3 — (D7) No. 1:</i> Passenger's seat <i>(D125) No. 4 — (D125) No. 5:</i>	Did the indicator change from "No continuity" (1 M Ω or more) to "Continuity exists" (less than 10 Ω)?	Go to step 4.	Replace the power window main switch. <Ref. to GW-11, Power Window Control Switch.>
4 CHECK POWER WINDOW MAIN SWITCH (DOOR LOCK SWITCH). Measure the continuity between terminals when moving the power window main switch (door lock switch) in UNLOCK direction. Connector & terminal Driver's seat <i>(D7) No. 9 — (D7) No. 1:</i> Passenger's seat <i>(D125) No. 2 — (D125) No. 5:</i>	Did the indicator change from "No continuity" (1 M Ω or more) to "Continuity exists" (less than 10 Ω)?	Go to step 5.	Replace the power window main switch. <Ref. to GW-11, Power Window Control Switch.>

Door Lock Control System

SECURITY AND LOCKS

Step	Check	Yes	No
5 CHECK HARNESS. Measure the resistance between the power window main switch (door lock switch) connector and chassis ground. <i>Connector & terminal</i> <i>Driver's seat</i> (D7) No. 1 — Chassis ground: <i>Passenger's seat</i> (D125) No. 5 — Chassis ground:	Is the resistance less than 10 Ω ?	Go to step 6.	Repair or replace the harness.
6 CHECK HARNESS. Check the harness between body integrated unit and power window switch (door lock switch). <i>Connector & terminal</i> <i>Driver's seat</i> (D7) No. 3 — (i84) No. 9: (D7) No. 9 — (i84) No. 20: <i>Passenger's seat</i> (D125) No. 4 — (i84) No. 9: (D125) No. 2 — (i84) No. 20:	Is harness normal?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	Repair or replace the harness.

4. CHECK REAR GATE OPENER BUTTON CIRCUIT

Step	Check	Yes	No
1 CHECK CURRENT DATA. Using the Subaru Select Monitor, display the data of «R Gate Release SW input». NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the display change to OFF $\longleftrightarrow$ ON, when the rear gate opener button is operated?	Rear gate opener button is normal.	Go to step 2.
2 CHECK HARNESS. 1) Disconnect the connectors of body integrated unit and rear gate opener button. 2) Check the harness between the body integrated unit and rear gate opener button. <i>Connector & terminal</i> <i>Keyless access model</i> (i84) No. 10 — (D77) No. 5: <i>Keyless entry model</i> (i84) No. 10 — (D47) No. 1:	Is harness normal?	Go to step 3.	Repair or replace the harness.
3 CHECK HARNESS. Measure the resistance between the rear gate opener button connector and chassis ground. <i>Connector & terminal</i> <i>Keyless access model</i> (D77) No. 6 — Chassis ground: <i>Keyless entry model</i> (D47) No. 2 — Chassis ground:	Is the resistance less than 10 Ω ?	Go to step 4.	Repair or replace the harness.
4 CHECK REAR GATE OPENER BUTTON. Measure the resistance between terminals both when the rear gate opener button is pressed and when not pressed. <i>Terminals</i> <i>Keyless entry model</i> No. 5 — No. 6: <i>Keyless entry model</i> No. 1 — No. 2:	Is the resistance less than 10 Ω when the switch is pressed and 1 M Ω or more when not pressed?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	Replace the rear gate opener button.

Door Lock Control System

SECURITY AND LOCKS

5. CHECK DOOR LOCK ACTUATOR AND CIRCUIT

Step	Check	Yes	No
1 CHECK HARNESS (DOOR LOCK). 1) Disconnect the body integrated unit and each door lock actuator connector. 2) Check the harness between body integrated unit and each door lock actuator. Connector & terminal Front door LH <i>(i171) No. 2 — (D72) No. 4:</i> Front door RH <i>(i171) No. 2 — (D18) No. 4:</i> Rear door LH <i>(i171) No. 2 — (D26) No. 4:</i> Rear door RH <i>(i171) No. 2 — (D32) No. 4:</i>	Is harness normal?	Go to step 2.	Repair or replace the harness.
2 CHECK HARNESS (DOOR UNLOCK). Check the harness between body integrated unit and each door lock actuator. Connector & terminal Front door LH <i>(i171) No. 4 — (D72) No. 1:</i> Front door RH (keyless access model) <i>(i171) No. 6 — (D18) No. 1:</i> Front door RH (keyless entry model) <i>(i171) No. 3 — (D18) No. 1:</i> Rear door LH <i>(i171) No. 3 — (D26) No. 1:</i> Rear door RH <i>(i171) No. 3 — (D32) No. 1:</i>	Is harness normal?	Go to step 3.	Repair or replace the harness.
3 CHECK HARNESS (REAR GATE UNLOCK). Check the harness between the body integrated unit and rear gate lock actuator. Connector & terminal <i>(i171) No. 7 — (D46) No. 1:</i>	Is harness normal?	Go to step 4.	Repair or replace the harness.
4 CHECK HARNESS (REAR GATE UNLOCK). Measure the resistance between the rear gate lock actuator connector and chassis ground. Connector & terminal <i>(D46) No. 2 — Chassis ground:</i>	Is the resistance less than 10 Ω ?	Go to step 5.	Repair or replace the harness.
5 CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL. 1) Connect the body integrated unit connector. 2) Measure the voltage between terminals of the body integrated unit when operating the door lock switch to LOCK direction. Connector & terminal Except for front door LH <i>(i171) No. 2 (+) — (i171) No. 3 (-):</i> Front door LH <i>(i171) No. 2 (+) — (i171) No. 4 (-):</i>	Does the voltage change from less than 1 V $\rightarrow$ 9 V or more? (During lock output)	Go to step 6.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>

Door Lock Control System

SECURITY AND LOCKS

Step	Check	Yes	No
6 CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL. Measure the voltage between terminals of the body integrated unit when operating the door lock switch to UNLOCK direction. <i>Connector & terminal</i> <i>Except for front door LH</i> <i>(i171) No. 3 (+) — (i171) No. 2 (-):</i> <i>Front door LH</i> <i>(i171) No. 4 (+) — (i171) No. 2 (-):</i>	Does the voltage change from less than 1 V → 9 V or more? (During unlock output)	Go to step 7.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>
7 CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL. Measure the voltage between body integrated unit and chassis ground when operating the rear gate opener button. <i>Connector & terminal</i> <i>(i171) No. 7 (+) — Chassis ground (-):</i>	Does the voltage change from less than 1 V → 9 V or more? (During unlock output)	Go to step 8.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>
8 CHECK DOOR LOCK ACTUATOR. Check the door lock actuator. • Front door lock actuator: <Ref. to SL-40, INSPECTION, Front Door Latch and Door Lock Actuator Assembly.> • Rear door lock actuator: <Ref. to SL-47, INSPECTION, Rear Door Latch and Door Lock Actuator Assembly.>	Is the door lock actuator OK?	Go to step 9.	Replace the door latch and door lock actuator assembly.
9 CHECK REAR GATE LOCK ACTUATOR. Check the rear gate lock actuator. <Ref. to SL-50, Rear Gate Latch and Actuator Assembly.>	Is the rear gate lock actuator normal?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the rear gate latch and actuator assembly.



Keyless Entry System

SECURITY AND LOCKS

4. Keyless Entry System

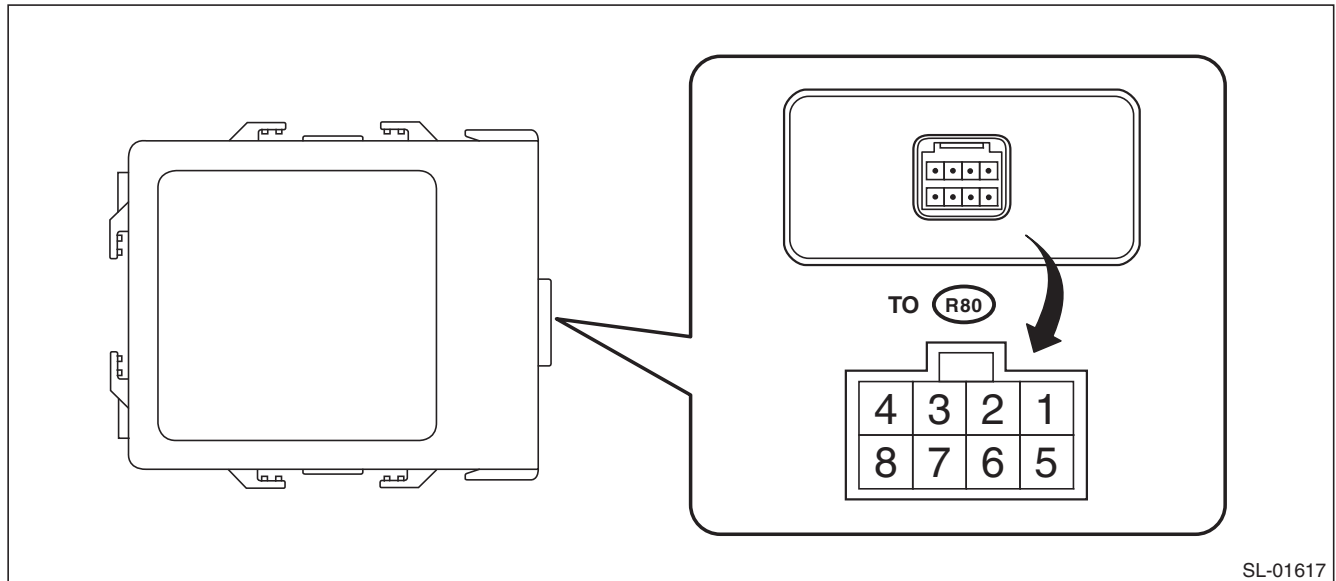
A: WIRING DIAGRAM

Refer to "Keyless Entry System" in the wiring diagram. <Ref. to WI-289, WIRING DIAGRAM, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

1. KEYLESS ENTRY CONTROL MODULE

- Model without tire pressure monitoring system

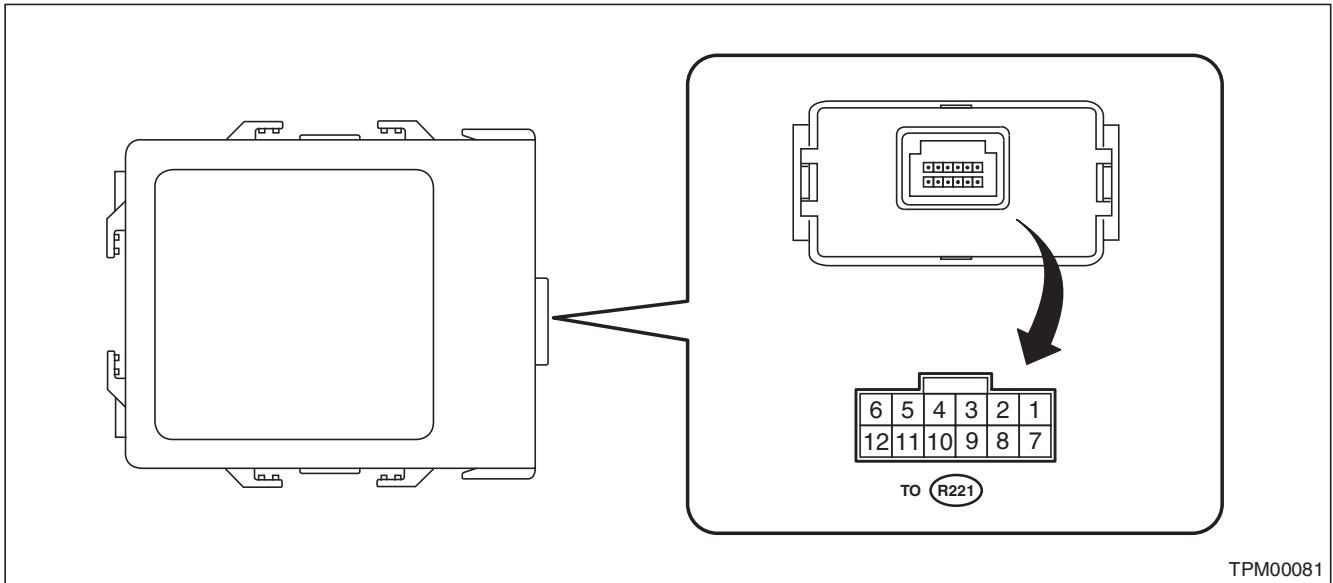


Terminal No.	Item	Measuring condition	Standard
3 (U-ART com.)	—	Cannot be measured	—
4 (+B) ↔ Chassis ground	Voltage	Always	10 — 14 V
7 (GND) ↔ Chassis ground	Resistance	Always	Less than 1 Ω

Keyless Entry System

SECURITY AND LOCKS

- Model with tire pressure monitoring system



Terminal No.	Item	Measuring condition	Standard
4 (IG) ↔ Chassis ground	Resistance	IG OFF → ON	0 V → 10 — 14 V
5 (GND) ↔ Chassis ground	Resistance	Always	Less than 1 Ω
6 (+B) ↔ Chassis ground	Voltage	Always	10 — 14 V
11 (U-ART com.)	—	Cannot be measured	—

2. BODY INTEGRATED UNIT

Refer to "Control Module I/O Signal" of "BODY CONTROL SYSTEM (DIAGNOSTICS)" section. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

Keyless Entry System

SECURITY AND LOCKS

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	Reference
None of the functions of the keyless entry system operate.	1. Check the keyless transmitter battery.	<Ref. to SL-19, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Remove and visually inspect the following fuses. - No. 3 (in fuse & relay box) - No. 7 (in fuse & relay box) - No. 15 (in fuse & relay box)	If the fuse is blown out, replace the fuse with a new part. When there is no defective with the fuse, check the power supply and ground circuit. <Ref. to SL-12, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the keyless entry control module.	<Ref. to SL-20, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the power supply and ground circuit for body integrated unit.	<Ref. to SL-20, CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Keyless Entry System.>
	5. Check the key warning switch.	<Ref. to SL-22, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	6. Check the door switch signal.	<Ref. to SL-21, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	7. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
The keyless transmitter cannot be registered.	1. Check the keyless transmitter battery.	<Ref. to SL-19, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-22, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	3. Check the keyless entry control module.	<Ref. to SL-20, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
Door lock or unlock does not operate. NOTE: If the door lock control system does not operate when using the door lock switch, check the door lock control system. <Ref. to SL-11, INSPECTION, Door Lock Control System.>	1. Check the keyless transmitter battery.	<Ref. to SL-19, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-22, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	3. Check the keyless entry control module.	<Ref. to SL-20, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
The keyless buzzer and hazard light do not operate.	1. Check the keyless buzzer operation.	<Ref. to SL-24, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
	2. Check the hazard light operation.	<Ref. to SL-23, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	3. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
Room light does not operate.	1. Check the room light operation.	<Ref. to SL-23, CHECK ROOM LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	2. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
Ignition switch illumination does not operate.	1. Check the ignition switch illumination.	<Ref. to SL-25, CHECK IGNITION SWITCH ILLUMINATION, INSPECTION, Keyless Entry System.>
	2. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>

Keyless Entry System

SECURITY AND LOCKS

2. CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION

CAUTION:

Be sure to reset keyless transmitter of other vehicles registered to the inspection target vehicle, and vehicles to which keyless transmitters were registered for inspection, to the condition before performing the inspection. (Re-register the keyless transmitters.)

Step	Check	Yes	No
1 CHECK KEYLESS TRANSMITTER BATTERY. 1) Remove the battery from the keyless transmitter. <Ref. to SL-77, REMOVAL, Keyless Transmitter.> 2) Check the battery voltage. <Ref. to SL-78, INSPECTION, Keyless Transmitter.>	Is the voltage 2.5 V or more?	Go to step 2.	Replace the keyless transmitter battery.
2 CHECK KEYLESS TRANSMITTER. Register the keyless transmitter which operates normally on other vehicles to the inspection target vehicle. <Ref. to SL-78, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.> 1) Close all the doors and rear gate of inspection target vehicle. 2) Using the keyless transmitter, lock and unlock the doors and rear gate of vehicle.	Can the check vehicle be locked and unlocked properly?	Go to step 3.	Due to vehicle malfunction, continue the keyless entry system diagnosis.
3 CHECK KEYLESS TRANSMITTER. Register the keyless transmitter of the inspected vehicle to another vehicle whose keyless system operates normally. <Ref. to SL-78, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>	Is the keyless transmitter registered correctly?	Go to step 4.	Replace the keyless transmitter and perform registration.
4 CHECK KEYLESS TRANSMITTER. Check the registered keyless transmitter. 1) Close all the doors and rear gate of the vehicle which keyless system operates normally. 2) Using the keyless transmitter, lock and unlock the doors and rear gate of vehicle.	Does the vehicle operate lock and unlock normally?	Keyless transmitter is OK.	Replace the keyless transmitter and perform registration.

Keyless Entry System

SECURITY AND LOCKS

3. CHECK KEYLESS ENTRY CONTROL MODULE

Step	Check	Yes	No
1 CHECK BODY INTEGRATED UNIT. Read the DTC using Subaru Select Monitor. NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Is DTC B1500 "Keyless UART com. Malfunction" displayed?	Go to step 2.	Keyless entry control module is normal.
2 CHECK POWER SUPPLY. 1) Disconnect the keyless entry control module connector. 2) Measure the voltage between keyless entry control module connector and chassis ground. Connector & terminal Model without tire pressure monitoring system (R80) No. 4 (+) — Chassis ground (-): Model with tire pressure monitoring system (R221) No. 6 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 3.	Check the harness for open or short circuits between the keyless entry control module and the fuse.
3 CHECK POWER SUPPLY (MODEL WITH TPMS ONLY). Measure the voltage between connector and chassis ground. Connector & terminal (R221) No. 4 (+) — Chassis ground (-):	IGN OFF: 0 V IGN ON: 10 V or more?	Go to step 4.	Check the harness for open or short circuits between the keyless entry control module and the fuse.
4 CHECK GROUND CIRCUIT. Measure the resistance between keyless entry control module connector and chassis ground. Connector & terminal Model without tire pressure monitoring system (R80) No. 7 — Chassis ground: Model with tire pressure monitoring system (R221) No. 5 — Chassis ground:	Is the resistance less than 10 Ω ?	Go to step 5.	Repair or replace the harness.
5 CHECK KEYLESS ENTRY CONTROL MODULE CIRCUIT. 1) Disconnect the body integrated unit connector. 2) Check the harness between keyless entry control module and body integrated unit. Connector & terminal Model without tire pressure monitoring system (i171) No. 11 — (R80) No. 3: Model with tire pressure monitoring system (i171) No. 11 — (R221) No. 11:	Is harness normal?	Replace the keyless entry control module.	Repair or replace the harness.

4. CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT

Refer to the "INSPECTION of POWER SUPPLY AND GROUND CIRCUIT" of "Door Lock Control System" for detailed procedures. <Ref. to SL-12, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>

Keyless Entry System

SECURITY AND LOCKS

5. CHECK DOOR SWITCH

Step	Check	Yes	No
1 CHECK CURRENT DATA. Display the following items using Subaru Select Monitor. • «Driver's door SW input» • «P-door SW input» • «Rear right door SW input» • «Rear left door SW input» • «R Gate SW input» NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the display switch between OFF ←→ ON when each door or rear gate is opened/closed?	The door switch or the rear gate latch switch is normal.	Go to step 2.
2 CHECK HARNESS. 1) Disconnect the connector of body integrated unit. 2) Disconnect the connector of the door switch or the rear gate latch switch that the display does not change. 3) Check the harness between body integrated unit and defective switch. Connector & terminal Front door LH <i>(i84) No. 14 — (R9) No. 1:</i> Front door RH <i>(i84) No. 13 — (R12) No. 1:</i> Rear door LH <i>(i84) No. 24 — (R22) No. 1:</i> Rear door RH <i>(i84) No. 25 — (R16) No. 1:</i> Rear gate <i>(i84) No. 33 — (D46) No. 3:</i>	Is harness normal?	Go to step 3.	Repair or replace the harness.
3 CHECK HARNESS. Measure the resistance between the faulty switch connector and chassis ground. Connector & terminal Front door LH <i>(R9) No. 3 — Chassis ground:</i> Front door RH <i>(R12) No. 3 — Chassis ground:</i> Rear door LH <i>(R22) No. 3 — Chassis ground:</i> Rear door RH <i>(R16) No. 3 — Chassis ground:</i> Rear gate <i>(D46) No. 4 — Chassis ground:</i>	Is the resistance less than 10 Ω?	Go to step 4.	Repair or replace the harness.
4 CHECK DOOR SWITCH. Measure the resistance between faulty switch terminals. Terminals Front LH door switch <i>No. 1 — No. 3:</i> Front RH door switch <i>No. 1 — No. 3:</i> Rear LH door switch <i>No. 1 — No. 3:</i> Rear RH door switch <i>No. 1 — No. 3:</i> Rear gate latch switch <i>No. 3 — No. 4:</i>	Is the resistance 1 MΩ or more when the door switch is pushed and the rear gate is closed?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	Replace the faulty parts. • Door switches • Rear gate latch and actuator assembly

Keyless Entry System

SECURITY AND LOCKS

6. CHECK KEY WARNING SWITCH

Step	Check	Yes	No
1 CHECK CURRENT DATA. Using the Subaru Select Monitor, display the data of «key-lock warning SW». NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Is the normal input signal displayed when the key is inserted in/removed from the ignition switch?	The key warning switch is OK.	Go to step 2.
2 CHECK FUSE. Remove and visually check fuse No. 14 (in the main fuse box).	Is the fuse blown out?	Replace the fuse with a new part.	Go to step 3.
3 CHECK KEY WARNING SWITCH CIRCUIT. 1) Disconnect the connector of body integrated unit. 2) Insert the key into ignition switch. (LOCK position) 3) Measure the voltage between the body integrated unit connector and chassis ground. Connector & terminal (B280) No. 4 (+) — Chassis ground (-):	Is the voltage 9 V or more?	Go to step 4.	Go to step 5.
4 CHECK KEY WARNING SWITCH CIRCUIT. 1) Remove the key from ignition switch. 2) Measure the voltage between the body integrated unit connector and chassis ground. Connector & terminal (B280) No. 4 (+) — Chassis ground (-):	Is the voltage less than 1.5 V?	The key warning switch is OK.	Go to step 5.
5 CHECK KEY WARNING SWITCH. 1) Disconnect the connector of key warning switch. 2) Insert the key into ignition switch. (LOCK position) 3) Measure the resistance between key warning switch terminals. Terminals No. 1 — No. 2:	Is the resistance less than 1 Ω?	Go to step 6.	Replace the key warning switch.
6 CHECK KEY WARNING SWITCH. 1) Remove the key from ignition switch. 2) Measure the resistance between key warning switch terminals. Terminals No. 1 — No. 2:	Is the resistance 1 MΩ or more?	Check the following: • Harness for open circuits and shorts between the key warning switch and fuse. • Harness for open or short between the body integrated unit and key warning switch	Replace the key warning switch.

Keyless Entry System

SECURITY AND LOCKS

7. CHECK ROOM LIGHT OPERATION

Step	Check	Yes	No
1 CHECK ROOM LIGHT OPERATION. Make sure the room light illuminates when the room light switch is ON, and goes off when the switch is OFF.	Does the room light illuminate or go off?	Go to step 2.	Check the room light circuit. <Ref. to LI-66, INSPECTION, Room Light.>
2 CHECK ROOM LIGHT OPERATION. 1) Turn the room light switch to the "DOOR" position. 2) Open and close any door.	Does the room light illuminate ←→ go off (including off delay) when the door is opened and closed?	Go to step 3.	Go to step 4.
3 CHECK KEYLESS ENTRY OPERATION. Press the LOCK/UNLOCK button of the keyless transmitter.	Does it operate properly?	Room light is normal.	Check keyless entry system. <Ref. to SL-18, SYMPTOM CHART, INSPECTION, Keyless Entry System.>
4 CHECK ROOM LIGHT. Check the room light. <Ref. to LI-66, INSPECTION, Room Light.>	Is room light normal?	Go to step 5.	Replace the bulb or room light assembly.
5 CHECK HARNESS. 1) Disconnect the connectors of body integrated unit and room light. 2) Check the harness between body integrated unit and room light. Connector & terminal (i84) No. 4 — (R52) No. 2:	Is harness normal?	Go to step 6.	Repair or replace the harness.
6 CHECK HARNESS. Measure the voltage between the room light connector and chassis ground. Connector & terminal (R52) No. 3 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	Repair or replace the harness.

8. CHECK HAZARD LIGHT OPERATION

Step	Check	Yes	No
1 CHECK HAZARD LIGHT OPERATION. Make sure the hazard light blinks when hazard switch is turned to ON.	Does the hazard light blink?	Go to step 2.	Check the hazard light circuit.
2 CHECK BODY INTEGRATED UNIT SETTING. Display the data of «Abnormal warning lamp flashing setting» using Subaru Select Monitor. NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Is the setting ON?	Go to step 3.	Turn the setting to ON.
3 CHECK CURRENT DATA. Display the data of «Hazard Output» using Subaru Select Monitor.	Is output signal present when operating the transmitter LOCK/UNLOCK button?	Go to step 4.	Go to step 5.
4 CHECK KEYLESS ENTRY OPERATION. Press the LOCK/UNLOCK button of the keyless transmitter.	Does it operate properly?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	Check keyless entry system. <Ref. to SL-18, SYMPTOM CHART, INSPECTION, Keyless Entry System.>

Keyless Entry System

SECURITY AND LOCKS

Step	Check	Yes	No
5 CHECK HAZARD LIGHT CIRCUIT. 1) Disconnect the connectors of the body integrated unit and turn signal & hazard unit. 2) Check the harness between body integrated unit and turn signal & hazard unit. Connector & terminal (i171) No. 18 — (B32) No. 8:	Is harness normal?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Repair or replace the harness.

9. CHECK KEYLESS BUZZER

Step	Check	Yes	No
1 CHECK BODY INTEGRATED UNIT SETTING. Display the data of «Answer-back buzzer setup» using Subaru Select Monitor. NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Is the setting ON?	Go to step 2.	Turn the setting to ON.
2 CHECK BODY INTEGRATED UNIT. Select and perform the «Keyless Buzzer Output» using Subaru Select Monitor.	Does the keyless buzzer sound?	Check the keyless control module.	Go to step 3.
3 CHECK KEYLESS BUZZER CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the connectors of the body integrated unit and keyless buzzer. 3) Check the harness between body integrated unit and keyless buzzer. Connector & terminal (B280) No. 20 — (B164) No. 1:	Is harness normal?	Go to step 4.	Repair or replace the harness.
4 CHECK KEYLESS BUZZER CIRCUIT. Measure the resistance between the keyless buzzer connector and chassis ground. Connector & terminal (B164) No. 2 — Chassis ground:	Is the resistance less than 10 Ω ?	Go to step 5.	Repair or replace the harness.
5 CHECK BODY INTEGRATED UNIT. 1) Select and perform the «Keyless Buzzer Output» using Subaru Select Monitor. 2) Measure the voltage between the body integrated unit connector and chassis ground. Connector & terminal (B280) No. 20 (+) — Chassis ground (-):	Is the waveform with frequency 2 kHz and voltage 9 V or more being output?	Replace the keyless buzzer.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>

10.CHECK DOOR LOCK SWITCH

For operation procedures, refer to the “INSPECTION OF DOOR LOCK SWITCH” of the “Door Lock Control System”. <Ref. to SL-12, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>

Keyless Entry System

SECURITY AND LOCKS

11.CHECK IGNITION SWITCH ILLUMINATION

Step	Check	Yes	No
1 CHECK IGNITION CIRCUIT. Check the ignition circuit. <Ref. to SL-32, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.>	Is the switch circuit normal?	Go to step 2.	Repair or replace.
2 CHECK DOOR SWITCH CIRCUIT. Inspect door switch circuit. <Ref. to SL-21, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>	Is the switch circuit normal?	Go to step 3.	Repair or replace.
3 CHECK FUSE. Remove and visually check fuse No. 14 (in the main fuse box).	Is the fuse blown out?	Replace the fuse with a new part.	Go to step 4.
4 CHECK HARNESS. 1) Disconnect the ignition switch illumination connector. NOTE: The ignition switch illumination is integrated into the immobilizer antenna. 2) Measure the voltage between ignition switch illumination connector and chassis ground. Connector & terminal (B415) No. 2 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 5.	Check the harness for open or short circuits between the ignition switch illumination and fuse.
5 CHECK IGNITION SWITCH ILLUMINATION CIRCUIT. 1) Disconnect the connector of body integrated unit. 2) Check the harness between body integrated unit and ignition switch illumination. Connector & terminal (B280) No. 25 — (B415) No. 6:	Is harness normal?	Go to step 6.	Check the harness for open circuits and shorts between the body integrated unit and ignition switch illumination.
6 CHECK IGNITION SWITCH ILLUMINATION BULB. Apply battery voltage between terminals of the bulb. Terminals No. 2 (+) — No. 6 (-):	Does the bulb illuminate?	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>	• Model with immobilizer Replace the immobilizer antenna. <Ref. to SL-83, REMOVAL, Immobilizer Antenna.> • Model without immobilizer Replace the ignition switch illumination. <Ref. to LI-70, REMOVAL, Ignition Switch Illumination.>

Keyless Access System

SECURITY AND LOCKS

5. Keyless Access System

A: WIRING DIAGRAM

For wiring diagrams related to the keyless access system, refer to the following items.

- Keyless access system: <Ref. to WI-279, WIRING DIAGRAM, Keyless Access System.>
- Push button start system
 - Non-turbo model: <Ref. to WI-331, NON-TURBO MODEL, WIRING DIAGRAM, Push Button Start System.>
 - Turbo model: <Ref. to WI-338, TURBO MODEL, WIRING DIAGRAM, Push Button Start System.>

B: ELECTRICAL SPECIFICATION

Refer to “Control Module I/O Signal” of “KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)” section. <Ref. to KPS(diag)-12, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM

Refer to “Basic Diagnostic Procedure” of “KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)” section. <Ref. to KPS(diag)-2, Basic Diagnostic Procedure.>

6. Push Button Start System

A: WIRING DIAGRAM

For wiring diagrams related to the push button start system (ignition change), refer to the following items.

- Keyless access system: <Ref. to WI-279, WIRING DIAGRAM, Keyless Access System.>
- Push button start system
 - Non-turbo model: <Ref. to WI-331, NON-TURBO MODEL, WIRING DIAGRAM, Push Button Start System.>
 - Turbo model: <Ref. to WI-338, TURBO MODEL, WIRING DIAGRAM, Push Button Start System.>

B: ELECTRICAL SPECIFICATION

Refer to "Control Module I/O Signal" of "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-12, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. IGNITION/ACC CHANGE FUNCTION CHECK

1) Check push button ignition switch function

(1) Check the power supply change control through push button ignition switch, brake pedal, clutch pedal operation, and shift position.

- CVT model

Shift lever position	Brake pedal operation	Push button ignition switch operation
P	Released	Repeat Ignition OFF → ACC ON → Ignition ON → Ignition OFF
P	Released	Engine running → Ignition OFF
P	Depressed	Ignition OFF → Engine started
P	Depressed	ACC ON → Engine started
P	Depressed	Ignition ON → Engine started
P	Depressed	Engine running → Ignition OFF
N	Released	Repeat Ignition OFF → ACC ON → Ignition ON → ACC ON
N	Released	Engine running → ACC ON
N	Depressed	Ignition OFF → Engine started
N	Depressed	ACC ON → Engine started
N	Depressed	Ignition ON → Engine started
N	Depressed	Engine running → ACC ON
Other than P or N	Released	Repeat Ignition OFF → ACC ON → Ignition ON → ACC ON
Other than P or N	Released	Engine running → ACC ON
Other than P or N	Depressed	Ignition OFF → Ignition ON
Other than P or N	Depressed	ACC ON → Ignition ON
Other than P or N	Depressed	Engine running → ACC ON

- MT model

Shift lever position	Clutch pedal operation	Push button ignition switch operation
—	Released	Repeat Ignition OFF → ACC ON → Ignition ON → Ignition OFF
	Released	Engine running → Ignition OFF
	Depressed	Ignition OFF → Engine started
	Depressed	ACC ON → Engine started
	Depressed	Ignition ON → Engine started
	Depressed	Engine running → Ignition OFF

Push Button Start System

SECURITY AND LOCKS

2) Check power status display

- (1) Check the power indicator display of the push button ignition switch.

NOTE:

*1: Key collation is normal, and the stop light switch (CVT) or clutch switch (MT) is ON.

*2: For CVT models, while the select lever button is being pressed, the indicator does not illuminate in green even if the select lever is in P range.

Indicator display

Push button ignition switch status	Indicator lighting status
Ignition OFF (except for condition *1)	Light OFF
ACC ON (except for condition *1)	Orange light
Ignition ON (except for condition *1)	Orange light
Engine start standby (*1)	Green light (*2)
After engine is started	Light OFF

NOTE:

The indicator blinks if any of the following malfunctions are detected.

Detected malfunction	Indicator lighting status
Steering lock stuck	Green blinking
Clutch switch failure	Orange blinking
Steering lock CM internal malfunction	Orange blinking
Keyless access CM internal malfunction	Orange blinking
Vehicle speed signal malfunction	Orange blinking



7. Security System

A: WIRING DIAGRAM

Refer to "Security System" in the wiring diagram.

- Without push button start: <Ref. to WI-378, WITHOUT PUSH BUTTON START, WIRING DIAGRAM, Security System.>
- With push button start: <Ref. to WI-383, WITH PUSH BUTTON START, WIRING DIAGRAM, Security System.>

B: ELECTRICAL SPECIFICATION

Refer to "Control Module I/O Signal" of "BODY CONTROL SYSTEM (DIAGNOSTICS)" section. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. BASIC DIAGNOSTIC PROCEDURE

Step	Check	Yes	No
1 INITIAL CHECK. Check the keyless entry system or keyless access system operation.	Does the keyless entry system or keyless access system operate normally?	Go to step 2.	Check the keyless entry system or keyless access system. • Keyless entry system: <Ref. to SL-18, INSPECTION, Keyless Entry System.> • Keyless access system: <Ref. to KPS(diag)-4, KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM, CAUTION, General Description.>
2 CHECK SECURITY ON/OFF SETTING. 1) Remove the key from ignition switch, and then close all doors. 2) Check the status of security indicator light. 3) Press the LOCK button of the keyless transmitter or access key. 4) Check the security indicator light blinking patterns.	Is the security indicator light blinking patterns as follows? • Before pressing the LOCK button: Blinks once within 3 seconds • After pressing the LOCK button: When monitoring lag is set to 0 second, flashes twice within 0.5 seconds in 2 second intervals / When monitoring lag is set to 30 seconds, flashes once within 0.4 seconds in 30 seconds.	Go to step 4.	Go to step 3.
3 CHANGE SETTING OF SECURITY SYSTEM. Change the setting of security system to ON using Subaru Select Monitor. <Ref. to SL-31, SECURITY SYSTEM ON/OFF SETTING, INSPECTION, Security System.>	Is setting change completed correctly?	Go to step 4.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>

Security System

SECURITY AND LOCKS

Step	Check	Yes	No
4 CHECK SECURITY SYSTEM OPERATION. 1) Remove the key from ignition switch, and then close all doors. 2) Press the LOCK button on the keyless transmitter or access key, then wait for 30 seconds. 3) Check the security indicator light blinking patterns.	Does the security indicator light blink twice within 0.5 seconds in 2 second intervals?	Go to step 5.	Check the security indicator light. <Ref. to SL-32, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
5 CHECK SECURITY ALARM OPERATION. 1) Operate the driver's door lock switch to the UNLOCK side. 2) Open any door or rear gate.	Does the security alarm operate when opening any door or rear gate?	Go to step 6.	Check the following parts. <Ref. to SL-21, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.> • Door switches • Rear gate latch switch
6 CHECK SECURITY ALARM OPERATION. Check the security alarm operation status.	During the operation, does the horn keep sounding and the hazard light blink?	Go to step 7.	Check the following parts. <Ref. to SL-21, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.> • Horn: <Ref. to SL-32, CHECK HORN, INSPECTION, Security System.> • Hazard light: <Ref. to SL-32, CHECK HAZARD LIGHT OPERATION., INSPECTION, Security System.>
7 CHECK SECURITY ALARM CANCEL OPERATION. Press any button of the transmitter or access key while the security alarm is operating.	Do the horn sound and the blinking of the hazard light stop?	Go to step 8.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>
8 CHECK IMPACT SENSOR (DEALER OPTION). Check the sensibility of impact sensor. <Ref. to SL-70, CHECK IMPACT SENSOR, ADJUSTMENT, Impact Sensor.>	Is the sensibility set properly?	Go to step 9.	Adjust the sensitivity. <Ref. to SL-71, IMPACT SENSITIVITY ADJUSTMENT, ADJUSTMENT, Impact Sensor.>
9 CHECK SECURITY SYSTEM CONDITION MEMORY. 1) Remove the key from ignition switch, and then close all doors. 2) Open the front hood. 3) Press the LOCK button on the keyless transmitter or access key, then wait for 30 seconds. 4) Disconnect the ground cable from battery. 5) Connect the ground cable to battery. 6) Check the status of security indicator light.	Does the security indicator light blinks twice within 0.5 seconds at 2 second intervals?	Go to step 10.	Replace the body integrated unit. <Ref. to SL-74, Body Integrated Unit.>



Security System

SECURITY AND LOCKS

Step	Check	Yes	No
10 CHECK SECURITY SYSTEM MANUAL ON/OFF SETTING. 1) Press the UNLOCK button of the keyless transmitter or access key. 2) Change the setting of security system. <Ref. to SL-31, SECURITY SYSTEM ON/OFF SETTING, INSPECTION, Security System.>	Is setting change completed correctly?	Restore the security system settings to those before the diagnosis and finish the diagnosis.	Check the following parts. • Ignition switch circuit: <Ref. to SL-62, INSPECTION, Ignition Key Lock.> • Door lock switch circuit: <Ref. to SL-12, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>

NOTE:

If the horn sounds when the security is turned on (monitor condition) using the keyless transmitter, check the function setting of the body integrated unit. As a cause, it is possible that the impact sensor present (ON) / not present (OFF) setting is set to ON in the customization function though there is no impact sensor. <Ref. to BC(diag)-15, User Customizing.>

2. CHECK SECURITY SYSTEM CONDITION MEMORY

- 1) Pull out the key from the ignition switch, or turn the ignition to OFF.
- 2) Close all the doors and rear gate.
- 3) Open the front hood.
- 4) Press the LOCK button of the keyless transmitter.

NOTE:

Wait until the security indicator light blinks twice within 0.5 seconds at 2 second intervals.

If the 30 second monitoring lag has been set, wait for 30 seconds.

- 5) Disconnect the ground cable from battery.
- 6) Connect the battery ground terminal.
- 7) Check that the security indicator light blinks twice within 0.5 seconds at 2 second intervals. When it does not blink, replace the body integrated unit.

3. SECURITY SYSTEM ON/OFF SETTING

NOTE:

It can be set by «Security Alarm Setup» in unit customizing using Subaru Select Monitor.

