

SECURITY AND LOCKS

SL

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GENERAL DESCRIPTION

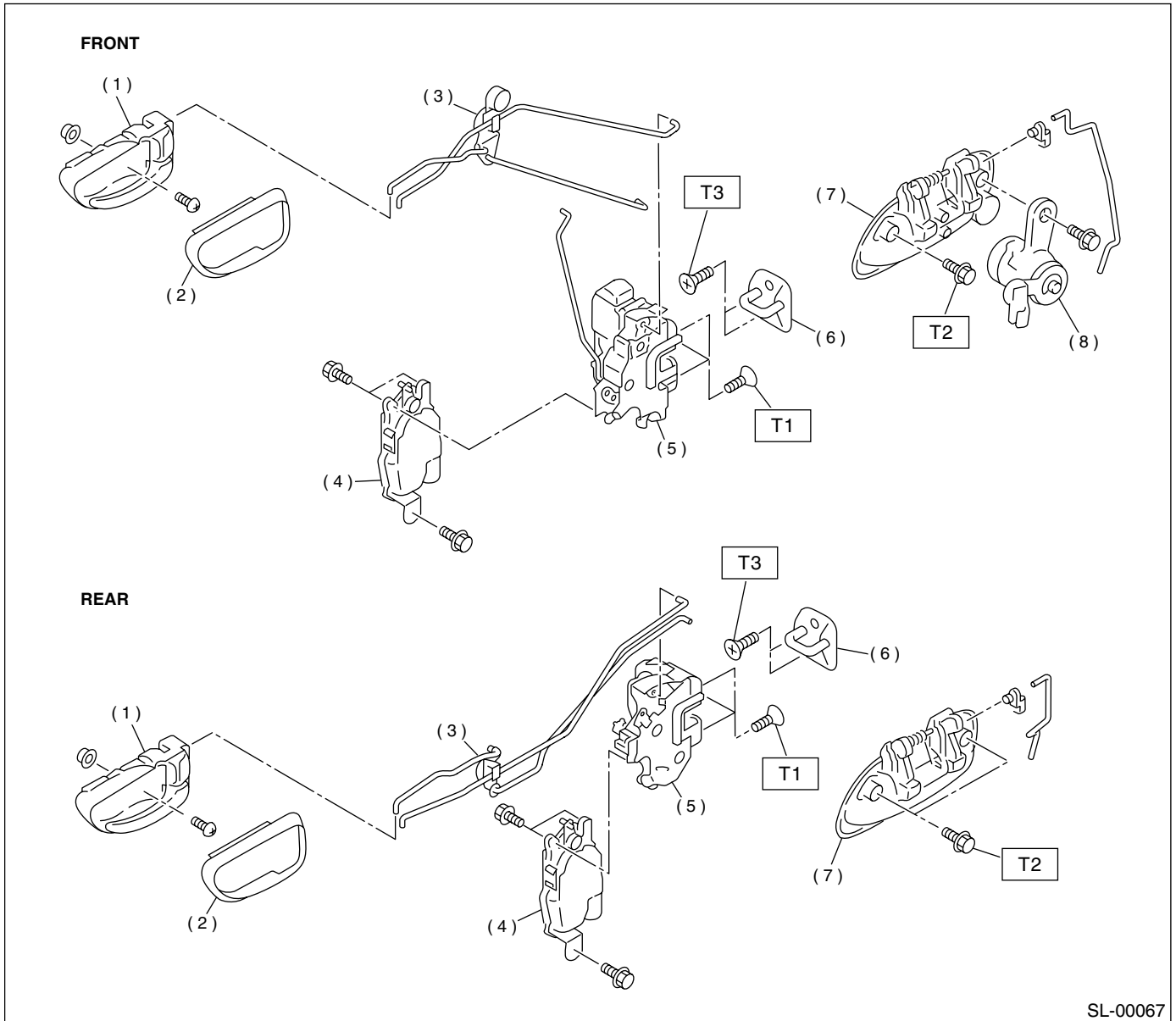
SECURITY AND LOCKS

1. General Description

A: SPECIFICATIONS

B: COMPONENT

1. DOOR LOCK ASSEMBLY



SL-00067

- | | |
|-----------------------------|-----------------------|
| (1) Inner remote ASSY | (6) Striker |
| (2) Inner remote cover | (7) Door outer handle |
| (3) Bell crank | (8) Key cylinder |
| (4) Auto-door lock actuator | |
| (5) Door latch | |

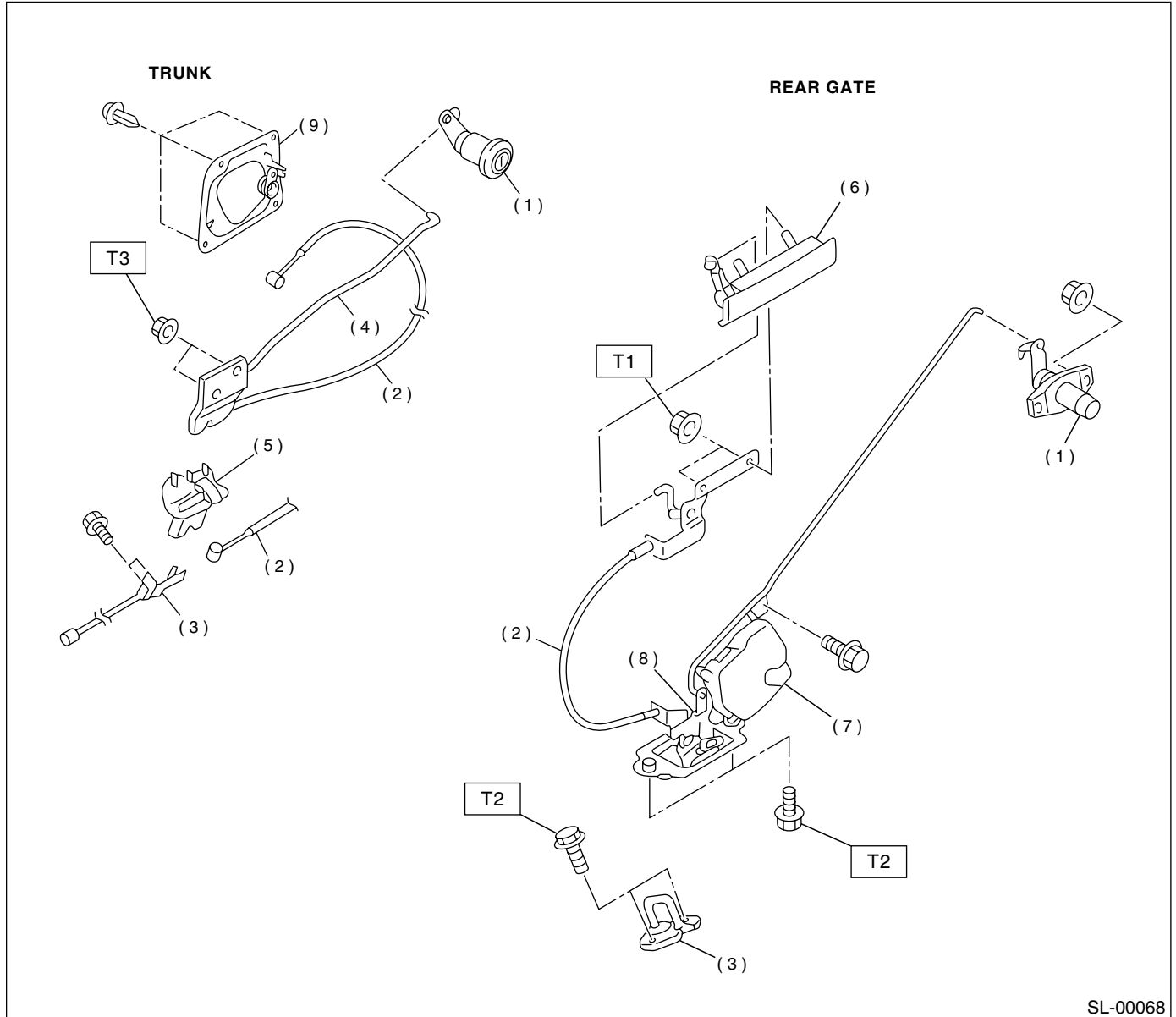
Tightening torque: N·m (kgf·m, ft·lb)

T1: 6.4 (0.65, 4.7)

T2: 7.35 (0.75, 5.4)

T3: 18.0 (1.8, 13.0)

2. TRUNK LID AND REAR GATE LOCK



- | | |
|--------------------------|------------------------------|
| (1) Key cylinder | (6) Rear gate outer handle |
| (2) Cable | (7) Rear gate actuator |
| (3) Striker | (8) Rear gate latch |
| (4) Trunk lid lock ASSY | (9) Trunk lid release handle |
| (5) Trunk lid lock cover | |

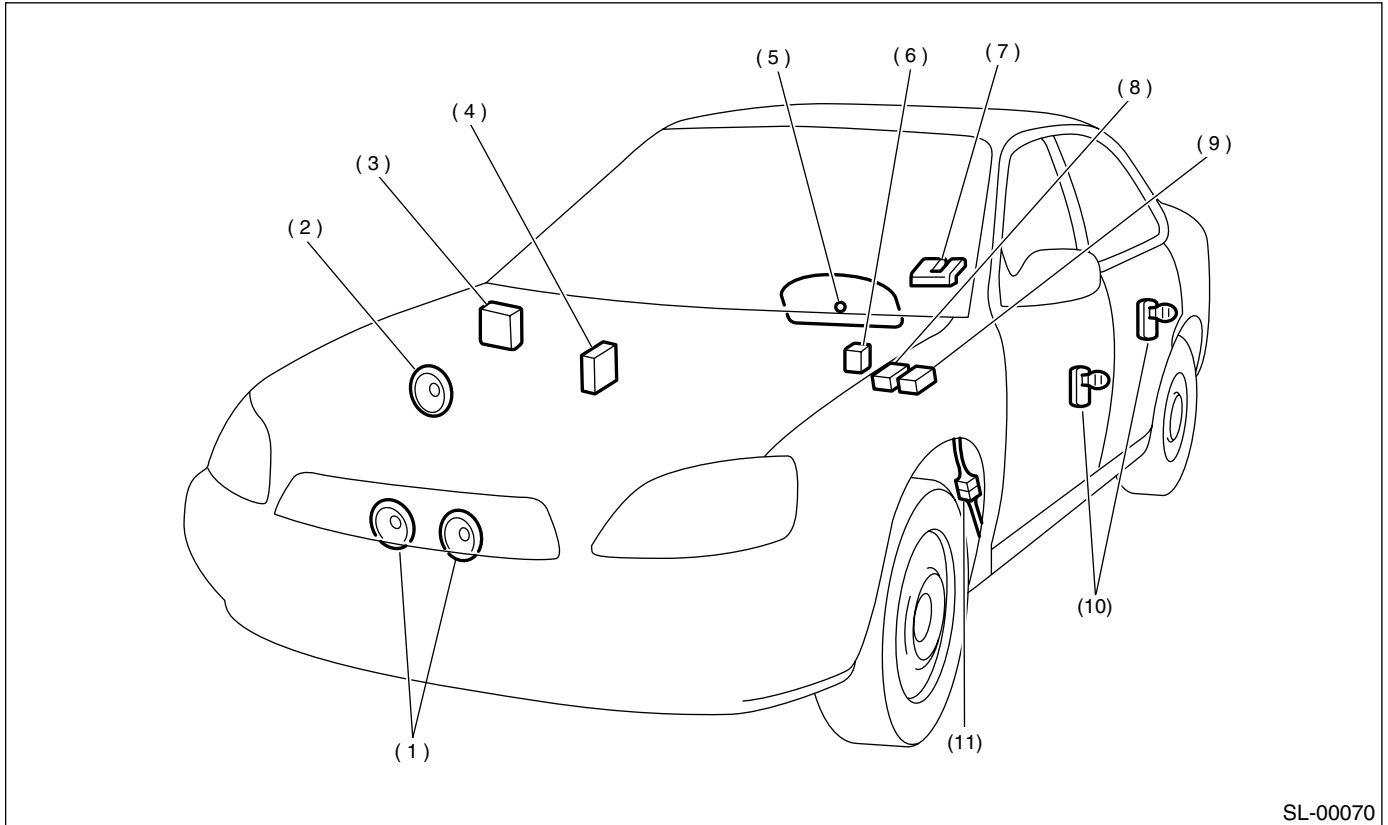
Tightening torque: N·m (kgf-m, ft-lb)

T1: 7.5 (0.76, 5.5)

T2: 25 (2.5, 18.1)

T3: 18 (1.8, 13.0)