For detailed procedures, refer to “PC application help for Subaru Select Monitor”.

- 1) Close all doors and rear gate, and sit in the driver's seat. Press the UNLOCK button of the keyless transmitter or access key.
- 2) Turn the ignition to ON.
- 3) Press the central door unlock switch and open the driver's door simultaneously. (Keep the central door unlock switch pressed down.)
- 4) When the condition in step 3) continues for 10 seconds, the system switches to a mode reverse to the current mode.

Setting	Horn activation	Meter display
ON → OFF	Twice	[AL_OF]
OFF → ON	Once	[AL_ON]

4. CHECK DOOR SWITCH

For operation procedure, refer to “CHECK DOOR SWITCH” of “Keyless Entry System”. <Ref. to SL-21, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>

Security System

SECURITY AND LOCKS

5. CHECK SECURITY INDICATOR LIGHT CIRCUIT

For operation procedures, refer to "CHECK SECURITY INDICATOR LIGHT CIRCUIT" of "IMMOBILIZER (DIAGNOSTICS)" section. <Ref. to IM(diag)-11, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>

6. CHECK HORN

Step	Check	Yes	No
1 CHECK HORN OPERATION. Check the horn sounds when the horn switch is pushed.	Does the horn sound?	Go to step 2.	Check the horn circuit.
2 CHECK BODY INTEGRATED UNIT. Select and perform the «Horn Output» using Subaru Select Monitor. NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the horn sound?	Horn circuit is OK.	Go to step 3.
3 CHECK HORN RELAY CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the connector of body integrated unit. 3) Remove the horn relay. 4) Check the harness between body integrated unit and horn relay. Connector & terminal (B280) No. 24 — Horn relay No. 4:	Is harness normal?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Repair or replace the harness.

7. CHECK HAZARD LIGHT OPERATION.

For operation procedure, refer to "CHECK HAZARD LIGHT OPERATION" of "Keyless Entry System" <Ref. to SL-23, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>

8. CHECK IGNITION SWITCH CIRCUIT

Step	Check	Yes	No
1 CHECK CURRENT DATA. Display the data of «BATT voltage» and «IG power supply voltage» using the Subaru Select Monitor. NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the «IG power supply voltage» indicate 0 V when the ignition is OFF, and fall within a range of ± 1 V from the «BATT voltage» when the ignition is ON?	The ignition switch input circuit is OK.	Go to step 2.
2 CHECK IGNITION SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the connector of body integrated unit. 3) Turn the ignition switch to ON. 4) Measure the voltage between the body integrated unit connector and chassis ground. Connector & terminal (B281) No. 3 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Check the harness for open or short circuit between body integrated unit and fuse.

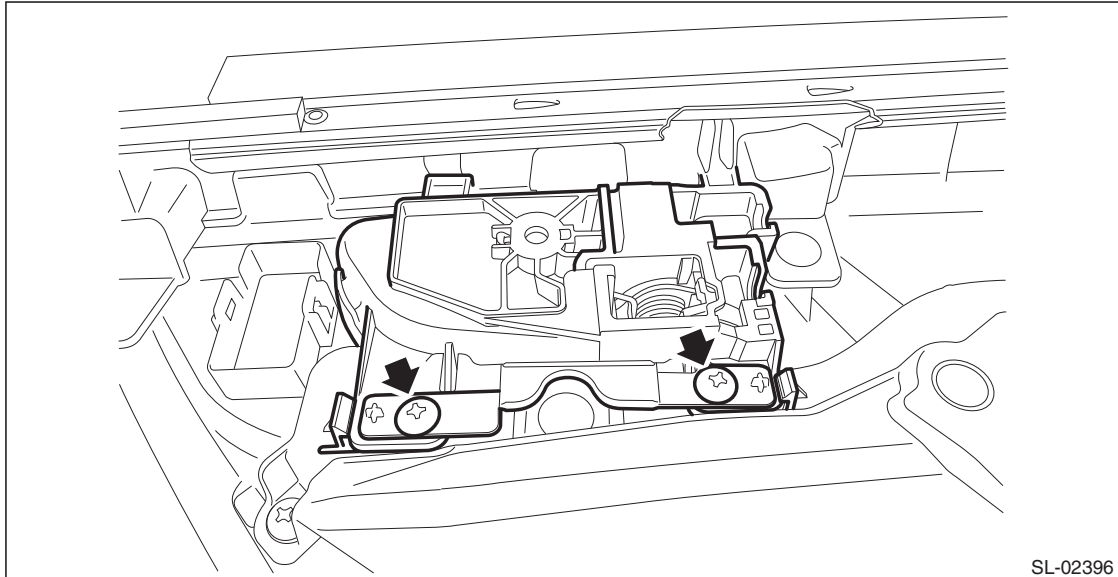
8. Front Inner Remote

A: REMOVAL

- 1) Remove the trim panel - front door. <Ref. to EI-55, FRONT DOOR, REMOVAL, Door Trim.>
- 2) Remove the screw, and remove the remote assembly - door.

CAUTION:

The remote assembly - door is tightened with the plate. Be careful not to drop or damage the part.



SL-02396

B: INSTALLATION

- 1) Before installation, check the following items.
 - Cable is free from deformation such as fray.
 - Grease is applied sufficiently to cable joints.
 - If grease is insufficient, add it as necessary before assembling the cable.
- 2) Install each part in the reverse order of removal.

CAUTION:

Securely install the plate.

C: INSPECTION

Check if the remote handle operates normally.

- If the lever is faulty, replace the remote handle.
- If the cable is deformed, replace the latch & actuator assembly - front.

Front Outer Handle

SECURITY AND LOCKS

9. Front Outer Handle

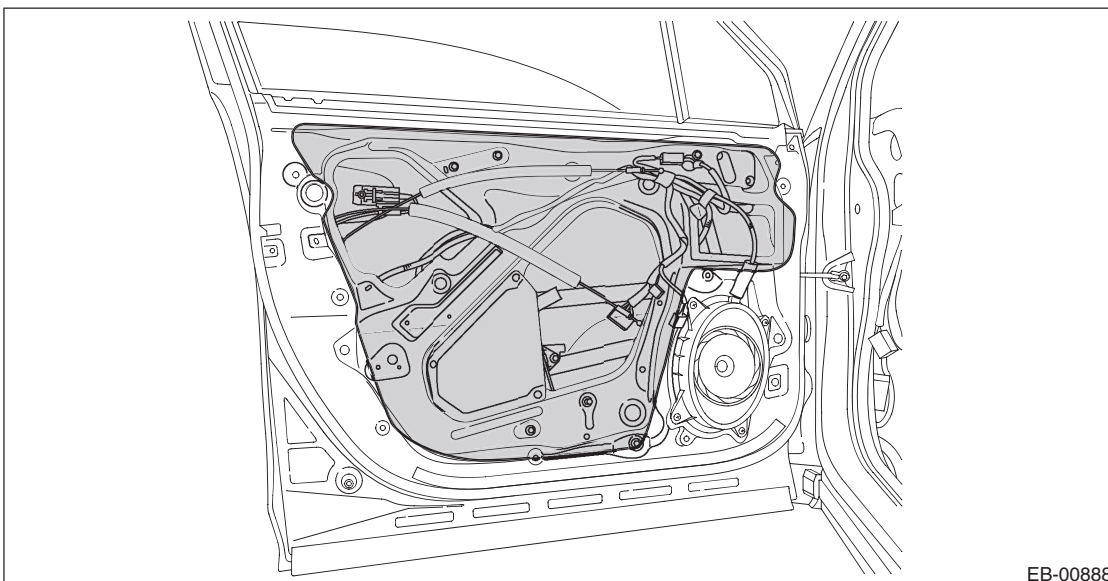
A: REMOVAL

- 1) Raise the glass assembly - front door to the top position.
- 2) Remove the trim panel - front door. <Ref. to EI-55, FRONT DOOR, REMOVAL, Door Trim.>
- 3) Turn over the sealing cover - front door.

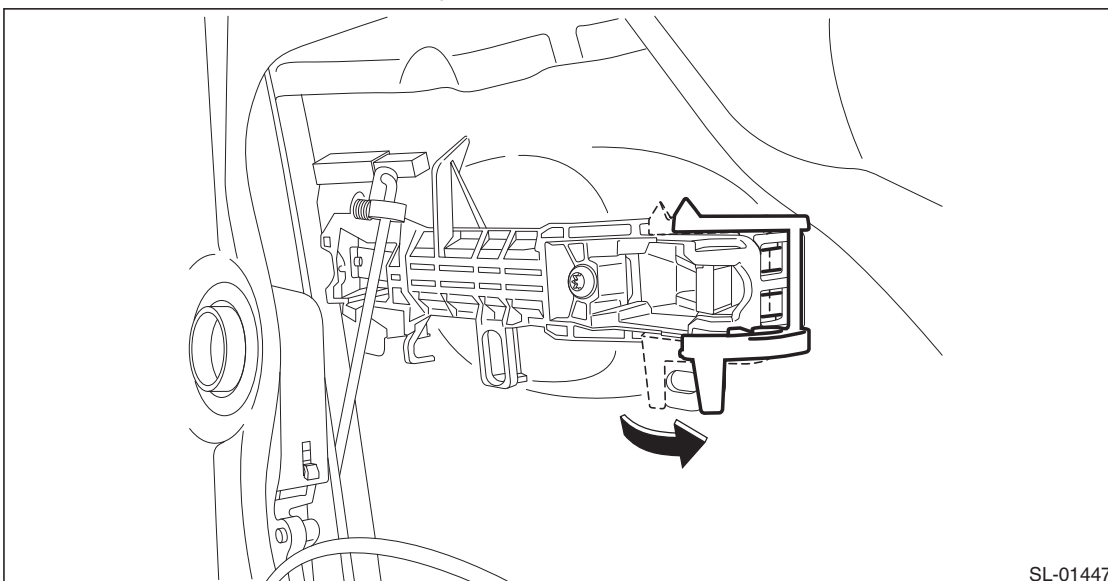
CAUTION:

- Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.
- If the sealing cover - front door gets broken, replace it with a new part.
- Be careful not to allow the butyl tape to contact any trims and seats because the butyl tape, which has a strong adhesive force, is difficult to remove once it adhered.

- (1) Disconnect connectors.
- (2) Carefully remove the butyl tape and turn over the sealing cover - front door within the area where the operation can be performed.



- 4) Remove the holder of the frame assembly - front door outer.

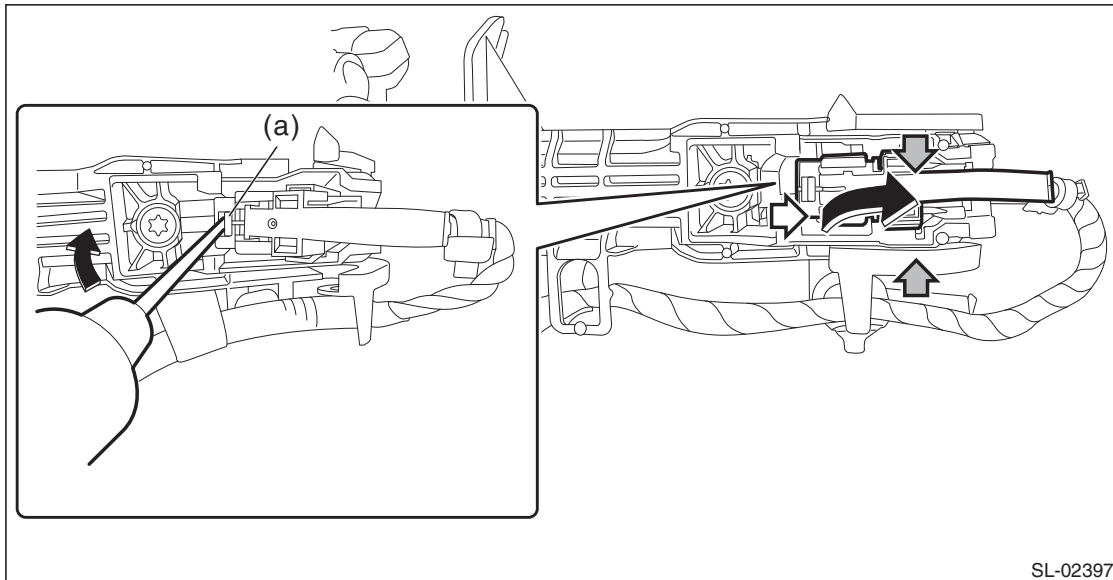


Front Outer Handle

SECURITY AND LOCKS

NOTE:

- For model with keyless access, disconnect the harness clip and exterior antenna (touch sensor) connector.
- Using (a) shown in the figure as a supporting point, pry it with a flat tip screwdriver to remove.



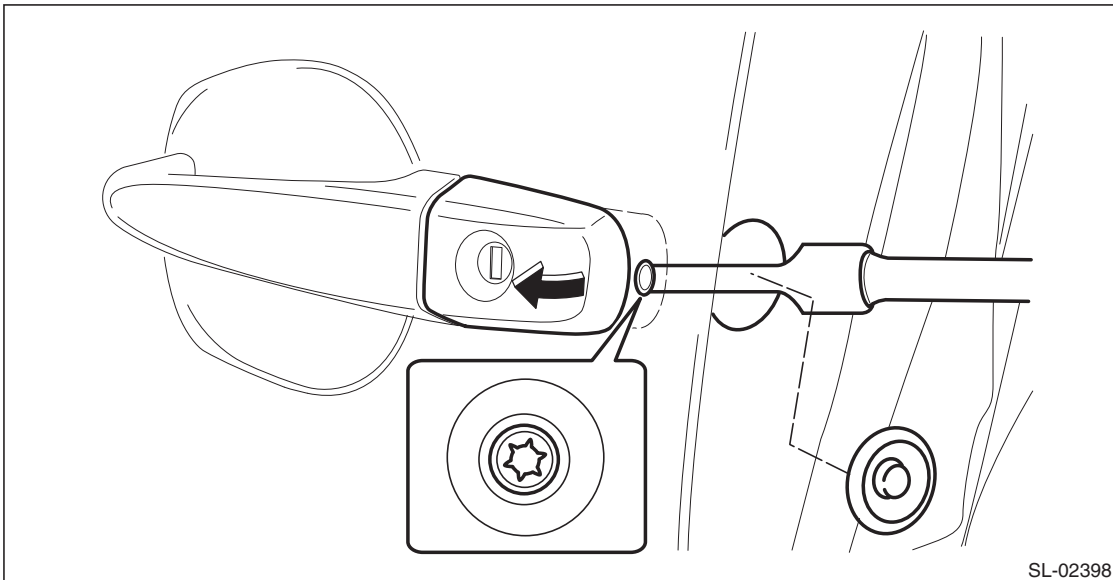
SL-02397

5) Remove the cover - handle front outer.

Preparation tool:

TORX® T30

- (1) Remove the plug at the rear end of the panel assembly - front door.
- (2) Loosen the TORX® bolt and remove the cover - handle front outer.



SL-02398

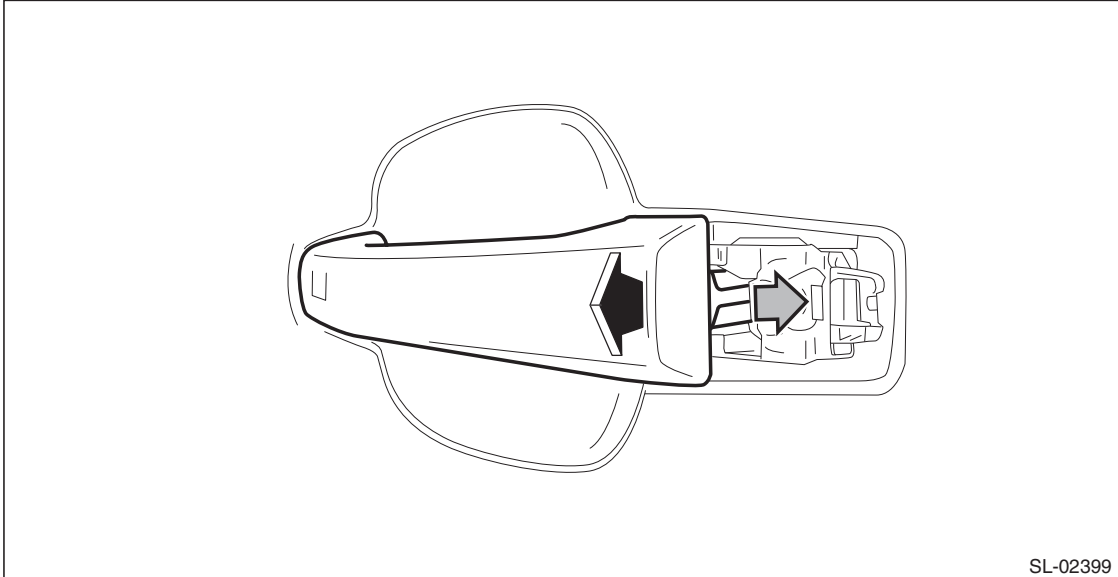
Front Outer Handle

SECURITY AND LOCKS

6) Remove the handle - door outer by moving it rearward.

CAUTION:

Do not apply excessive force to remove the handle - door outer from the panel assembly - front door. The panel assembly - front door may be deformed.

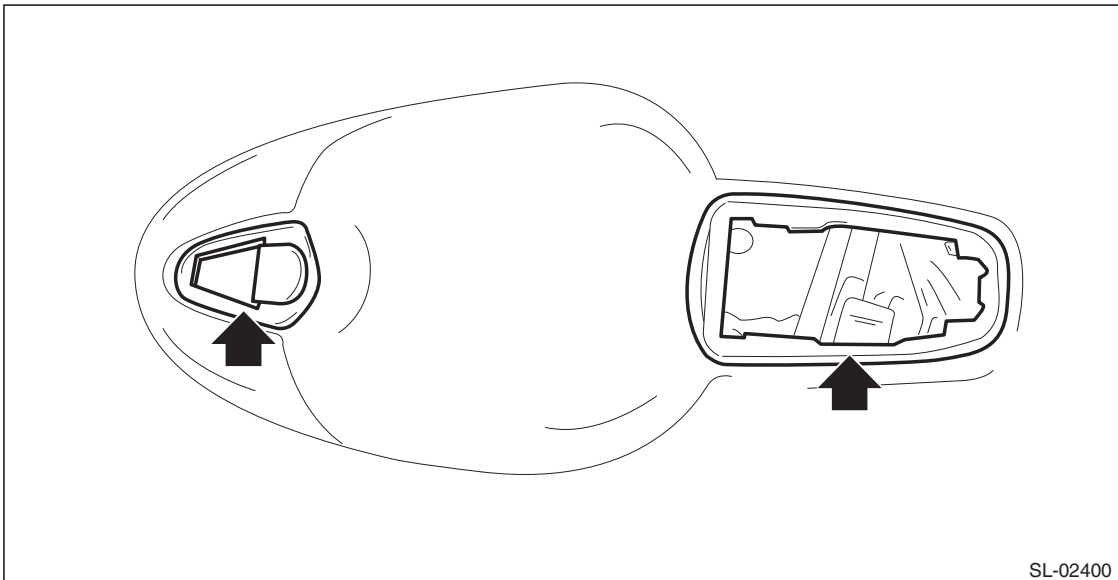


7) Remove the frame assembly - front door outer.

Preparation tool:

TORX® T30

(1) Remove the spacer - door handle outer.

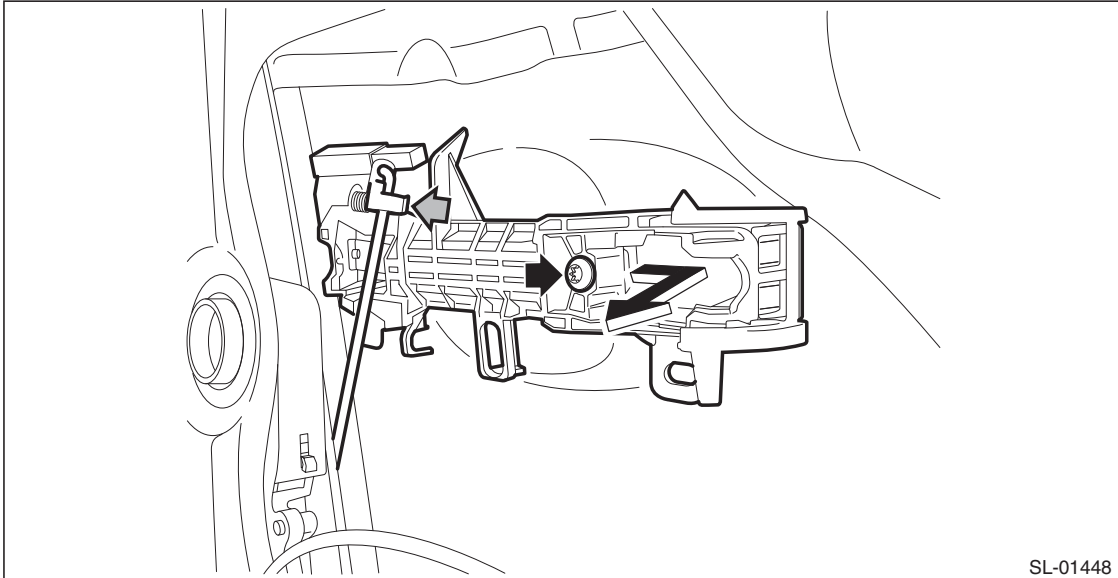


(2) Remove the rod from the rod clamp of the frame assembly - front door outer.

Front Outer Handle

SECURITY AND LOCKS

(3) Loosen the TORX® bolt and remove the frame assembly - front door outer from inside the panel assembly - front door.



SL-01448

B: INSTALLATION

- 1) Before installation, check the following items.
 - Rod is free from deformation.
 - Grease is applied sufficiently to rod joints.
 - If grease is insufficient, add it as necessary before assembling the rod.
- 2) Install each part in the reverse order of removal.

Tightening torque:

Refer to “COMPONENT” of “General Description”. <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

Check if the outer handle operates normally.

- If the lever is faulty, replace the handle - door outer.
- If the rod is deformed, replace the latch & actuator assembly - front.

Front Door Latch and Door Lock Actuator Assembly

SECURITY AND LOCKS

10. Front Door Latch and Door Lock Actuator Assembly

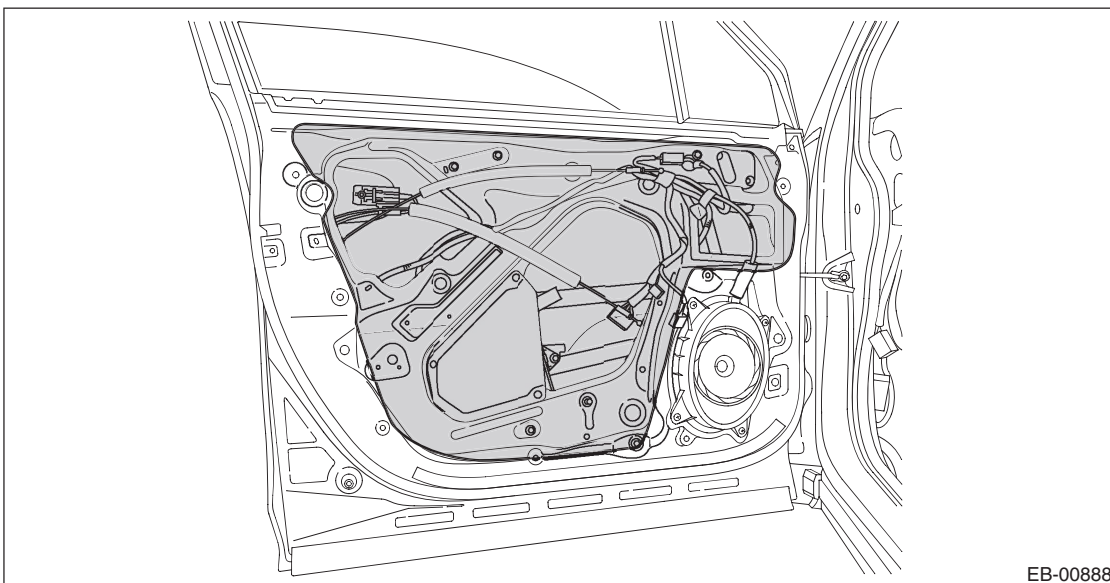
A: REMOVAL

- 1) Raise the glass assembly - front door to the top position.
- 2) Remove the trim panel - front door. <Ref. to EI-55, FRONT DOOR, REMOVAL, Door Trim.>
- 3) Turn over the sealing cover - front door.

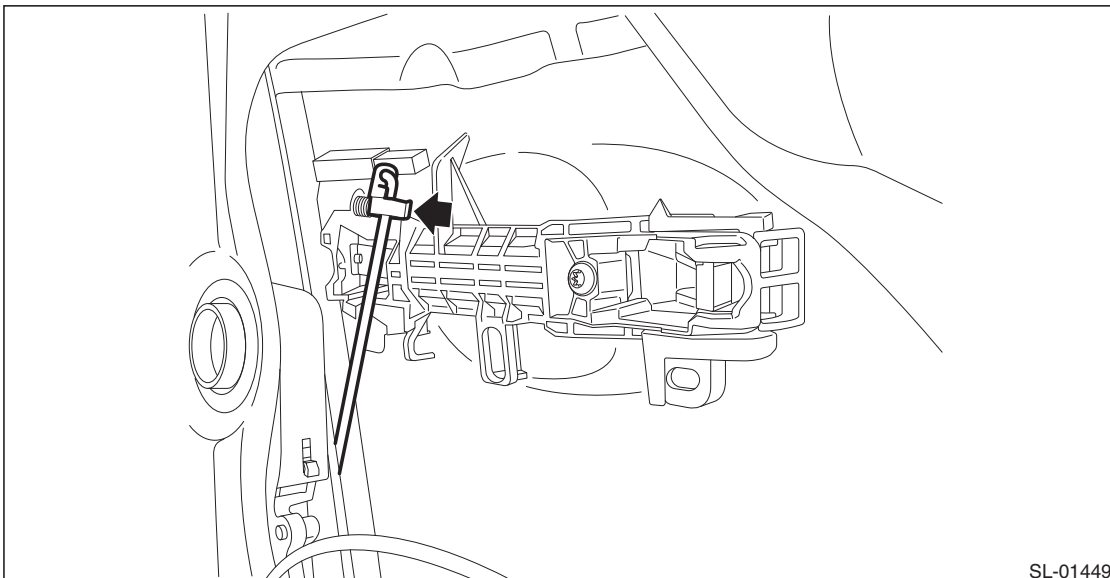
CAUTION:

- Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.
- If the sealing cover - front door gets broken, replace it with a new part.
- Be careful not to allow the butyl tape to contact any trims and seats because the butyl tape, which has a strong adhesive force, is difficult to remove once it adhered.

- (1) Disconnect connectors.
- (2) Carefully remove the butyl tape and turn over the sealing cover - front door within the area where the operation can be performed.



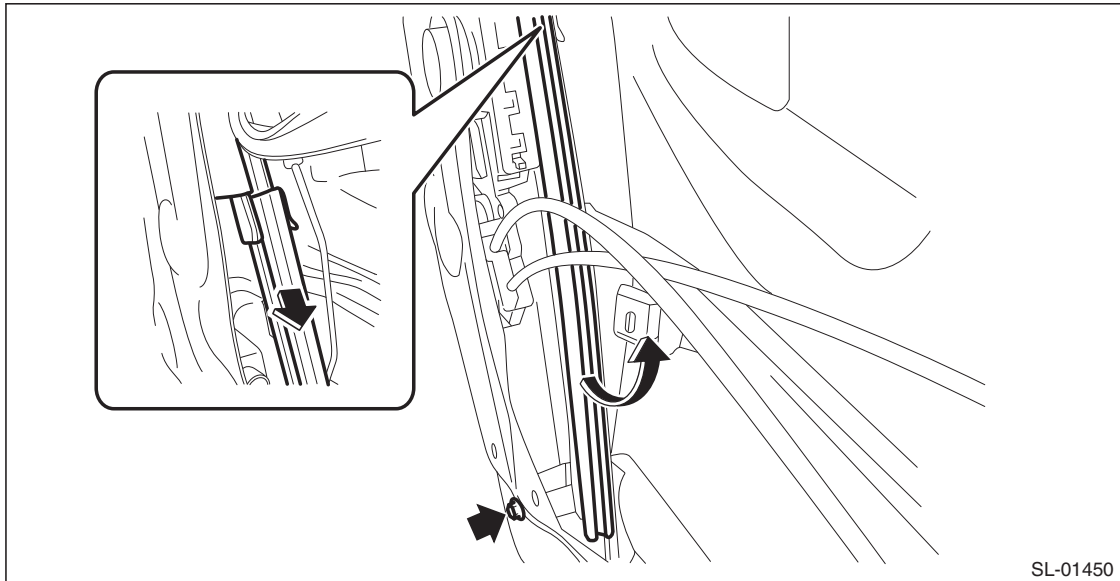
- 4) Remove the rod from the rod clamp of the frame assembly - front door outer.



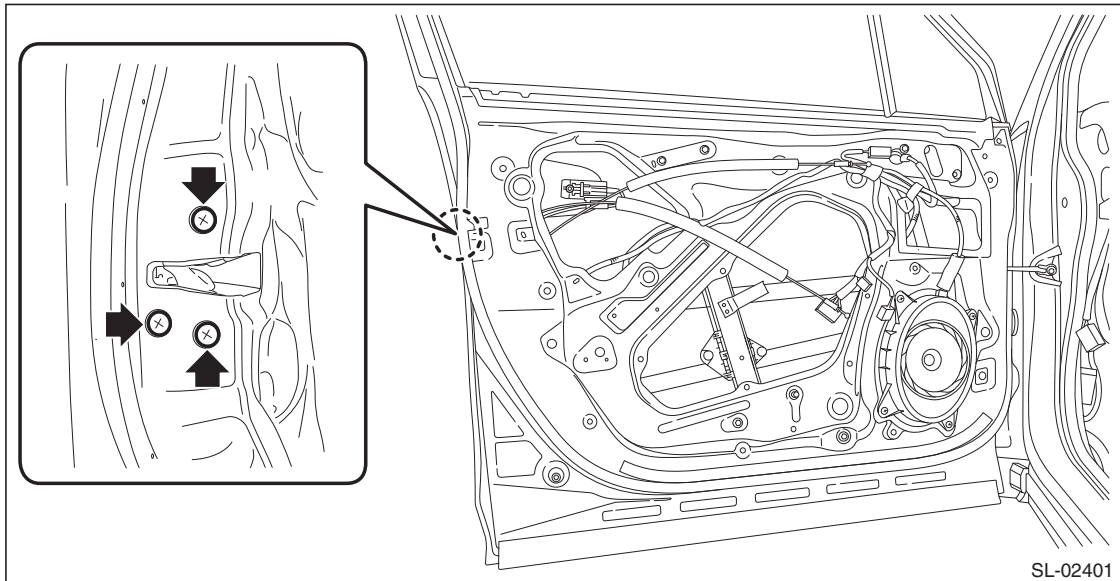
Front Door Latch and Door Lock Actuator Assembly

SECURITY AND LOCKS

- 5) Remove the sash COMPL - lower.
- (1) Remove the lower side of the running channel - front door.
 - (2) Remove the bolts, and remove the sash COMPL - lower.



- 6) Remove the screws to remove the latch & actuator assembly - front.



B: INSTALLATION

- 1) Before installation, check the following items.
 - Cable and rod are free from deformation.
 - Grease is applied sufficiently to rod joints.
 - If grease is insufficient, add it as necessary before assembling the rod.
- 2) Install each part in the reverse order of removal.

Tightening torque:

Door lock assembly: <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

Sash COMPL - D3: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

Front Door Latch and Door Lock Actuator Assembly

SECURITY AND LOCKS

C: INSPECTION

1. LATCH

Check if the latch operates normally.

If the cable or rod is faulty, replace the latch & actuator assembly - front.

2. LOCK ACTUATOR

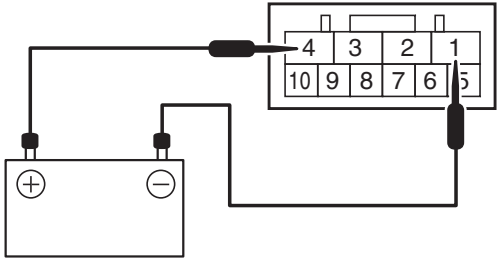
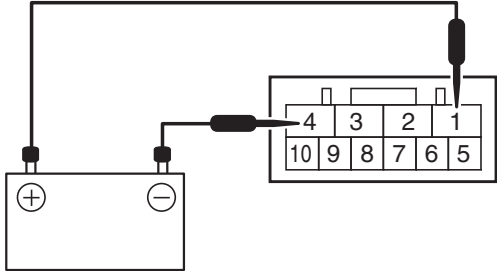
UNIT INSPECTION

Preparation tool:

Circuit tester

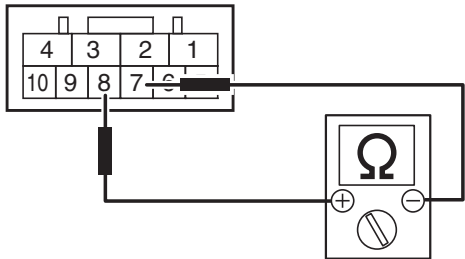
1) Check door lock operation

Check the door lock operation when battery voltage is applied between the terminals of actuator.

Terminal No.	Inspection conditions	Specification	Connection diagram
4 (+) — 1 (—)	Apply battery voltage.	LOCK	 SL-01474
1 (+) — 4 (—)		UNLOCK	 SL-01473

2) Check position switch

Check the resistance between actuator terminals.

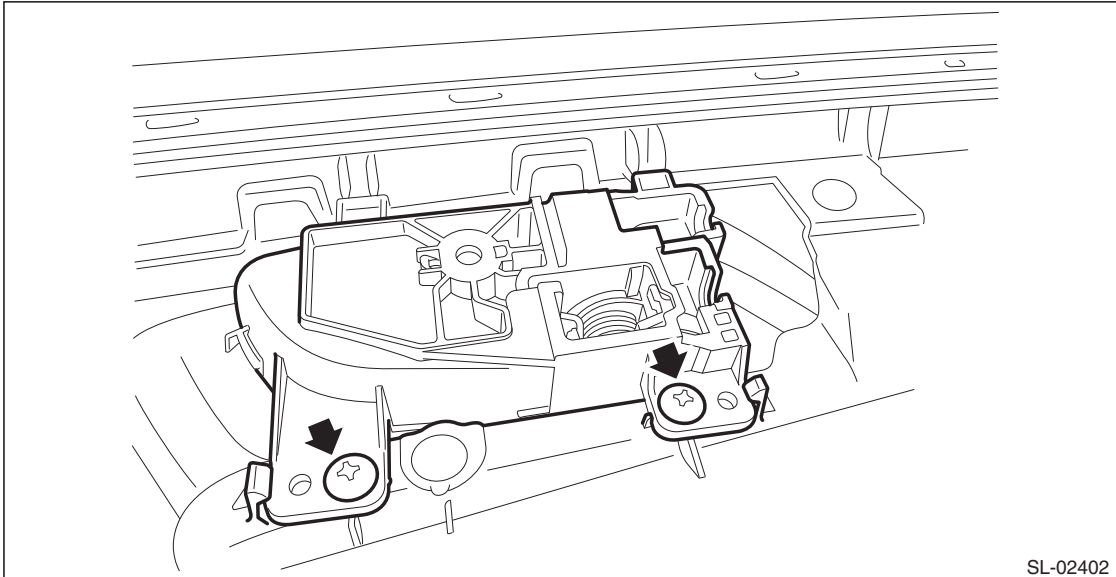
Terminal No.	Inspection conditions	Standard	Connection diagram
8 — 7	LOCK	1 MΩ or more	 SL-01568
	UNLOCK	Less than 1 Ω	

3) Replace the latch & actuator assembly - front if it is found defective.

11.Rear Inner Remote

A: REMOVAL

- 1) Remove the trim panel - rear door. <Ref. to EI-56, REAR DOOR, REMOVAL, Door Trim.>
- 2) Remove the screw, and remove the remote assembly - door.



B: INSTALLATION

- 1) Before installation, check the following items.
 - Cable is free from deformation such as fray.
 - Grease is applied sufficiently to cable joints.
 - If grease is insufficient, add it as necessary before assembling the cable.
- 2) Install each part in the reverse order of removal.

C: INSPECTION

Check if the remote handle operates normally.

- If the lever is faulty, replace the remote handle.
- If the cable is deformed, replace the latch & actuator assembly - rear.

Rear Outer Handle

SECURITY AND LOCKS

12.Rear Outer Handle

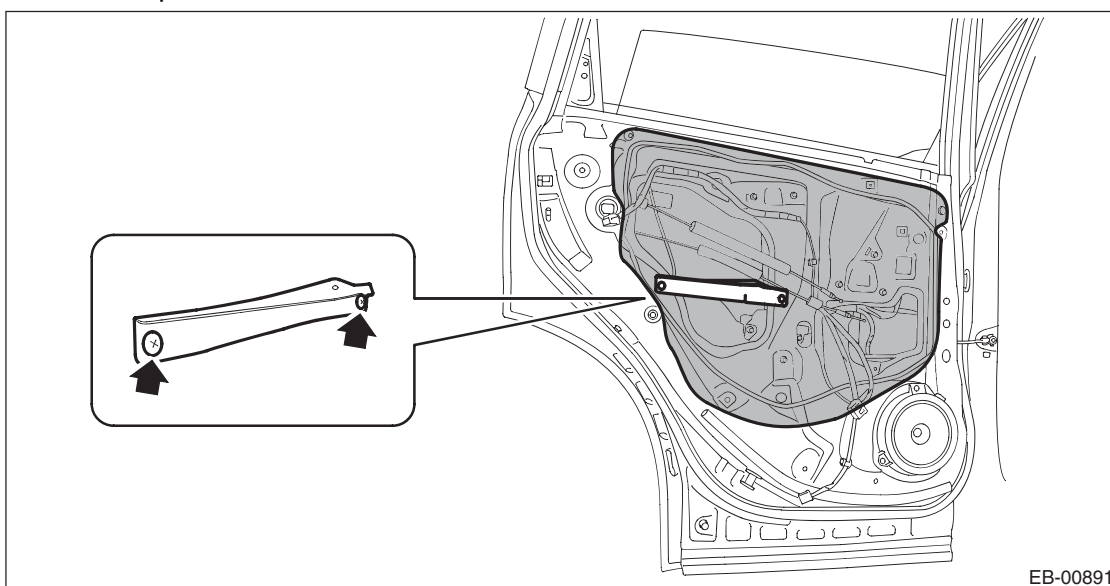
A: REMOVAL

- 1) Raise the glass assembly - rear door to the top position.
- 2) Remove the trim panel - rear door. <Ref. to EI-56, REAR DOOR, REMOVAL, Door Trim.>
- 3) Turn over the sealing cover - rear door.

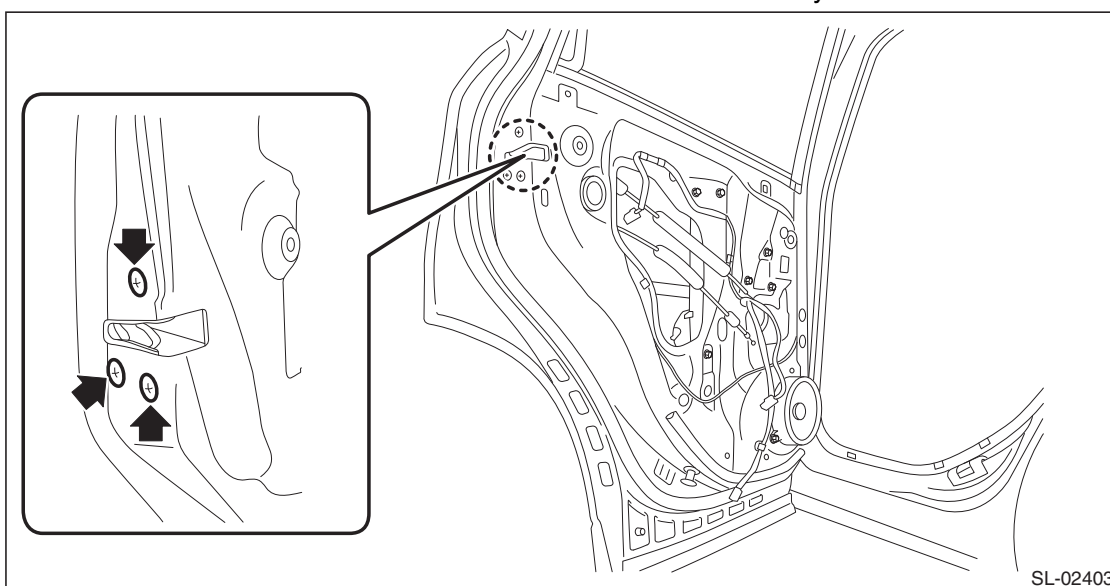
CAUTION:

- Carefully remove the butyl tape. Excessive force will easily break the sealing cover - rear door.
- If the sealing cover - rear door gets broken, replace it with a new part.
- Be careful not to allow the butyl tape to contact any trims and seats because the butyl tape, which has a strong adhesive force, is difficult to remove once it adhered.

- (1) Remove the screw to remove the bracket - door trim rear.
- (2) Disconnect connectors.
- (3) Carefully remove the butyl tape and turn over the sealing cover - rear door within the area where the operation can be performed.



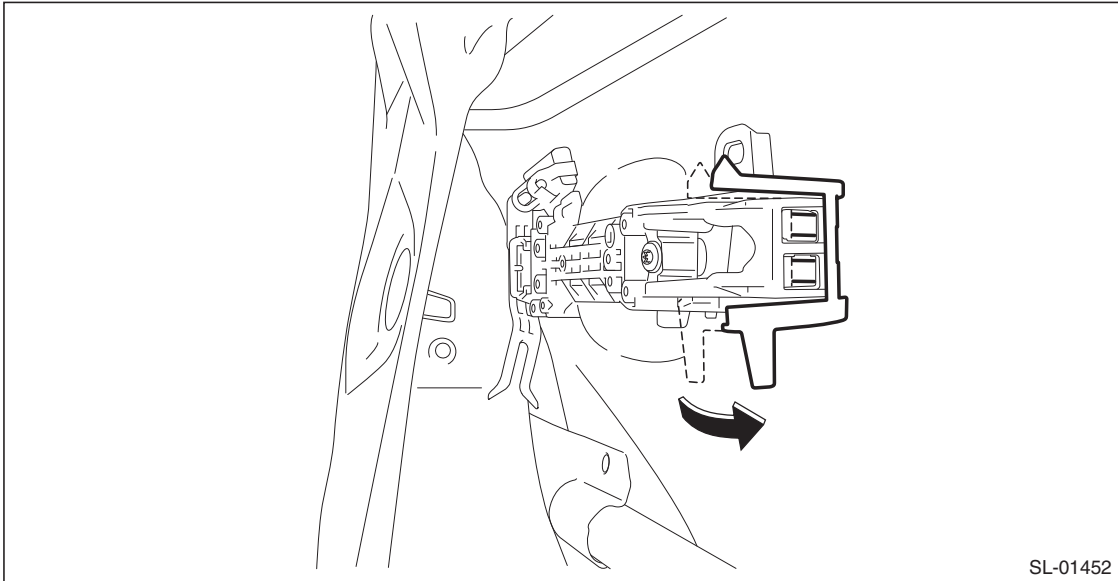
- 4) Remove the screws and move downward the latch & actuator assembly - rear.



Rear Outer Handle

SECURITY AND LOCKS

5) Remove the holder of the frame assembly - rear door outer.



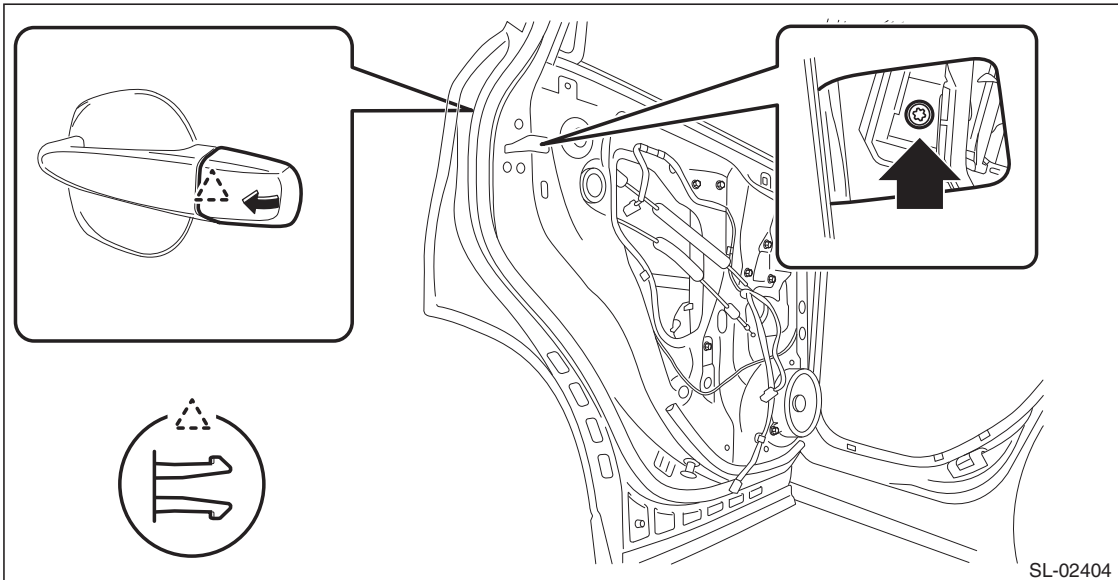
SL-01452

6) Remove the cover - handle rear outer.

Preparation tool:

TORX® T30

- (1) Loosen the TORX® bolt.
- (2) Release the claws, and then remove the cover - handle rear outer.



SL-02404

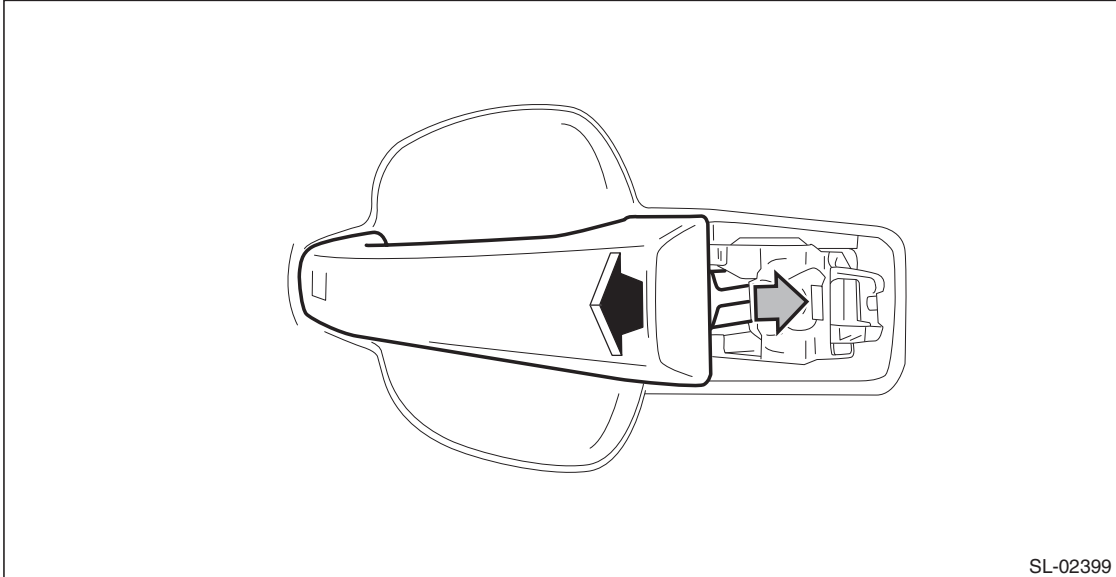
Rear Outer Handle

SECURITY AND LOCKS

7) Remove the handle - door outer by moving it rearward.

CAUTION:

**Do not apply excessive force to remove the handle - door outer from the panel assembly - rear door.
The panel assembly - rear door may be deformed.**

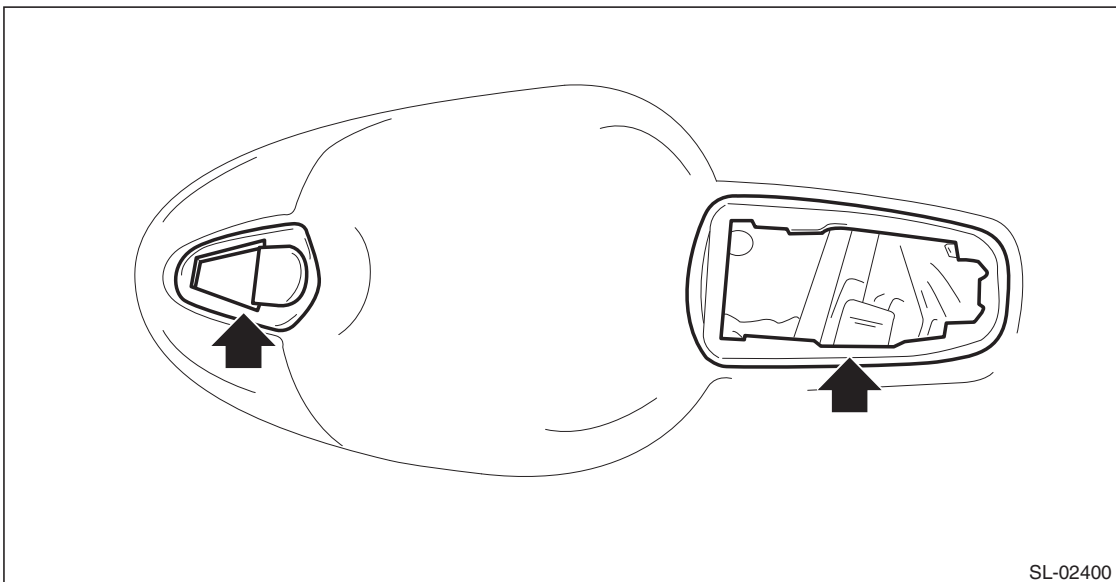


8) Remove the frame assembly - rear door outer.

Preparation tool:

TORX® T30

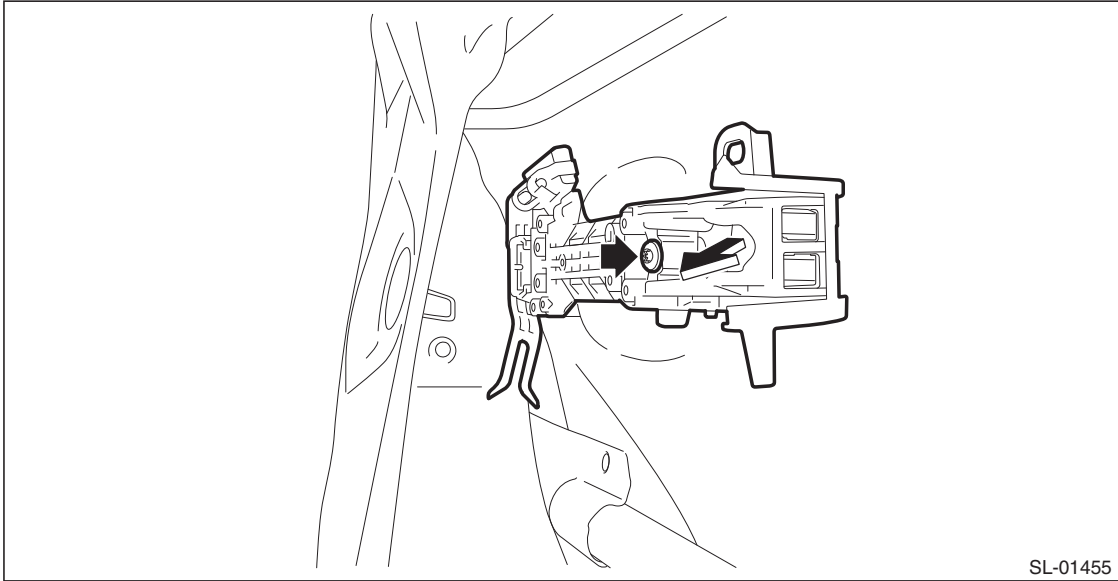
(1) Remove the spacer - door handle outer.



Rear Outer Handle

SECURITY AND LOCKS

(2) Loosen the TORX® bolt and remove the frame assembly - rear door outer from inside the panel assembly - rear door.



B: INSTALLATION

- 1) Before installation, check the following items.
 - Lever is free from deformation.
 - Grease is applied sufficiently to lever joints.
 - If grease is insufficient, add it as necessary before assembling.
- 2) Install each part in the reverse order of removal.

Tightening torque:

Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

Check if the outer handle operates normally.
If the lever is faulty, replace the handle - door outer.

Rear Door Latch and Door Lock Actuator Assembly

SECURITY AND LOCKS

13. Rear Door Latch and Door Lock Actuator Assembly

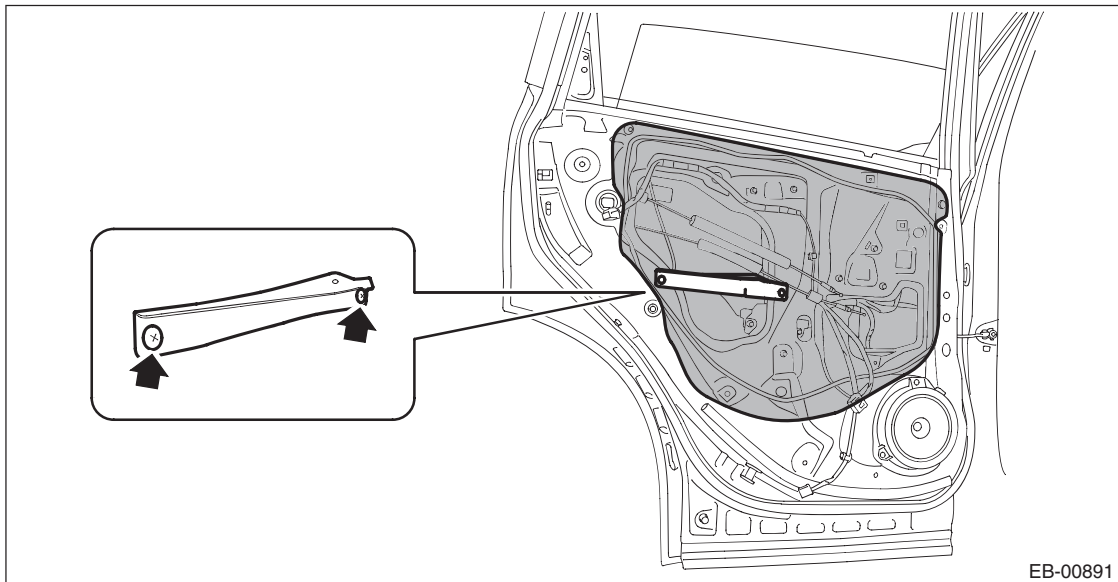
A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the trim panel - rear door. <Ref. to EI-56, REAR DOOR, REMOVAL, Door Trim.>
- 3) Turn over the sealing cover - rear door.

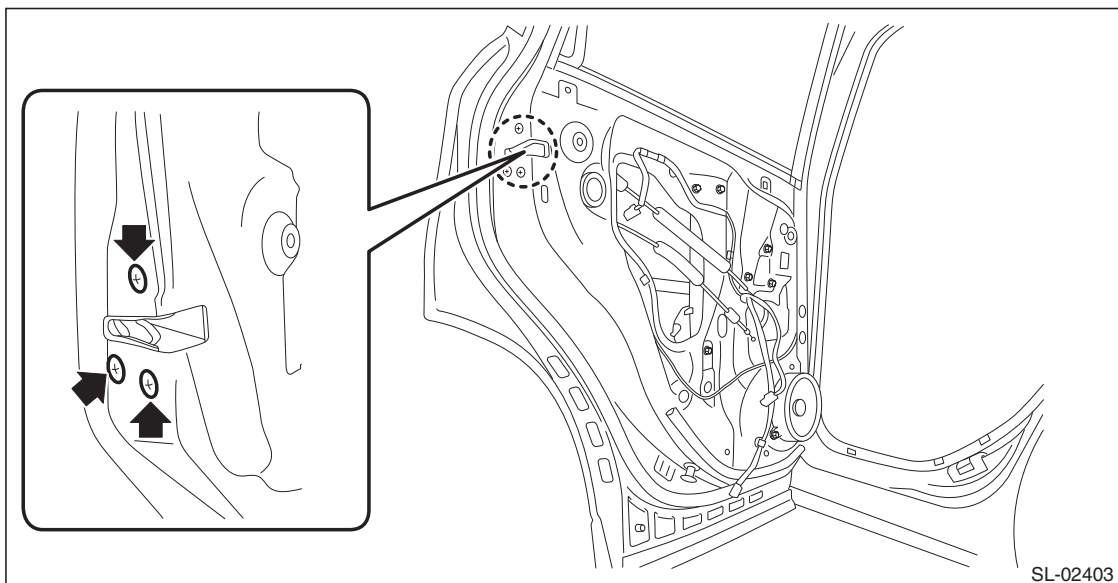
CAUTION:

- Carefully remove the butyl tape. Excessive force will easily break the sealing cover - rear door.
- If the sealing cover - rear door gets broken, replace it with a new part.
- Be careful not to allow the butyl tape to contact any trims and seats because the butyl tape, which has a strong adhesive force, is difficult to remove once it adhered.

- (1) Remove the screw to remove the bracket - door trim rear.
- (2) Disconnect connectors.
- (3) Carefully remove the butyl tape and turn over the sealing cover - rear door within the area where the operation can be performed.



- 4) Remove the glass assembly - rear door. <Ref. to GW-31, REMOVAL, Rear Door Glass.>
- 5) Remove the screws to remove the latch & actuator assembly - rear.



Rear Door Latch and Door Lock Actuator Assembly

SECURITY AND LOCKS

B: INSTALLATION

1) Before installation, check the following items.

- Cable is free from deformation.
- Grease is applied sufficiently to lever joints.
- If grease is insufficient, add it as necessary before assembling.

2) Install each part in the reverse order of removal.

Tightening torque:

Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

NOTE:

Make sure the child safety lock works correctly after installation.

C: INSPECTION

1. LATCH

Check if the latch operates normally.

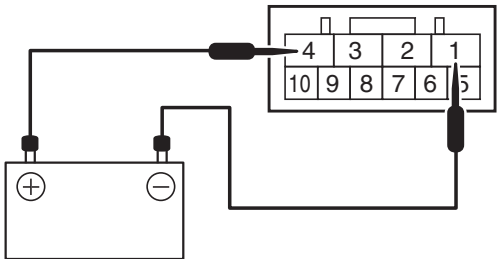
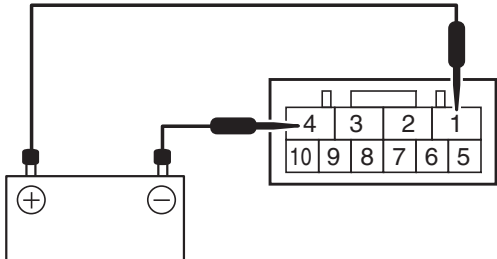
If the cable is faulty, replace the latch & actuator assembly - rear.

2. ACTUATOR

UNIT INSPECTION

1) Check door lock operation

Check the door lock operation when battery voltage is applied between the terminals of actuator.

Terminal No.	Inspection conditions	Specification	Connection diagram
4 (+) — 1 (—)	Apply battery voltage.	LOCK	 SL-01474
1 (+) — 4 (—)		UNLOCK	 SL-01473

2) If it does not operate properly as a result of inspection, replace the latch & actuator assembly - rear.

Rear Gate Opener Button

SECURITY AND LOCKS

14. Rear Gate Opener Button

A: REMOVAL

NOTE:

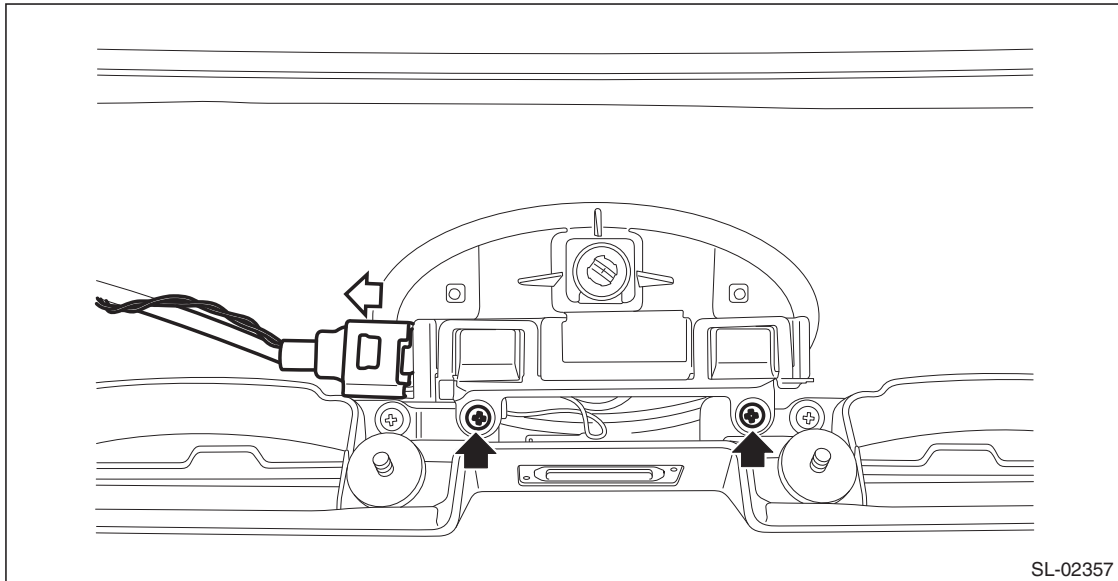
The button - opener rear gate is integrated with the rear lock button. (Model with keyless access)

1) Remove the trim panel - rear gate and the garnish assembly - rear gate. <Ref. to EI-126, REMOVAL, Rear Gate Garnish.>

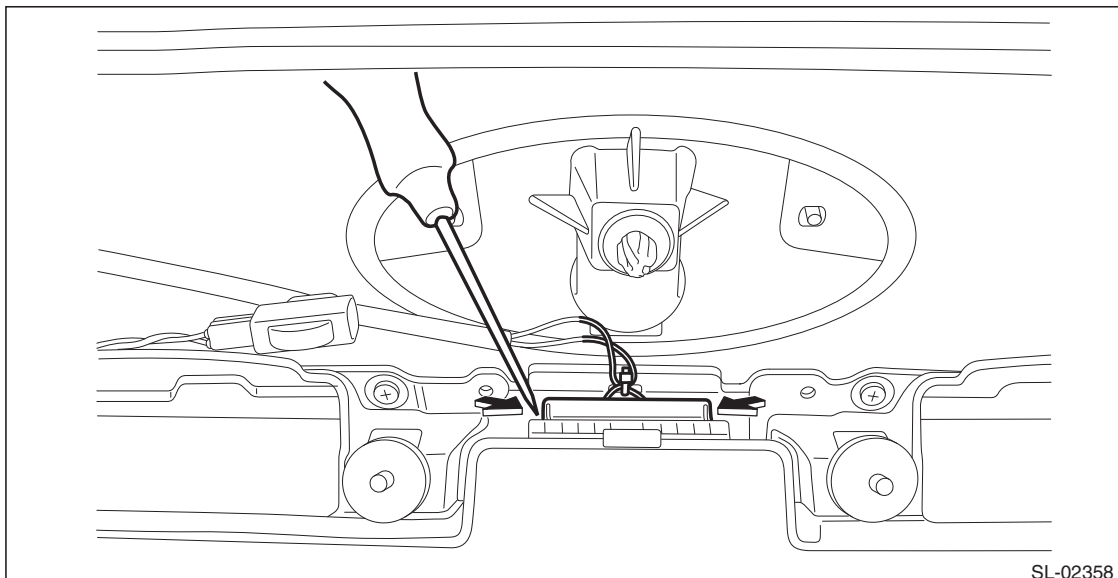
2) Remove the interior antenna. (Model with keyless access)

(1) Remove the connector.

(2) Remove the screws and detach the interior antenna.



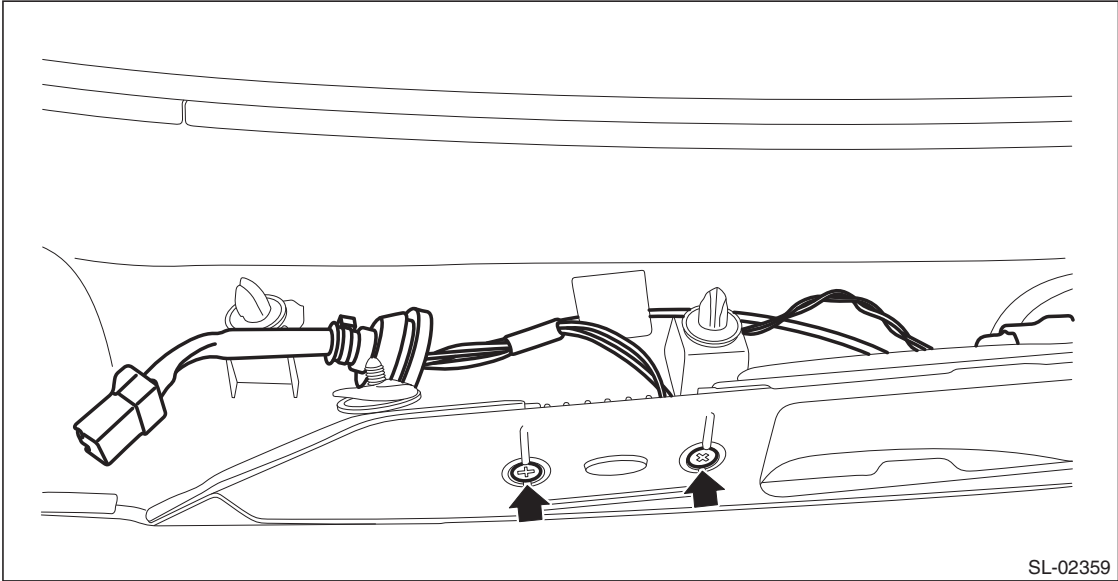
3) Release the locks at both ends of the button - opener rear gate by pushing them with a flat tip screwdriver, and remove the button - opener rear gate.



Rear Gate Opener Button

SECURITY AND LOCKS

4) Remove the screws, and remove the rear lock button, and remove the integrated harness. (Model with keyless access)



B: INSTALLATION

CAUTION:
Make sure that the harness grommet is securely installed.
If not properly installed, this may cause leaks.
Install each part in the reverse order of removal.

NOTE:
Refer to "INSTALLATION" of "Rear Gate Garnish". <Ref. to EI-128, INSTALLATION, Rear Gate Garnish.>

C: INSPECTION

UNIT INSPECTION

Preparation tool:
Circuit tester

1) Check the resistance between switch terminals.

Terminal No.	Inspection conditions	Standard	Connection diagram
1 — 2	OPEN	Less than 5 Ω	
	CLOSE	1 MΩ or more	

SL-01578

2) If the inspection result is not within the standard, replace the button - opener rear gate.

Rear Gate Latch and Actuator Assembly

SECURITY AND LOCKS

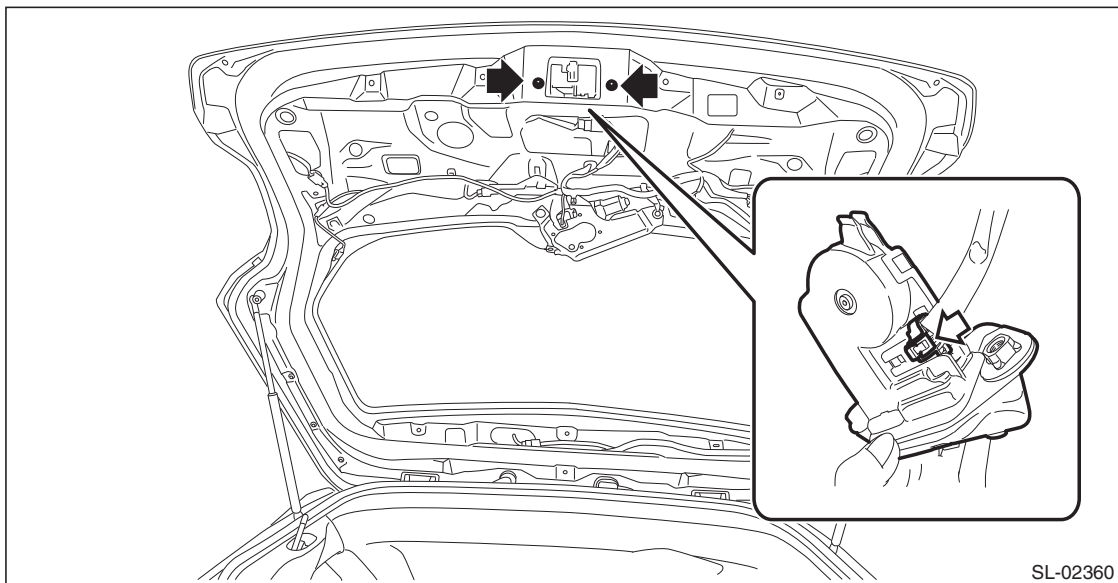
15. Rear Gate Latch and Actuator Assembly

A: REMOVAL

NOTE:

For models with power rear gate, refer to "Power Rear Gate Auto Closer". <Ref. to PRG-15, REMOVAL, Power Rear Gate Auto Closer.>

- 1) Disconnect the ground cable from battery.
- 2) Remove the trim panel - rear gate. <Ref. to EI-122, REMOVAL, Rear Gate Trim.>
- 3) Remove the latch and actuator - rear gate.
 - (1) Disconnect the connector.
 - (2) Remove the bolts, and remove the latch and actuator - rear gate.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:

Refer to "COMPONENT" of "General Description". <Ref. to SL-3, REAR GATE LOCK, COMPONENT, General Description.>

Rear Gate Latch and Actuator Assembly

SECURITY AND LOCKS

C: INSPECTION

1. LATCH

Check if the latch operates normally.

If latch deformation, abnormal wear, or unsmooth lock operation is observed, replace the latch and actuator - rear gate.

2. ACTUATOR

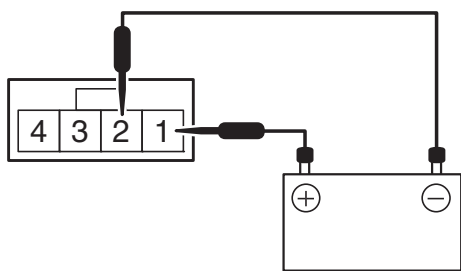
UNIT INSPECTION

PREPARATION TOOL:

Circuit tester

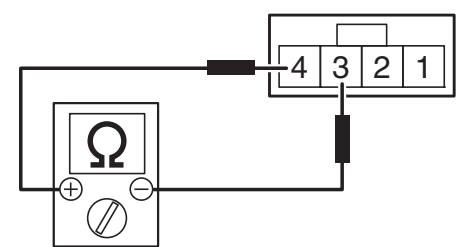
1) Check door lock operation

Check the door lock operation when battery voltage is applied between the terminals of actuator.

Terminal No.	Inspection conditions	Specification	Connection diagram
1 (+) — 2 (—)	Connect battery to the terminals	OPEN	 SL-01477

2) Check switch

Check the resistance between actuator terminals.

Terminal No.	Inspection conditions	Specification	Connection diagram
3 — 4	OPEN	Less than 1.5 Ω	 SL-01478
	CLOSE	1 M Ω or more	

3) If it does not operate properly as a result of inspection, replace the latch and actuator - rear gate.

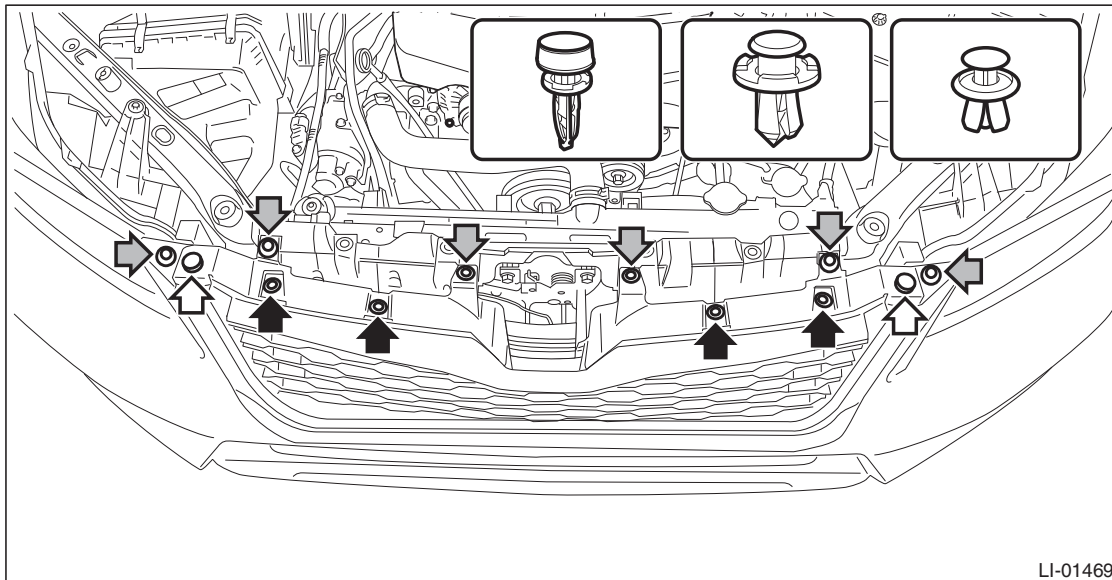
Front Hood Lock Assembly

SECURITY AND LOCKS

16. Front Hood Lock Assembly

A: REMOVAL

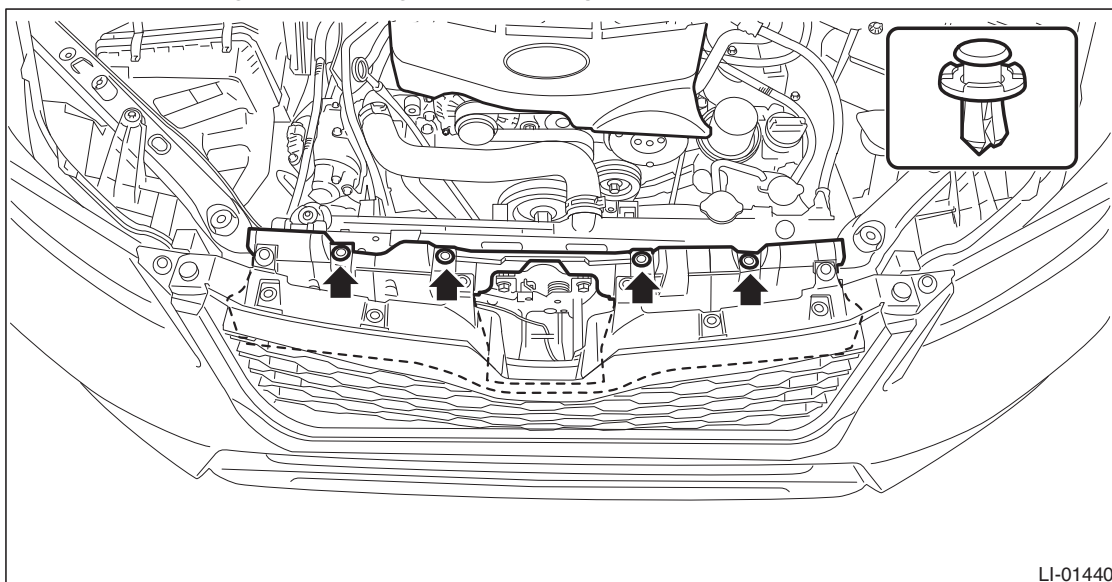
- 1) Open the front hood.
- 2) Remove the beam COMPL - front UPR.
 - (1) Remove each bumper clip.



- 3) Remove the clip, and remove the bracket - grille.

CAUTION:

- To prevent damage to the bracket - grille, make sure to remove all clips.
- Be careful not to damage the front grille assembly, etc.