4. SECURITY SYSTEM



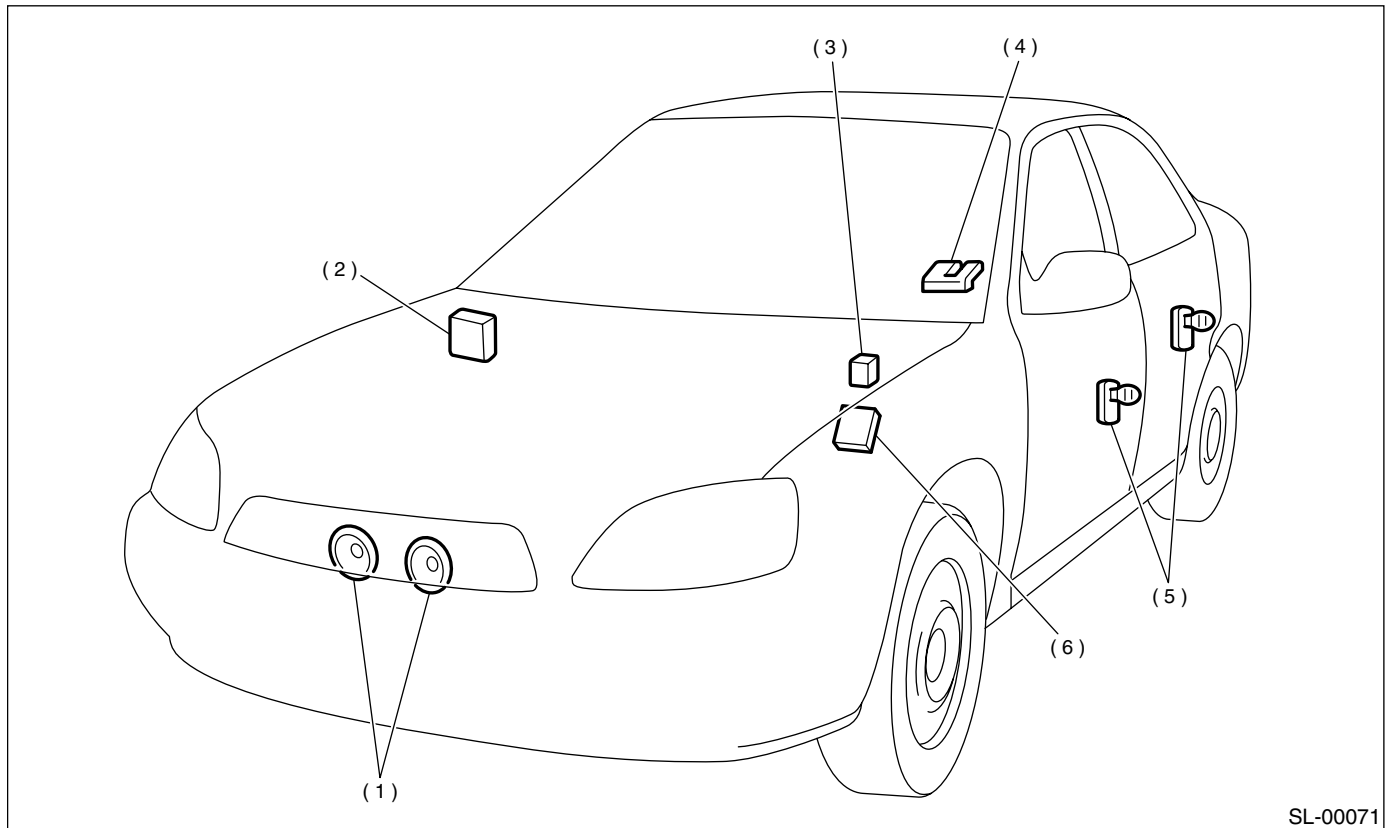
SL-00070

- | | | |
|---|--|----------------------------|
| (1) Horn | (6) Horn relay (in main fuse box) | (10) Door switch |
| (2) Security horn | (7) Trunk room light switch (Sedan),
rear gate latch switch (Wagon) | (11) Passive arm connector |
| (3) Keyless entry control module | | |
| (4) Security control module | (8) Interrupt relay | |
| (5) Security indicator light (in combination meter) | (9) Security horn relay | |

GENERAL DESCRIPTION

SECURITY AND LOCKS

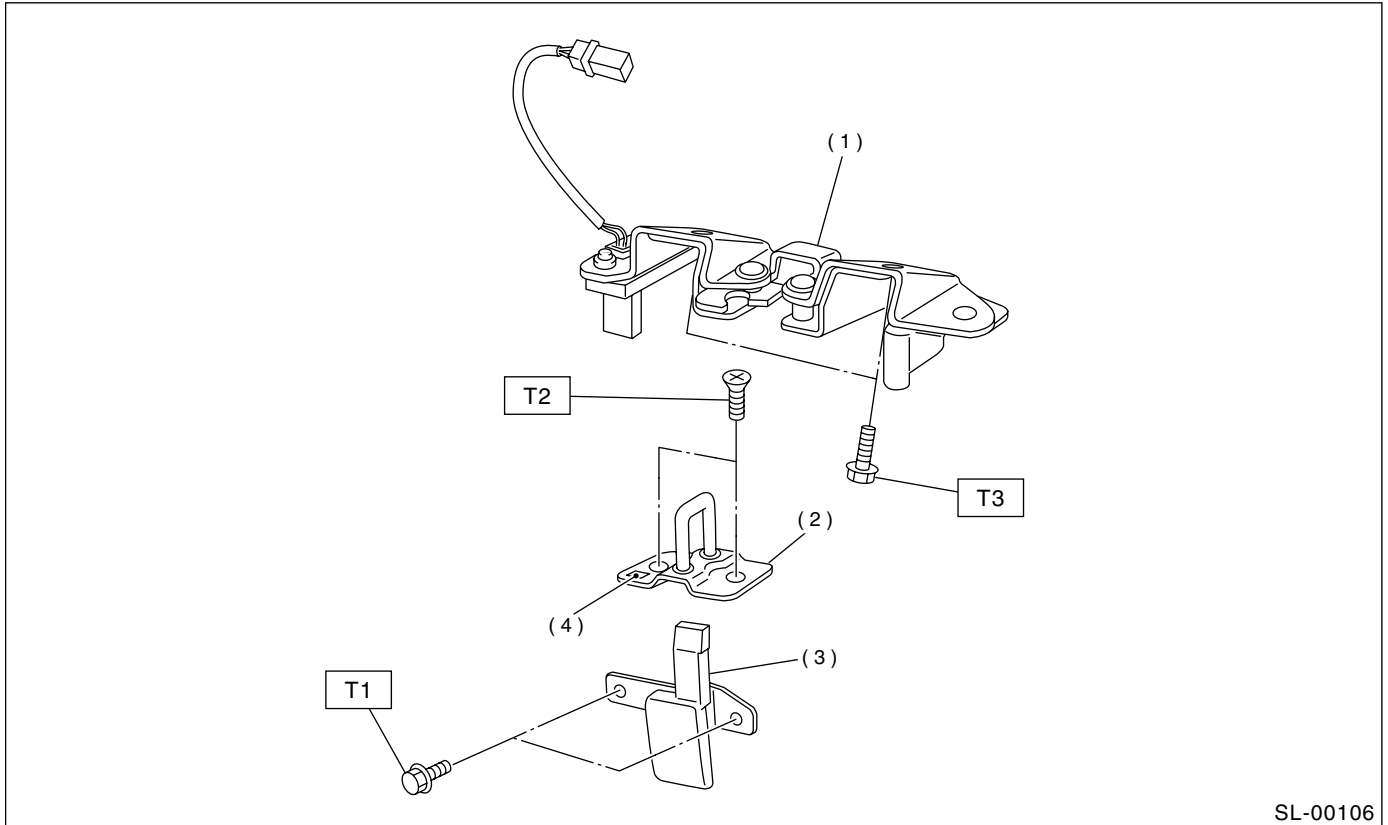
5. KEYLESS ENTRY SYSTEM



SL-00071

- | | | |
|----------------------------------|--|-----------------------|
| (1) Horn | (3) Horn relay | (5) Door switch |
| (2) Keyless entry control module | (4) Rear gate latch switch (Wagon)/
Trunk room right switch (Sedan) | (6) Integrated module |

6. SWITCH BACK GATE LOCK



(1) Switch back gate latch
 (2) Striker

(3) Switch back gate release handle
 (4) Marking

Tightening torque: N·m (kgf·m, ft·lb)

T1: 7.5 (0.76, 5.5)

T2: 18 (1.8 13.0)

T3: 27.5 (2.80, 20.3)

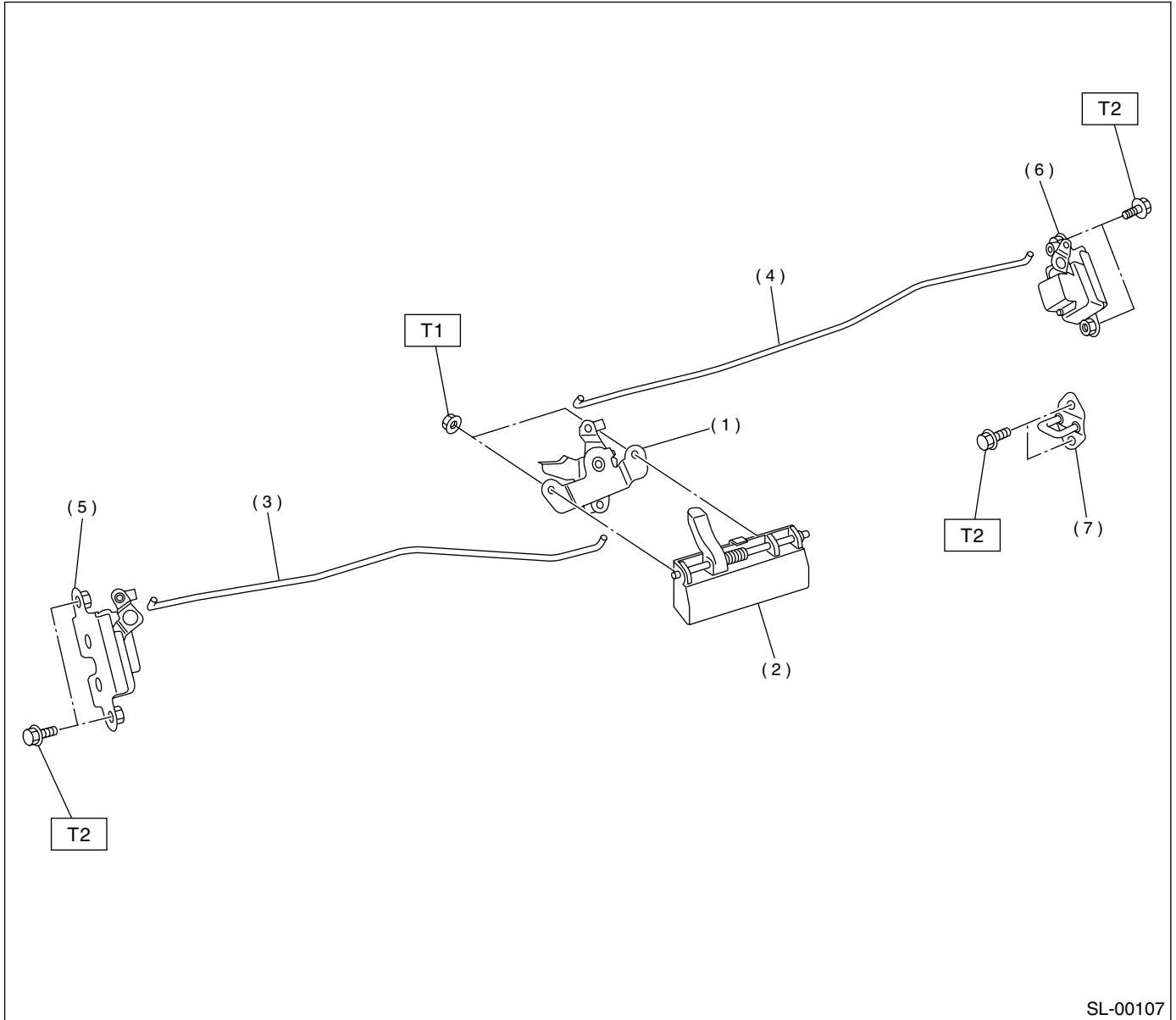
NOTE:

When installing striker, mount with marked portion facing the vehicle front.

GENERAL DESCRIPTION

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7. TAIL GATE LOCK



- (1) Link ASSY
- (2) Tail gate outer handle
- (3) Rod (LH)
- (4) Rod (RH)
- (5) Tail gate latch (LH)
- (6) Tail gate latch (RH)
- (7) Striker

Tightening torque: N·m (kgf·m, ft·lb)

T1: 7.5 (0.76, 5.5)

T2: 25 (2.5, 18.1)

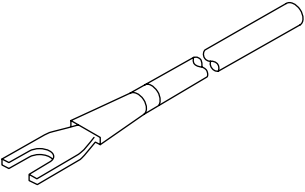
C: CAUTION

- Before disassembling or reassembling parts, always disconnect battery ground cable. When repairing radio, control module, etc. which are provided with memory functions, record memory contents before disconnecting battery ground cable. Otherwise, these contents are cancelled upon disconnection.
- Reassemble parts in reverse order of disassembly procedure unless otherwise indicated.
- Adjust parts to specifications contained in this manual if so designated.