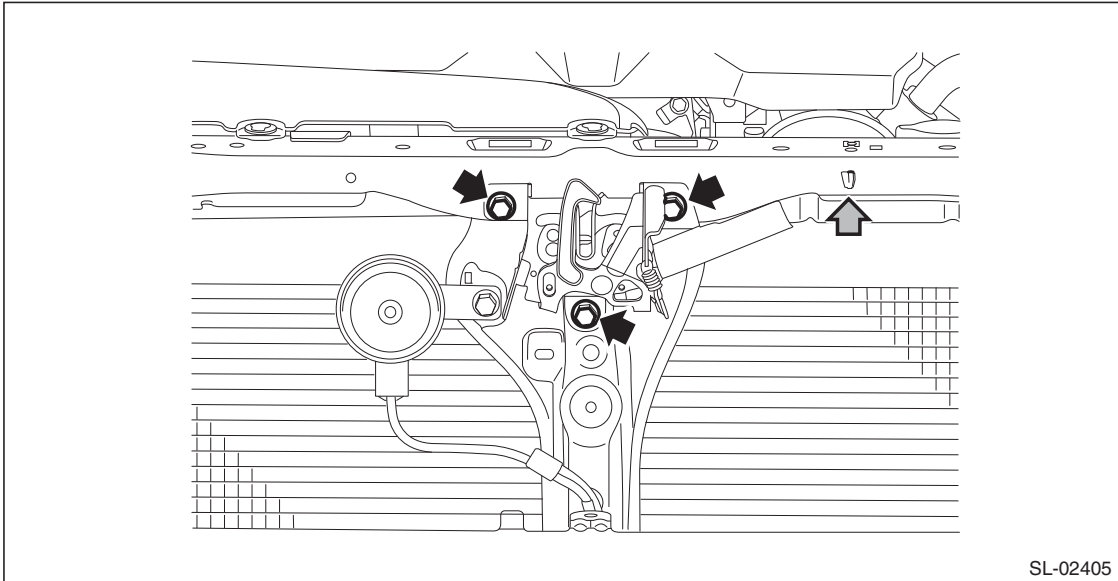


Front Hood Lock Assembly

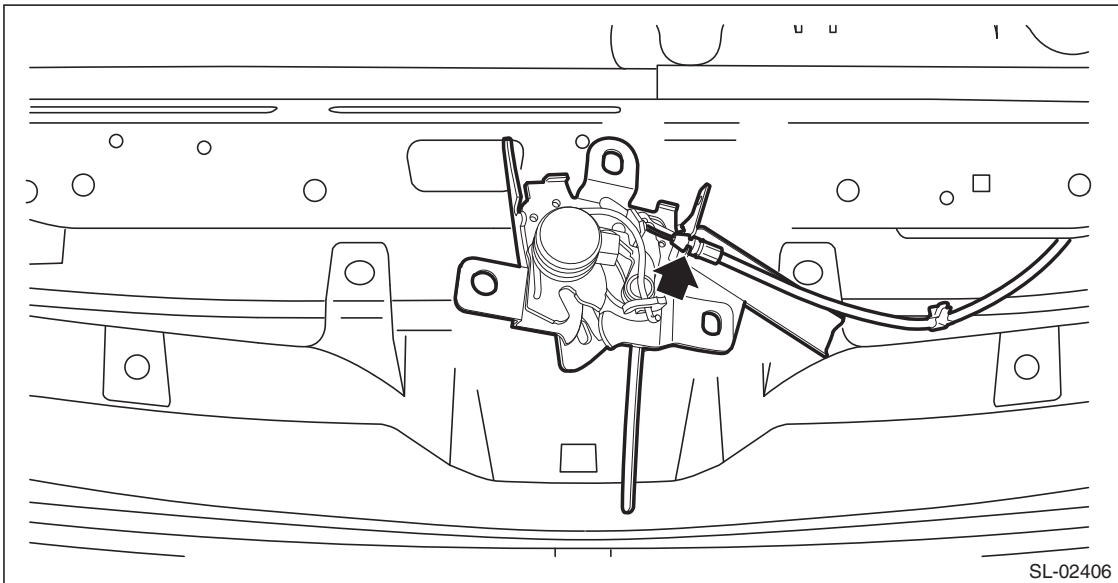
SECURITY AND LOCKS

4) Remove the lock assembly - front hood.

(1) Remove the bolt and clip.



(2) Disconnect the release cable, and detach the lock assembly - front hood.



NOTE:

When disconnecting the release cable, refer to "FRONT HOOD OPENER" of "Remote Openers". <Ref. to SL-55, FRONT HOOD OPENER, REMOVAL, Remote Openers.>

B: INSTALLATION

1) Before installation, check the following items.

- Is the cable deformed?
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.

2) Install each part in the reverse order of removal.

Tightening torque:

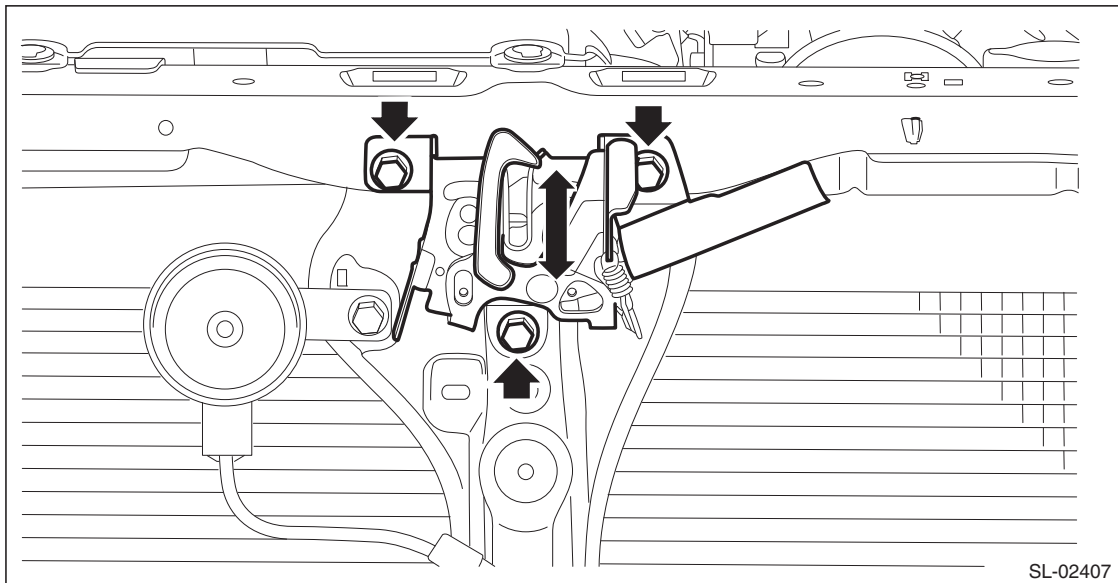
Refer to "COMPONENT" of "General Description". <Ref. to SL-4, FRONT HOOD LOCK, COMPONENT, General Description.>

Front Hood Lock Assembly

SECURITY AND LOCKS

C: ADJUSTMENT

- 1) Loosen the bolt, and adjust the lock assembly - front hood while moving it up and down.



- 2) After adjustment, tighten the bolts securely.

Tightening torque:

Refer to "COMPONENT" of "General Description". <Ref. to SL-4, FRONT HOOD LOCK, COMPONENT, General Description.>

D: INSPECTION

Check if the lock assembly operates normally.

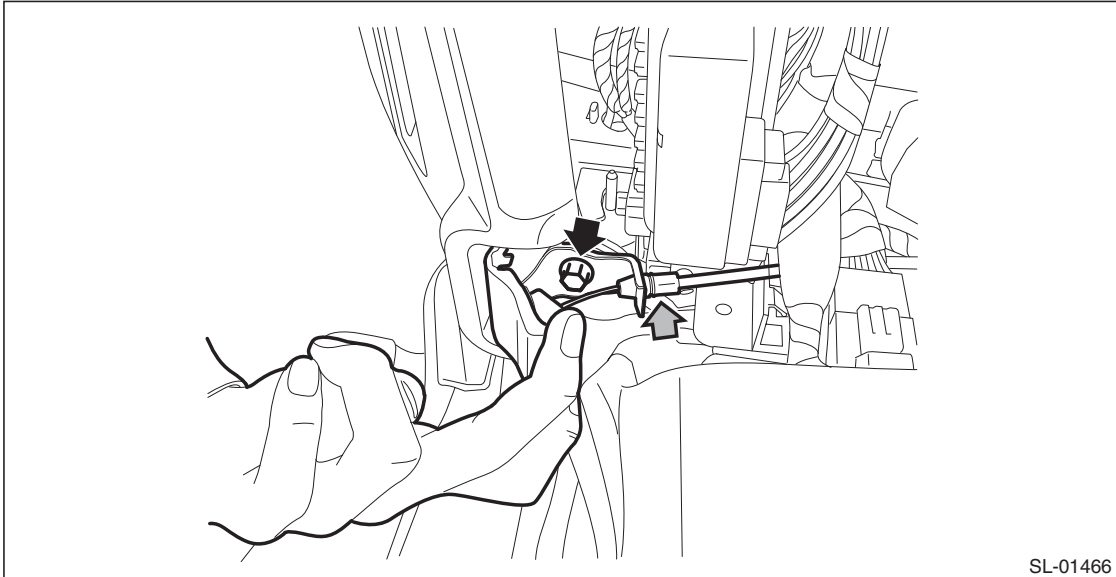
If lever deformation, abnormal wear, or unsmooth lock operation is observed, replace the lock assembly - front hood.

17.Remote Openers

A: REMOVAL

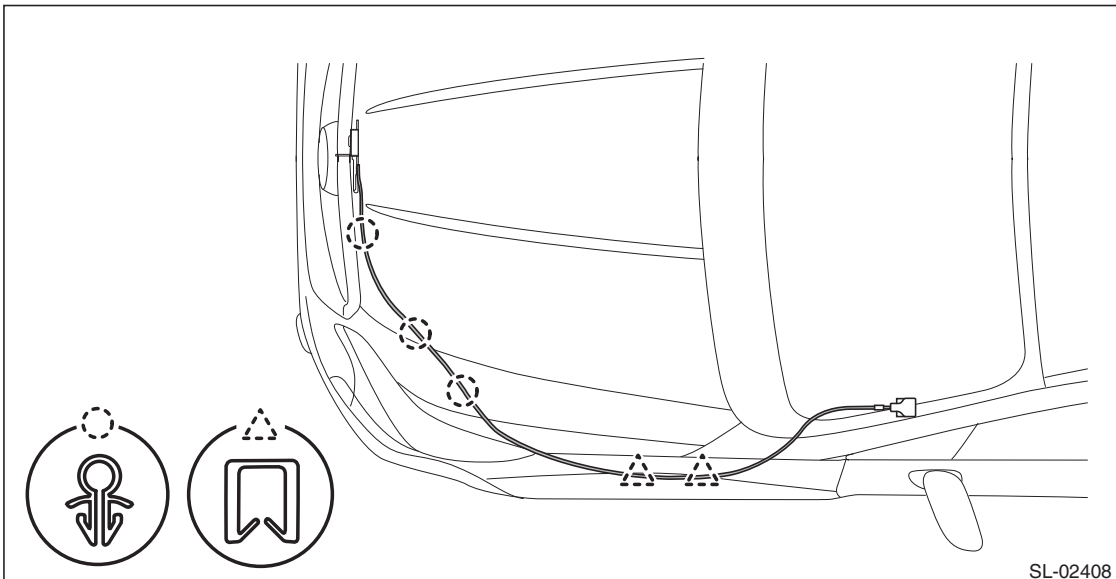
1. FRONT HOOD OPENER

- 1) Remove the opener handle.
 - (1) Remove the cable.
 - (2) Remove the bolt, and remove the opener handle.



- 2) Remove the following parts and remove the cable clip and cable.

- Lock assembly - front hood: <Ref. to SL-52, REMOVAL, Front Hood Lock Assembly.>
- Cover assembly - instrument panel LWR driver: <Ref. to EI-59, REMOVAL, Instrument Panel Lower Cover.>

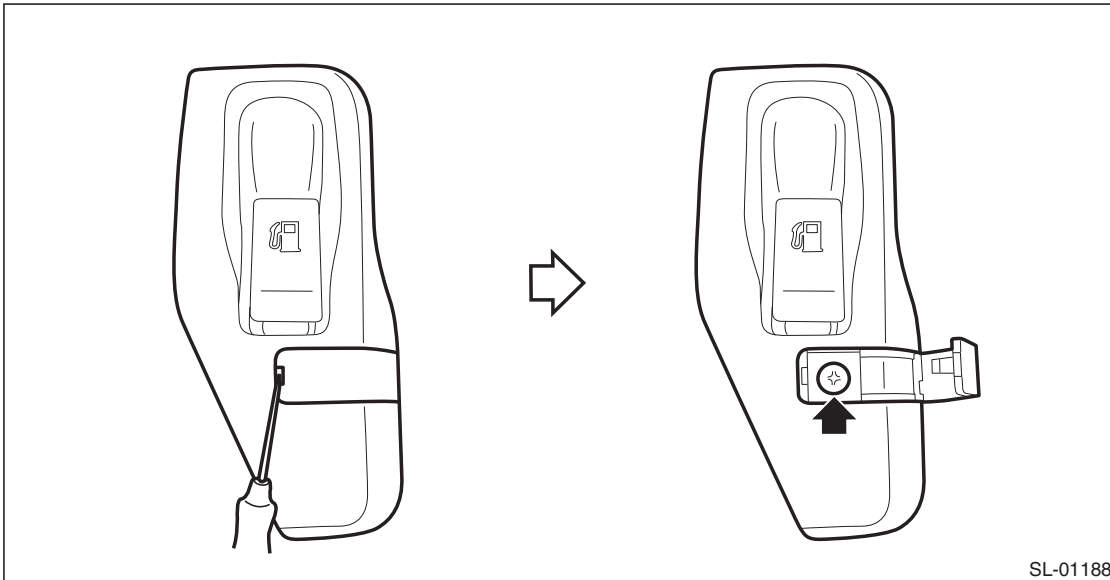


Remote Openers

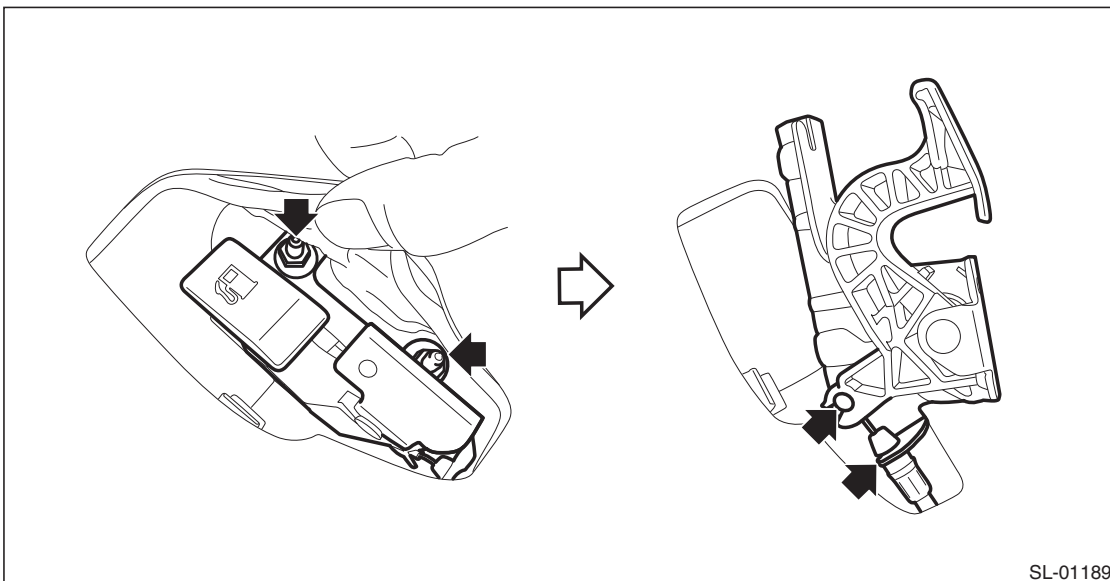
SECURITY AND LOCKS

2. FUEL FLAP OPENER

- 1) Remove the cover - handle.
 - (1) Open the cover by using a flat tip screwdriver.
 - (2) Remove the screws and detach the cover - handle.



- 2) Remove the pull handle - opener.
 - (1) Remove the nut.
 - (2) Remove the cable from pull handle - opener.

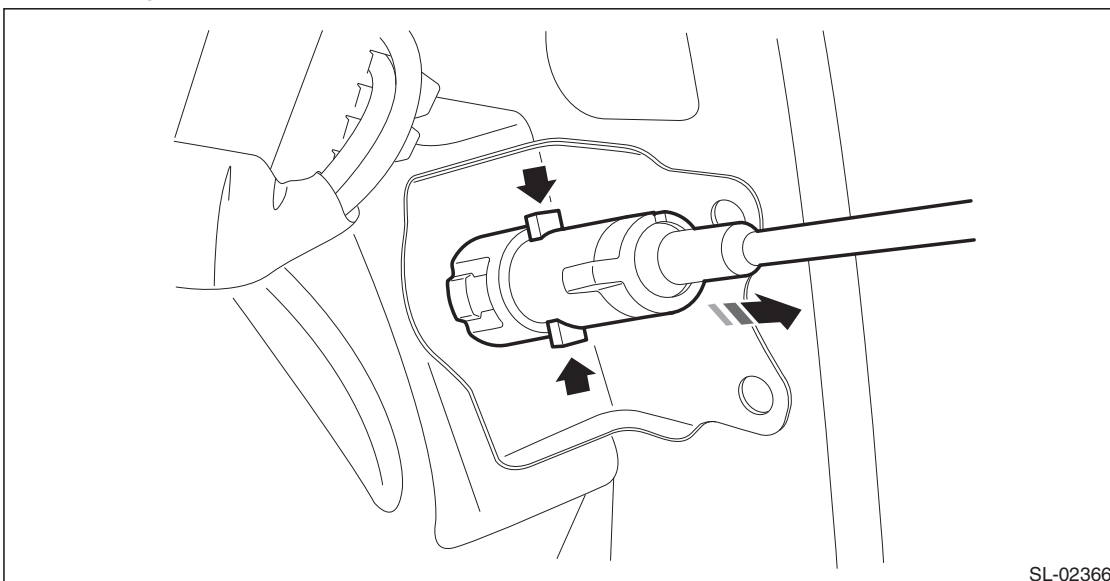


- 3) Remove the trim panel - rear apron RH. <Ref. to EI-102, REMOVAL, Rear Quarter Trim.>

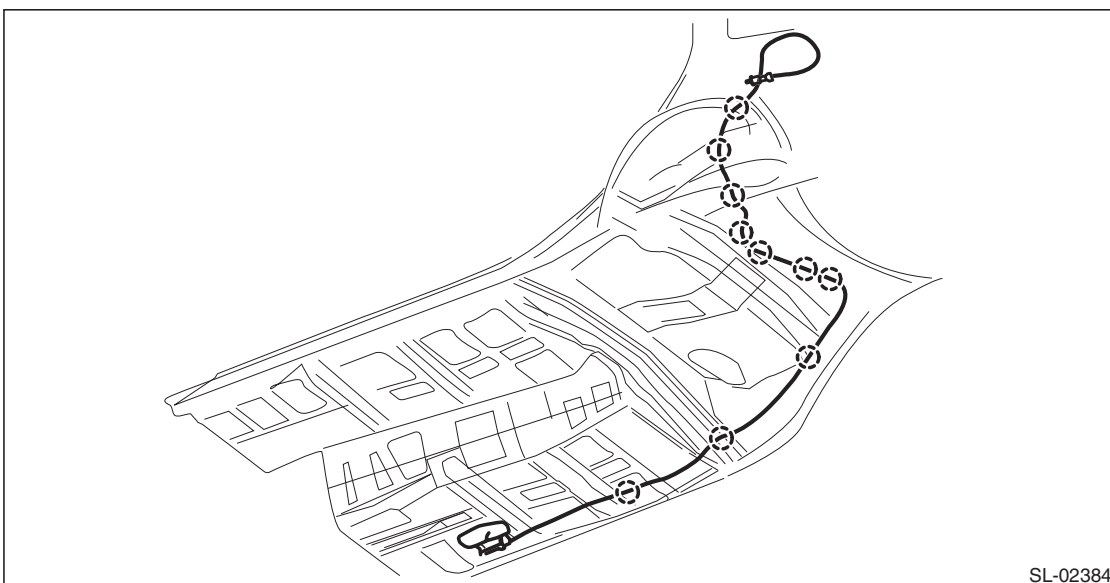
Remote Openers

SECURITY AND LOCKS

- 4) Remove the fuel lock inside the quarter panel.
 - (1) Press the claws of the fuel lock.
 - (2) While keeping the condition in step (1), pull the fuel lock to the rearward of the vehicle.



- 5) Remove the lower inner trim. <Ref. to EI-92, REMOVAL, Lower Inner Trim.>
- 6) Remove the cable clip, and remove the cable.



B: INSTALLATION

- 1) Before installation, check the following items.
 - Cable is free from deformation such as fray.
- 2) Install each part in the reverse order of removal.

Tightening torque:

Front hood lock: <Ref. to SL-4, FRONT HOOD LOCK, COMPONENT, General Description.>

Remote opener: <Ref. to SL-4, FUEL FLAP OPENER, COMPONENT, General Description.>

C: INSPECTION

Check if the front hood and fuel flap operate normally.

Ignition Key Lock

SECURITY AND LOCKS

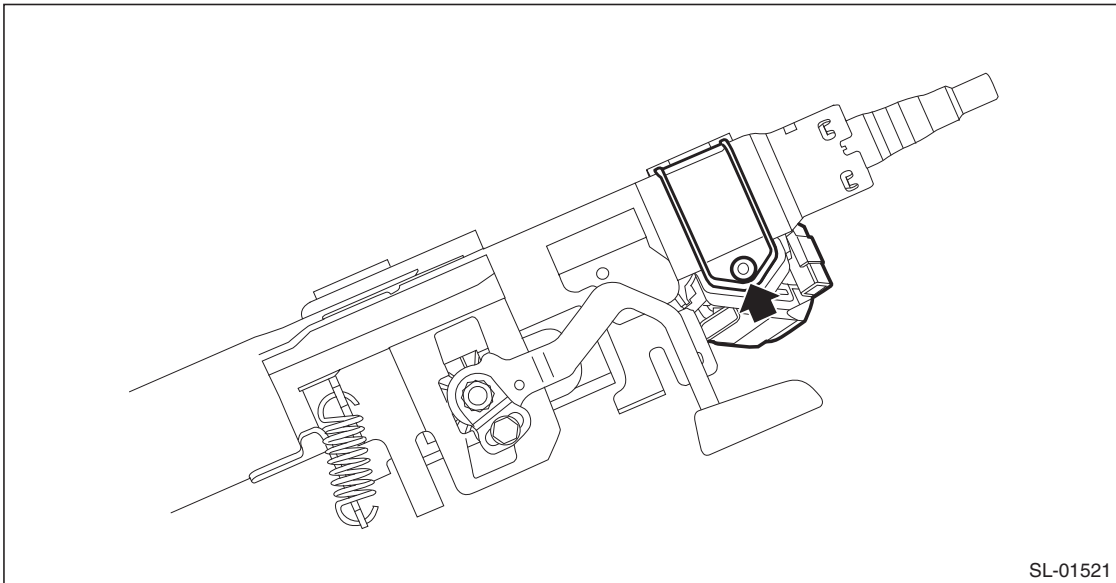
18. Ignition Key Lock

A: REPLACEMENT

CAUTION:

- Before handling the airbag module, refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM”. <Ref. to AB-9, CAUTION, General Description.>
- If the steering wheel and steering angle sensor (steering roll connector) are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-23, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

- 1) Disconnect the ground cable from battery.
- 2) Remove the column assembly - steering. <Ref. to PS-18, REMOVAL, Steering Column.>
- 3) Remove the ignition key lock.
 - (1) Secure the column assembly - steering in a vise.
 - (2) Use the reverse tap or drill to remove the set bolt and remove the ignition key lock.



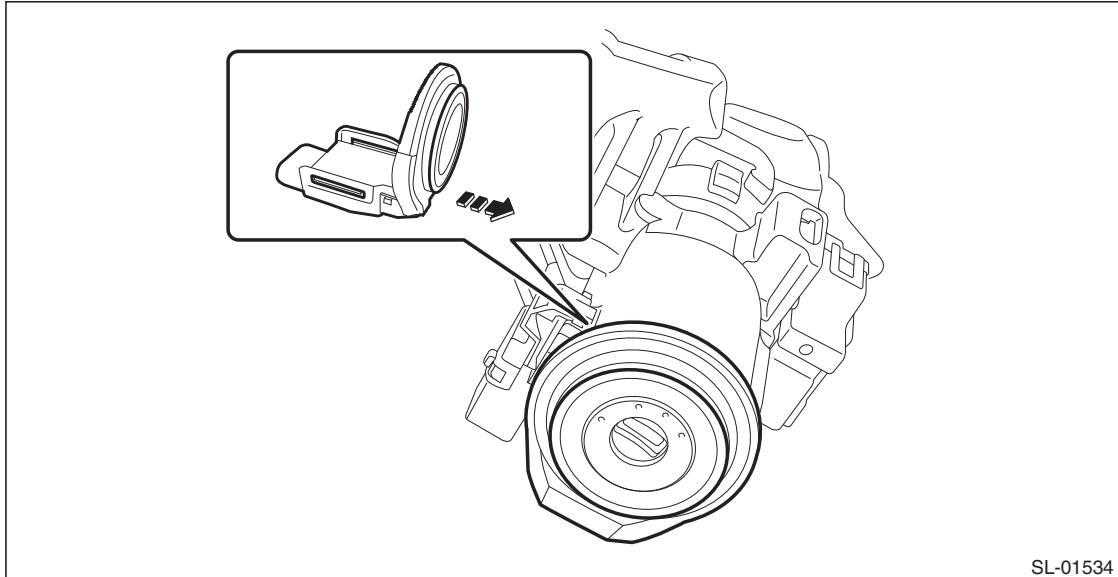
- 4) Install the ignition key lock.
 - (1) Secure the ignition key lock to the column assembly - steering.
 - (2) Use new set bolts. Tighten the bolt until the bolt head is broken (bolt head wrenched off).

B: DISASSEMBLY

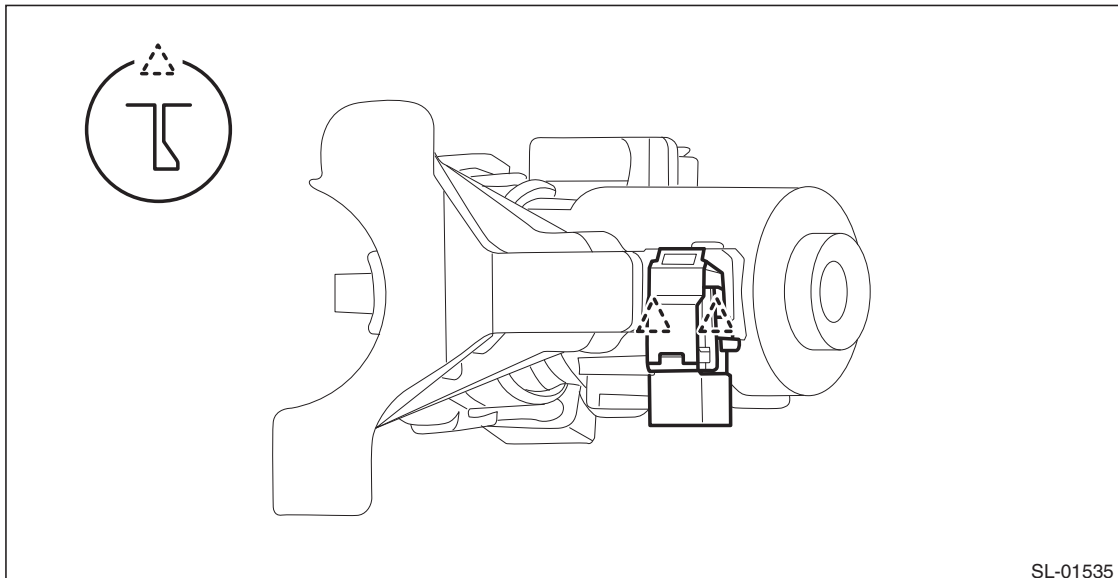
1) Remove the immobilizer antenna assembly.

CAUTION:

Do not apply excessive force to remove the immobilizer antenna and lock. Otherwise they may be broken because those parts are the products made of a plastic.



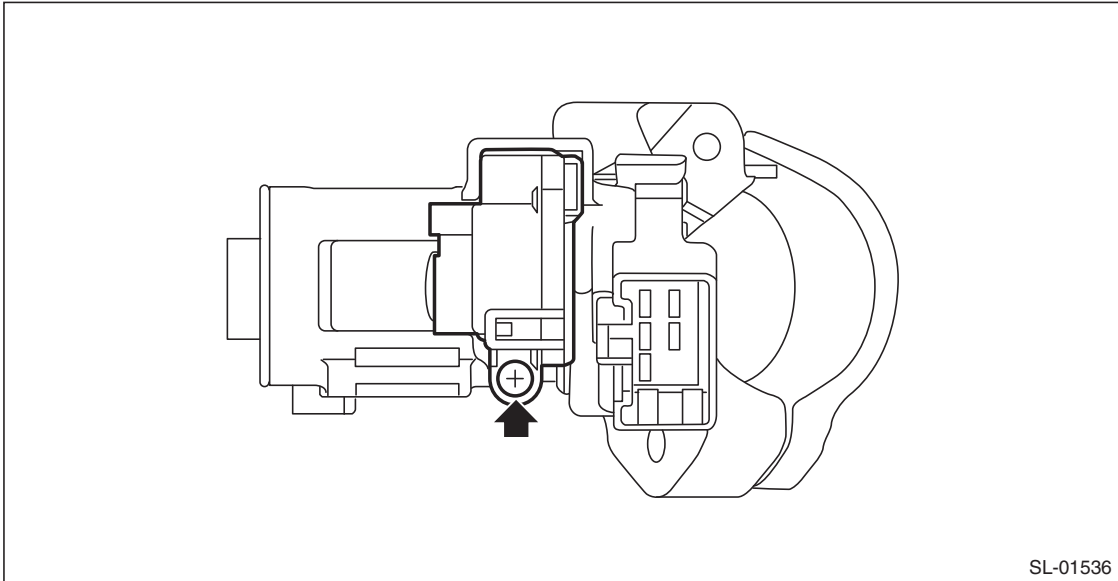
2) Release the claws, and pull the key warning switch downwards to remove.



Ignition Key Lock

SECURITY AND LOCKS

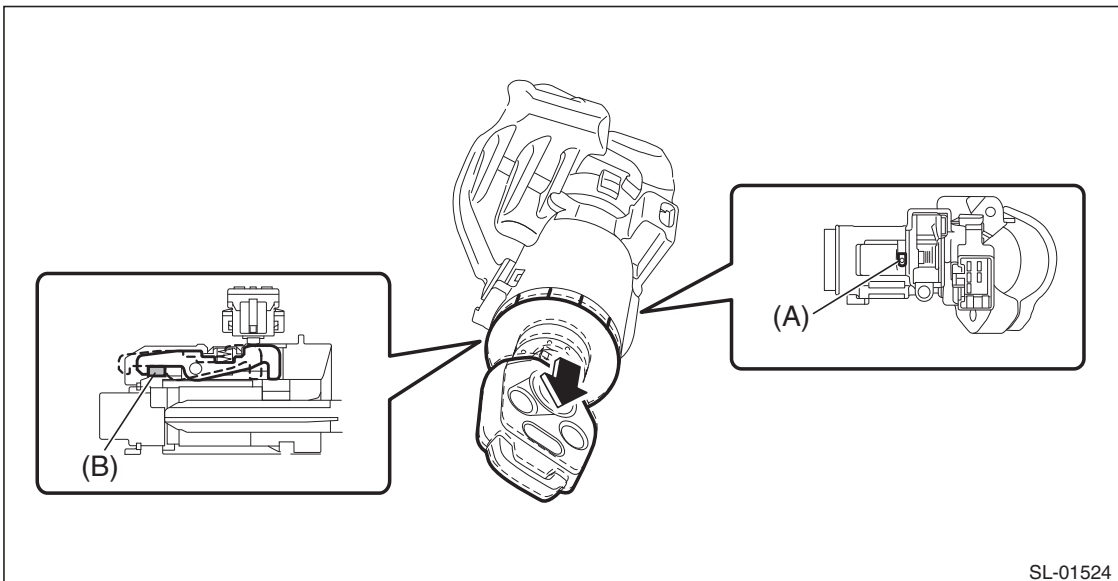
3) Remove the screws and remove the key lock solenoid.



4) Replace the key cylinder.

(1) Insert the key into the key cylinder, and turn the key to the ACC position.

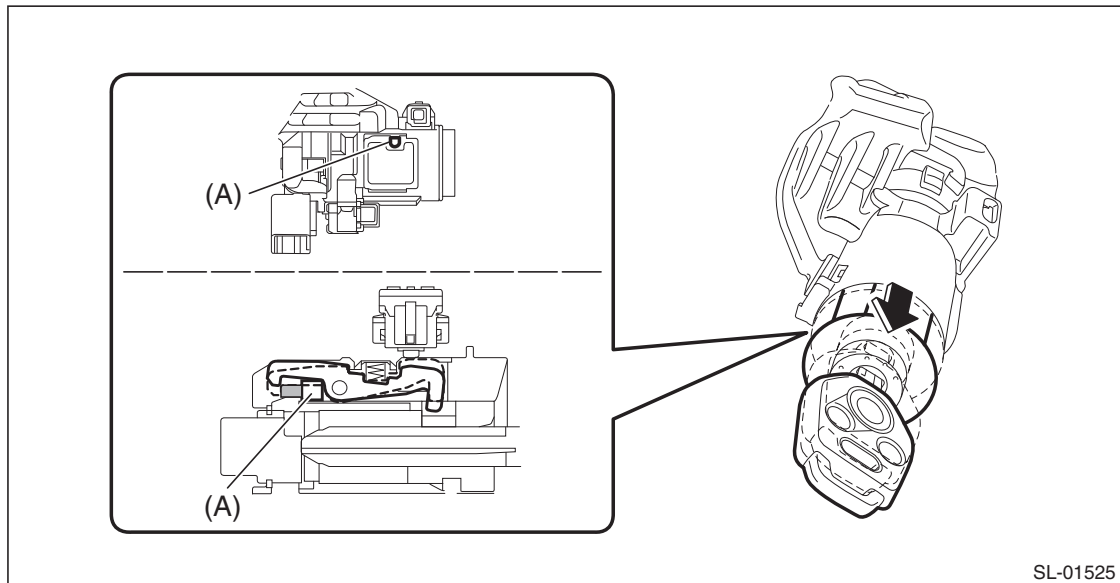
(2) Insert a flat tip screwdriver from the steering lock frame hole (A), and pull the key cylinder until the key cylinder claws touch the steering lock frame stopper (B).



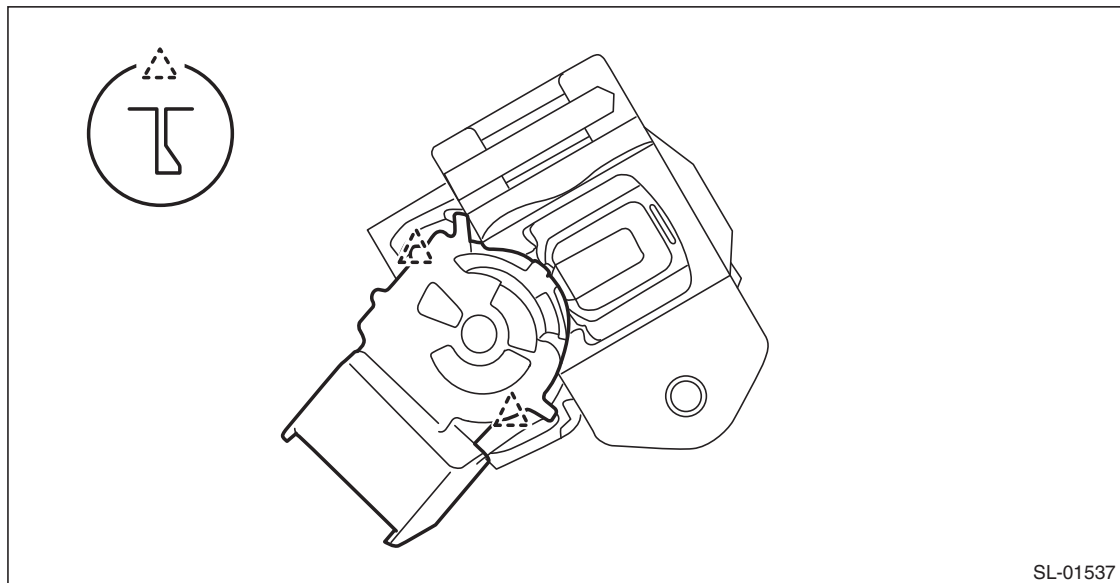
Ignition Key Lock

SECURITY AND LOCKS

(3) Insert a flat tip screwdriver from the steering lock frame hole (A), and release the claws to pull out the key cylinder.



5) Release the claws and remove the ignition switch assembly.



Ignition Key Lock

SECURITY AND LOCKS

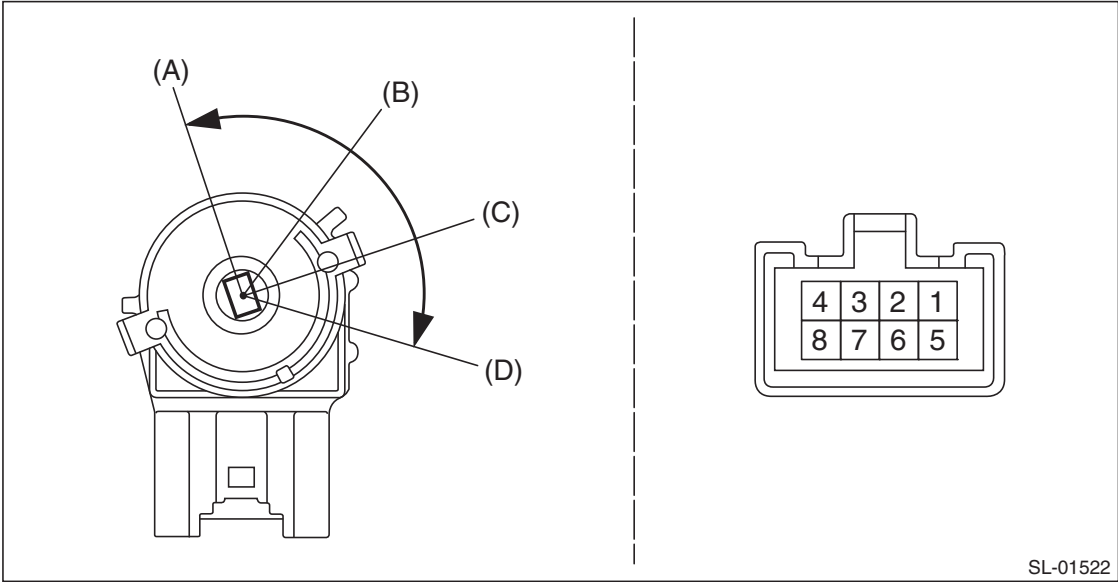
C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:

Circuit tester

1) Check the resistance between switch terminals.



Terminal No.	Inspection conditions		Standard
Between all terminals	(A)	LOCK	1 MΩ or more
2 — 4	(B)	ACC	Less than 1 Ω
1 — 2 — 4 5 — 6	(C)	ON	Less than 1 Ω
1 — 3 — 4 5 — 6 — 7	(D)	ST	Less than 1 Ω

2) Replace the ignition switch assembly if the inspection result is not within the standard.

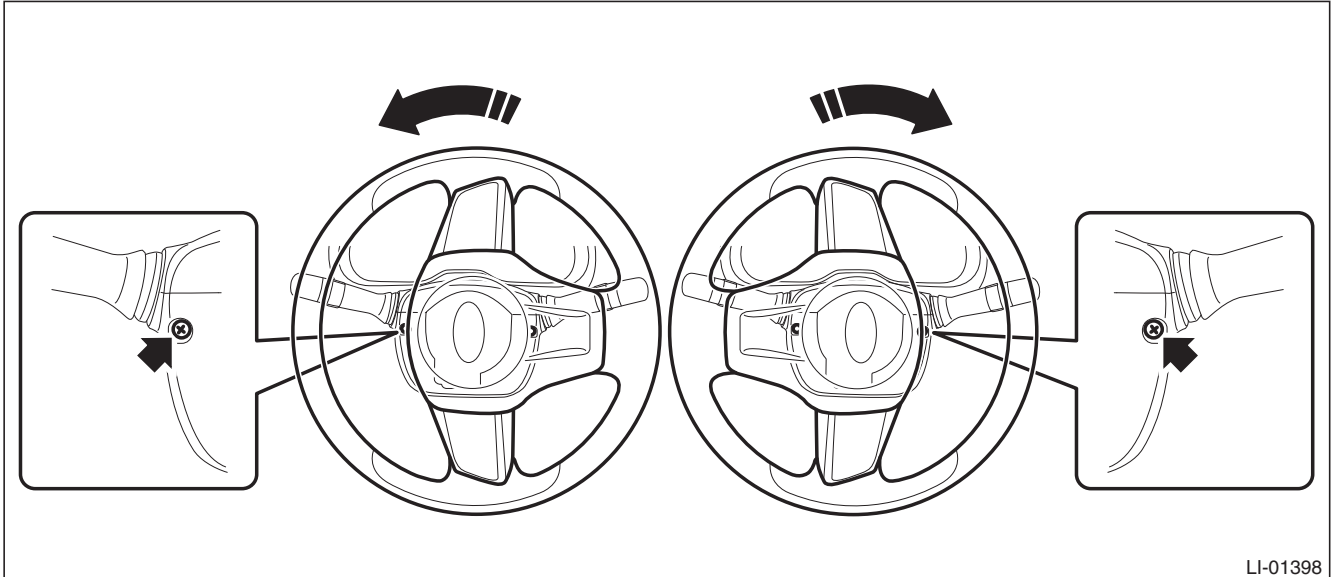
19.Key Lock Cylinders

A: REPLACEMENT

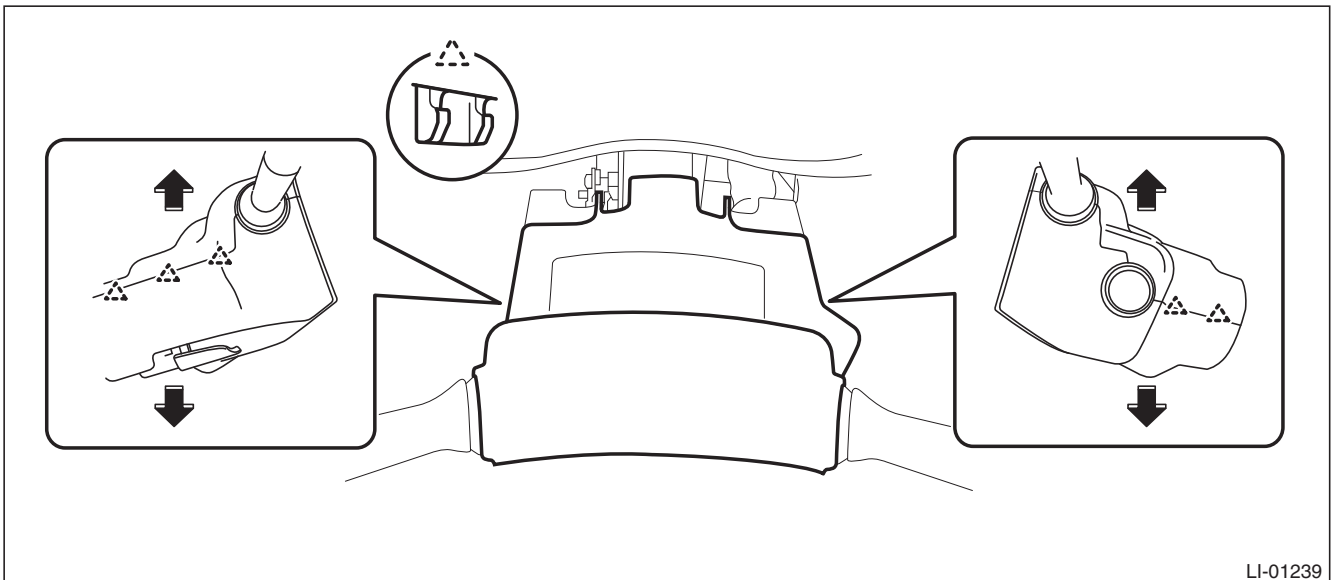
1. STEERING LOCK

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

(1) Remove the screws by turning the steering wheel to right and left.



- (2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.



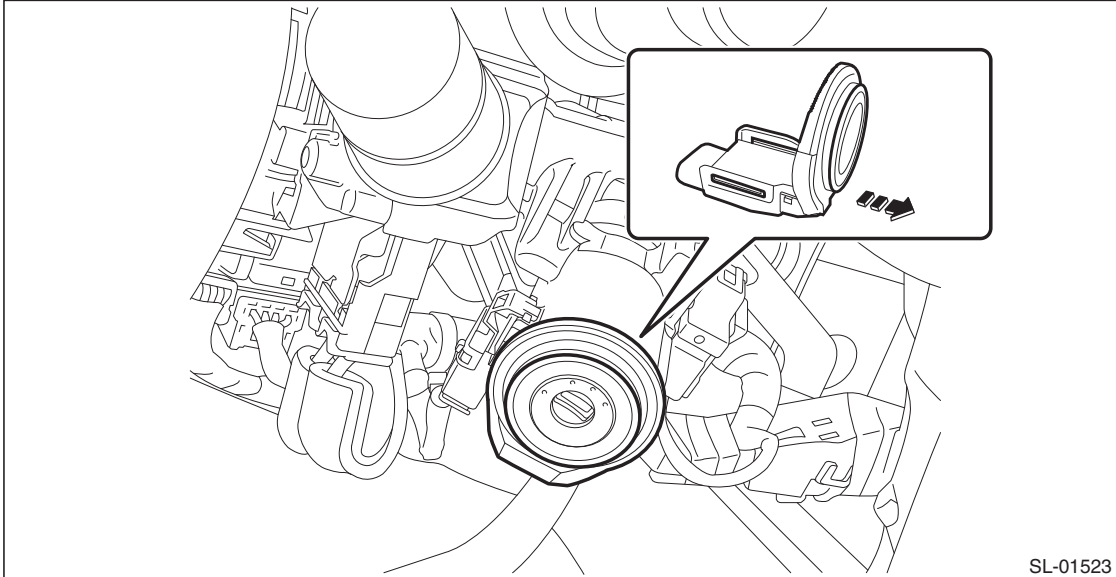
Key Lock Cylinders

SECURITY AND LOCKS

3) Disconnect the connector and remove the immobilizer antenna assembly.

CAUTION:

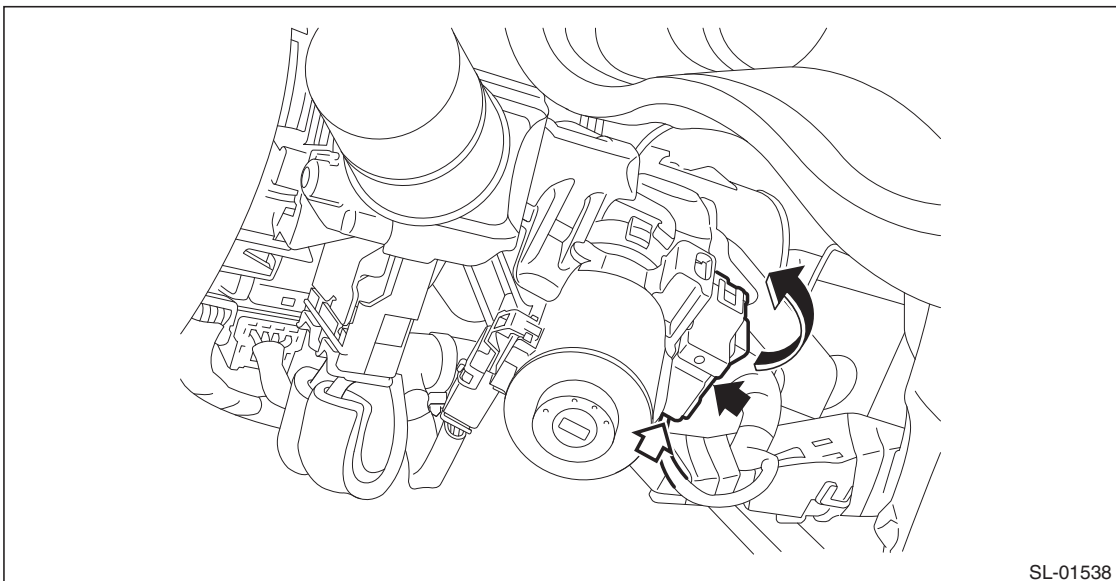
Do not apply excessive force to remove the immobilizer antenna and lock. Otherwise they may be broken because those parts are the products made of a plastic.



4) Remove the key lock solenoid.

(1) Disconnect the connector.

(2) Remove the screws and remove the key lock solenoid.



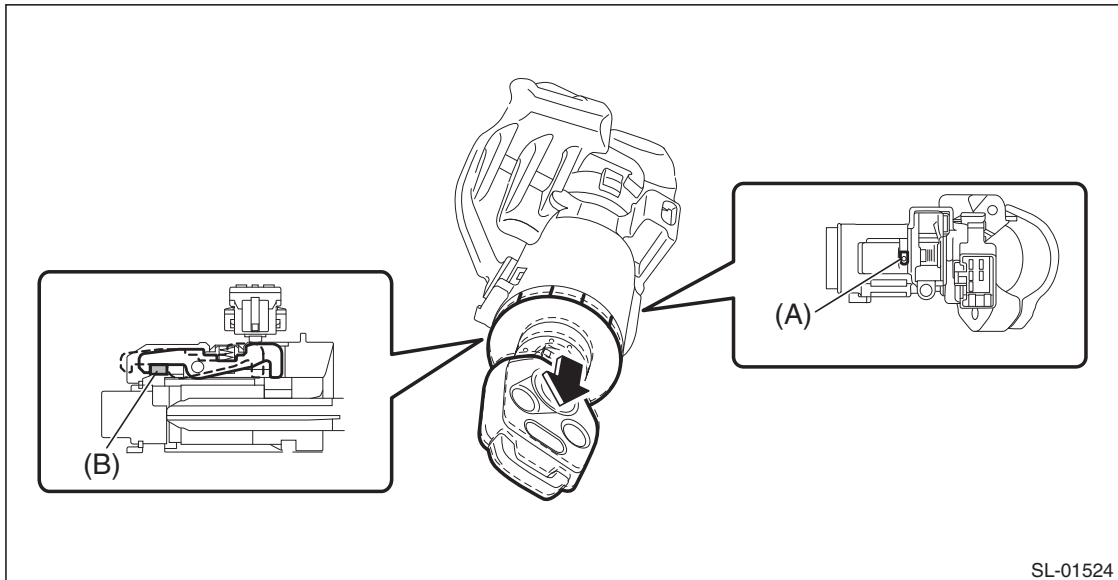
Key Lock Cylinders

SECURITY AND LOCKS

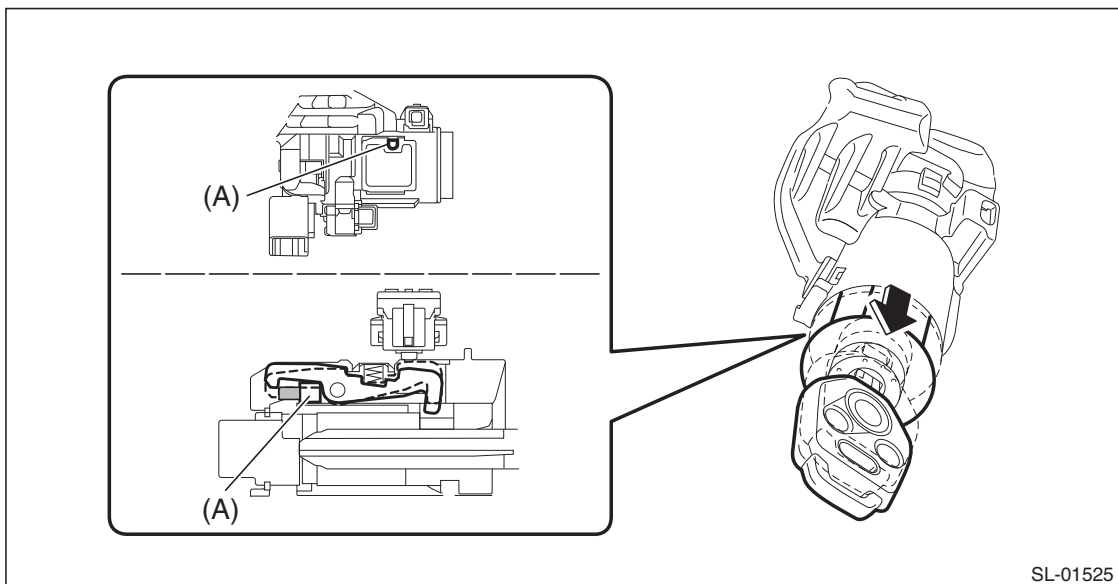
5) Replace the key cylinder.

(1) Insert the key into the key cylinder, and turn the key to the ACC position.

(2) Insert a flat tip screwdriver from the steering lock frame hole (A), and pull the key cylinder until the key cylinder claws touch the steering lock frame stopper (B).



(3) Insert a flat tip screwdriver from the steering lock frame hole (A), and release the claws to pull out the key cylinder.



6) Install each part in the reverse order of removal.

Key Lock Cylinders

SECURITY AND LOCKS

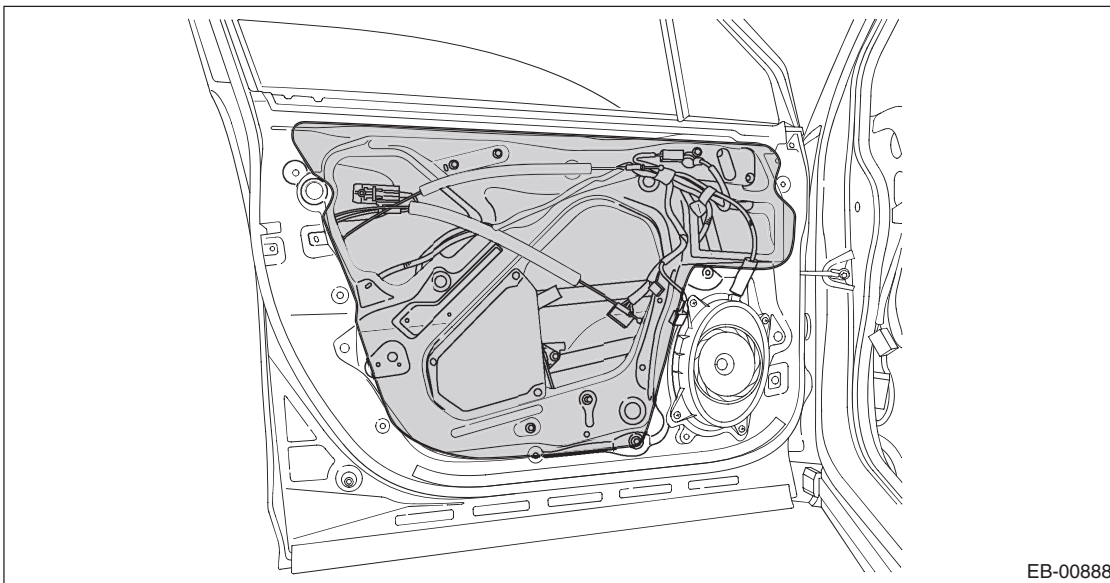
2. FRONT DOOR

- 1) Raise the glass assembly - front door to the top position.
- 2) Remove the trim panel - front door. <Ref. to EI-55, FRONT DOOR, REMOVAL, Door Trim.>
- 3) Remove the sealing cover - front door.

CAUTION:

- Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.
- If the sealing cover - front door gets broken, replace it with a new part.
- Be careful not to allow the butyl tape to contact any trims and seats because the butyl tape, which has a strong adhesive force, is difficult to remove once it adhered.

- (1) Disconnect connectors.
- (2) Carefully remove the butyl tape and turn over the sealing cover - front door within the area where the operation can be performed.



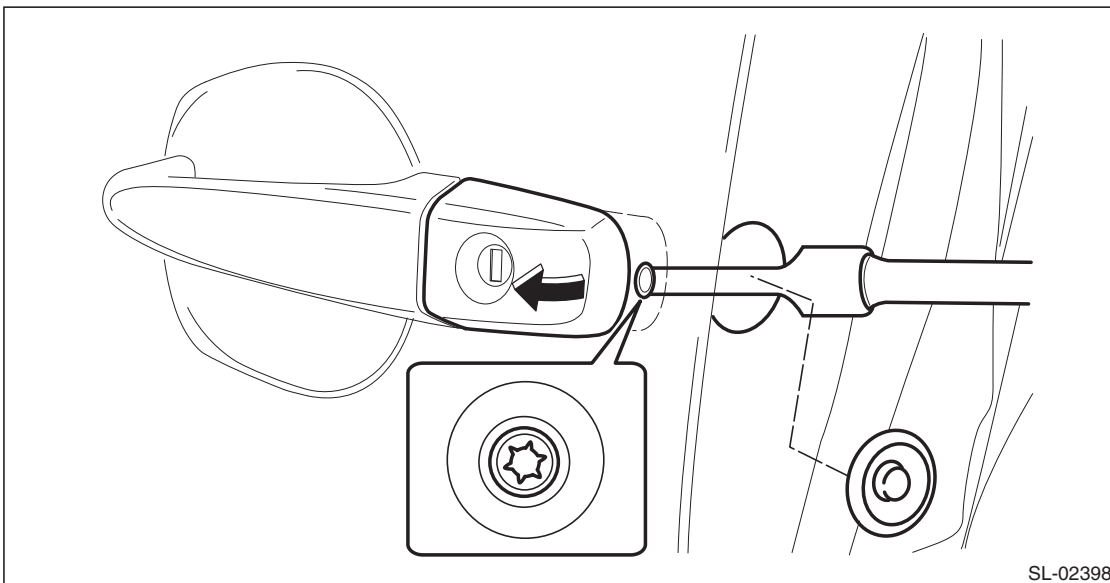
EB-00888

- 4) Remove the cover - handle front outer.

Preparation tool:

TORX® T30

- (1) Remove the plug at the rear end of the panel assembly - front door.
- (2) Loosen the TORX® bolt and remove the cover - handle front outer.

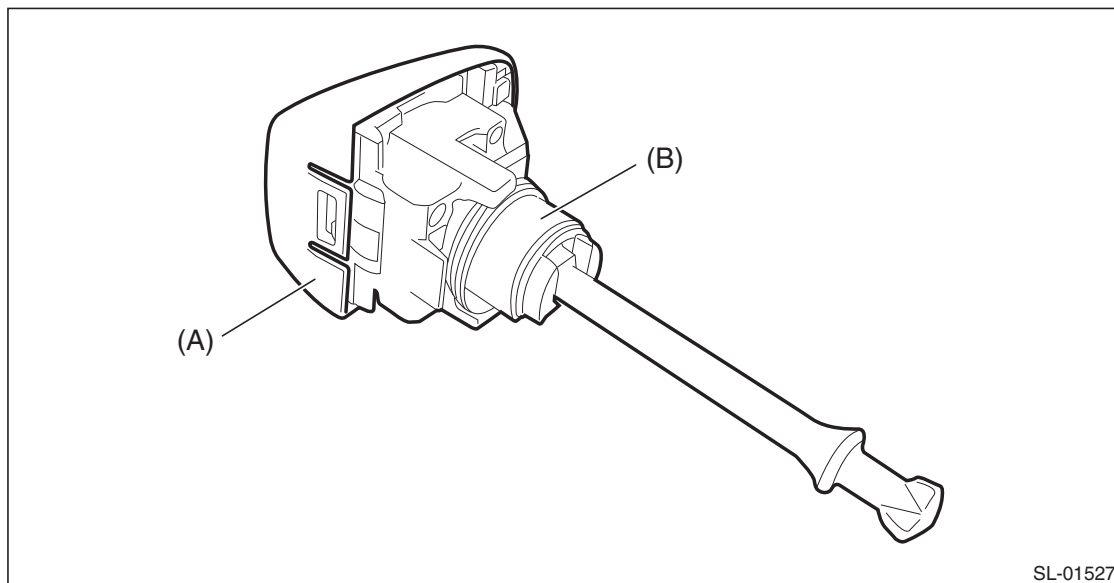


SL-02398

Key Lock Cylinders

SECURITY AND LOCKS

- 5) Remove the key cylinder (B) from the cover - handle front outer (A), and replace the key cylinder.



SL-01527

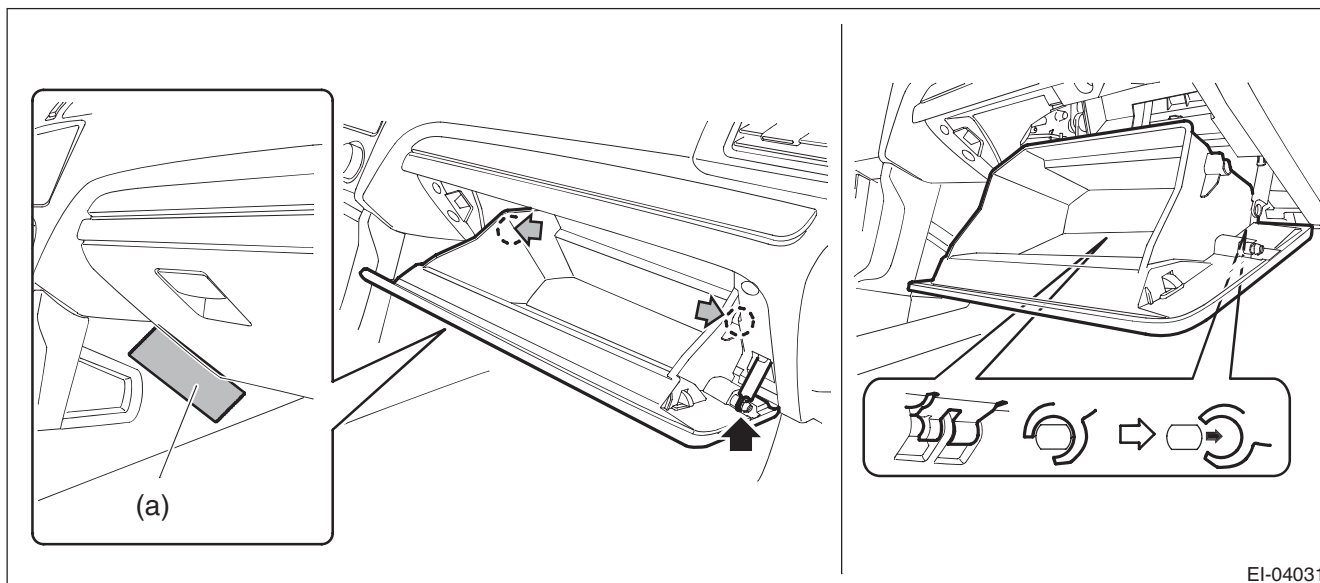
- 6) Install each part in the reverse order of removal.

Tightening torque:

Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

3. GLOVE BOX LID

- 1) Remove the pocket assembly.
- (1) Attach the protective tape (a) to the panel center LWR.
 - (2) Remove the damper COMPL - pocket.
 - (3) Release the stoppers and remove the pocket assembly by pulling it toward you.

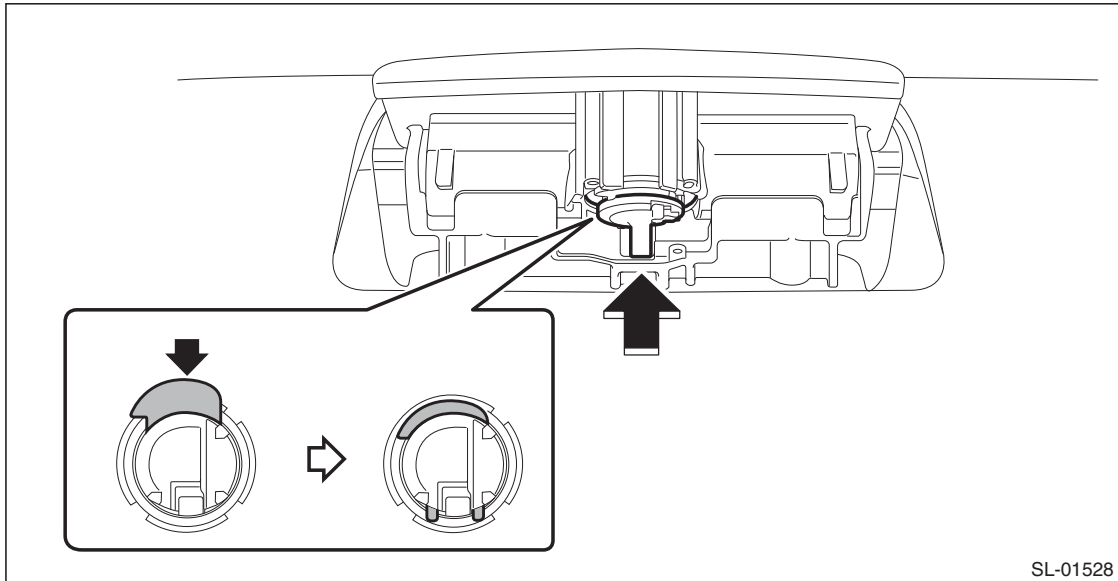


EI-04031

Key Lock Cylinders

SECURITY AND LOCKS

- 2) Replace the key cylinder.
 - (1) Pull up the lock knob.
 - (2) Push out the key cylinder from the pocket assembly while pressing in the metal plate.



SL-01528

- 3) Install each part in the reverse order of removal.



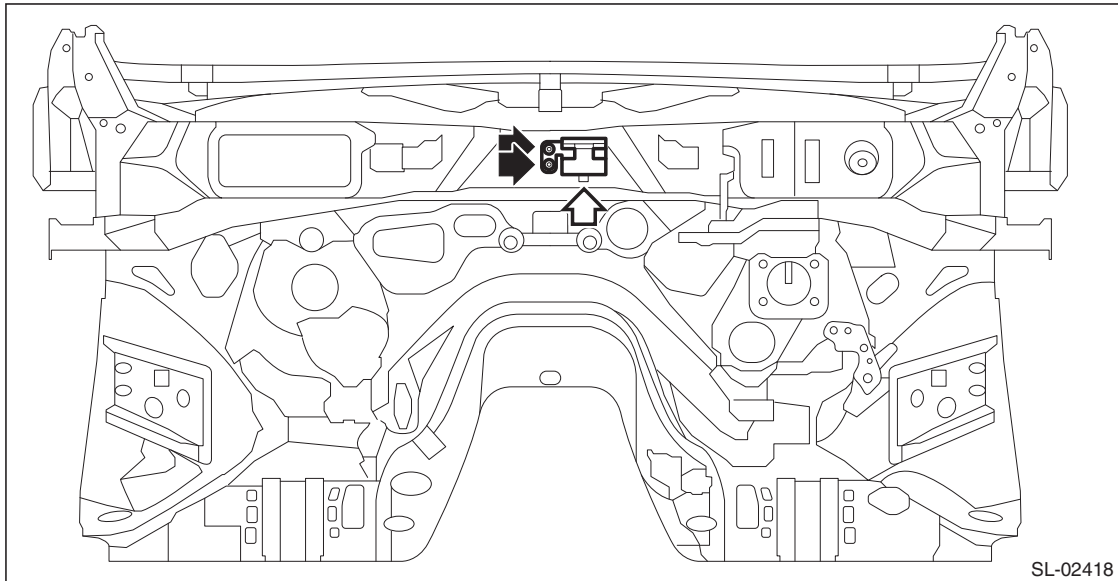
20.Security Control Module

A: REMOVAL

NOTE:

Equipped on C0 and C5 models without keyless access.

- 1) Remove the heater and cooling unit assembly. <Ref. to AC-58, REMOVAL, Heater and Cooling Unit.>
- 2) Remove the security control module.
 - (1) Disconnect the connector.
 - (2) Remove the nuts, and remove the security control module.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Heater and Cooling Unit". <Ref. to AC-61, INSTALLATION, Heater and Cooling Unit.>

Tightening torque:

Security control module: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

Impact Sensor

SECURITY AND LOCKS

21. Impact Sensor

A: REMOVAL

- 1) Remove the key from ignition switch.
- 2) Close all the doors and rear gate.
- 3) Press the UNLOCK button of the keyless transmitter.
- 4) Disconnect the ground cable from battery.
- 5) Remove the impact sensor.
- 6) Change the impact sensor setting using the Subaru Select Monitor.

B: INSTALLATION

- 1) Remove the key from ignition switch.
- 2) Close all the doors and rear gate.
- 3) Press the UNLOCK button of the keyless transmitter.
- 4) Disconnect the ground cable from battery.
- 5) Install the impact sensor.
- 6) Change the impact sensor setting using the Subaru Select Monitor.

C: OPERATION

1. IMPACT SENSOR SETTING USING SUBARU SELECT MONITOR

- 1) Prepare the Subaru Select Monitor kit.
- 2) Turn the ignition switch to ON (engine OFF) and run the "PC application for Subaru Select Monitor".
- 3) On «System Selection Menu» display, select {Integ. unit mode}.
- 4) Select {Unit customizing} from {Work Support}.
- 5) Make a impact monitor setting.
 - When installing: ON
 - When removing: OFF
- 6) Make a impact monitor ON/OFF setting.
 - When installing: ON
 - When removing: OFF
- 7) Turn the ignition switch to OFF, and then remove the Subaru Select Monitor.

D: ADJUSTMENT

1. CHECK IMPACT SENSOR

- 1) Remove the key from ignition switch.
- 2) Close all the windows.
- 3) Close all the doors and rear gate. Leave open the front hood.
- 4) Press the LOCK button of the keyless transmitter from outside of vehicle.
- 5) Check that the security indicator light blinks twice within 0.5 seconds in 2 second cycles after 30 seconds.
- 6) Hit all windows with the palm with force repeatedly, to check for whether the security alarm operates. Lift up the front hood approx. 12 cm (4.7 in) or more, and then drop it off to check the operation of security alarm.
- 7) If NG, adjust the impact sensitivity.



2. IMPACT SENSITIVITY ADJUSTMENT

- 1) Prepare the Subaru Select Monitor kit.
- 2) Turn the ignition switch to ON (engine OFF) and run the "PC application for Subaru Select Monitor".
- 3) On the «System Selection Menu», select the {Impact Sensor}.
- 4) Make a {Sensitivity Adjustment Mode}.
 - Sensitivity can be adjusted in 11 levels (0 to 10).
 - Initial setting is 5.
 - Smaller number means more sensitive.
 - Larger number means less sensitive.
- 5) Turn the ignition switch to OFF, and then remove the Subaru Select Monitor.

NOTE:

- Set the sensor so that it is not triggered by normal vibrations (someone reclining on the door, hit by a ball, etc.).
- Set the sensor to operate the alarm when the windshield glass or door is hit hard repeatedly, etc, where it can be assumed that there is an attempt to damage the car by a burglar, etc.
- Even if there is no burglary attempt, if there is vibration (road construction, elevated parking lots, passage of trains or boarding of ferries), the alarm can be triggered. Because of this, ask the customer about their parking conditions, and set an appropriate sensitivity level after discussion.
- If the sensitivity setting was not performed properly, a buzzer will sound four times. In this case, check that there is no error in CAN communication.

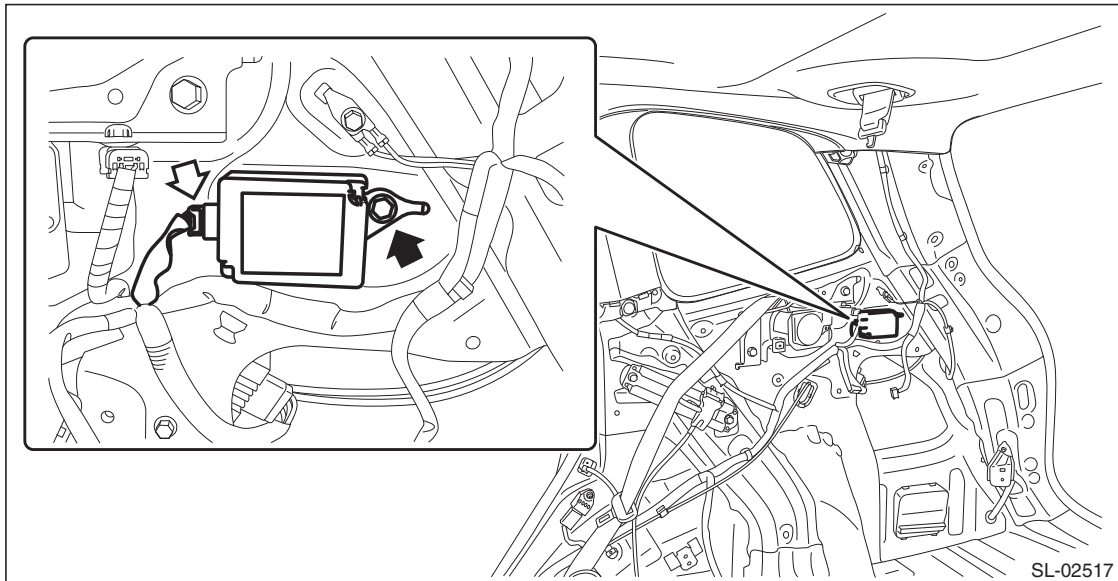
Keyless Entry Control Module

SECURITY AND LOCKS

22. Keyless Entry Control Module

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the trim panel - rear apron RH and trim panel - rear quarter pillar UPR RH. <Ref. to EI-102, REMOVAL, Rear Quarter Trim.>
- 3) Remove the keyless entry control module.
 - (1) Disconnect the connector.
 - (2) Remove the bolt and then remove the keyless entry control module.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Rear Quarter Trim". <Ref. to EI-106, INSTALLATION, Rear Quarter Trim.>

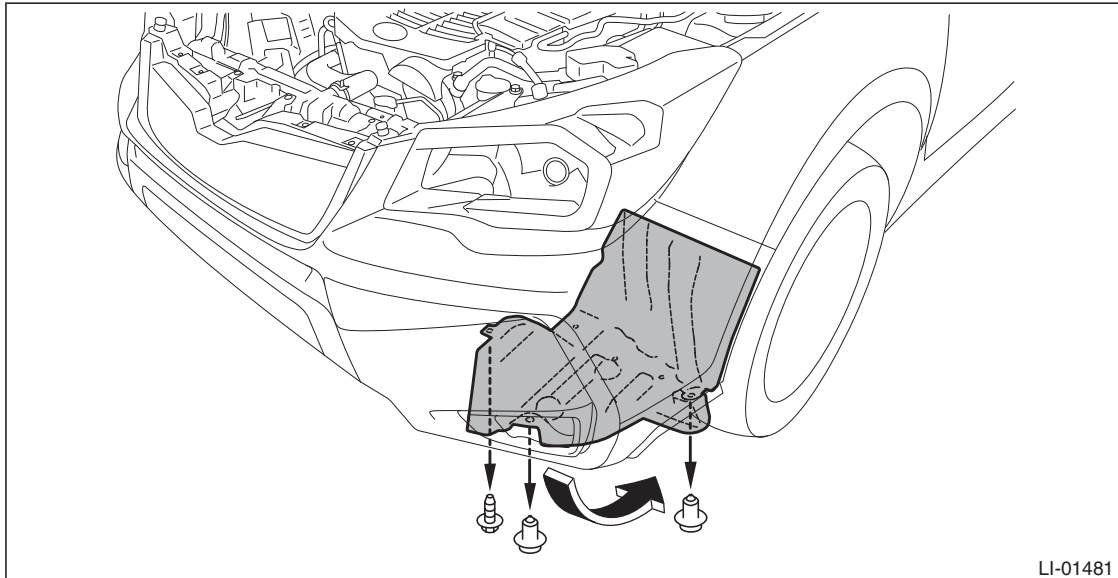
Tightening torque:

Keyless entry control module: 13 N·m (1.33 kgf-m, 9.6 ft-lb)

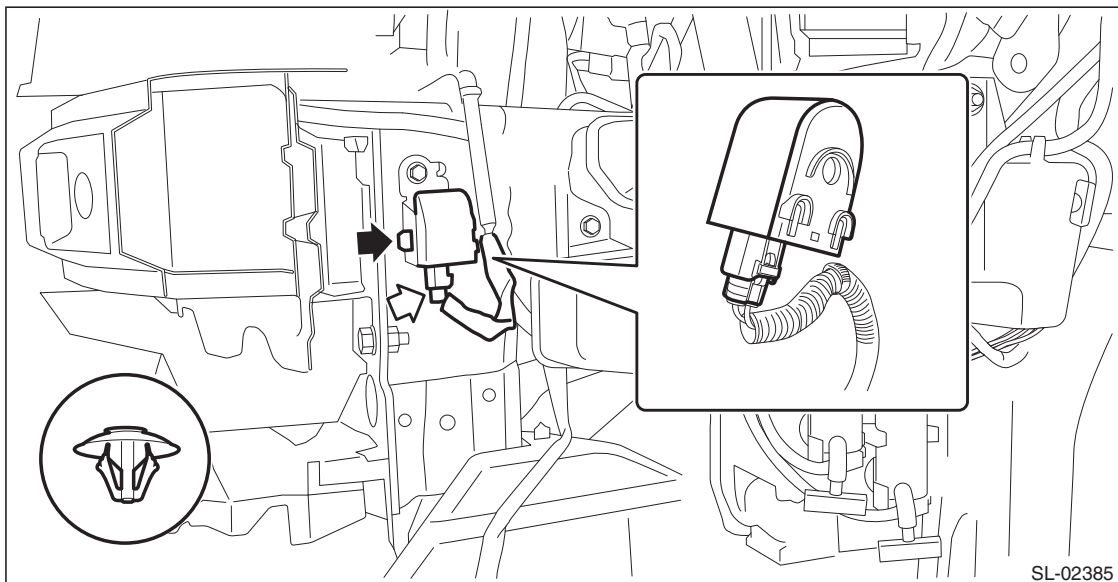
23.Keyless Buzzer

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Lift up the vehicle.
- 3) Remove the clips, and turn over the front side of the mud guard - front.



- 4) Remove the keyless buzzer.
 - (1) Disconnect the connector.
 - (2) Remove the clip and detach the keyless buzzer.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

Using the Subaru Select Monitor, perform forced operation of the keyless buzzer. <Ref. to BC(diag)-15, OPERATION, User Customizing.>

If the buzzer does not sound, replace the keyless buzzer.

Body Integrated Unit

SECURITY AND LOCKS

24. Body Integrated Unit

A: NOTE

1. WHEN REPLACING THE BODY INTEGRATED UNIT

- 1) Check and record the current setting. <Ref. to BC(diag)-17, CONFIRM CURRENT SETTING, OPERATION, Registration Body Integrated Unit.>
- 2) Prepare all immobilizer keys already registered. (Model without keyless access)

NOTE:

If some of the registered immobilizer keys are missing, the following parts must be replaced.