- Connect connectors and hoses securely during reassembly.
- After reassembly, ensure all functional parts operate smoothly.
- Airbag system wiring harness is routed near the electrical parts and switch.
- All airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage airbag system wiring harness when servicing the ignition key cylinder.

D: PREPARATION TOOL

1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-925580000	925580000	PULLER	Used for removing trim clip.

2. GENERAL TOOLS

TOOL NAME	REMARKS
Circuit Tester	Used for measuring resistance and voltage.
Drill	Used for replacing ignition key lock.

DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

2. Door Lock Control System

A: SCHEMATIC

1. DOOR LOCK CONTROL

<Ref. to WI-140, SCHEMATIC, Door Lock System.>

B: INSPECTION

1. SYMPTOM CHART

Symptom	Repair order	Reference
The door lock control system does not operate.	1. Check the fuse.	<Ref. to SL-10, CHECK FUSE, INSPECTION, Door Lock Control System.>
	2. Check the power supply and ground circuit for the integrated module.	<Ref. to SL-11, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the door lock switch and the circuit.	<Ref. to SL-11, CHECK DOOR LOCK SWITCH AND CIRCUIT, INSPECTION, Door Lock Control System.>
	4. Check the door lock actuator and the circuit.	<Ref. to SL-12, CHECK DOOR LOCK ACTUATOR AND CIRCUIT, INSPECTION, Door Lock Control System.>
The door lock switch does not operate.	Check the door lock switch and the circuit.	<Ref. to SL-11, CHECK DOOR LOCK SWITCH AND CIRCUIT, INSPECTION, Door Lock Control System.>
A specific door lock actuator does not operate.	Check the door lock actuator and the circuit.	<Ref. to SL-12, CHECK DOOR LOCK ACTUATOR AND CIRCUIT, INSPECTION, Door Lock Control System.>

2. CHECK FUSE

Step	Check	Yes	No
1 CHECK FUSE. Remove and visually check the fuse No. 2 (in the main fuse box) and No. 3 (in the fuse & relay box).	In the fuse blown out?	Check the power supply and ground circuit. <Ref. to SL-11, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>	Replace the fuse with a new one.

DOOR LOCK CONTROL SYSTEM

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Step	Check	Yes	No
1 CHECK POWER SUPPLY. 1) Disconnect the integrated module harness connector. 2) Measure the voltage between the harness connector terminal and chassis ground. Connector & terminal (B281) No. 1, 2 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Go to step 2.	Check the harness for open circuits or shorts between the integrated module and the fuse.
2 CHECK GROUND CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground. Connector & terminal (B281) No. 4, 13 — Chassis ground:	Is the measured value less than 10 Ω?	The power supply and ground circuit is OK.	Repair the harness.

4. CHECK DOOR LOCK SWITCH AND CIRCUIT

Step	Check	Yes	No
1 CHECK DOOR LOCK SWITCH CIRCUIT. 1) Disconnect the integrated module harness connector. 2) Measure the resistance between the harness connector terminal and chassis ground when moving the door lock switch to LOCK. Connector & terminal (B280) No. 12 — Chassis ground:	Is the measured value less than 10 Ω?	Go to step 2.	Go to step 3.
2 CHECK DOOR LOCK SWITCH CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground when the door lock switch is moved to UNLOCK. Connector & terminal (B280) No. 11 — Chassis ground:	Is the measured value less than 10 Ω?	The door lock switch is OK.	Go to step 3.
3 CHECK DOOR LOCK SWITCH. 1) Disconnect the door lock switch harness connector. 2) Measure the resistance between the door lock switch terminals when moving the door lock switch to LOCK. Connector & terminal Driver's side: (D7) No. 1 — No. 2 Passenger's side: (D62) No. 2 — No. 5	Is the measured value less than 1 Ω?	Go to step 4.	Replace the door lock switch.
4 CHECK DOOR LOCK SWITCH. Measure the resistance between the door lock switch terminals when moving the door lock switch to UNLOCK. Connector & terminal Driver's side: (D7) No. 1 — No. 6 Passenger's side: (D62) No. 1 — No. 5	Is the measured value less than 1 Ω?	Check the harness for open circuits or shorts between the integrated module and the door lock switch.	Replace the door lock switch.

DOOR LOCK CONTROL SYSTEM

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5. CHECK DOOR LOCK ACTUATOR AND CIRCUIT

Step	Check	Yes	No
1 CHECK OUTPUT SIGNAL. Measure the voltage between the harness connector terminal of integrated module and chassis ground when moving the door lock switch to LOCK. <i>Connector & terminal</i> <i>(B281) No. 6 (+) — Chassis ground (-):</i>	Is the measured value more than 10 V?	Go to step 2.	Replace the integrated module.
2 CHECK OUTPUT SIGNAL. Measure the voltage between the harness connector terminal of integrated module and chassis ground when moving the door lock switch to UNLOCK. <i>Connector & terminal</i> <i>(B281) No. 7, 8 (+) — Chassis ground (-):</i>	Is the measured value more than 10 V?	Go to step 3.	Replace the integrated module.
3 CHECK DOOR LOCK ACTUATOR. Check the door lock actuator. Front door lock actuator: <Ref. to SL-36, Front Door Lock Actuator.> Rear door lock actuator: <Ref. to SL-40, Rear Door Lock Actuator.> Rear gate latch lock actuator: <Ref. to SL-43, Rear Gate Latch Lock Actuator.>	Is the door lock actuator OK?	Check the harness for open circuits or shorts between the integrated module and the door lock actuator.	Replace the door lock actuator.

3. Keyless Entry System

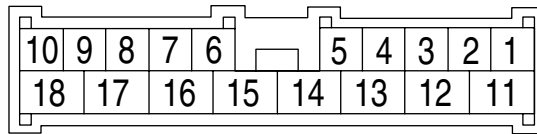
A: SCHEMATIC

1. KEYLESS ENTRY

<Ref. to WI-210, SCHEMATIC, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

1. KEYLESS ENTRY CONTROL MODULE



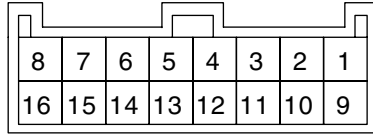
SL-00036

Content	Terminal No.	Measuring condition
Integrated module	1 (OUTPUT)	0 V is present when pressing the transmitter LOCK/ARM button.
Integrated module	2 (OUTPUT)	0 V is present when pressing the transmitter UNLOCK/DISARM button.
Security control module	3	—
Security control module	4	—
Door lock switch	5 (INPUT)	0 V is present when operating the door lock switch.
Ignition switch (ON)	6 (INPUT)	Battery voltage is present when ignition switch is turned to ON.
Key warning switch	7 (INPUT)	Battery voltage is present when inserting the key into the ignition switch.
Door unlock switch	8 (INPUT)	0 V is present when operating the door lock switch.
Trunk room light switch (Sedan), rear gate latch switch (Wagon)	9 (INPUT)	0 V is present when trunk lid or rear gate is open.
Door switch	10 (INPUT)	0 V is present when any door is open.
Ground	11	0 V is constantly present.
Turn signal light (Left)	12 (OUTPUT)	Battery voltage is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button.
Horn relay	13 (OUTPUT)	0 V is present when pressing the transmitter LOCK/ARM button three times within 5 seconds.
Power supply	14	Battery voltage is constantly present.
Power supply (Back-up)	15	Battery voltage is constantly present when back-up fuse is energized.
Keyless buzzer	16 (OUTPUT)	0 V is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button.
Security control module	17	—
Turn signal light (Right)	18 (OUTPUT)	Battery voltage is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button.

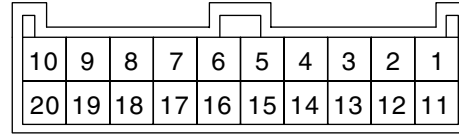
KEYLESS ENTRY SYSTEM

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2. INTEGRATED MODULE



(B)



(A)

SL-00263

Content	Terminal No.	Measuring condition
Ignition switch illumination	A2 (OUTPUT)	0 V is present when ignition switch is OFF, and when door is opened and then closed.
Door switch (Except driver's door)	A7 (INPUT)	0 V is present when any door is open (Except driver's door).
Door switch (Driver's door)	A8 (INPUT)	0 V is present when driver's door is open.
Door unlock switch	A11 (INPUT)	0 V is present when operating the door lock switch.
Door lock switch	A12 (INPUT)	0 V is present when operating the door lock switch.
Keyless entry control module	A13 (INPUT)	0 V is present when pressing the transmitter LOCK/ARM button.
Keyless entry control module	A14 (INPUT)	0 V is present when pressing the transmitter UNLOCK/DISARM button.
Ignition switch (ON)	A19 (INPUT)	Battery voltage is present when ignition switch is turned to ON.
Key warning switch	A20 (INPUT)	Battery voltage is present when inserting the key into ignition switch.
Power supply	B1	Battery voltage is constantly present.
Power supply	B2	Battery voltage is constantly present.
Ground	B4	0 V is constantly present.
Room light	B5 (OUTPUT)	0 V is present when all doors are closed and keys are removed, and when pressing the transmitter UNLOCK/DISARM button.
Door and rear gate lock actuator	B6 (OUTPUT)	Battery voltage is present when all doors are closed and keys are removed, and when pressing the transmitter LOCK/ARM button.
Door and rear gate lock actuator (Except driver side)	B7 (OUTPUT)	Battery voltage is present when all doors are closed and keys are removed, and when pressing the transmitter UNLOCK/DISARM button two times.
Door lock actuator (Driver side)	B8 (OUTPUT)	Battery voltage is present when all doors are closed and keys are removed, and when pressing the transmitter UNLOCK/DISARM button one time.
Ground	B13	0 V is constantly present.

C: INSPECTION

1. SYMPTOM CHART

Symptom	Repair order	Reference
None of the functions of the keyless entry system operate.	1. Check the transmitter battery and function.	<Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the fuse.	<Ref. to SL-18, CHECK FUSE, INSPECTION, Keyless Entry System.>
	3. Check the keyless entry control module power supply and ground circuit.	<Ref. to SL-18, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Keyless Entry System.>
	4. Replace the keyless entry control module.	<Ref. to SL-54, Keyless Entry Control Module.>
The transmitter cannot be programmed.	1. Check the transmitter battery and function.	<Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the ignition switch circuit.	<Ref. to SL-19, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Keyless Entry System.>
	3. Check the door switch.	<Ref. to SL-19, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	4. Check the key warning switch.	<Ref. to SL-20, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	5. Check the door switch.	<Ref. to SL-19, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	6. Check the output signal to integrated module.	<Ref. to SL-21, CHECK OUTPUT SIGNAL TO INTEGRATED MODULE, INSPECTION, Keyless Entry System.>
	7. Replace the keyless entry control module.	<Ref. to SL-54, Keyless Entry Control Module.>
The 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-10, INSPECTION, Door Lock Control System.>	1. Check the transmitter battery and function.	<Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-20, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	3. Check the door switch.	<Ref. to SL-19, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	4. Check the output signal to integrated module.	<Ref. to SL-21, CHECK OUTPUT SIGNAL TO INTEGRATED MODULE, INSPECTION, Keyless Entry System.>
	5. Replace the keyless entry control module.	<Ref. to SL-54, Keyless Entry Control Module.>
The panic alarm does not operate.	1. Check the transmitter battery and function.	<Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the horn operation.	<Ref. to SL-22, CHECK HORN OPERATION, INSPECTION, Keyless Entry System.>
	3. Replace the keyless entry control module.	<Ref. to SL-54, Keyless Entry Control Module.>

KEYLESS ENTRY SYSTEM

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Symptom	Repair order		Reference
The buzzer chirp and hazard light do not operate.	1. Check the buzzer chirp setting.		<Ref. to SL-18, CHECK BUZZER CHIRP SETTING, INSPECTION, Keyless Entry System.>
	2. Check the buzzer and hazard light operation.	Buzzer	<Ref. to SL-23, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
		Hazard light	<Ref. to SL-22, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	3. Check the output signal to integrated module.		<Ref. to SL-21, CHECK OUTPUT SIGNAL TO INTEGRATED MODULE, INSPECTION, Keyless Entry System.>
4. Replace the keyless entry control module.		<Ref. to SL-54, Keyless Entry Control Module.>	
The room light does not turn on.	1. Check the operation of room light.	Room light (Make sure that room light switch is set with door in engaged position.)	<Ref. to SL-21, CHECK ROOM LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	2. Replace the keyless entry control module.		<Ref. to SL-54, Keyless Entry Control Module.>
The door ajar warning does not operate.	1. Check the door switch.		<Ref. to SL-19, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	2. Check the buzzer operation.		<Ref. to SL-23, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
	3. Replace the keyless entry control module.		<Ref. to SL-54, Keyless Entry Control Module.>