- Except for C0 and C5 models: Combination meter
- C0 and C5 models: Security control module

2. AFTER REPLACING THE BODY INTEGRATED UNIT

- 1) Set the current settings as recorded.
- 2) Register the immobilizer. (Model without keyless access)

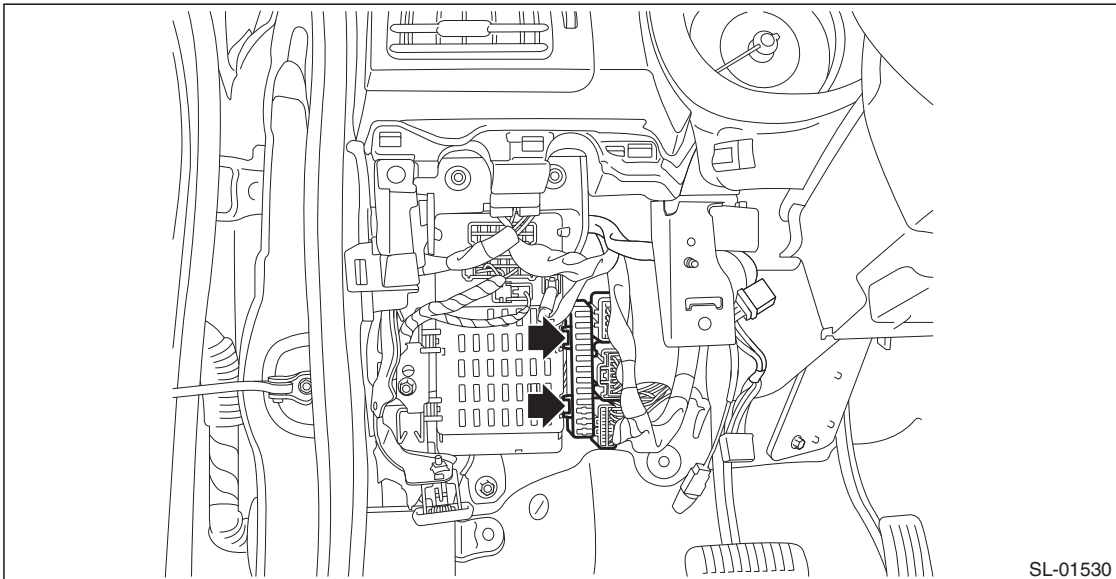
NOTE:

For detailed operation procedure, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

- 3) Set the current settings as recorded.

B: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



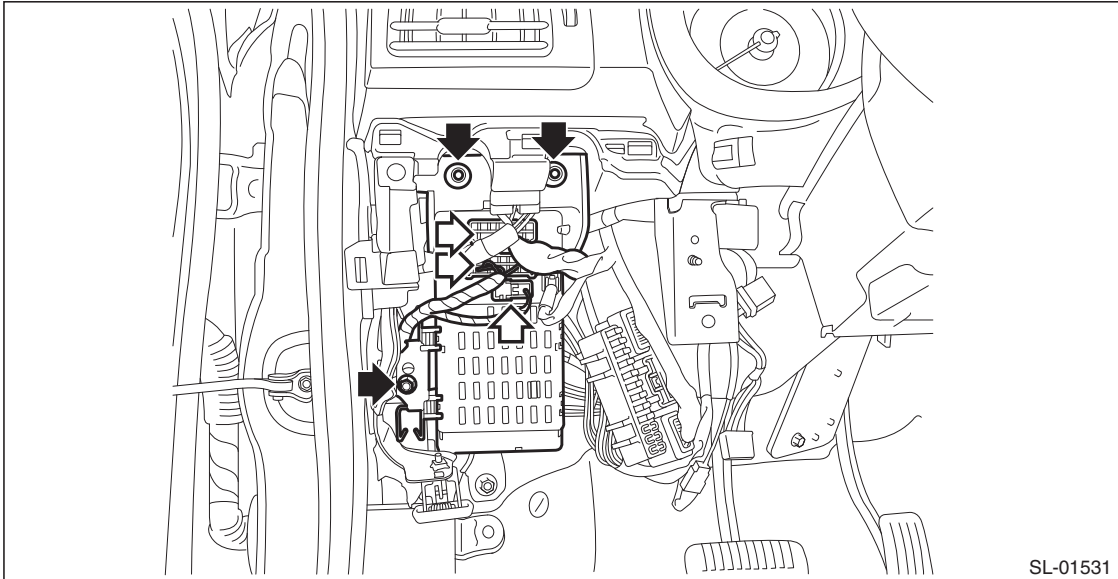
Body Integrated Unit

SECURITY AND LOCKS

3) Remove the relay & fuse box.

(1) Disconnect the connector.

(2) Remove the bolts and nuts, and remove the relay & fuse box.



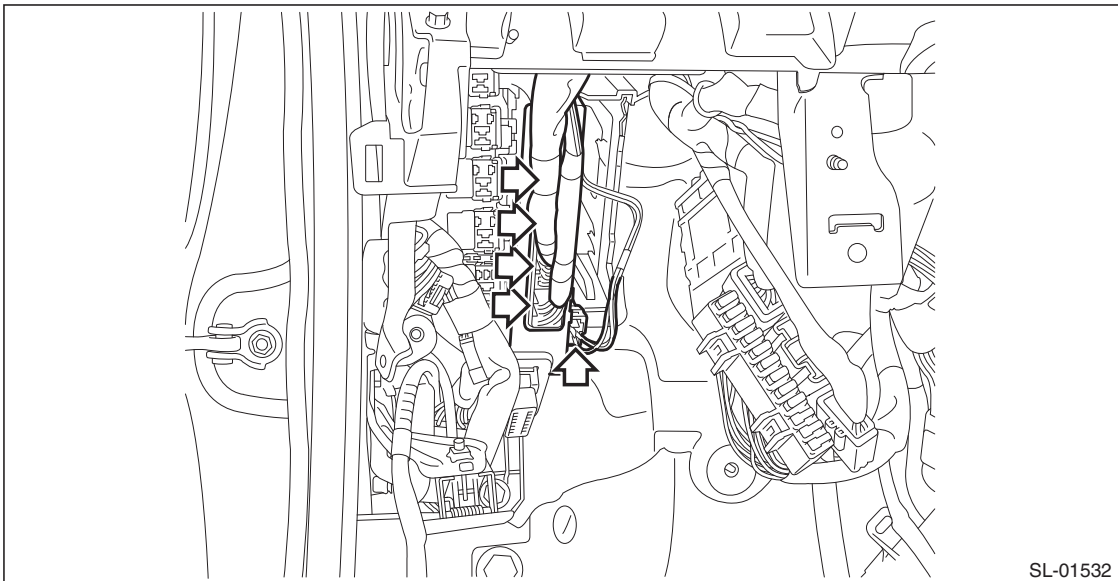
SL-01531

4) Remove the body integrated unit.

CAUTION:

Be careful to keep water and other foreign materials away from body integrated unit.

(1) Disconnect the connector.

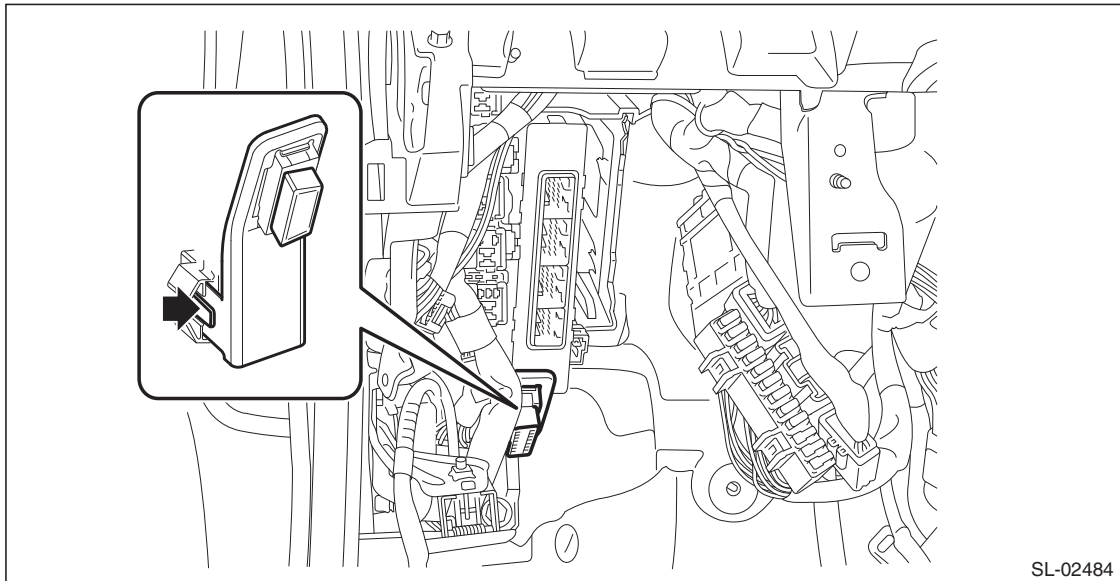


SL-01532

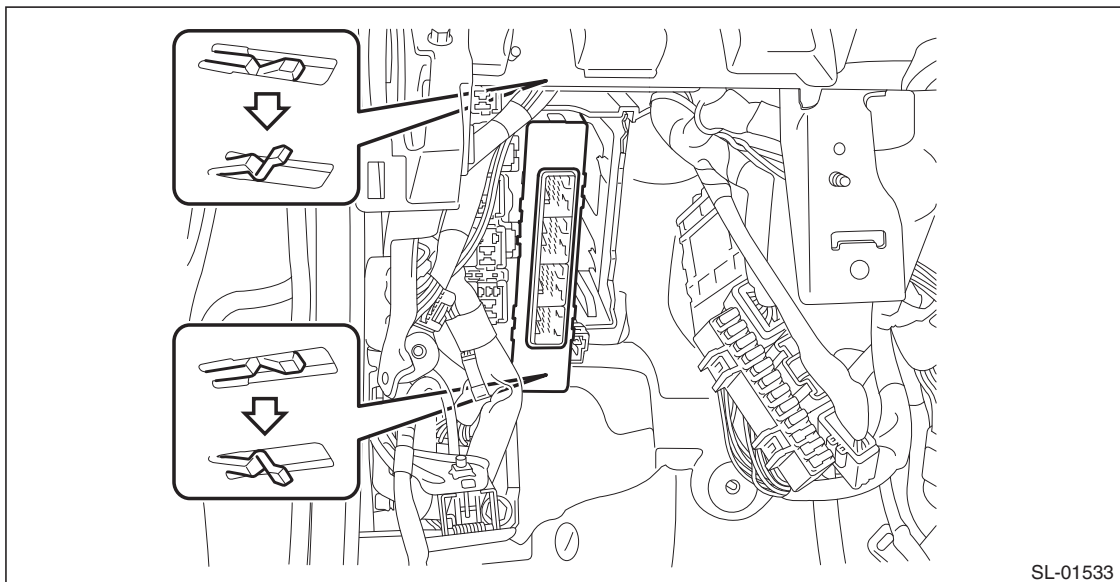
Body Integrated Unit

SECURITY AND LOCKS

- (2) Release the lock, and remove the data link connector bracket from the bracket.



- (3) Release the claws, and pull out the body integrated unit from the bracket.



C: INSTALLATION

CAUTION:

- Before handling the airbag module, refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM”. <Ref. to AB-9, CAUTION, General Description.>
- Do not allow harness and connectors to interfere or get tangled up with other parts.

Install each part in the reverse order of removal.

NOTE:

Refer to “INSTALLATION” of “Knee Airbag Module”. <Ref. to AB-41, INSTALLATION, Knee Airbag Module.>

Tightening torque:

Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:

Make sure that there are no differences from the contents of the current settings after installation. <Ref. to BC(diag)-11, LIST, Read Current Data.>

25. Keyless Transmitter

A: REMOVAL

NOTE:

Refer to the access key section for model with keyless access. <Ref. to SL-80, REMOVAL, Access Key.>

1. KEYLESS TRANSMITTER BATTERY

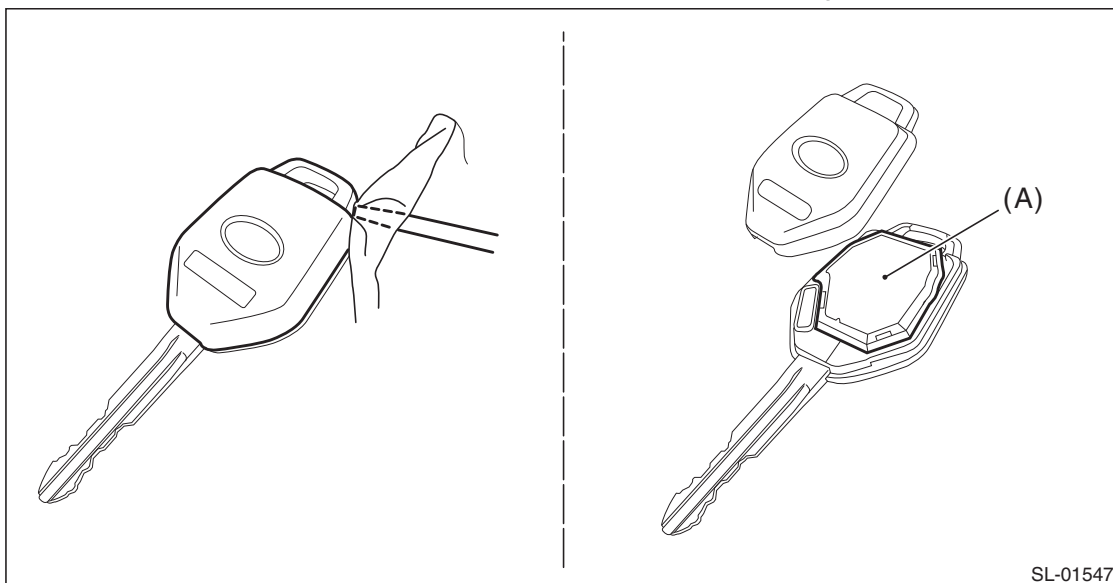
CAUTION:

To prevent static electricity damage to the keyless transmitter printed circuit board, touch the steel area of building with hand to discharge static electricity carried on body or clothes before disassembling the keyless transmitter.

1) Remove the keyless transmitter cover, and take out the transmitter case (A).

NOTE:

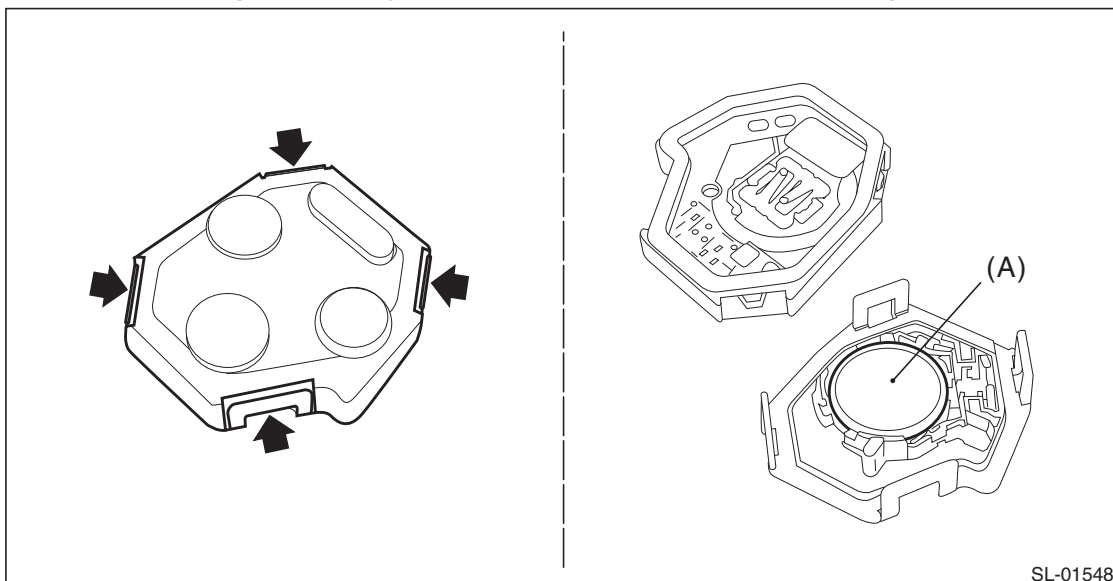
Use a flat tip screwdriver with protective tape or cloth in order not to damage the components.



2) Release the claws to open the transmitter case, then remove the battery (A).

CAUTION:

Press and hold the battery with a finger in order to prevent it from popping out.



Keyless Transmitter

SECURITY AND LOCKS

B: INSTALLATION

1. KEYLESS TRANSMITTER BATTERY

Install each part in the reverse order of removal.

C: INSPECTION

1. KEYLESS TRANSMITTER BATTERY

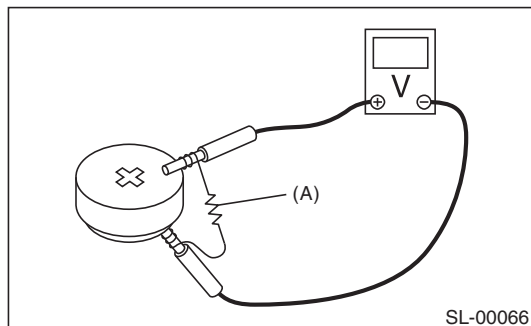
1) Check the keyless transmitter battery voltage.

PREPARATION TOOL:

Circuit tester

NOTE:

Complete the measurement within 5 seconds because the battery discharges during measurement.



Battery terminal	Inspection Conditions	Standard
(+) — (-)	Connect resistor (A) 47 Ω	2.5 — 3.0 V

2) Replace the battery if the inspection result is not within the standard. (Use CR1620 or equivalent.)

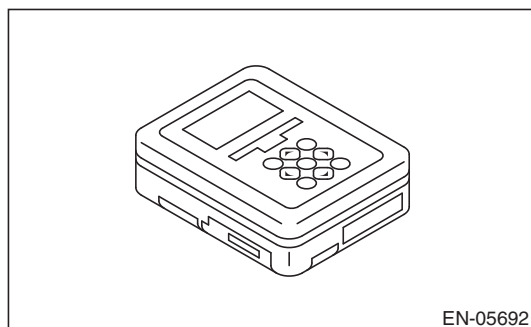
D: REPLACEMENT

1. REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR

NOTE:

- A maximum of four keyless transmitters can be registered for each individual vehicle.
- When replacing or adding the keyless transmitter, new registration of transmitter is necessary.

1) Prepare the Subaru Select Monitor kit. <Ref. to SL-8, SPECIAL TOOL, PREPARATION TOOL, General Description.>



2) Prepare PC with Subaru Select Monitor installed.

3) Connect the USB cable to SDI (Subaru Diagnosis Interface) and USB port on the personal computer (dedicated port for the Subaru Select Monitor).

NOTE:

The dedicated port for the Subaru Select Monitor means the USB port which was used to install the Subaru Select Monitor.

4) Connect the diagnosis cable to SDI.

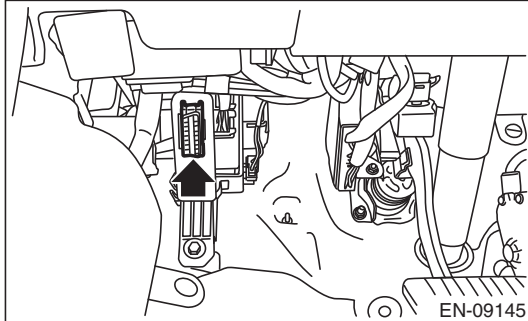
Keyless Transmitter

SECURITY AND LOCKS

5) Connect SDI to data link connector located in the lower portion of the instrument panel (on the driver's side).

CAUTION:

Do not connect scan tools other than the Subaru Select Monitor.



6) Start the PC.

7) Turn the ignition switch to OFF and run the "PC application for Subaru Select Monitor".

8) On the «Main Menu» of the Subaru Select Monitor, select {Each System Check} → {Integ. unit mode} → {Work Support} → {Keyless ID registration}.

9) According to the directions on the screen, press the button of the transmitter to be registered in the LOCK → UNLOCK order. «When registration completed, external buzzer sound once.» Repeat the registration as many times as desired.

10) Press the [Exit] button to finish the operations.

NOTE:

When attempting to register a key that has already been registered, the external buzzer sounds twice.



Access Key

SECURITY AND LOCKS

26. Access Key

A: REMOVAL

NOTE:

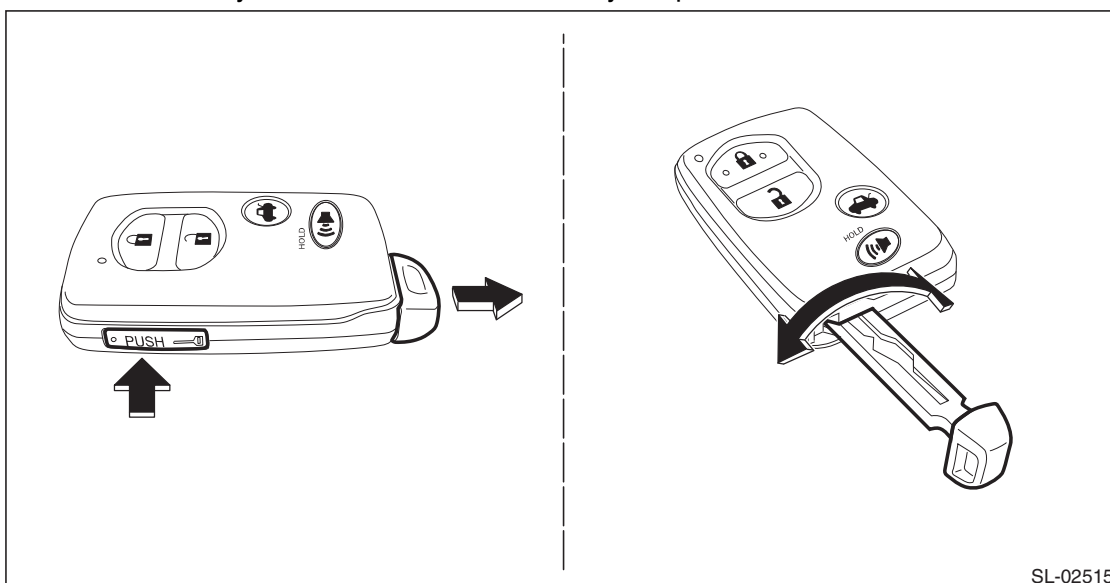
Refer to keyless transmitter for model without keyless access. <Ref. to SL-77, KEYLESS TRANSMITTER BATTERY, REMOVAL, Keyless Transmitter.>

1. ACCESS KEY BATTERY

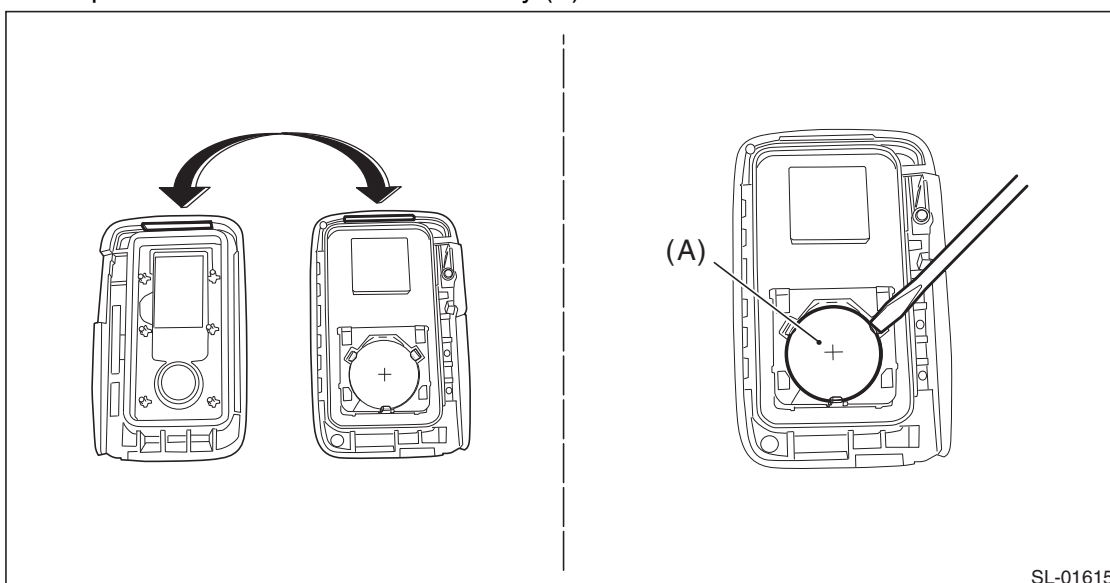
CAUTION:

To prevent static electricity damage to the access key printed circuit board, touch the steel area of building with hand to discharge static electricity carried on body or clothes before disassembling the access key.

- 1) Push the lock button and remove the mechanical key from the access key.
- 2) Insert the mechanical key into the slit of the access key to open the case.



- 3) Insert a flat tip screwdriver to remove the battery (A) from the case.



B: INSTALLATION

1. ACCESS KEY BATTERY

Install each part in the reverse order of removal.

C: INSPECTION

1. ACCESS KEY BATTERY

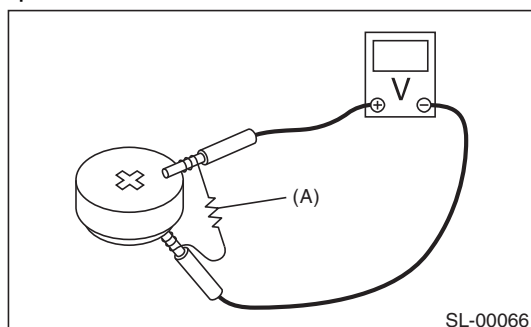
Check the access key battery voltage.

Preparation tool:

Circuit tester

NOTE:

Complete the measurement within 5 seconds because the battery discharges during measurement.



Battery terminal	Inspection conditions	Standard
(+) — (—)	Connect resistor (A) 47 Ω	2.5 — 3.0 V

Replace the battery if the inspection result is not within the standard value. (Use CR1632 V or equivalent.)

D: REPLACEMENT

1. ACCESS KEY REGISTRATION

NOTE:

- A maximum of seven access keys can be registered for each individual vehicle.
- When replacing or adding an access key, new registration of the access key is necessary.
- When the access key has been newly added, it is registered to the immobilizer system at the same time.

2. CLEARING ACCESS KEY REGISTRATION

Refer to the “REGISTRATION MANUAL FOR IMMOBILIZER” for clearing access key registration.

Immobilizer Control Module

SECURITY AND LOCKS

27. Immobilizer Control Module

A: NOTE

The control of immobilizer system is carried out in body integrated unit. For the detailed procedure, refer to the section of body integrated unit.

- Removal: <Ref. to SL-74, REMOVAL, Body Integrated Unit.>
- Installation: <Ref. to SL-76, INSTALLATION, Body Integrated Unit.>

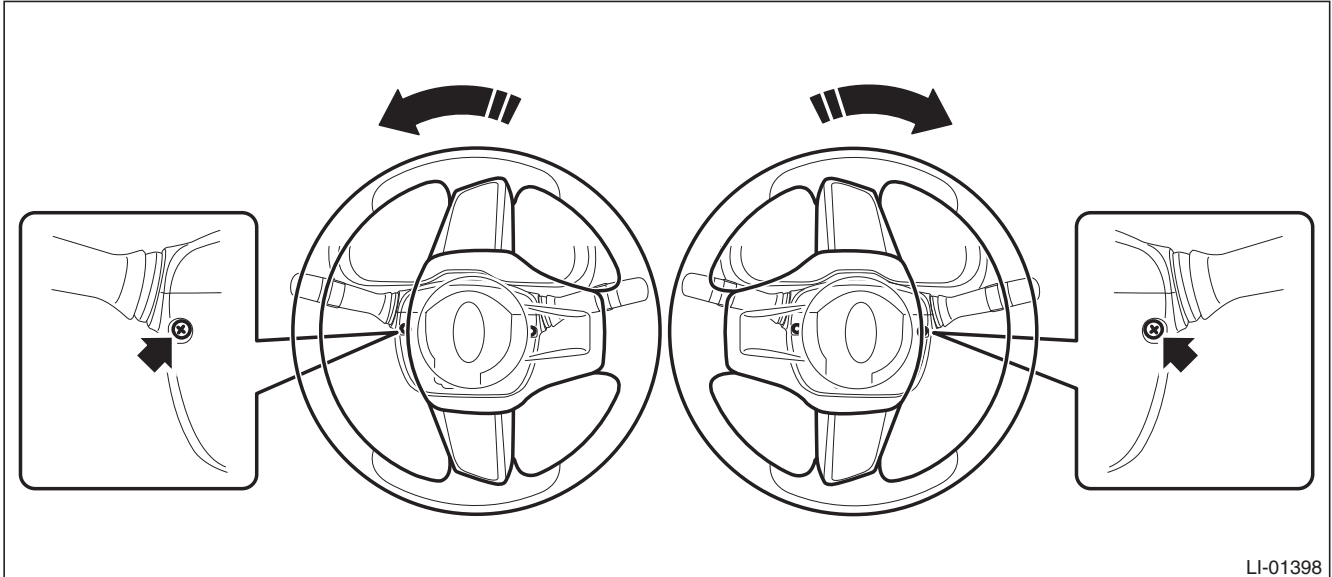


28. Immobilizer Antenna

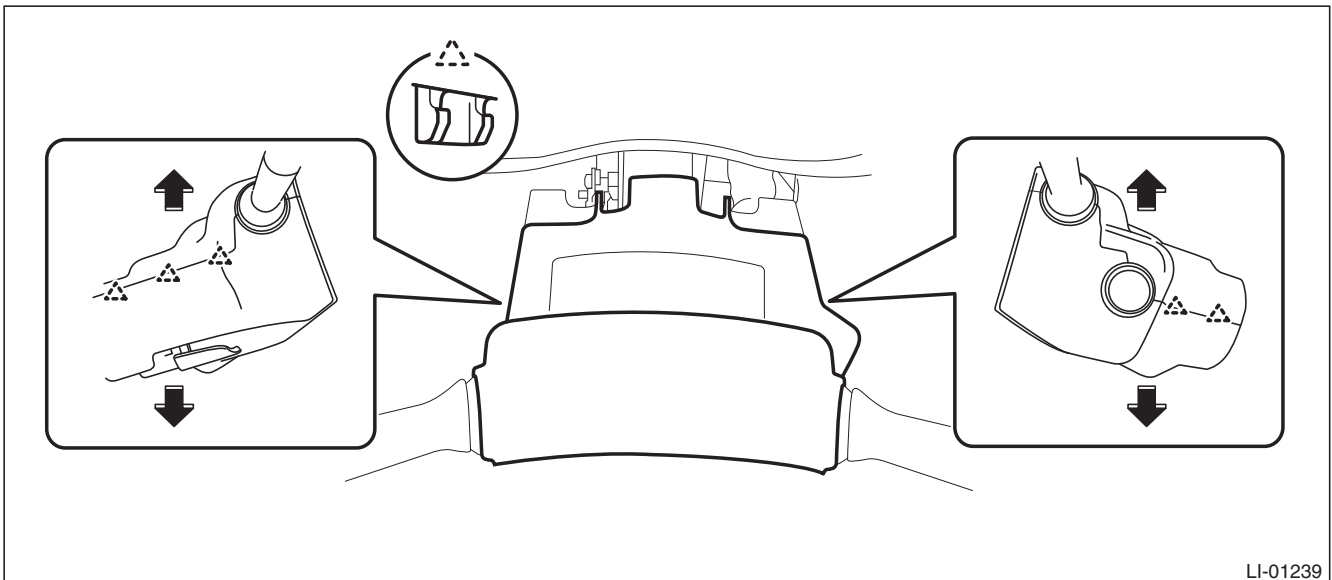
A: REMOVAL

1. MODELS WITHOUT KEYLESS ACCESS

- 1) Disconnect the ground cable from battery.
- 2) Remove the cover assembly - column.
- (1) Remove the screws by turning the steering wheel to right and left.



- (2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.



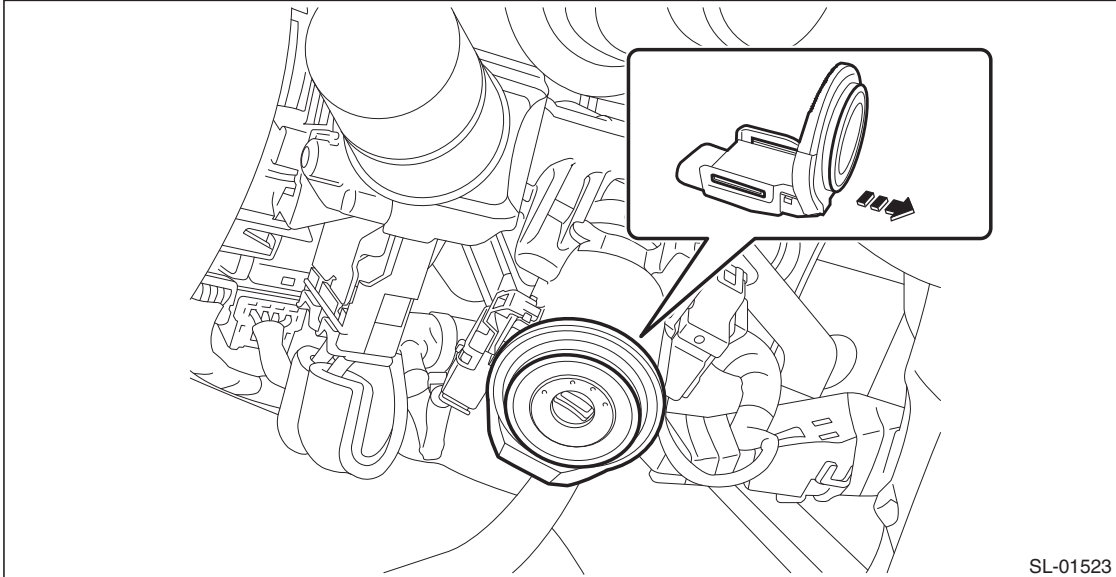
Immobilizer Antenna

SECURITY AND LOCKS

3) Disconnect the connector and remove the immobilizer antenna assembly.

CAUTION:

Do not apply excessive force to remove the immobilizer antenna lock. Otherwise they may be broken because those parts are the products made of a plastic.



2. MODELS WITH KEYLESS ACCESS

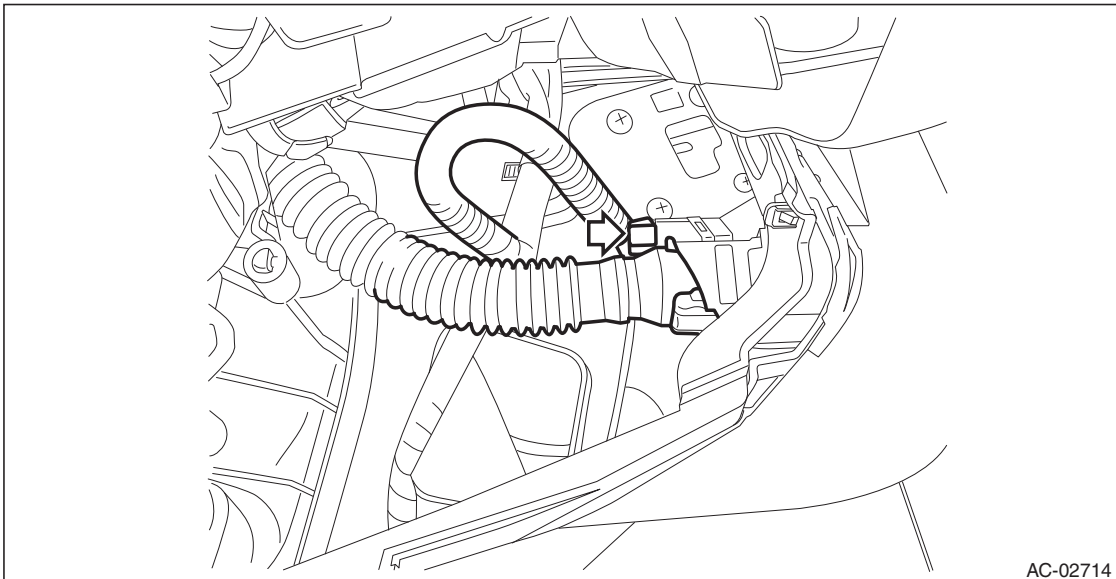
NOTE:

Immobilizer antenna is integrated with the push button ignition switch.

1) Remove the cover assembly - instrument panel LWR driver. <Ref. to EI-59, REMOVAL, Instrument Panel Lower Cover.>

2) Remove the push button ignition switch.

(1) Disconnect the connector, and remove the aspirator hose.

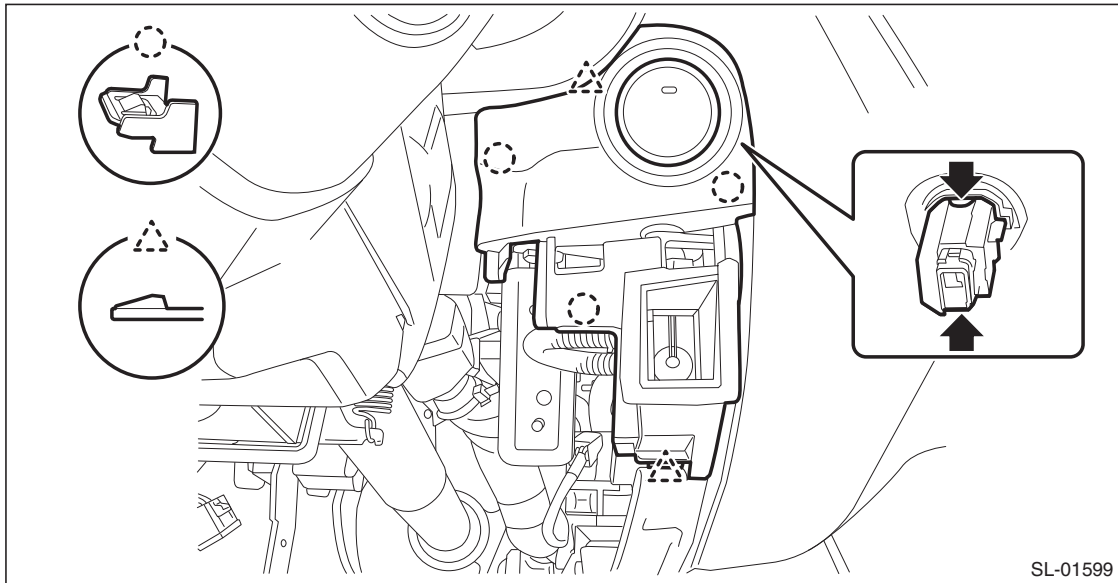


(2) Release the claws, and then remove the panel - switch.