2. CHECK TRANSMITTER BATTERY AND FUNCTION

Step	Check	Yes	No
1 CHECK TRANSMITTER BATTERY. 1) Remove the battery from the transmitter. <Ref. to SL-56, REMOVAL, Keyless Transmitter.> 2) Check the battery voltage. <Ref. to SL-56, INSPECTION, Keyless Transmitter.>	Is the measured value more than 2 V?	Go to step 2.	Replace the transmitter battery.
2 CHECK LED OF TRANSMITTER. 1) Press the LOCK/ARM or UNLOCK/DISARM button six times to synchronize with the keyless entry control module. 2) Press the LOCK/ARM button.	Does the LED blink one time?	Go to step 3.	Replace the transmitter. <Ref. to SL-56, REPLACEMENT, Keyless Transmitter.>
3 CHECK LED OF TRANSMITTER. Keep the LOCK/ARM button pressed.	Does the LED blink one time, and then turn on?	Go to step 4.	Replace the transmitter. <Ref. to SL-56, REPLACEMENT, Keyless Transmitter.>
4 CHECK LED OF TRANSMITTER. Press the UNLOCK/DISARM button.	Does the LED blink one time?	Go to step 5.	Replace the transmitter. <Ref. to SL-56, REPLACEMENT, Keyless Transmitter.>
5 CHECK LED OF TRANSMITTER. Keep the UNLOCK/DISARM button pressed.	Does the LED blink two times?	Transmitter is OK.	Replace the transmitter. <Ref. to SL-56, REPLACEMENT, Keyless Transmitter.>

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

3. CHECK BUZZER CHIRP SETTING

Step	Check	Yes	No
1 CHECK BUZZER CHIRP SETTING. 1) Check the current setting of the buzzer chirp. 2) Remove the key from the ignition switch. 3) Close all doors and the rear gate. 4) Press the LOCK/ARM or UNLOCK/DISARM button.	Does the buzzer signal chirp?	Buzzer chirp function is OK.	Go to step 2.
2 CHECK BUZZER CHIRP SETTING. 1) Press the UNLOCK/DISARM button once. 2) Press both the LOCK/ARM and UNLOCK/DISARM buttons for more than 2 seconds. 3) Press the LOCK/ARM or UNLOCK/DISARM button.	Does the buzzer signal chirp?	Buzzer chirp function is OK.	Check the transmitter function. <Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>

4. CHECK FUSE

Step	Check	Yes	No
1 CHECK FUSE. Remove and visually check the fuse No. 6 (in the main fuse box) and No. 3 (in the fuse and relay box).	Is the fuse blown out?	Check the power supply and ground circuit. <Ref. to SL-18, CHECK POWER SUPPLY AND GROUND CIRCUIT, Keyless Entry System.>	Replace the fuse with a new one.

5. CHECK POWER SUPPLY AND GROUND CIRCUIT

Step	Check	Yes	No
1 CHECK POWER SUPPLY. 1) Disconnect the keyless entry control module harness connector. 2) Measure the voltage between the harness connector terminal and chassis ground. Connector & terminal (B176) No. 14, No. 15 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Go to step 2.	Check the harness for open circuits and shorts between the keyless entry control module and fuse.
2 CHECK GROUND CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground. Connector & terminal (B176) No. 11 — Chassis ground:	Is the measured value less than 10 Ω?	The power supply and ground circuit are OK.	Repair the harness.

6. CHECK IGNITION SWITCH CIRCUIT

Step	Check	Yes	No
1 CHECK IGNITION SWITCH SIGNAL. 1) Disconnect the keyless entry control module harness connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between harness connector terminal and chassis ground. Connector & terminal (B176) No. 6 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Ignition switch circuit is OK.	Check the harness for open circuits and shorts between the keyless entry control module and ignition relay.

7. CHECK DOOR SWITCH

Step	Check	Yes	No
1 CHECK DOOR SWITCH CIRCUIT. Measure the voltage between the keyless entry control module harness connector terminal and chassis ground. Connector & terminal Front and rear side door: (B176) No. 10 (+) — Chassis ground (-): Rear gate or trunk lid: (B176) No. 9 (+) — Chassis ground (-):	Is the measured value less than 1.5 V when each door, rear gate or trunk lid is opened?	Go to step 2.	Go to step 3.
2 CHECK DOOR SWITCH CIRCUIT. Measure the voltage between the keyless entry control module harness connector terminal and chassis ground. Connector & terminal Front and rear side door: (B176) No. 10 (+) — Chassis ground (-): Rear gate or trunk lid: (B176) No. 9 (+) — Chassis ground (-):	Does the measured value more than 10 V when all doors and rear gate or trunk lid is closed?	The door switch is OK.	Go to step 3.
3 CHECK DOOR SWITCH. 1) Disconnect the door switch harness connector. 2) Measure the resistance between the door switch terminals. Terminal Door switch No. 1 — No. 3: Rear gate latch switch or trunk room light switch No. 1 — No. 2:	Is the measured value more than 1 MΩ when the door switch is depressed?	Go to step 4.	Replace the door switch.
4 CHECK DOOR SWITCH. Measure the resistance between the door switch terminals. Terminal Door switch No. 1 — No. 3: Rear gate latch switch or trunk room light switch No. 1 — No. 2:	Is the measured value less than 1 Ω when the door switch is released?	Check the harness for open circuits and shorts between the integrated module and door switch.	Replace the door switch.

KEYLESS ENTRY SYSTEM

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8. CHECK KEY WARNING SWITCH

Step	Check	Yes	No
1 CHECK FUSE. Remove and visually check the fuse No. 6 (in the main fuse box).	Is the fuse blown out?	Go to step 2.	Replace the fuse with a new one.
2 CHECK KEY WARNING SWITCH CIRCUIT. 1) Disconnect the keyless entry control module harness connector. 2) Insert the key into the ignition switch. (LOCK position) 3) Measure the voltage between the harness connector terminal and chassis ground. Connector & terminal (B176) No. 7 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Go to step 3.	Go to step 4.
3 CHECK KEY WARNING SWITCH CIRCUIT. 1) Remove the key from the ignition switch. 2) Measure the voltage between the harness connector terminal and chassis ground. Connector & terminal (B176) No. 7 (+) — Chassis ground (-):	Is the measured value less than 1.5 V?	Key warning switch is OK.	Go to step 4.
4 CHECK KEY WARNING SWITCH. 1) Disconnect the key warning switch harness connector. 2) Insert the key into the ignition switch. (LOCK position) 3) Measure the resistance between the key warning switch terminals. Terminal No. 1 — No. 2:	Is the measured value less than 1 Ω ?	Go to step 5.	Replace the key warning switch.
5 CHECK KEY WARNING SWITCH. 1) Remove the key from the ignition switch. 2) Measure the resistance between the key warning switch terminals. Terminal No. 1 — No. 2:	Is the measured value more than 1 M Ω ?	Check the following: <ul style="list-style-type: none"> • Harness for open circuits and shorts between the key warning switch and fuse • Harness for open circuits and shorts between the keyless entry control module and key warning switch 	Replace the key warning switch.

9. 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 turned ON.	Does the room light illuminate?	Go to step 2.	Check the room light circuit.
2 CHECK HARNESS BETWEEN ROOM LIGHT AND INTEGRATED MODULE. 1) Disconnect the integrated module harness connector and room light harness connector. 2) Measure the resistance between the integrated module harness connector terminal and the room light harness connector terminal. Connector & terminal (B281) No. 5 — (R52) No. 2:	Is the measured value less than 10 Ω ?	The room light operation circuit is OK.	Check the harness for open circuits and/or shorts between the integrated module and room light.

10. CHECK OUTPUT SIGNAL TO INTEGRATED MODULE

Step	Check	Yes	No
1 CHECK OUTPUT SIGNAL. Measure the voltage between the keyless entry control module harness connector terminal and chassis ground when UNLOCK/DISARM button of transmitter is pressed. Connector & terminal (B176) No. 2 (+) — Chassis ground (-):	Is the measured value less than 1.5 V?	Go to step 2.	Replace the keyless entry control module.
2 CHECK OUTPUT SIGNAL. Measure the voltage between the keyless entry control module harness connector terminal and chassis ground when LOCK/ARM button of transmitter is pressed. Connector & terminal (B176) No. 1 (+) — Chassis ground (-):	Is the measured value less than 1.5 V?	Go to step 3.	Replace the keyless entry control module.
3 CHECK HARNESS BETWEEN KEYLESS ENTRY CONTROL MODULE AND INTEGRATED MODULE. 1) Disconnect the keyless entry control module harness connector and integrated module harness connector. 2) Measure the resistance between the keyless entry control module harness connector terminal and integrated module harness connector terminal. Connector & terminal (B176) No. 2 — (B280) No. 14: (B176) No. 1 — (B280) No. 13:	Is the measured value less than 10 Ω ?	Replace the integrated module.	Check the harness for open circuit or shorts between the keyless entry control module and integrated module.

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

11.CHECK HORN OPERATION

Step	Check	Yes	No
1 CHECK HORN OPERATION. Make sure the horn sounds when the horn switch is pushed.	Does the horn sound?	Go to step 2.	Check the horn circuit.
2 CHECK HORN OPERATION. 1) Disconnect the keyless entry control module harness connector. 2) Ground the harness connector terminal with a suitable wire. Connector & terminal (B176) No. 13 — Chassis ground:	Does the horn sound?	Replace the keyless entry control module.	Check the harness for open circuits and/or shorts between the keyless entry control module and horn relay.

12.CHECK HAZARD LIGHT OPERATION

Step	Check	Yes	No
1 CHECK HAZARD LIGHT OPERATION. Make sure the hazard light blinks when hazard switch is turned ON.	Does the hazard light blink?	Go to step 2.	Check the hazard light circuit.
2 CHECK OUTPUT SIGNAL. 1) Remove the key from ignition switch. 2) Close all doors and rear gate or trunk lid. 3) Measure the voltage between keyless entry control module harness connector terminal and chassis ground when LOCK/ARM button of transmitter is pressed. Connector & terminal (B176) No. 12, 18 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Check the harness for open or short between keyless entry control module and turn signal lights.	Replace the keyless entry control module.

13.CHECK KEYLESS BUZZER

Step	Check	Yes	No
1 CHECK FUSE. Remove and check the fuse No. 3 (located in fuse and relay box).	Is the fuse blown out?	Go to step 2.	Replace the fuse with a new one.
2 CHECK KEYLESS BUZZER POWER SUPPLY. 1) Disconnect the connector from keyless buzzer. 2) Measure the voltage between keyless buzzer harness connector and chassis ground. <i>Connector & terminal (D70) No. 2 (+) — Chassis ground (-):</i>	Is the measured value more than 10 V?	Go to step 3.	Check the harness for open or short between fuse and keyless buzzer.
3 CHECK HARNESS BETWEEN KEYLESS BUZZER AND KEYLESS ENTRY CONTROL MODULE. 1) Disconnect the connector from keyless entry control module. 2) Measure the resistance between keyless buzzer and keyless entry control module. <i>Connector & terminal (D70) No. 1 (+) — (B176) No. 16:</i>	Is the measured value less than 10 Ω?	Go to step 4.	Repair the harness between keyless buzzer and keyless entry control module.
4 CHECK KEYLESS BUZZER. Make sure that the buzzer sounds when connecting battery positive terminal to No. 2 terminal of keyless buzzer connector and battery ground terminal to No. 1 terminal of keyless buzzer connector.	Does the buzzer sound?	Replace the keyless entry control module.	Replace the keyless buzzer.

SECURITY SYSTEM

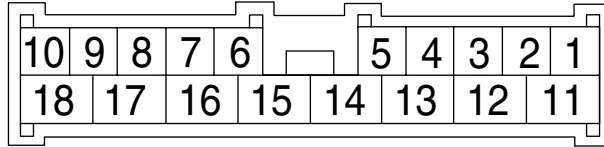
SECURITY AND LOCKS

4. Security System

A: SCHEMATIC

<Ref. to WI-276, SCHEMATIC, Security System.>

B: ELECTRICAL SPECIFICATION



SL-00037

Content	Terminal No.	Measuring condition
Empty	1	—
Ignition switch (ON)	2 (INPUT)	Battery voltage is present when ignition switch is turned to ON.
Passive arm	3	—
Rear gate latch switch	4 (INPUT)	0 V is present when rear gate is open.
Door switch	5 (INPUT)	0 V is present when any door is open.
Empty	6	—
Keyless entry control module	7	—
Keyless entry control module	8	—
Security indicator light	9 (OUTPUT)	0 V is present when activating the alarm operation.
Keyless entry control module	10	—
Power supply (Back-up)	13	Battery voltage is constantly present.
Ground	14	0 V is constantly present.
Interrupt relay	15 (OUTPUT)	Battery voltage is present when activating the alarm operation.
Security horn relay	16 (INPUT)	Battery voltage is present when activating the alarm operation.
Security horn	17 (OUTPUT)	Battery voltage is present when activating the alarm operation.
Security horn relay	18 (INPUT)	Battery voltage is present when activating the alarm operation.

C: INSPECTION

1. BASIC DIAGNOSTIC PROCEDURE

Step	Check	Yes	No
1 CHECK SECURITY SYSTEM SET OPERATION. 1) Before starting this diagnosis, open all windows. 2) Remove the key from ignition key cylinder, and then close all doors and rear gate. 3) Press the LOCK/ARM button of transmitter.	Can the security system be set?	Go to step 2.	Go to symptom 1. <Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
2 CHECK SECURITY INDICATOR LIGHT AND HAZARD LIGHT BLINKING. Check the security indicator light and hazard light blinking.	Do the security indicator light and hazard light blink?	Go to step 3.	Go to symptom 2. <Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
3 CHECK SECURITY ALARM OPERATION. 1) Unlock all doors using the door lock switch on front door. 2) Open any door, rear gate or trunk lid.	Does the security alarm operate when any door, rear gate or trunk lid is opened?	Go to step 4.	Go to symptom 3. <Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
4 CHECK SECURITY ALARM OPERATION. Check the security alarm operation.	Does all security alarm (horn, hazard light and security indicator light) operate? And is the starter motor deactivated?	Go to step 5.	Go to symptom 4. <Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
5 CHECK SECURITY ALARM CANCEL OPERATION. Press the UNLOCK/DISARM button of transmitter.	Do all security alarm (horn and hazard light) stop? And is the starter motor activated?	Go to step 6.	Go to symptom 5. <Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
6 CHECK BATTERY DISCONNECT PROTECTION. Make sure that the system operates properly if the battery cable is disconnected temporarily. <Ref. to SL-26, CHECK BATTERY DISCONNECT PROTECTION, INSPECTION, Security System.>	Does the system operate properly if the battery cable is disconnected temporarily?	Go to step 7.	Replace the security control module.
7 PERFORM IMPACT SENSITIVITY TEST. Perform the impact sensitivity test. <Ref. to SL-50, IMPACT SENSITIVITY TEST, INSPECTION, Security Control Module.>	Is the impact sensitivity properly set?	Press the UNLOCK/DISARM button of transmitter, and finish the diagnosis.	Adjust the impact sensitivity. <Ref. to SL-50, IMPACT SENSITIVITY, ADJUSTMENT, Security Control Module.>

SECURITY SYSTEM

SECURITY AND LOCKS

2. CHECK BATTERY DISCONNECT PROTECTION

- 1) Remove the key from the ignition switch.
 - 2) Close all the doors, rear gate and trunk lid.
 - 3) Open the front hood.
 - 4) Press the LOCK/ARM button of the transmitter.
 - 5) Disconnect the ground cable from the battery.
 - 6) Reconnect the cable to the battery.
 - 7) Check that the security indicator light blinks after reconnecting the battery cable.
- If NG, replace the security control module.

3. SYMPTOM CHART

Symptom		Repair order	Reference
1	Security system cannot be set.	1. Check the transmitter function.	<Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
		2. Check the fuse.	<Ref. to SL-27, CHECK FUSE, INSPECTION, Security System.>
		3. Check the security control module power supply and ground circuit.	<Ref. to SL-27, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Security System.>
		4. Check the door switch.	<Ref. to SL-27, CHECK DOOR SWITCH, INSPECTION, Security System.>
		5. Replace the security control module.	<Ref. to SL-50, Security Control Module.>
2	Security system can be set, but the security indicator light or hazard light does not blink.	Security indicator light	<Ref. to SL-29, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
		Hazard light	<Ref. to SL-31, CHECK HAZARD LIGHT OPERATION, INSPECTION, Security System.>
3	Security system does not alarm when one of the door is opened.	Check the door switch.	<Ref. to SL-27, CHECK DOOR SWITCH, INSPECTION, Security System.>
4	Security alarm does not activate.	All functions	Check the door switch. <Ref. to SL-27, CHECK DOOR SWITCH, INSPECTION, Security System.>
		Security indicator light	Check the security indicator light circuit. <Ref. to SL-29, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
		Security horn	Check the security horn. <Ref. to SL-29, CHECK SECURITY HORN, INSPECTION, Security System.>
		Hazard light	Check the hazard light operation. <Ref. to SL-31, CHECK HAZARD LIGHT OPERATION, INSPECTION, Security System.>
		Starter motor deactivation	Check the interrupt relay circuit. <Ref. to SL-31, CHECK INTERRUPT RELAY CIRCUIT, INSPECTION, Security System.>
5	Security system cannot be canceled.	Transmitter	Check the transmitter function. <Ref. to SL-17, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
		Ignition switch	Check the ignition switch circuit. <Ref. to SL-32, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.>

4. CHECK FUSE

Step	Check	Yes	No
1 CHECK FUSE. Remove and visually check the fuse No. 2 (in main fuse box).	Is the fuse blown out?	Check the power supply and ground circuit. <Ref. to SL-27, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Security System.>	Replace the fuse with a new one.

5. CHECK POWER SUPPLY AND GROUND CIRCUIT

Step	Check	Yes	No
1 CHECK POWER SUPPLY. 1) Disconnect the security control module harness connector. 2) Measure the voltage between the harness connector terminal and chassis ground. <i>Connector & terminal</i> <i>(B93) No. 13 (+) — Chassis ground (-):</i>	Is the measured value more than 10 V?	Go to step 2.	Check the harness for open circuits and shorts between the security control module and fuse.
2 CHECK GROUND CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground. <i>Connector & terminal</i> <i>(B93) No. 14 — Chassis ground:</i>	Is the measured value less than 10 Ω?	The power supply and ground circuit are OK.	Repair the harness.

6. CHECK DOOR SWITCH

Step	Check	Yes	No
1 CHECK DOOR SWITCH CIRCUIT. Measure the voltage between the security control module harness connector terminal and chassis ground. <i>Connector & terminal</i> <i>Front and rear door:</i> <i>(B93) No. 5 (+) — Chassis ground (-):</i> <i>Rear gate or trunk lid:</i> <i>(B93) No. 4 (+) — Chassis ground (-):</i>	Is the measured value less than 1.5 V when each door, rear gate or trunk lid is opened?	Go to step 2.	Go to step 3.
2 CHECK DOOR SWITCH CIRCUIT. Measure the voltage between the security control module harness connector terminal and chassis ground. <i>Connector & terminal</i> <i>Front and rear door:</i> <i>(B93) No. 5 (+) — Chassis ground (-):</i> <i>Rear gate or trunk lid:</i> <i>(B93) No. 4 (+) — Chassis ground (-):</i>	Does the measured value exceed the 10 V when all doors and rear gate or trunk lid is closed?	The door switch is OK.	Go to step 3.

SECURITY SYSTEM

SECURITY AND LOCKS

Step	Check	Yes	No
3 CHECK DOOR SWITCH. 1) Disconnect the door switch harness connector. 2) Measure the resistance between the door switch terminals. Terminal Door switch: No. 1 — No. 3: Rear gate latch switch or trunk room light: No. 1 — No. 2:	Is the measured value more than 1 M Ω when door switch is pushed?	Go to step 4.	Replace the door switch.
4 CHECK DOOR SWITCH. Measure the resistance between the door switch terminals. Terminal Door switch: No. 1 — No. 3: Rear gate latch switch or trunk room light switch: No. 1 — No. 2:	Is the measured value less than 1 Ω when door switch is released?	Check the harness for open circuits and shorts between the security control module and door switch.	Replace the door switch.

7. CHECK SECURITY INDICATOR LIGHT CIRCUIT

Step	Check	Yes	No
1 CHECK SECURITY INDICATOR LIGHT. 1) Disconnect the security control module harness connector. 2) Ground the harness connector terminal with a suitable wire. Connector & terminal (B93) No. 9 — Chassis ground:	Does the security indicator light illuminate?	Replace the security control module.	Go to step 2.
2 CHECK POWER SUPPLY FOR SECURITY INDICATOR LIGHT. 1) Disconnect the connector from the combination meter. 2) Measure the voltage between the combination meter harness connector terminal and chassis ground. Connector & terminal (i12) No. 7 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Go to step 3.	Check the harness for open circuits and shorts between the combination meter and the fuse.
3 CHECK SECURITY INDICATOR LIGHT CIRCUIT. Measure the resistance between the combination meter harness connector terminal and security control module harness connector terminal. Connector & terminal (i12) No. 1 — (B93) No. 9:	Is the measured value less than 10 Ω ?	Replace the combination meter printed circuit.	Check the harness for open circuits and shorts between the combination meter and security control module.

8. CHECK SECURITY HORN

Step	Check	Yes	No
1 CHECK SECURITY HORN RELAY. Remove and check the security horn relay. <Ref. to SL-52, Security Horn Relay.>	Is the security horn relay OK?	Go to step 2.	Replace the security horn relay.
2 CHECK POWER SUPPLY FOR SECURITY HORN RELAY. Measure the voltage between the security horn relay harness connector terminal and chassis ground. Connector & terminal Without OnStar models (B243) No. 1 (+) — Chassis ground (-): With OnStar models (B243) No. 3 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Go to step 3.	Check the harness for open circuits and shorts between the security horn relay and horn relay.
3 CHECK POWER SUPPLY FOR SECURITY HORN RELAY. Measure the voltage between the security horn relay harness connector terminal and chassis ground. Connector & terminal Without OnStar models (B243) No. 2 (+) — Chassis ground (-): With OnStar models (B243) No. 1 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Go to step 4.	Check the harness for open circuits and shorts between the security horn relay and the fuse.

SECURITY SYSTEM

SECURITY AND LOCKS

Step	Check	Yes	No
<p>4 CHECK HARNESS BETWEEN SECURITY HORN RELAY AND SECURITY CONTROL MODULE.</p> <p>1) Disconnect the security control module harness connector.</p> <p>2) Measure the resistance between the security horn relay harness connector terminal and security control module harness connector terminal.</p> <p>Connector & terminal Without OnStar models (B243) No. 3 — (B93) No. 18: With OnStar models (B243) No. 4 — (B93) No. 18:</p>	<p>Is the measured value less than 10 Ω?</p>	<p>Go to step 5.</p>	<p>Check the harness for open circuits and shorts between the security horn relay and security control module.</p>
<p>5 CHECK HARNESS BETWEEN SECURITY HORN RELAY AND SECURITY CONTROL MODULE.</p> <p>Measure the resistance between the security horn relay harness connector terminal and security control module harness connector terminal.</p> <p>Connector & terminal Without OnStar models (B243) No. 4 — (B93) No. 16: With OnStar models (B243) No. 2 — (B93) No. 16:</p>	<p>1Is the measured value less than 10 Ω?</p>	<p>Go to step 6.</p>	<p>Check the harness for open circuits and shorts between the security horn relay and security control module.</p>
<p>6 CHECK HARNESS BETWEEN SECURITY CONTROL MODULE AND SECURITY HORN.</p> <p>1) Disconnect the security horn harness connector.</p> <p>2) Measure the resistance between the security control module harness connector terminal and security horn harness connector terminal.</p> <p>Connector & terminal (B93) No. 17 — (B204) No. 1:</p>	<p>Is the measured value less than 10 Ω?</p>	<p>Go to step 7.</p>	<p>Check the harness for open circuits and shorts between the security control module and security horn.</p>
<p>7 CHECK SECURITY HORN.</p> <p>Remove and check the security horn. <Ref. to SL-51, Security Horn.></p>	<p>Is the security horn OK?</p>	<p>Replace the security control module.</p>	<p>Replace the security horn.</p>

9. CHECK HAZARD LIGHT OPERATION

Step	Check	Yes	No
1 CHECK SECURITY CONTROL MODULE OUTPUT SIGNAL. 1) Remove the key from the ignition switch. 2) Open the driver's window, and then close all doors and rear gate. 3) Lock all doors with the transmitter or door lock switch to arm the security system. 4) Unlock all doors with the door lock switch. 5) Measure the voltage between the security control module harness connector terminal and chassis ground when any door is open. Connector & terminal (B93) No. 10 (+) — Chassis ground (-):	Is the measured value within 1 to 4 V?	Go to step 2.	Replace the security control module.
2 CHECK HARNESS BETWEEN SECURITY CONTROL MODULE AND KEYLESS ENTRY CONTROL MODULE. 1) Disconnect the security control module harness connector and keyless entry control module harness connector. 2) Measure the resistance between the security control module harness connector terminal and keyless entry control module harness connector terminal. Connector & terminal (B93) No. 10 — (B176) No. 3:	Is the measured value less than 10 Ω ?	Check the hazard light output of keyless entry control module.<Ref. to SL-22, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>	Check the harness for open circuit and shorts between the security control module and keyless entry control module.

10. CHECK INTERRUPT RELAY CIRCUIT

Step	Check	Yes	No
1 CHECK INTERRUPT RELAY. Remove and check the interrupt relay. <Ref. to SL-53, Interrupt Relay.>	Is the interrupt relay OK?	Go to step 2.	Replace the interrupt relay.
2 CHECK POWER SUPPLY FOR INTERRUPT RELAY. Measure the voltage between the interrupt relay harness connector terminal and chassis ground. Connector & terminal Without On Star: (B59) No. 1 (+) — Chassis ground (-): With On Star: (B59) No. 4 (+) — Chassis ground (-):	Is the measured value more than 10 V when ignition switch is turned to START?	Go to step 3.	Check the harness for open circuits and shorts between the interrupt relay and ignition switch.
3 CHECK HARNESS BETWEEN INTERRUPT RELAY AND SECURITY CONTROL MODULE. 1) Turn the ignition switch to OFF. 2) Disconnect the security control module harness connector. 3) Measure the resistance between the interrupt relay harness connector terminal and security control module harness connector terminal. Connector & terminal Without On Star: (B59) No. 4 — (B93) No. 15: With On Star: (B59) No. 2 — (B93) No. 15:	Is the measured value less than 10 Ω ?	Replace the security control module.	Check the harness for open circuits and shorts between the interrupt relay and security control module.