Immobilizer Antenna

SECURITY AND LOCKS

- (3) Release the claws, and then remove the push button ignition switch from the panel - switch.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

For model with keyless access, refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>



Keyless Access Indoor Antenna

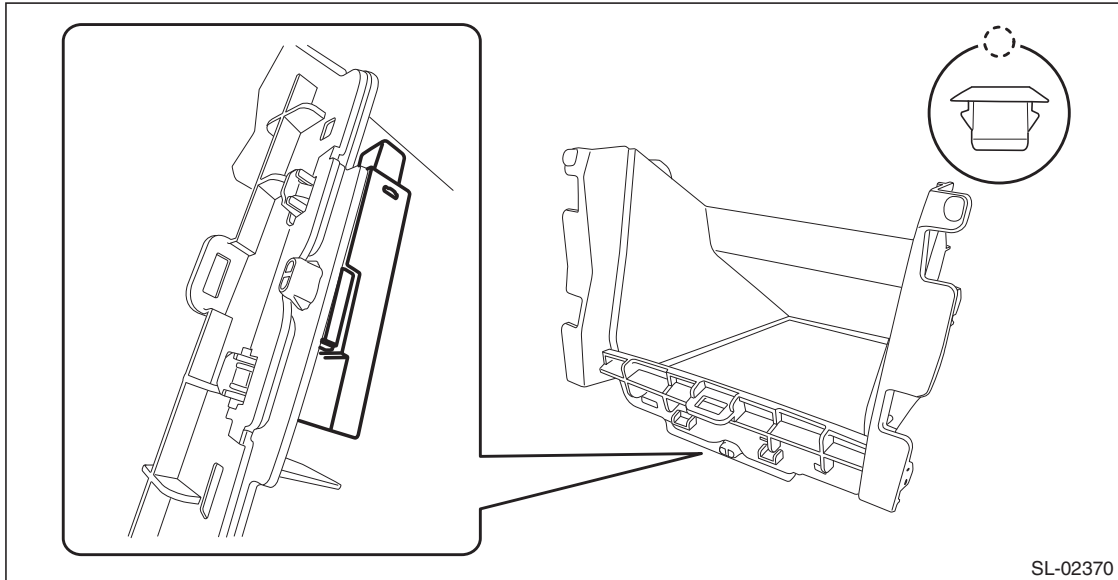
SECURITY AND LOCKS

29. Keyless Access Indoor Antenna

A: REMOVAL

1. FRONT ANTENNA

- 1) Remove the tray assembly - CTR. <Ref. to EI-65, REMOVAL, Console Box.>
- 2) Disconnect the connector and remove the front antenna assembly - interior.



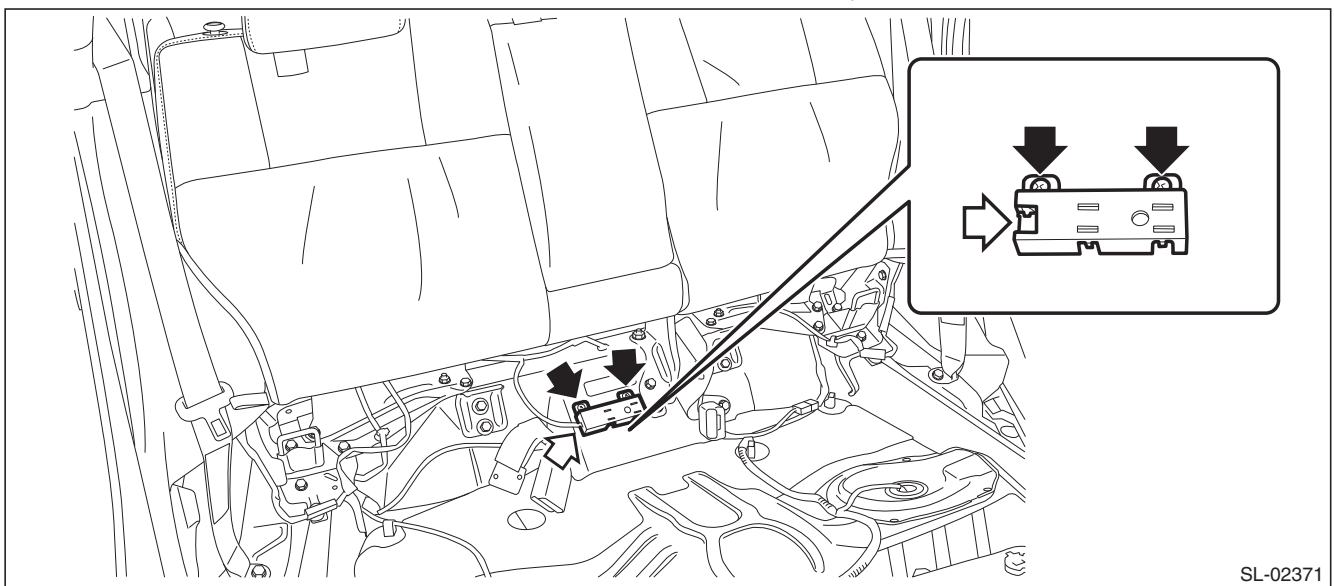
2. CENTER ANTENNA

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear seat cushion assembly. <Ref. to SE-32, REMOVAL, Rear Seat.>
- 3) Remove the center antenna assembly - interior.

NOTE:

Do not remove the antenna assembly from the cover. If removed, the antenna assembly and cover mounting becomes loose, causing abnormal noises.

- (1) Disconnect the connector.
- (2) Remove the screw, and remove the center antenna assembly - interior.

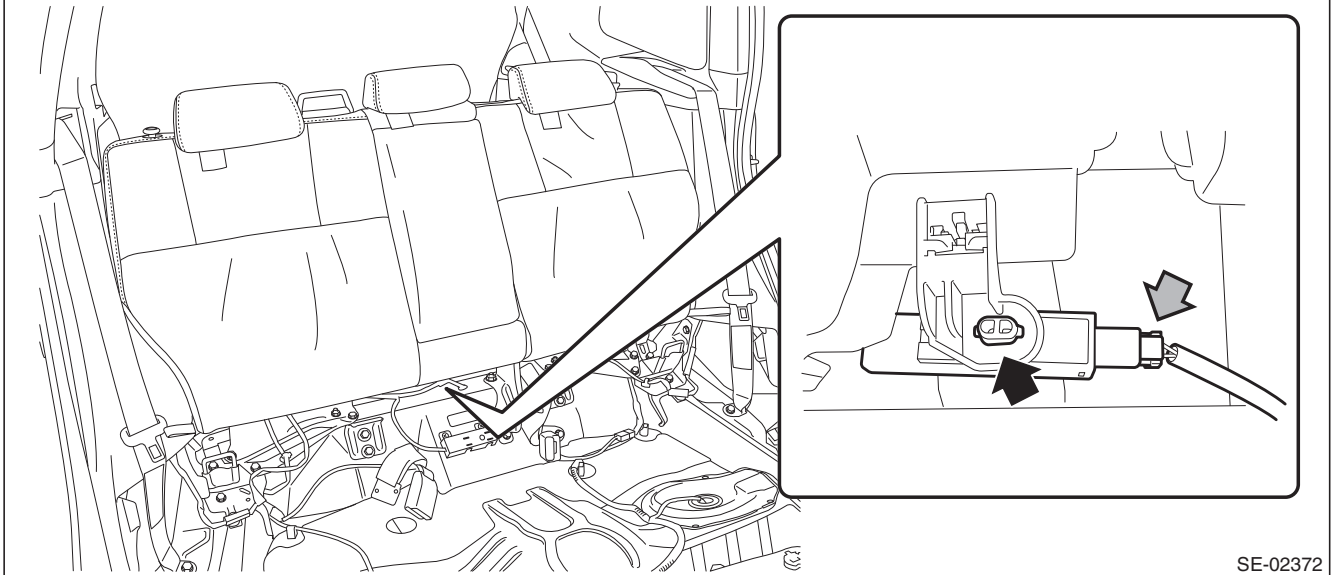


Keyless Access Indoor Antenna

SECURITY AND LOCKS

3. REAR ANTENNA

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear seat cushion assembly. <Ref. to SE-32, REMOVAL, Rear Seat.>
- 3) Disconnect the connector and remove the rear antenna assembly - interior.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of the following parts.

- Tray assembly - CTR: <Ref. to EI-68, INSTALLATION, Console Box.>
- Rear seat cushion assembly: <Ref. to SE-35, INSTALLATION, Rear Seat.>

C: INSPECTION

- 1) Check the setting by performing Keyless access system check using the Subaru Select Monitor. <Ref. to KPS(diag)-28, OPERATION, Keyless Access System Check.>
- 2) Disconnect the Subaru Select Monitor. After placing the access key near the changed antenna, operate the push button ignition switch to check that the power can be switched.
- 3) If the system does not operate normally as the result of inspection, refer to "General Diagnostic Table" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-88, KEYLESS ACCESS SYSTEM, INSPECTION, General Diagnostic Table.>

Keyless Access Outdoor Antenna

SECURITY AND LOCKS

30.Keyless Access Outdoor Antenna

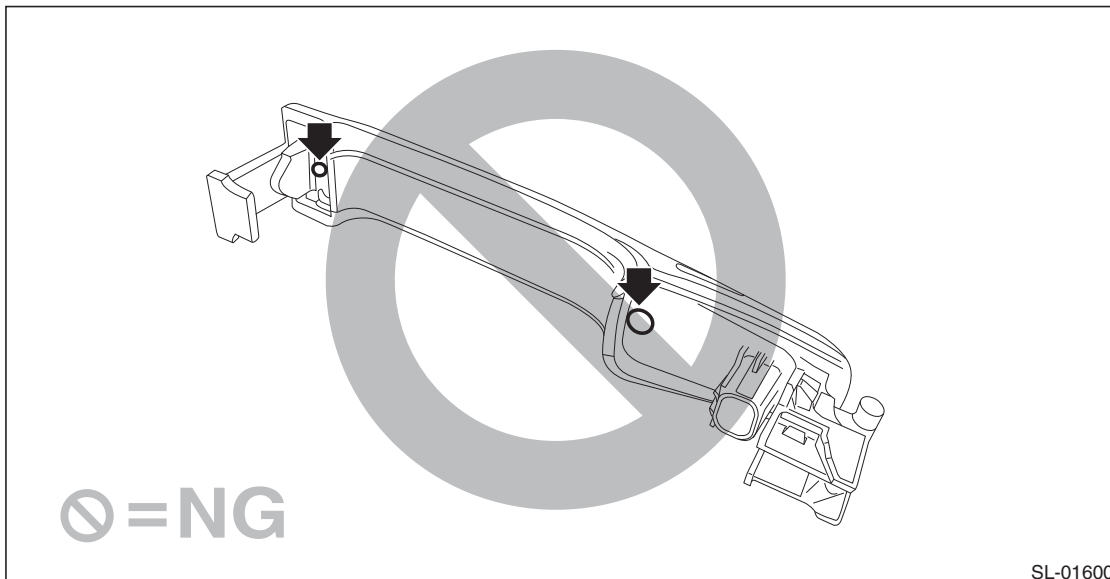
A: REMOVAL

1. FRONT ANTENNA

CAUTION:

Do not detach the antenna from the front door outer handle.

If replacement is required, replace the front outer handle assembly as a whole.



Remove the handle - door outer. <Ref. to SL-34, REMOVAL, Front Outer Handle.>

Keyless Access Outdoor Antenna

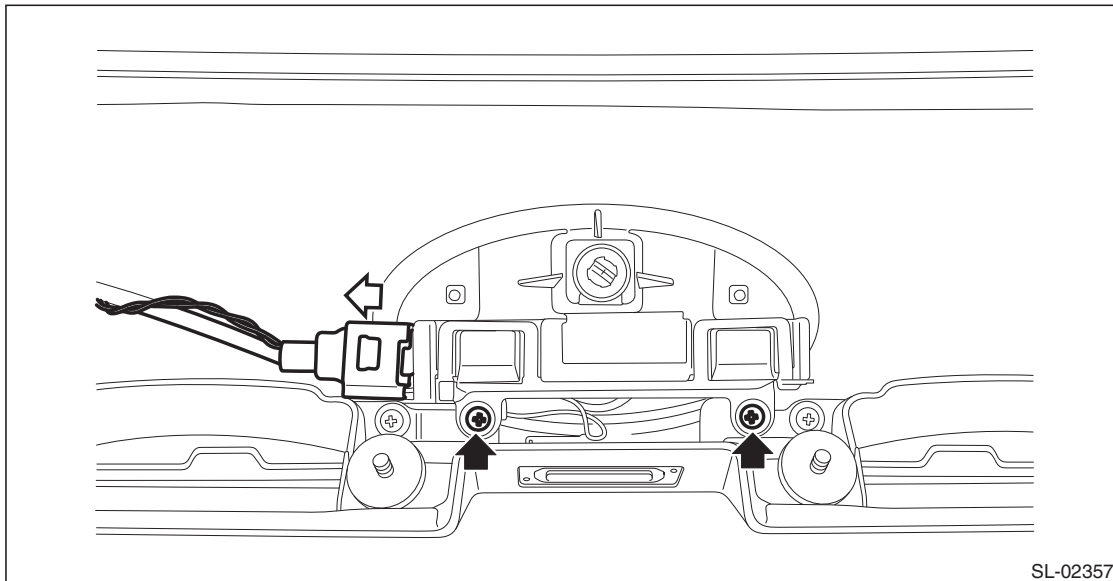
SECURITY AND LOCKS

2. REAR ANTENNA

CAUTION:

- Do not detach the antenna except when replacing it. Detaching unnecessarily will lead to insecure attachment of the antenna.
- When replacing the antenna, do not reuse the tapping screw. Always replace with new tapping screws.

- 1) Remove the garnish assembly - rear gate. <Ref. to EI-126, REMOVAL, Rear Gate Garnish.>
- 2) Remove the rear antenna assembly - exterior.
 - (1) Disconnect the connector.
 - (2) Remove the screws, and remove the rear antenna assembly - exterior.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Garnish Assembly - Rear Gate". <Ref. to EI-128, INSTALLATION, Rear Gate Garnish.>

Tightening torque:

Rear antenna assembly - exterior: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

- 1) Check the setting by performing Keyless access system check using the Subaru Select Monitor. <Ref. to KPS(diag)-28, OPERATION, Keyless Access System Check.>
- 2) Disconnect the Subaru Select Monitor. While bringing the access key, operate the opener switch on the rear gate and the lock request switch to check if the door unlock and lock operate.
- 3) If the system does not operate normally as the result of inspection, refer to "General Diagnostic Table" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-88, KEYLESS ACCESS SYSTEM, INSPECTION, General Diagnostic Table.>

Rear Lock Button

SECURITY AND LOCKS

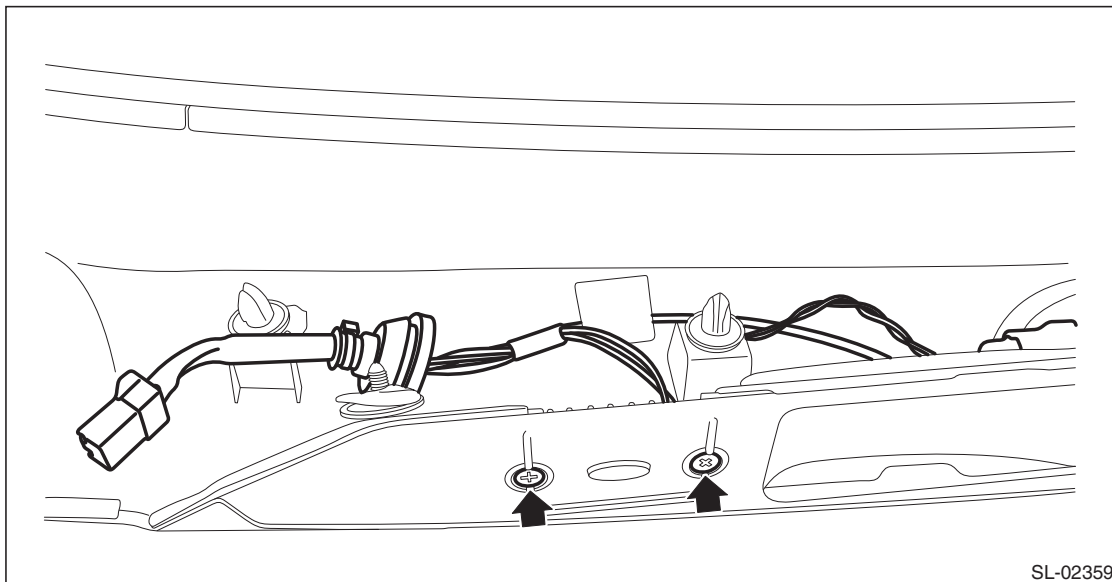
31.Rear Lock Button

A: REMOVAL

NOTE:

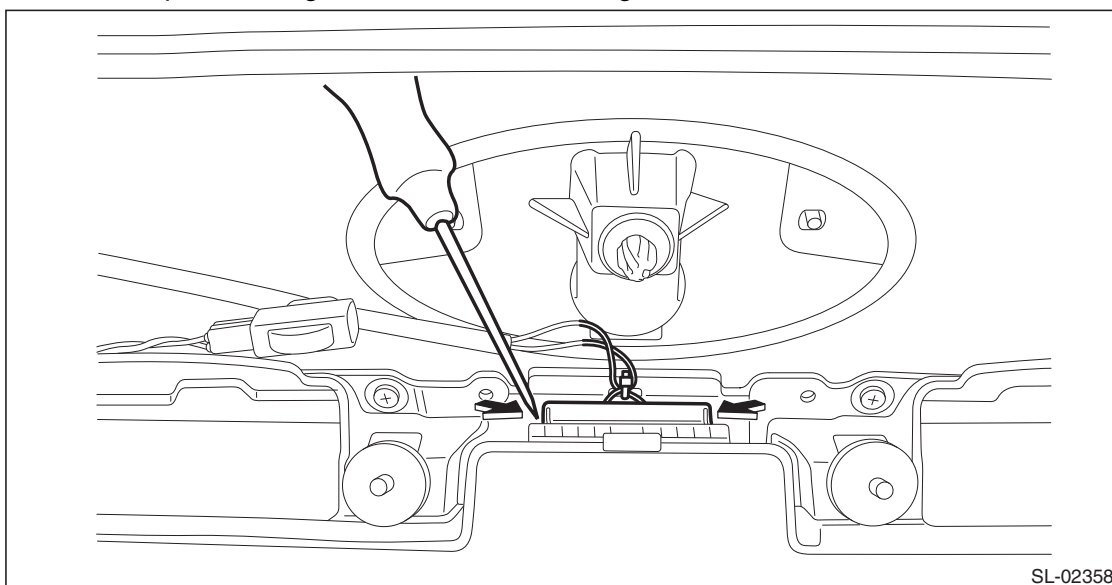
The rear lock button is integrated into the rear gate opener button.

- 1) Remove the garnish assembly - rear gate. <Ref. to EI-126, REMOVAL, Rear Gate Garnish.>
- 2) Remove the screws and remove the rear lock button.



- 3) Remove the rear antenna assembly - exterior.

- 4) Release the locks at both ends of the button - opener rear gate by pushing them with a flat tip screwdriver, remove the button - opener rear gate and remove the integrated harness.



B: INSTALLATION

CAUTION:

Make sure that the harness grommet is securely installed.

If not properly installed, this may cause leaks.

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Garnish Assembly - Rear Gate". <Ref. to EI-128, INSTALLATION, Rear Gate Garnish.>

C: INSPECTION

- 1) Display the current data using the Subaru Select Monitor.
- 2) Check if the display changes when the rear lock button is operated.
- 3) If the display is not correct as the result of inspection, refer to "General Diagnostic Table" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-88, KEYLESS ACCESS SYSTEM, INSPECTION, General Diagnostic Table.>

Receiver

SECURITY AND LOCKS

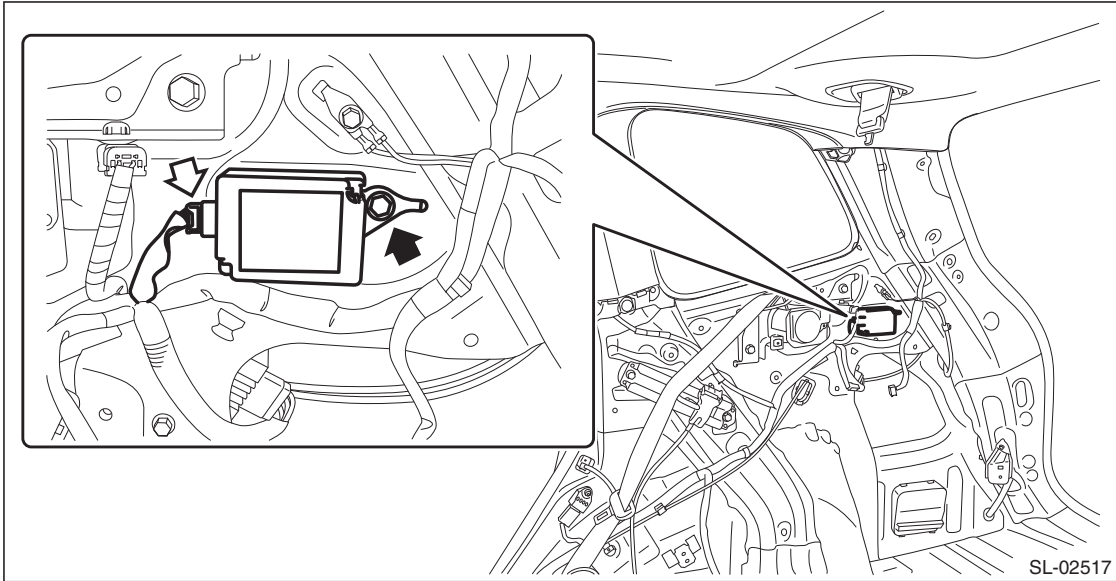
32.Receiver

A: REMOVAL

NOTE:

Except for model with keyless entry

- 1) Remove the trim panel - rear apron RH. <Ref. to EI-102, REMOVAL, Rear Quarter Trim.>
- 2) Remove the receiver assembly.
 - (1) Disconnect the connector.
 - (2) Remove the bolt and remove the receiver assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:

Receiver assembly: 13 N·m (1.33 kgf-m, 9.6 ft-lb)

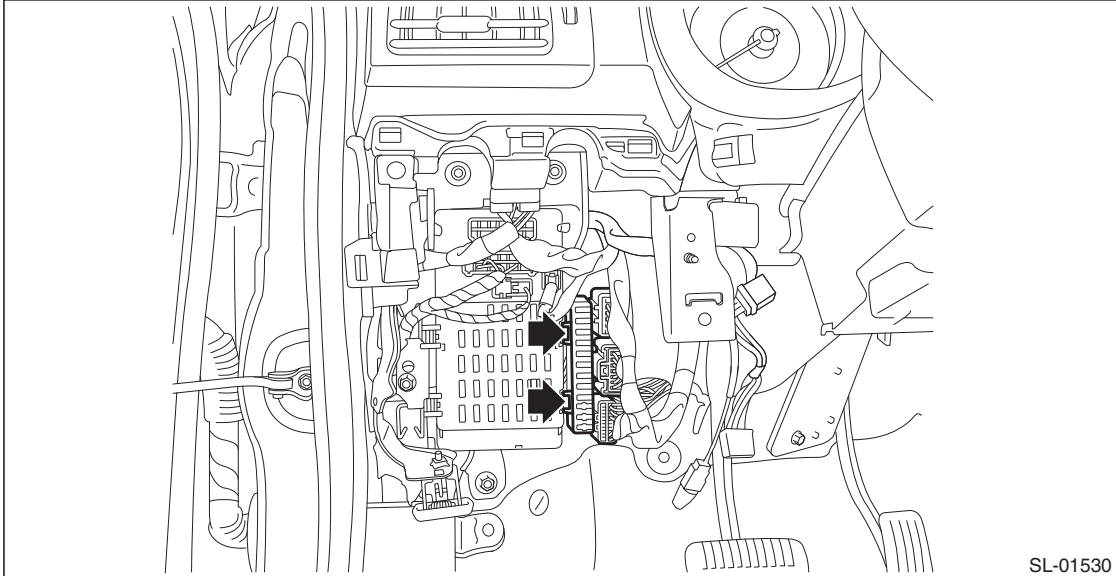
C: INSPECTION

- 1) Check if the door lock operates when the touch sensor of the door outer handle and rear lock button is operated.
- 2) If the system does not operate normally as the result of inspection, refer to "General Diagnostic Table" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-88, KEYLESS ACCESS SYSTEM, INSPECTION, General Diagnostic Table.>

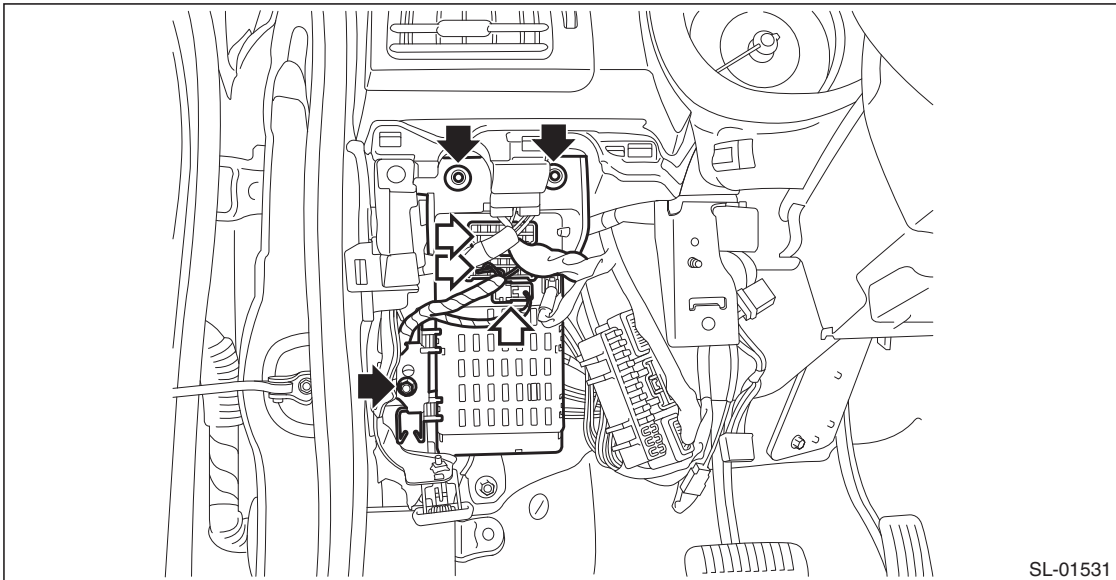
33.Keyless Access CM

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



- 3) Remove the relay & fuse box.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and nuts, and remove the relay & fuse box.



Keyless Access CM

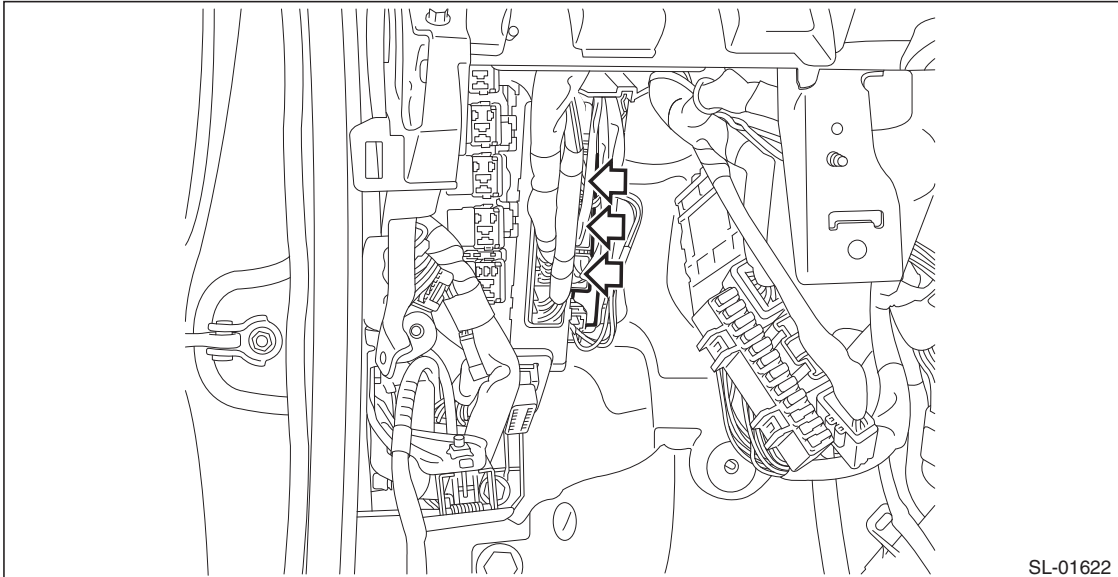
SECURITY AND LOCKS

4) Remove the keyless access CM.

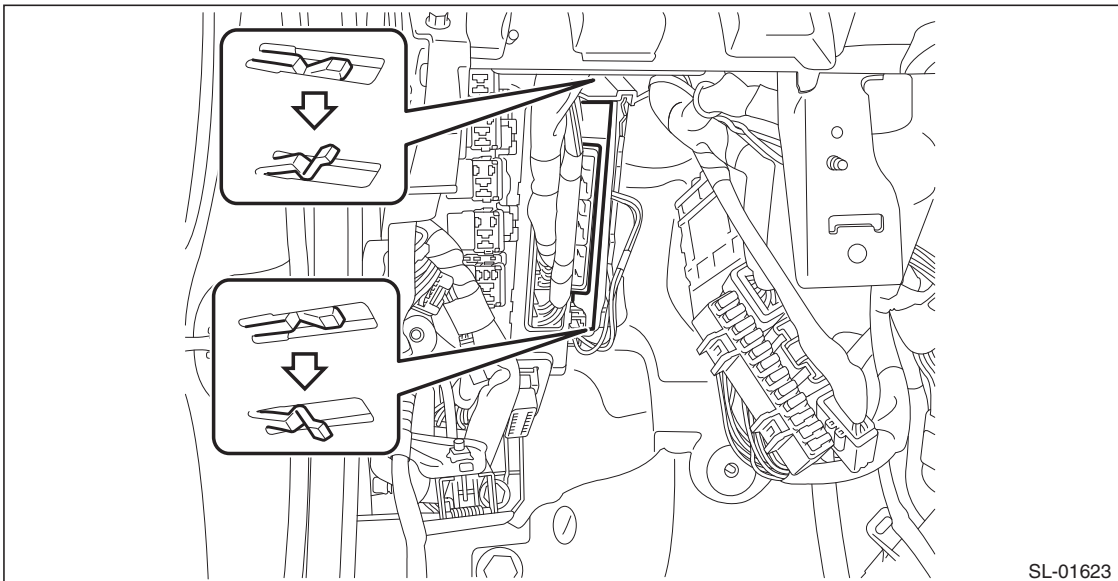
CAUTION:

Be careful to keep water and other foreign materials away from body integrated unit.

(1) Disconnect the connector.



(2) Release the claws, and pull out the keyless access CM from the bracket.



B: INSTALLATION

CAUTION:

Registration of the immobilizer is necessary when a immobilizer-related control module has been replaced. For detailed operation procedure, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

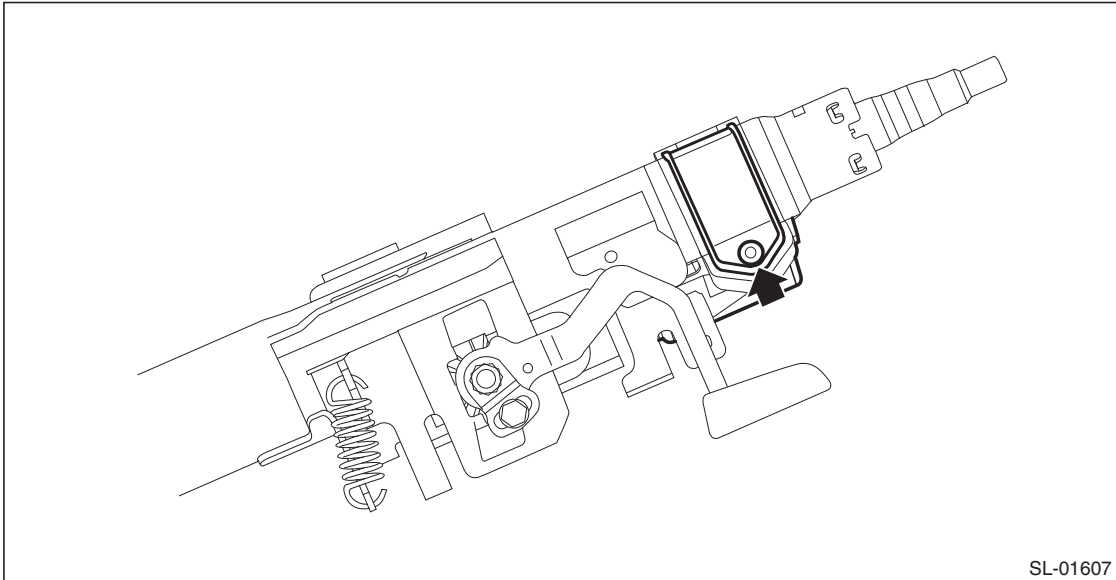
Tightening torque:

Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

34.Steering Lock CM

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the column assembly - steering. <Ref. to PS-18, REMOVAL, Steering Column.>
- 3) Remove the steering lock CM.
 - (1) Secure the column assembly - steering in a vise.
 - (2) Use the reverse tap or drill to remove the set bolt and remove the steering lock CM.



B: INSTALLATION

CAUTION:

Registration of the immobilizer is necessary when a immobilizer-related control module has been replaced. For the relevant procedures, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

- 1) Secure the steering lock CM to the steering column.
- 2) Use new set bolts. Tighten the bolt until the bolt head is broken (bolt head wrenched off).

C: INSPECTION

- 1) Check if the steering lock is released when you start the engine using the push button ignition switch.
- 2) If the system does not operate normally as the result of inspection, refer to "General Diagnostic Table" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-89, STEERING LOCK SYSTEM, INSPECTION, General Diagnostic Table.>

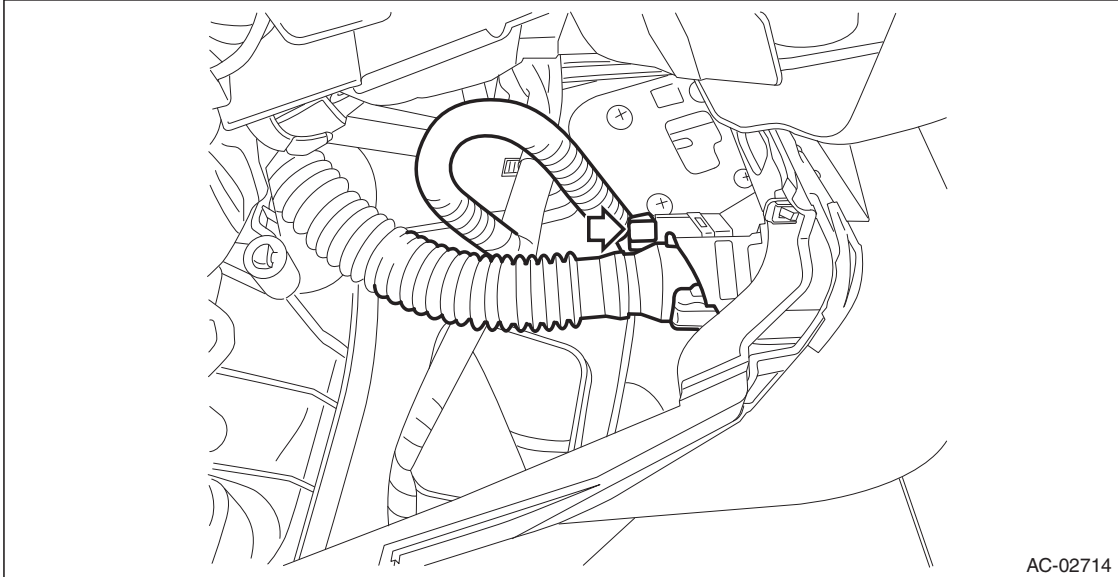
Push Button Ignition Switch

SECURITY AND LOCKS

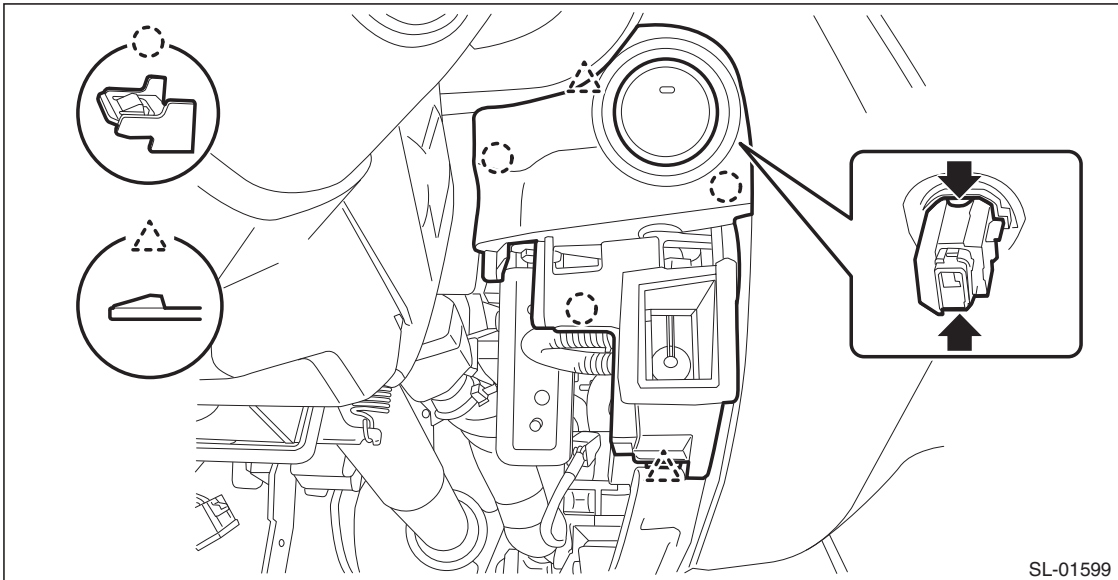
35.Push Button Ignition Switch

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Remove the push button ignition switch.
 - (1) Disconnect the connector, and remove the aspirator hose.



- (2) Release the claws, and then remove the panel - switch.
 - (3) Release the claws, and then remove the push button ignition switch from the panel - switch.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

Push Button Ignition Switch

SECURITY AND LOCKS

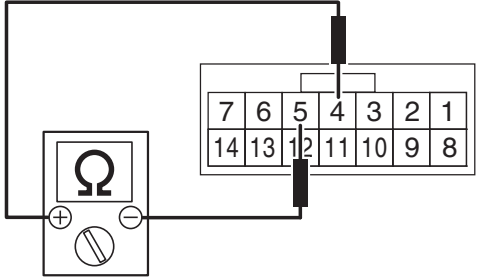
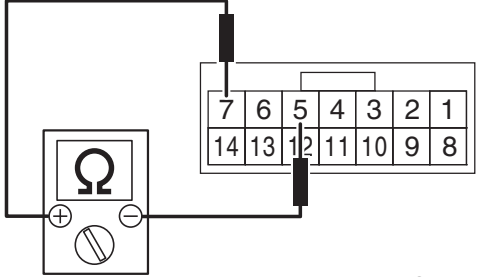
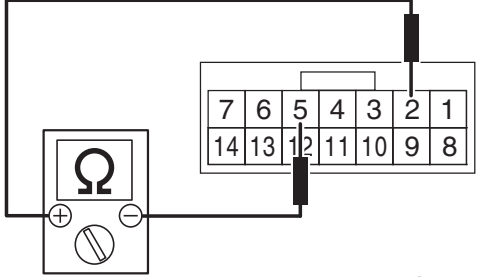
C: INSPECTION

On the vehicle inspection

Preparation tool:

Circuit tester

1) Check the continuity between push button ignition switch terminals.