SECURITY SYSTEM

SECURITY AND LOCKS

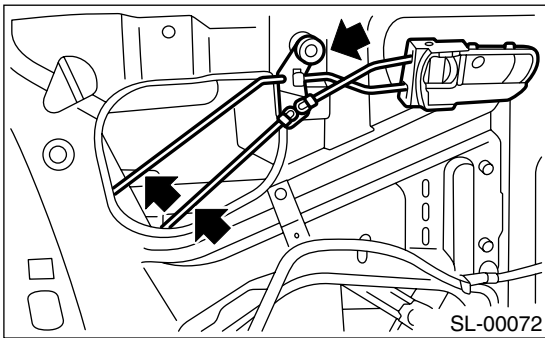
11.CHECK IGNITION SWITCH CIRCUIT

Step	Check	Yes	No
1 CHECK IGNITION SWITCH SIGNAL. 1) Disconnect the security control module harness connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the harness connector terminal and chassis ground. Connector & terminal (B93) No. 2 (+) — Chassis ground (-):	Is the measured value more than 10 V?	Ignition switch circuit is OK.	Check the harness for open circuits and shorts between the security control module and ignition switch.

5. Front Inner Remote

A: REMOVAL

- 1) Remove the door trim. <Ref. to EI-40, REMOVAL, Front Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-15, REMOVAL, Front Sealing Cover.>
- 3) Remove the two rod joints.
- 4) Remove the screw, and detach the front inner remote.



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the inner remote works properly after installation.

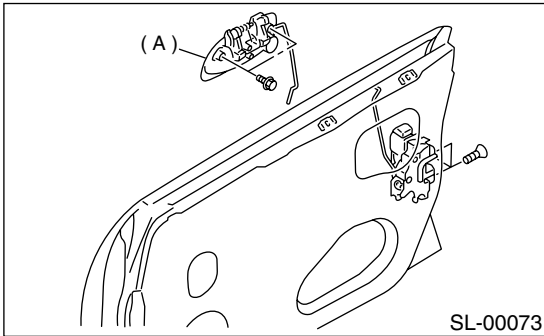
C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

6. Front Outer Handle

A: REMOVAL

- 1) Remove the front door latch assembly. <Ref. to SL-35, REMOVAL, Front Door Latch Assembly.>
- 2) Remove the two bolts. Remove the front outer handle (A).



CAUTION:

Do not use excessive force to remove the door panel. This will deform it.

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the outer handle works properly after installation.

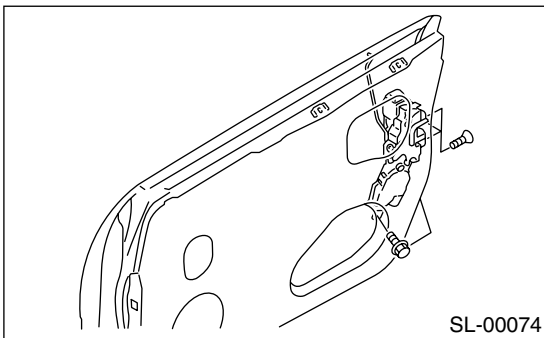
C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

7. Front Door Latch Assembly

A: REMOVAL

- 1) Disconnect ground cable from battery.
- 2) Remove the front door trim. <Ref. to EI-40, REMOVAL, Front Door Trim.>
- 3) Remove the sealing cover. <Ref. to EB-15, REMOVAL, Front Sealing Cover.>
- 4) Remove the front inner remote. <Ref. to SL-33, REMOVAL, Front Inner Remote.>
- 5) Remove the front door glass. <Ref. to GW-12, REMOVAL, Front Door Glass.>
- 6) Remove three nuts, and detach the front door sash (Rear).
- 7) Remove the three screws and bolt.



- 8) Disconnect the connector. Remove the front door latch assembly.

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the lock works properly after installation.

C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

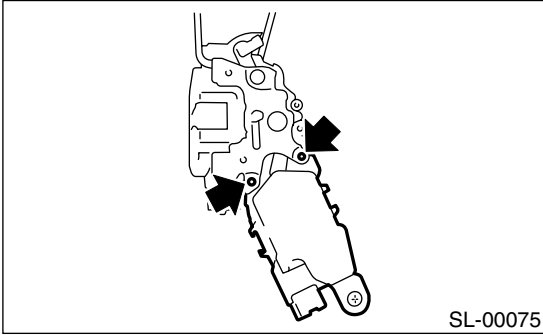
FRONT DOOR LOCK ACTUATOR

SECURITY AND LOCKS

8. Front Door Lock Actuator

A: REMOVAL

- 1) Remove the front door latch assembly. <Ref. to SL-35, REMOVAL, Front Door Latch Assembly.>
- 2) Remove the bolt. Remove the front door lock actuator.



B: INSTALLATION

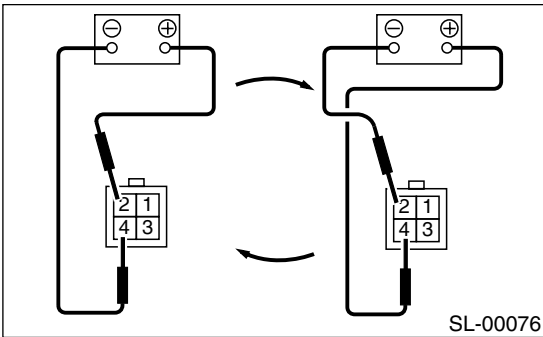
Install in the reverse order of removal.

NOTE:

Make sure the lock works properly after installation.

C: INSPECTION

- 1) Disconnect the door lock actuator harness connector.
- 2) Connect the battery to the door lock actuator terminals.



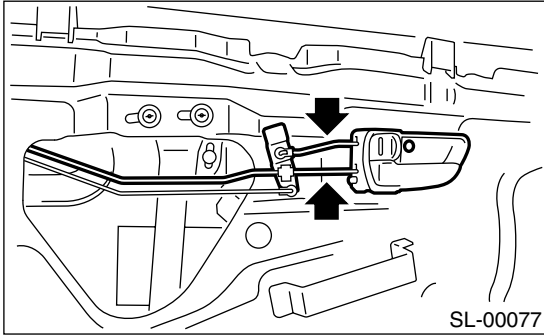
Terminal No.	Actuator operation
No. 2 (+) and No. 4 (-)	Unlocked → Locked
No. 4 (+) and No. 2 (-)	Locked → Unlocked

If NG, replace the door lock actuator.

9. Rear Inner Remote

A: REMOVAL

- 1) Remove the rear door trim. <Ref. to EI-41, REMOVAL, Rear Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-18, REMOVAL, Rear Sealing Cover.>
- 3) Remove the two rod joints.
- 4) Remove the screw, and detach the inner remote.



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the inner remote works properly after installation.

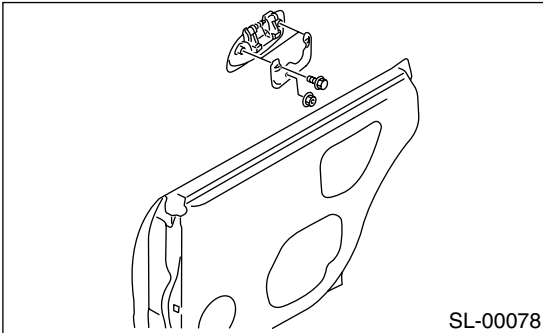
C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.
- 3) Make sure the child safety lock on rear doors work properly, when applicable.

10.Rear Outer Handle

A: REMOVAL

- 1) Remove the rear door trim. <Ref. to EI-41, REMOVAL, Rear Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-18, REMOVAL, Rear Sealing Cover.>
- 3) Remove the rear inner remote. <Ref. to SL-37, REMOVAL, Rear Inner Remote.>
- 4) Remove the rear door latch assembly. <Ref. to SL-39, REMOVAL, Rear Door Latch Assembly.>
- 5) Remove the two bolts and nut. Remove the rear outer handle.



CAUTION:

Do not use excessive force to remove the door panel. This will deform it.

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the outer handle works properly after installation.

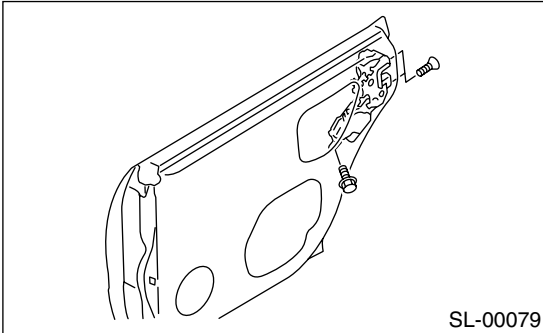
C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

11.Rear Door Latch Assembly

A: REMOVAL

- 1) Disconnect ground cable from battery.
- 2) Remove the rear door trim. <Ref. to EI-41, REMOVAL, Rear Door Trim.>
- 3) Remove the sealing cover. <Ref. to EB-18, REMOVAL, Rear Sealing Cover.>
- 4) Remove the rear inner remote. <Ref. to SL-37, REMOVAL, Rear Inner Remote.>
- 5) Remove the three screws and bolt.



- 6) Disconnect the connector. Remove the rear door latch assembly.

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the lock works properly after installation.

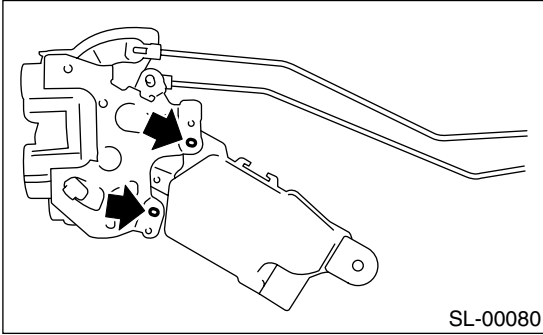
C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

12. Rear Door Lock Actuator

A: REMOVAL

- 1) Remove the rear door latch assembly. <Ref. to SL-39, REMOVAL, Rear Door Latch Assembly.>
- 2) Remove the bolt. Remove the rear door lock actuator.



B: INSTALLATION

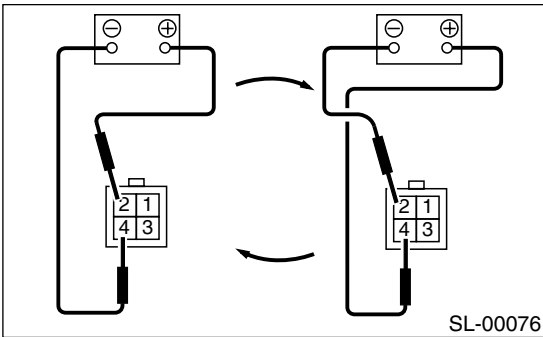
Install in the reverse order of removal.

NOTE:

Make sure the lock works properly after installation.

C: INSPECTION

- 1) Disconnect the door lock actuator harness connector.
- 2) Connect the battery to the door lock actuator terminals.



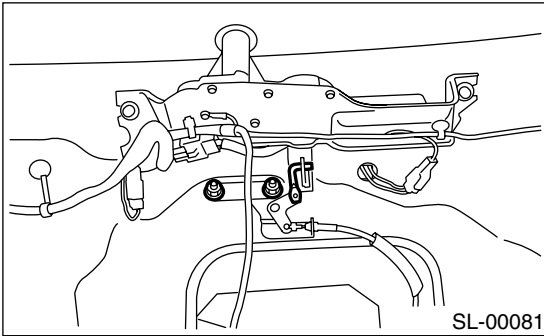
Terminal No.	Actuator operation
No. 2 (+) and No. 4 (-)	Unlocked → Locked
No. 4 (+) and No. 2 (-)	Locked → Unlocked

If NG, replace the door lock actuator.

13.Rear Gate Outer Handle

A: REMOVAL

- 1) Remove the rear gate trim (lower). <Ref. to EI-57, REMOVAL, Rear Gate Trim.>
- 2) Remove the rear gate latch rod.
- 3) Remove the nut holding the rear gate outer handle, and then remove the rear gate outer handle.



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the outer handle works properly after installation.

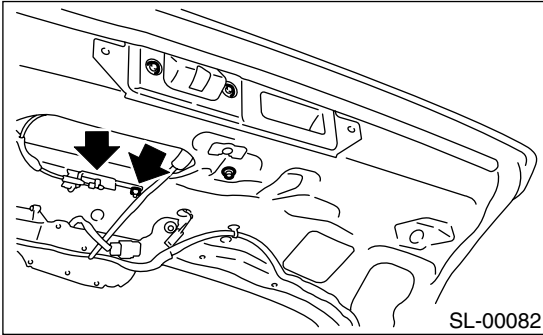
C: INSPECTION

- 1) Inspect the rod for deformation.
- 2) Make sure the lever and rod move smoothly.

14. Rear Gate Latch Assembly

A: REMOVAL

- 1) Disconnect ground cable from battery.
- 2) Remove the rear gate trim (lower). <Ref. to EI-57, REMOVAL, Rear Gate Trim.>
- 3) Remove the rear gate key cylinder rod.
- 4) Remove the rear gate outer handle. <Ref. to SL-41, REMOVAL, Rear Gate Outer Handle.>
- 5) Remove the three bolts.



- 6) Remove the two connectors and pull out the latch.

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Make sure the lock works properly after installation.

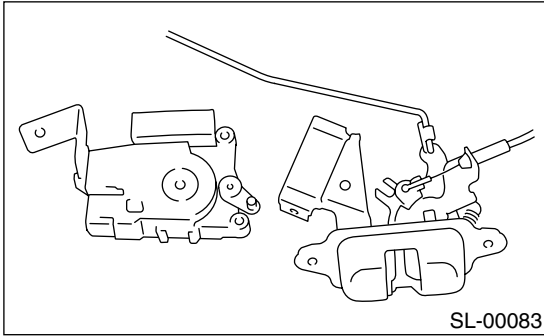
C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

15. Rear Gate Latch Lock Actuator

A: REMOVAL

- 1) Remove the rear gate latch assembly. <Ref. to SL-42, REMOVAL, Rear Gate Latch Assembly.>
- 2) Remove the rear gate lock actuator.



B: INSTALLATION

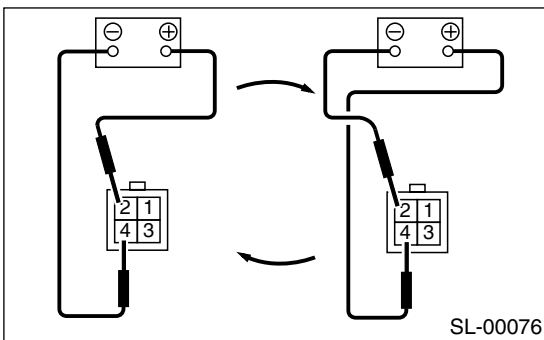
Install in the reverse order of removal.

NOTE:

Make sure the lock works properly after installation.

C: INSPECTION

- 1) Disconnect the door lock actuator harness connector.
- 2) Connect the battery to the door lock actuator terminals.



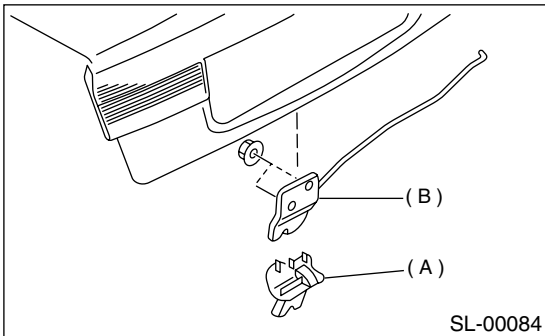
Terminal No.	Actuator operation
No. 2 (+) and No. 4 (-)	Unlocked → Locked
No. 4 (+) and No. 2 (-)	Locked → Unlocked

If NG, replace the rear gate latch lock actuator.

16. Trunk Lid Lock Assembly

A: REMOVAL

- 1) Remove the trunk lid key cylinder rod.
- 2) Remove the lock assembly cover (A).
- 3) Remove the nut while holding the lock assembly.
Remove the lock assembly (B).



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

- Apply grease to parts that rub.
- Make sure the lock works properly after installation.

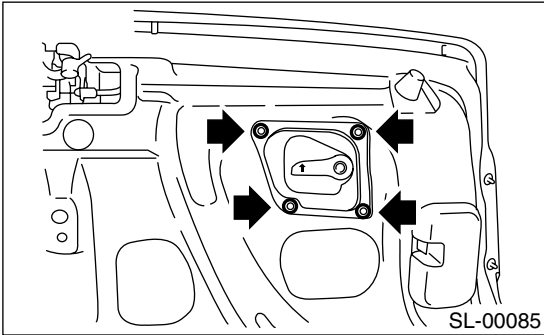
C: INSPECTION

- 1) Check the striker for bending or abnormal wear.
- 2) Check the safety lever for improper movement.
- 3) Check other levers and the spring for rust formation and unsmooth movement.

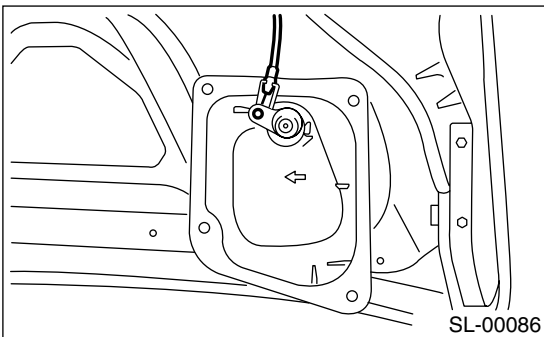
17. Trunk Lid Release Handle

A: REMOVAL

1) Remove the four clips.



2) Remove the cable from trunk lid release handle.



B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

- 1) Make sure the cable is not deformed.
- 2) Make sure the lever works smoothly.

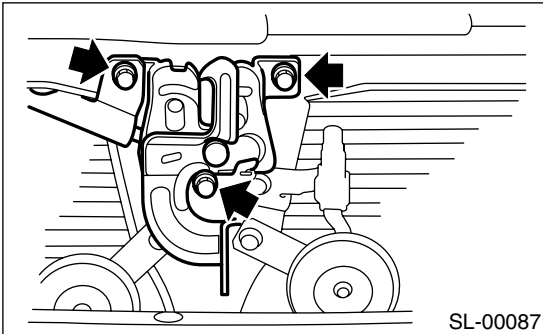
FRONT HOOD LOCK ASSEMBLY

SECURITY AND LOCKS

18. Front Hood Lock Assembly

A: REMOVAL

- 1) Open the hood.
- 2) Remove the bolt. Remove the hood lock assembly.
- 3) Remove the release cable from the lock assembly.



B: INSTALLATION

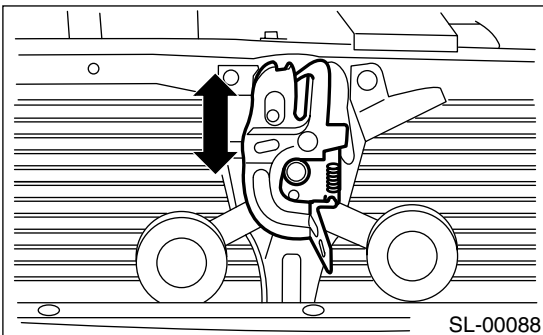
Install in the reverse order of removal.

NOTE:

- Apply grease to parts that rub.
- Make sure the release cable works properly after installation.

C: ADJUSTMENT

Loosen the bolt. Adjust the lock assembly while moving it up and down.



D: INSPECTION

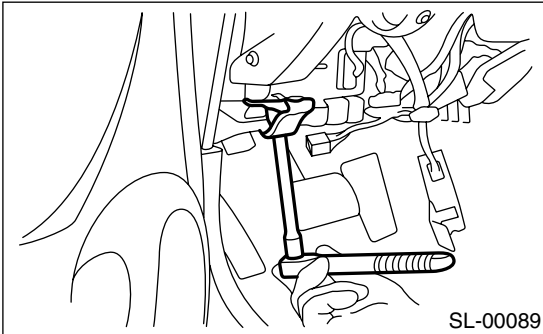
- 1) Check the striker for bending or abnormal wear.
- 2) Check the safety lever for improper movement.
- 3) Check other levers and the spring for rust formation and unsmooth movement.

19. Remote Openers

A: REMOVAL

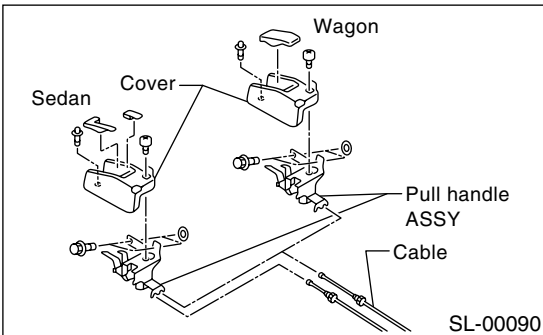
1. HOOD OPENER

- 1) Remove the release cable from the hood lock.
- 2) Remove the bolt. Remove the opener lever.

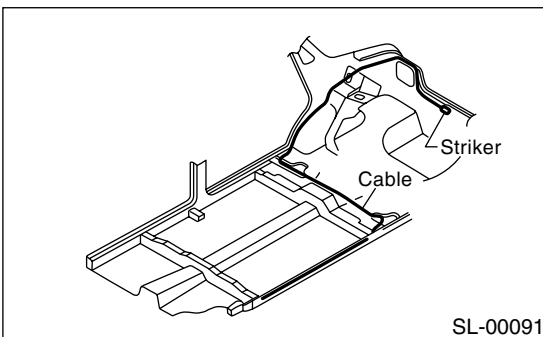


2. TRUNK LID OPENER

- 1) Remove the front seat. <Ref. to SE-8, REMOVAL, Front Seat.>
- 2) Remove the center pillar lower trim and side sill cover on the passenger side. Remove the rear pillar lower trim. Pull back the floor mat. Remove the clip holding the cable.
- 3) Remove the bolt. Remove the opener pull handle.

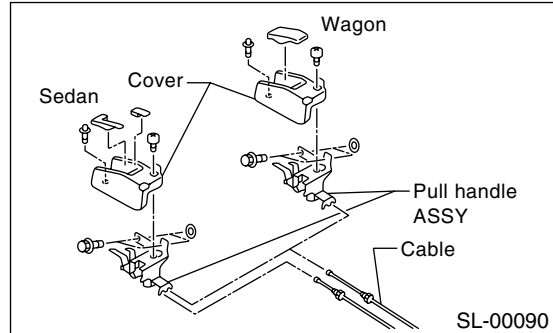


- 4) Remove the cable from the opener pull handle.
- 5) Remove the striker from the trunk lid.
- 6) Remove the cable from the striker.

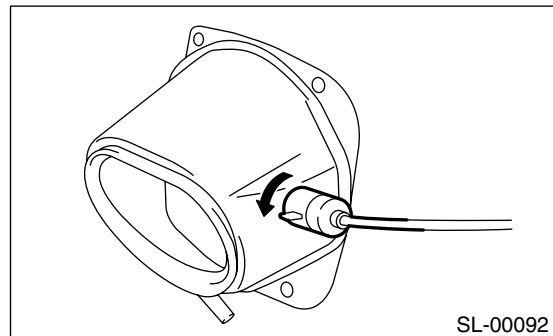


3. FUEL FLAP OPENER

- 1) Remove the rear seat. <Ref. to SE-18, REMOVAL, Rear Seat.>
- 2) Remove the center pillar lower trim and side sill cover on the passenger side. Remove the rear pillar lower trim. Pull back the floor mat. Remove the clip holding the cable.
- 3) Remove the bolt. Remove the opener pull handle.



- 4) Remove the cable from the opener pull handle.
- 5) Remove the right rear quarter trim. <Ref. to EI-52, REMOVAL, Rear Quarter Trim.>
- 6) Rotate the fuel lock inside the quarter panel to left and remove.



B: INSTALLATION

1. HOOD OPENER

Install in the reverse order of removal.

2. TRUNK LID OPENER

Install in the reverse order of removal.

3. FUEL FLAP OPENER

Install in the reverse order of removal.

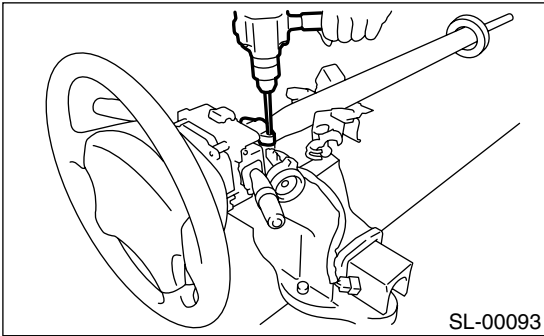
C: INSPECTION

Make sure the fuel flap opens and closes smoothly.

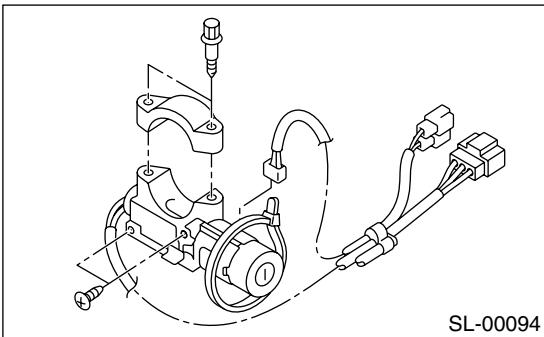
20. Ignition Key Lock

A: REPLACEMENT

- 1) Disconnect ground cable from battery.
- 2) Remove the steering column. <Ref. to PS-21, REMOVAL, Tilt Steering Column.>
- 3) Secure the steering column in a vise. Remove the bolt with a drill.