Terminal No.	Inspection conditions	Specification	Connection diagram
4 (COM) — 5 (GND)	Always	Continuity exists	 SL-01608
7 (SSW1) — 5 (GND)	Push button ignition switch released → pressed	Continuity exists	 SL-01609
2 (SSW2) — 5 (GND)	Push button ignition switch released → pressed	Continuity exists	 SL-01610

Push Button Ignition Switch

SECURITY AND LOCKS

2) Check the push button ignition switch operation when battery voltage is applied between the terminals of the push button ignition switch.

Terminal No.	Inspection conditions	Specification	Connection diagram
11 (SWIL) — 5 (GND)	Connect battery to the terminals	Goes off → Red switch illumination light	SL-01659
12 (INDS) — 5 (GND)		Turns off → Switch indicator lights in green	SL-01660
13 (INDW) — 5 (GND)		Turns off → Switch indicator lights in orange	SL-01661

3) Replace the push button ignition switch if the inspection result is not within the standard value.

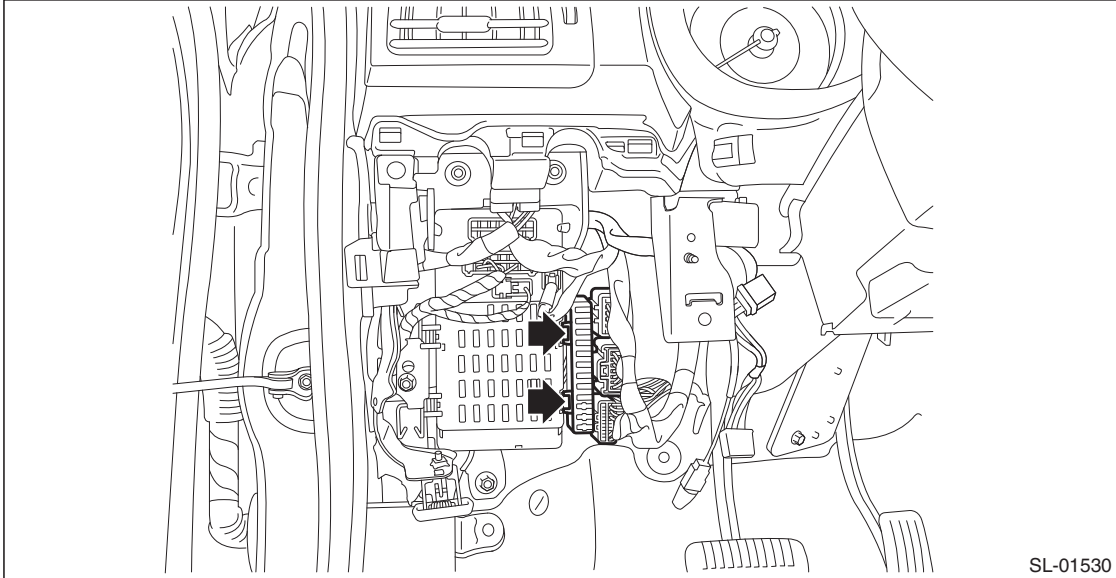
Starter Relay (Push Button Start)

SECURITY AND LOCKS

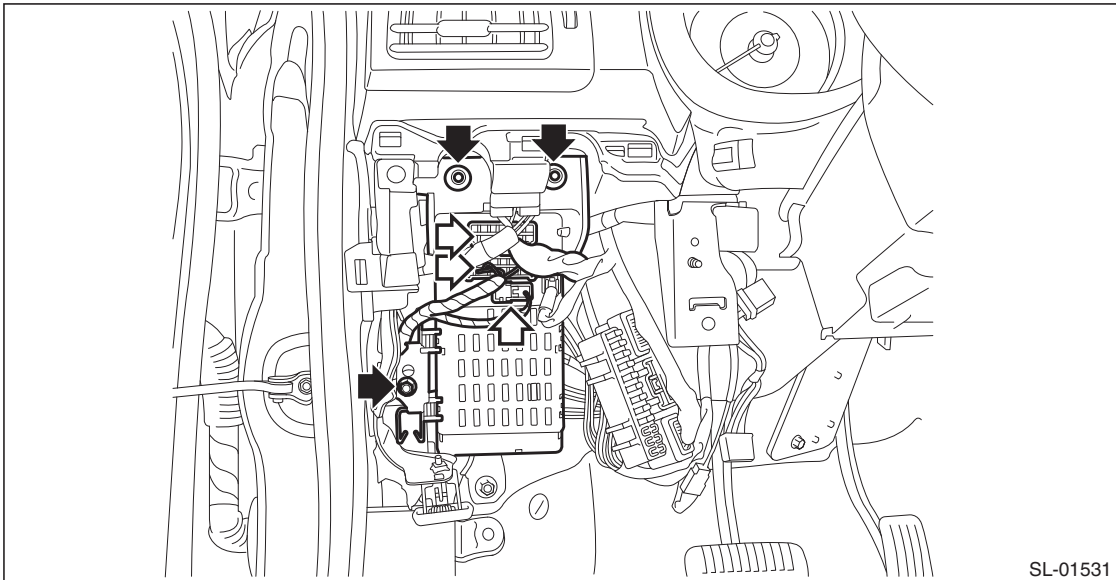
36.Starter Relay (Push Button Start)

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



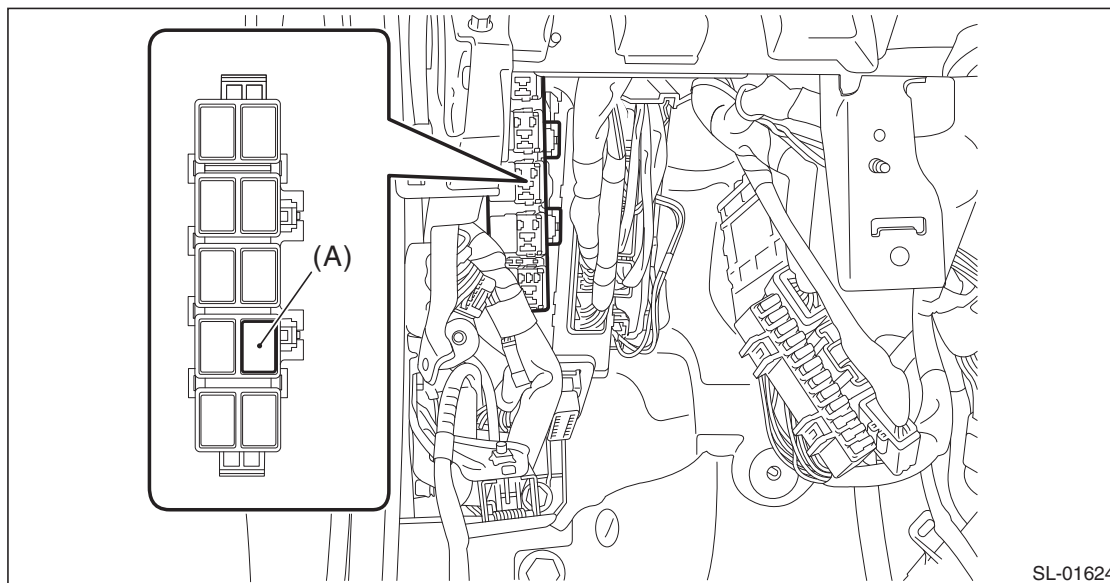
- 3) Remove the relay & fuse box.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and nuts, and remove the relay & fuse box.



Starter Relay (Push Button Start)

SECURITY AND LOCKS

4) Remove the starter relay (push button start) (A) from the relay holder.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

Tightening torque:

Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

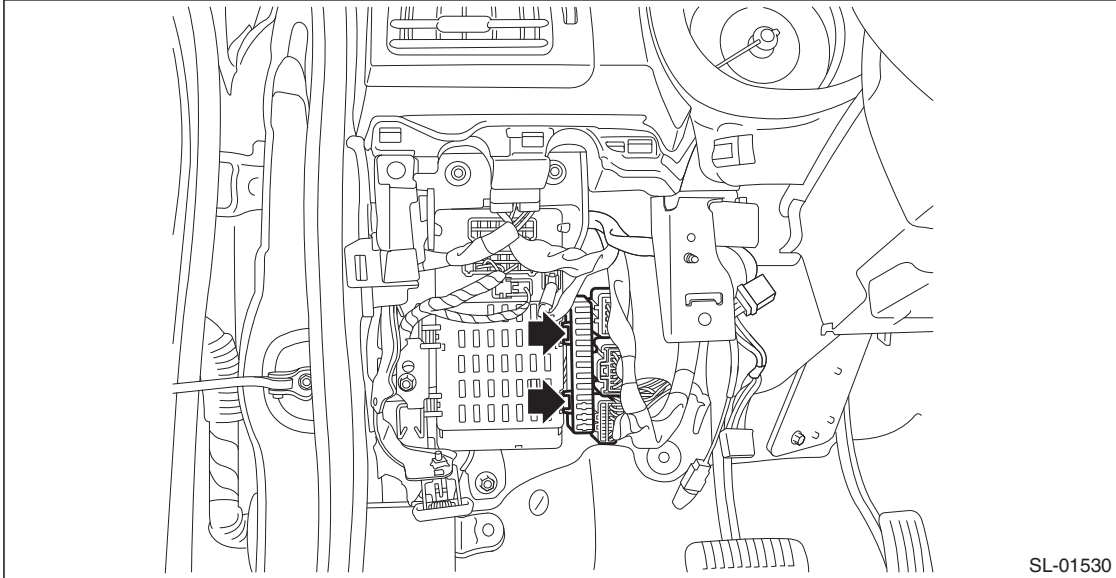
C: INSPECTION

Refer to "CHECK RELAY" in "Relay and Fuse". <Ref. to SL-10, CHECK RELAY, INSPECTION, Relay and Fuse.>

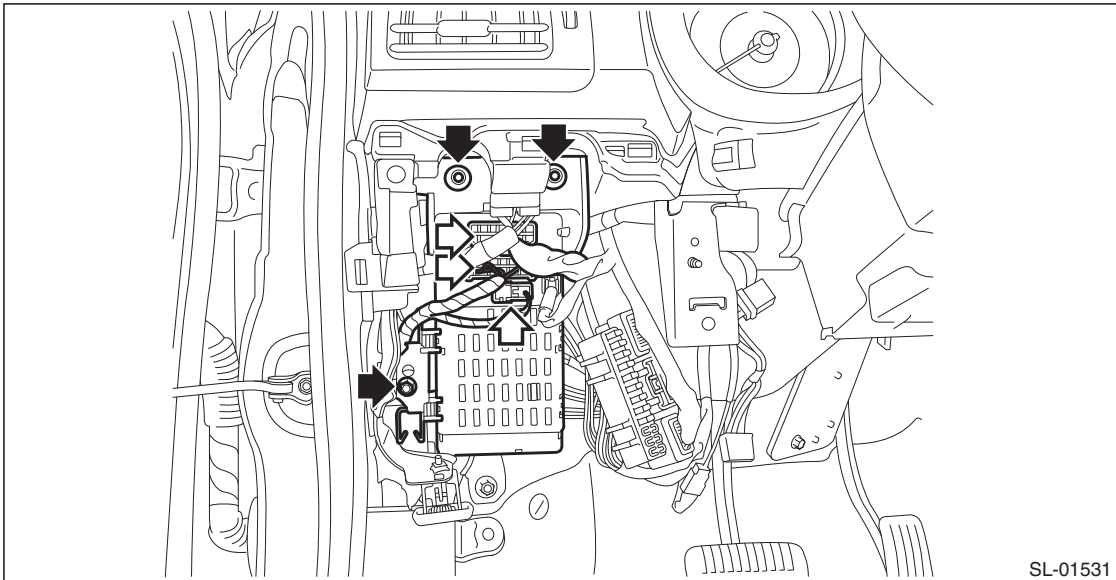
37.IG Relay1 (Push Button Start)

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



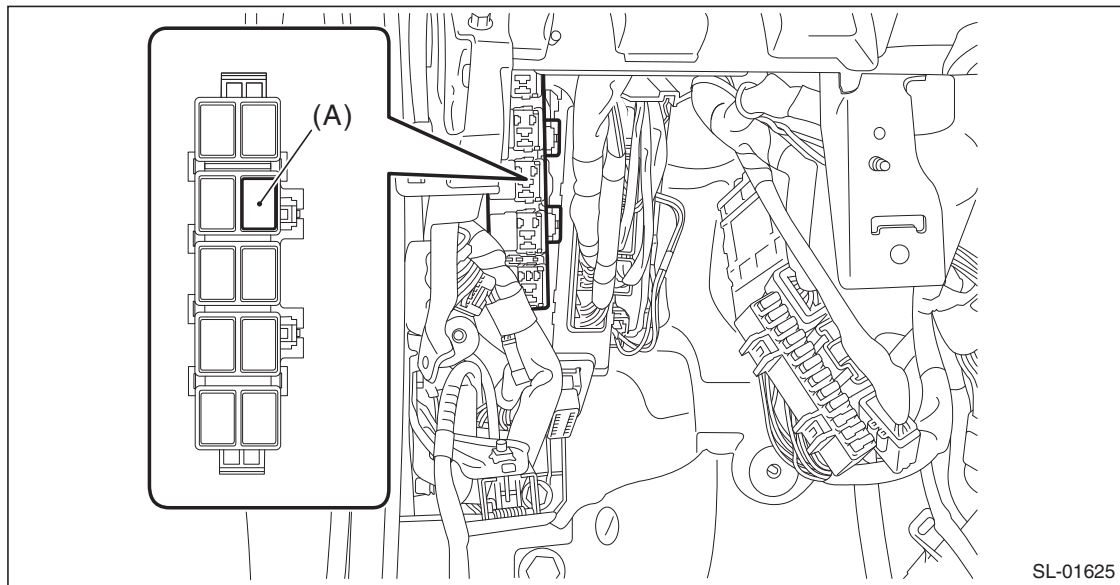
- 3) Remove the relay & fuse box.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and nuts, and remove the relay & fuse box.



IG Relay1 (Push Button Start)

SECURITY AND LOCKS

4) Remove IG relay 1 (push button start) (A) from the relay holder.



SL-01625

B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

Tightening torque:

Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

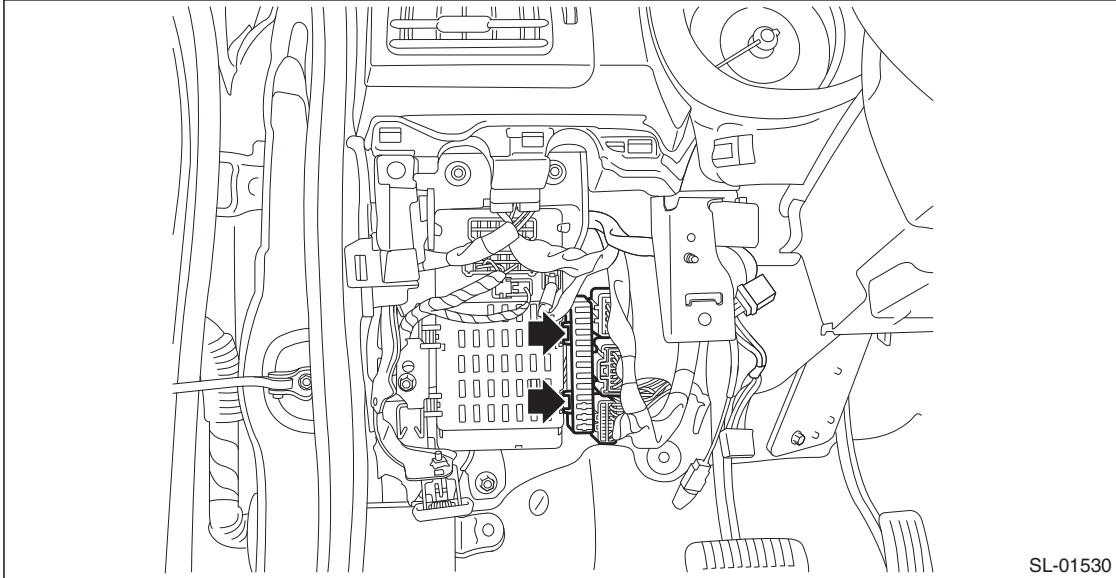
C: INSPECTION

Refer to "CHECK RELAY" in "Relay and Fuse". <Ref. to SL-10, CHECK RELAY, INSPECTION, Relay and Fuse.>

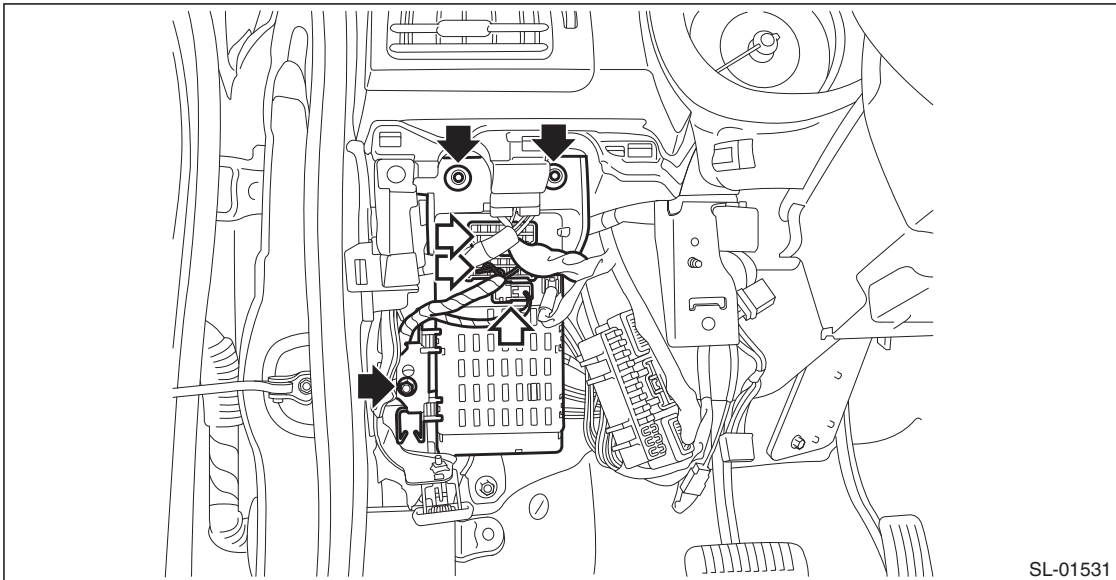
38.IG Relay2 (Push Button Start)

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



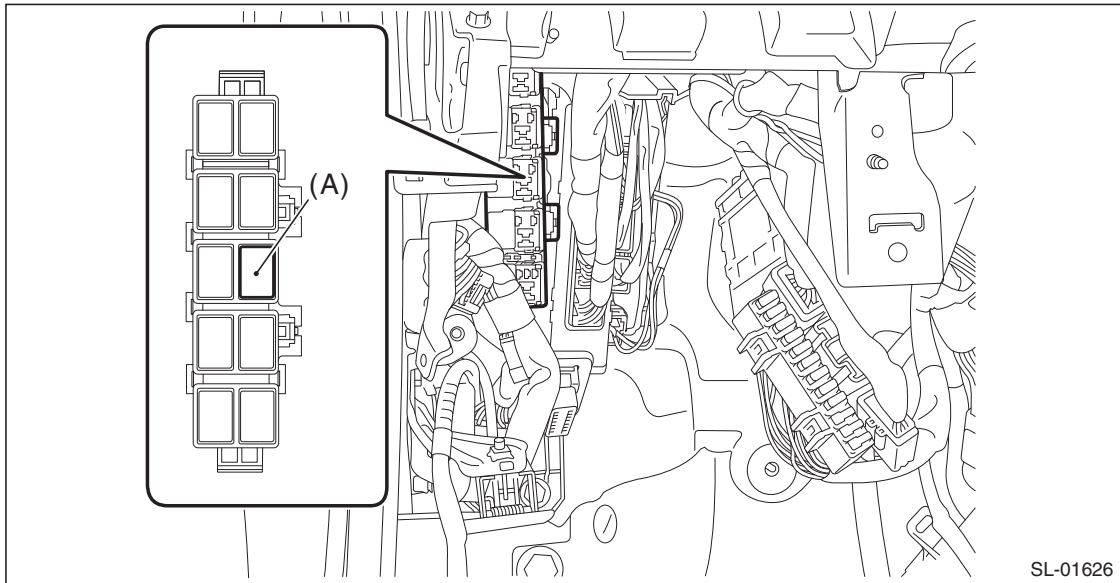
- 3) Remove the relay & fuse box.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and nuts, and remove the relay & fuse box.



IG Relay2 (Push Button Start)

SECURITY AND LOCKS

4) Remove IG relay 2 (push button start) (A) from the relay holder.



SL-01626

B: INSTALLATION

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

Tightening torque:

Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

Refer to "CHECK RELAY" in "Relay and Fuse". <Ref. to SL-10, CHECK RELAY, INSPECTION, Relay and Fuse.>

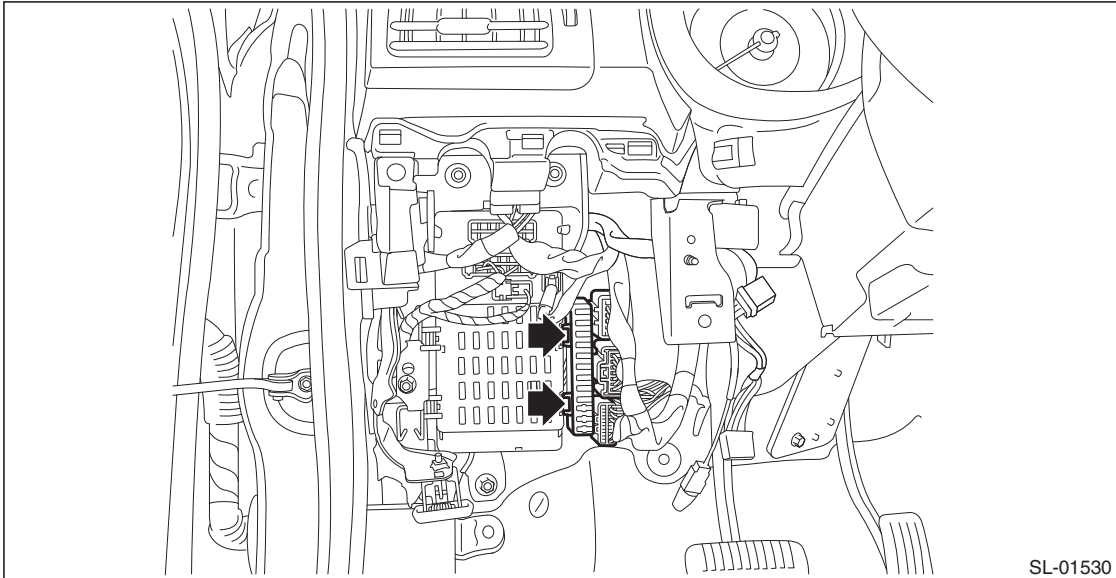
Accessory Relay (Push Button Start)

SECURITY AND LOCKS

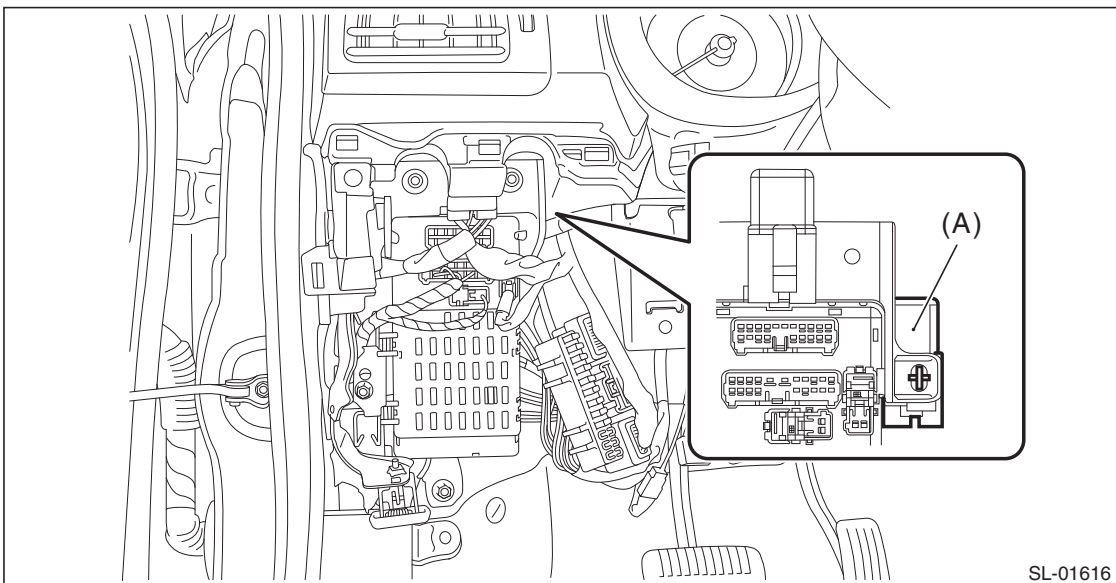
39. Accessory Relay (Push Button Start)

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



- 3) Remove the accessory relay (push button start) (A) from the relay and fuse box.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

C: INSPECTION

Refer to "CHECK RELAY" in "Relay and Fuse". <Ref. to SL-10, CHECK RELAY, INSPECTION, Relay and Fuse.>

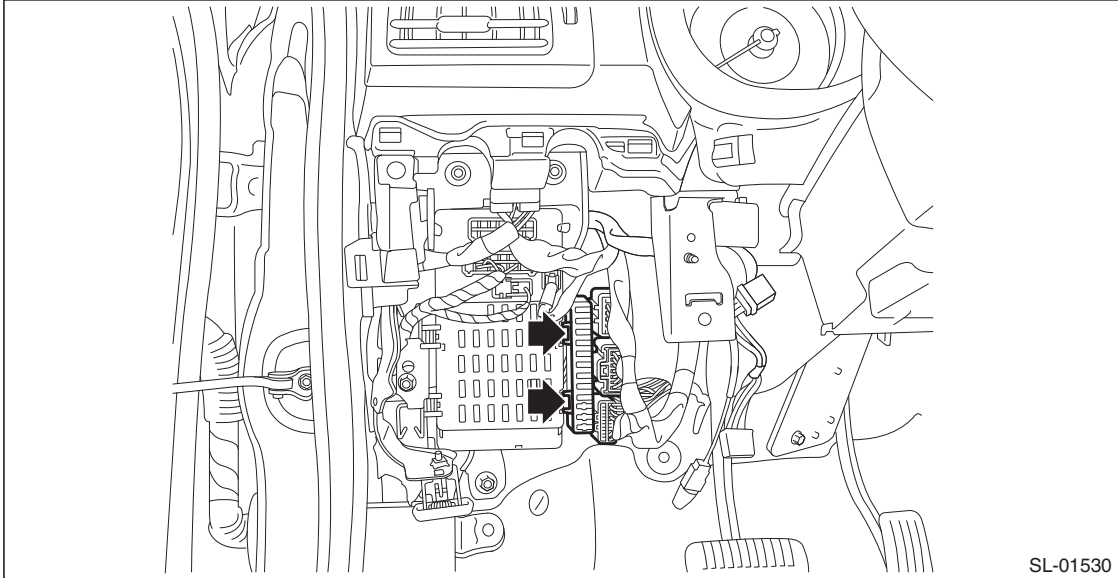
Starter Cut Relay

SECURITY AND LOCKS

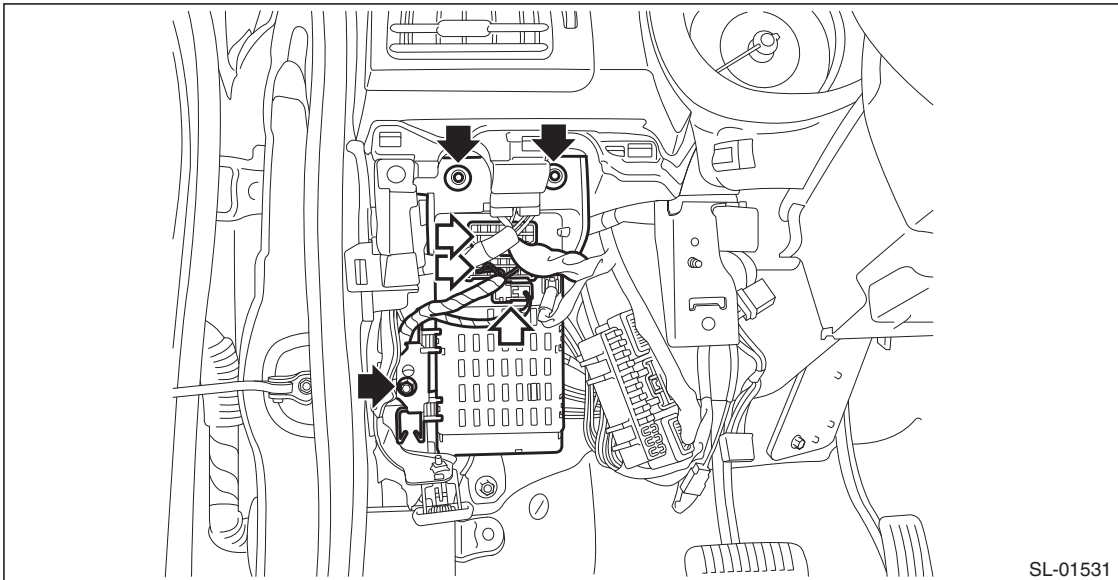
40. Starter Cut Relay

A: REMOVAL

- 1) Remove the cover assembly - instrument panel LWR driver and the knee airbag module. <Ref. to AB-39, REMOVAL, Knee Airbag Module.>
- 2) Release the lock and remove the fuse holder.



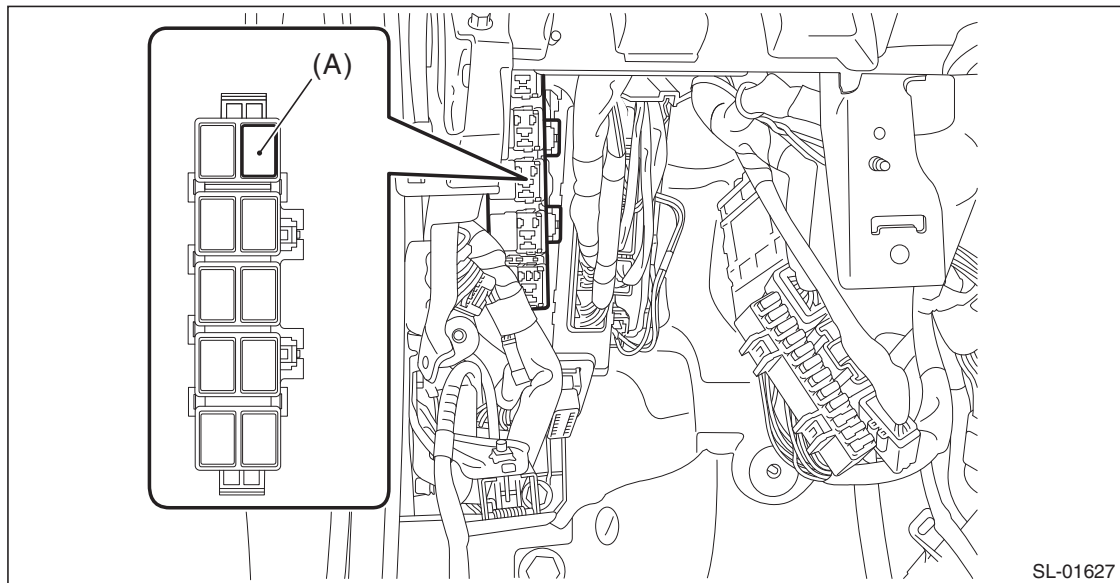
- 3) Remove the relay & fuse box.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and nuts, and remove the relay & fuse box.



Starter Cut Relay

SECURITY AND LOCKS

4) Remove the starter cut relay (A) from the relay holder.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

Refer to "INSTALLATION" of "Instrument Panel Lower Cover". <Ref. to EI-60, INSTALLATION, Instrument Panel Lower Cover.>

Tightening torque:

Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

Refer to "CHECK RELAY" in "Relay and Fuse". <Ref. to SL-10, CHECK RELAY, INSPECTION, Relay and Fuse.>

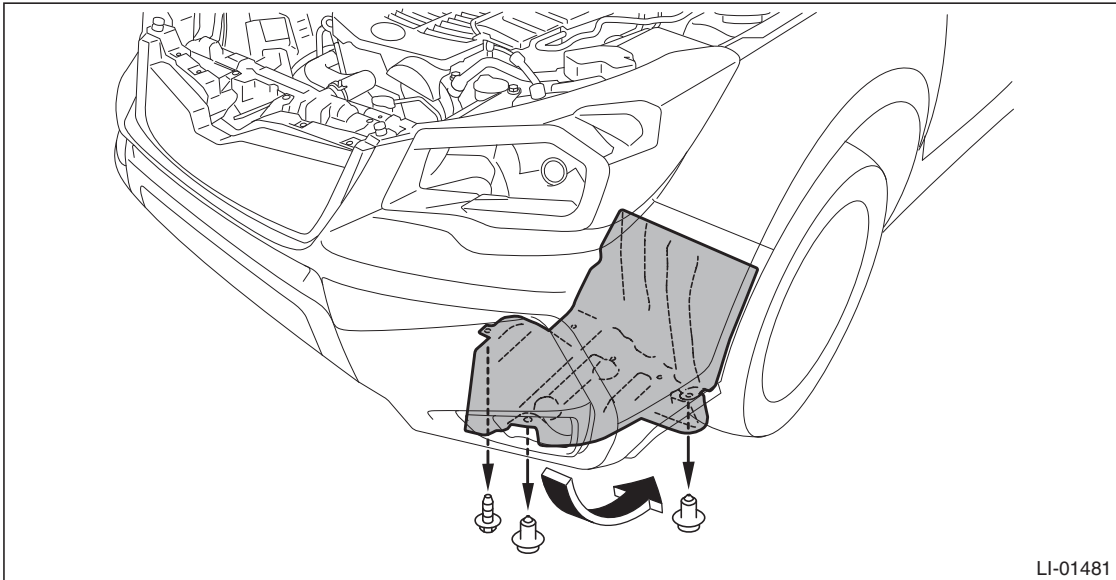
Access Buzzer

SECURITY AND LOCKS

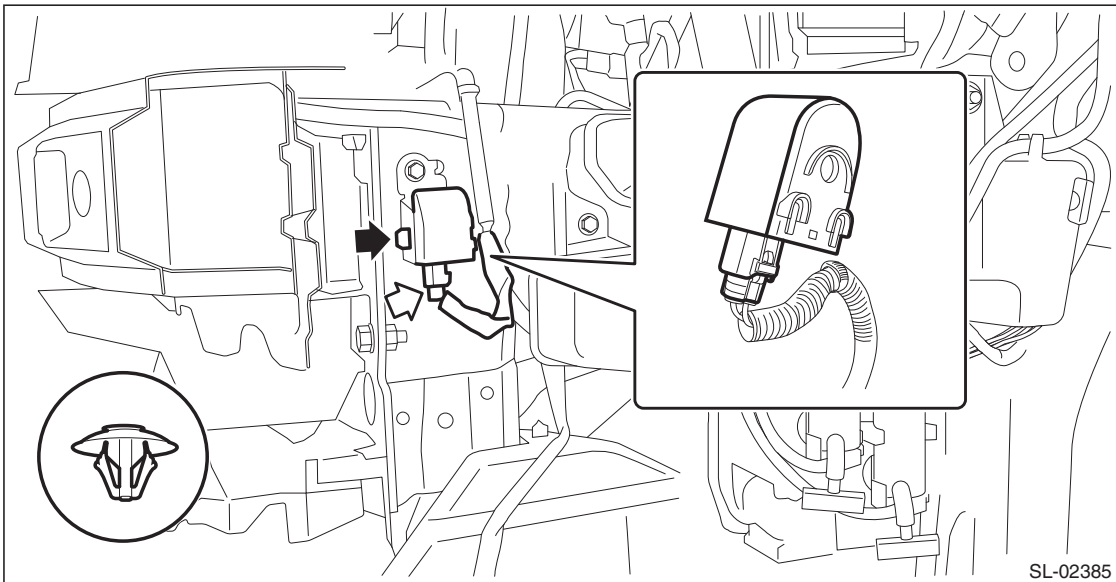
41. Access Buzzer

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Lift up the vehicle.
- 3) Remove the clips, and turn over the front side of the mud guard - front.



- 4) Remove the keyless buzzer.
 - (1) Disconnect the connector.
 - (2) Remove the clip and detach the keyless buzzer.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

Using the Subaru Select Monitor, perform forced operation of the keyless buzzer. <Ref. to BC(diag)-15, OPERATION, User Customizing.>

If a buzzer does not sound, refer to "Diagnostics with Phenomenon" of "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-98, KEYLESS ACCESS EXTERNAL BUZZER DOES NOT BEEP, INSPECTION, Diagnostics with Phenomenon.>

Function Setting (Customize)

SECURITY AND LOCKS

42.Function Setting (Customize)

A: OPERATION

Disabling/Activating the keyless access system

The following functions are disabled when the keyless access system functions are disabled:

- LOCK function performed by the operation of touch sensor on the door outer handle
- Rear gate LOCK function by rear lock button operation
- UNLOCK function by the door touch sensor
- Rear gate open function by rear gate opener button operation in the rear gate lock condition
- Lockout prevention feature
- Warning function
- Engine starting control using keyless access collation

B: PROCEDURE

1) Check that the vehicle status is as follows:

- Ignition switch OFF
- One window is completely open
- Keyless access system is activated (or disabled if re-activating)

2) Sit in the driver's seat with the door closed and press the door lock switch to UNLOCK once.

3) Open the driver's door within five seconds.

4) Within 5 seconds, with the driver's door opened, slowly press the door lock switch to UNLOCK twice.

5) Within 30 seconds, perform the closing → opening operation of the driver's door twice.

6) Within 30 seconds, with the driver's door opened, slowly press the door lock switch to UNLOCK twice.

7) Within 30 seconds, perform the closing → opening operation of the driver's door once.

8) Within five seconds, close the driver's door.

NOTE:

- Perform the same procedures to re-activate the keyless access system from the disabled condition.
- If the driver's door is opened or closed in step 4) and step 6), the cancel operation is disabled.

Keyless Access With Push Button Start System

SECURITY AND LOCKS

43. Keyless Access With Push Button Start System

A: DIAGNOSTIC PROCEDURE WITH PHENOMENON

Refer to "Diagnostics with Phenomenon" of "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. <Ref. to KPS(diag)-90, Diagnostics with Phenomenon.>

Keyless Access With Push Button Start System

SECURITY AND LOCKS