- 4) Remove the ignition key lock.
- 5) Use a new torn bolt. Tighten the torn bolt to the end of the thread.



B: INSPECTION

- 1) Remove the instrument panel lower cover.
- 2) Remove the lower column cover.
- 3) Unfasten the hold-down clip which secures the harness and disconnect the connector of the ignition switch from the body harness.
- 4) Turn the ignition key plate to each position and check the continuity between the terminals of the ignition connector.

Switch position	Terminal No.	Standard
LOCK	—	—
ACC	No. 1 and No. 2	Less than 1 Ω
ON	No. 1 and No. 2 No. 1 and No. 4 No. 2 and No. 4	Less than 1 Ω
ST	No. 1 and No. 3 No. 1 and No. 4 No. 3 and No. 4	Less than 1 Ω

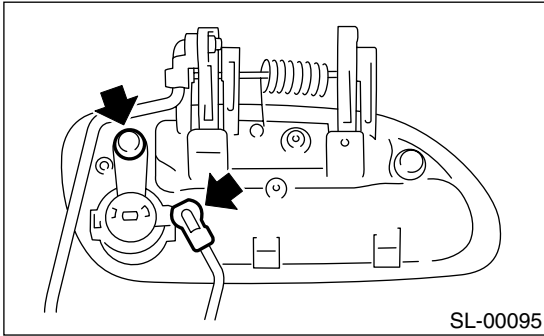
If continuity dose not exist, replace the ignition switch.

21. Key Lock Cylinders

A: REPLACEMENT

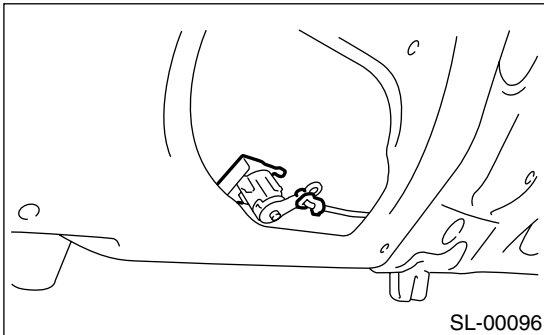
1. FRONT DOOR

- 1) Remove the front outer handle. <Ref. to SL-34, REMOVAL, Front Outer Handle.>
- 2) Remove the rod clamp. Replace the key cylinder.



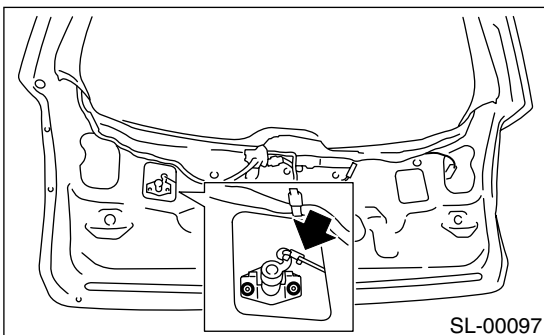
2. TRUNK LID

- 1) Remove the trunk trim. <Ref. to EI-59, REMOVAL, Trunk Trim.>
- 2) Remove the rod clamp. Remove the lock plate. Replace the key cylinder.



3. REAR GATE

- 1) Remove the rear gate lower trim. <Ref. to EI-57, REMOVAL, Rear Gate Trim.>
- 2) Remove the rod clamp. Remove the nut. Replace the key cylinder.



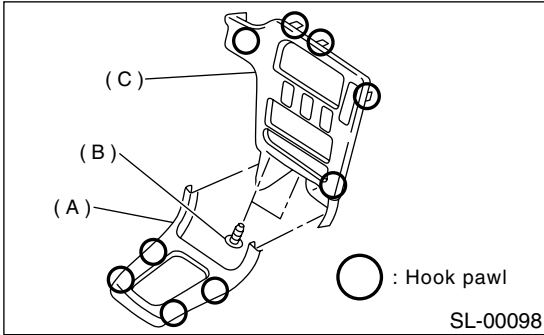
SECURITY CONTROL MODULE

SECURITY AND LOCKS

22. Security Control Module

A: REMOVAL

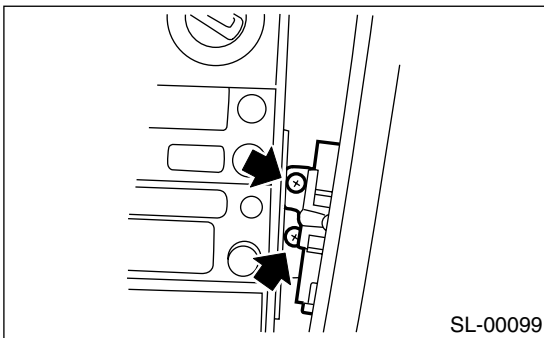
- 1) Disconnect the ground cable from battery.
- 2) Remove front cover (A).
- 3) Remove screws (B) and then detach center panel (C) while disconnecting connector.



- 4) Remove two screws.

NOTE:

Before removing the screw, apply a few turns of butyl tape to the tip of the service tool. This prevents the screw from falling during removal.



- 5) Remove radio and security control module together while disconnecting connector. <Ref. to ET-5, REMOVAL, Radio.>

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

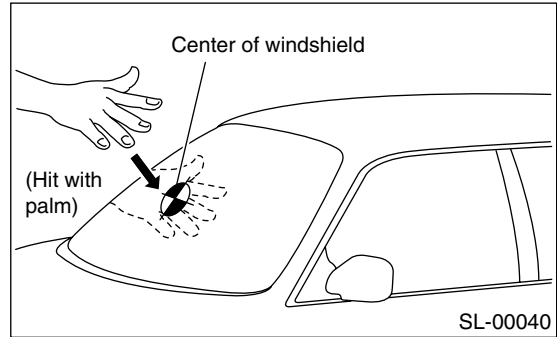
To install the security control module, tighten the bolts securely so that the bolts do not come loose.

C: INSPECTION

1. IMPACT SENSITIVITY TEST

- 1) Remove the key from the ignition switch.
- 2) Close all windows.
- 3) Close all doors and the rear gate.
- 4) Cover the hood with a blanket.
- 5) Press the LOCK/ARM button of the transmitter.
- 6) Confirm that the security indicator light blinks every 2 seconds.

- 7) Hit the center of the windshield with your palm and make sure the alarm operates.



If NG, adjust the impact sensitivity. <Ref. to SL-50, ADJUSTMENT, Security Control Module.>

D: ADJUSTMENT

1. IMPACT SENSITIVITY

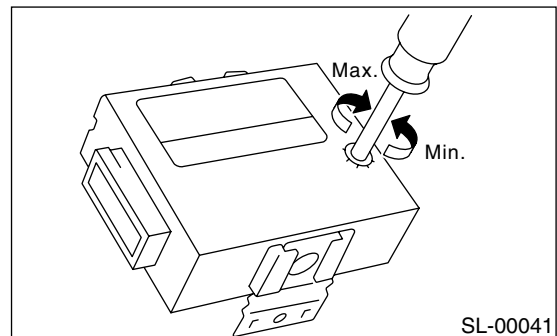
NOTE:

Before adjustment, make sure the security control module has been securely installed on the bracket.

- 1) Remove the security control module. <Ref. to SL-50, REMOVAL, Security Control Module.>
- 2) Adjust the sensitivity adjust screw in the security control module.

NOTE:

After adjusting, be sure to plug the adjust screw hole.

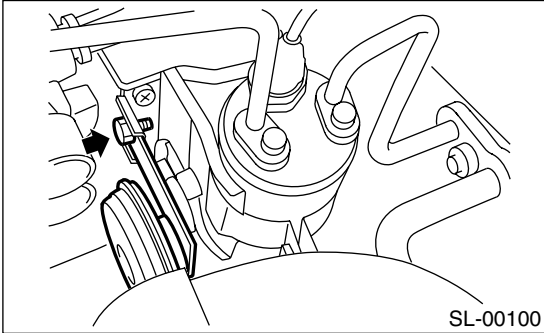


- 3) Install the security control module.
- 4) Perform the impact sensitivity test.

23. Security Horn

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the nuts and then detach the security horn while disconnecting the connector.

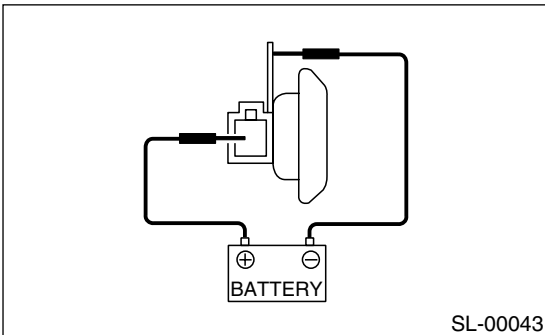


B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Connect the battery to the security horn terminal and case ground and make sure the horn sounds properly.

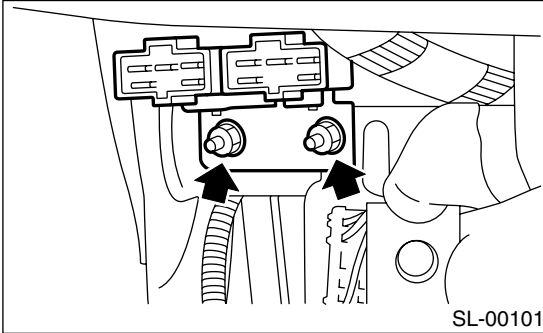


If NG, replace the security horn.

24. Security Horn Relay

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the mounting bolt and detach the security horn relay (near the fuse box).



B: INSTALLATION

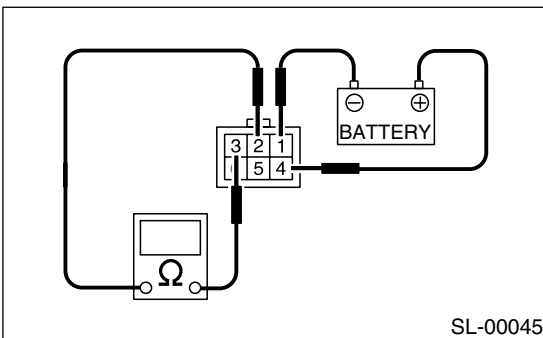
Install in the reverse order of removal.

C: INSPECTION

Measure the security horn relay resistance between terminals (indicated in the table below) when connecting terminal No. 1 (without OnStar (R)) or No. 3 (with OnStar (R)) to battery positive terminal and terminal No. 4 (without OnStar (R)) or No. 2 (with OnStar (R)) to battery ground terminal.

Without OnStar (R):

Current	Terminal No.	Standard
Flow	2 — 3	Less than 1 Ω
No flow		More than 1 M Ω



With OnStar (R):

Current	Terminal No.	Standard
Flow	1 — 4	Less than 1 Ω
No flow		More than 1 M Ω

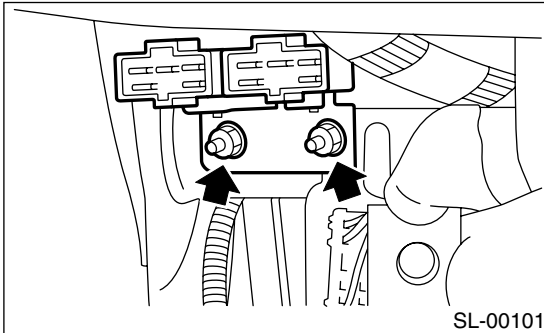
If the measured value is out of specifications indicated in table, replace security horn relay.

If NG, replace door lock actuator.

25. Interrupt Relay

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the mounting nuts and detach the interrupt relay (near the fuse box).



B: INSTALLATION

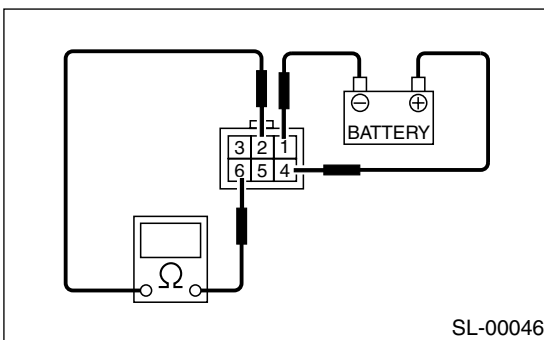
Install in the reverse order of removal.

C: INSPECTION

Measure the interrupt relay resistance between terminals (indicated in the table below) when connecting terminal No. 1 (without OnStar (R)) or No. 4 (with OnStar (R)) to battery positive terminal and terminal No. 4 (without OnStar (R)) or No. 2 (with OnStar (R)) to battery ground terminal.

Without OnStar (R):

Current	Terminal No.	Standard
Flow	2 — 6	More than 1 MΩ
No flow		Less than 1 Ω



With OnStar (R):

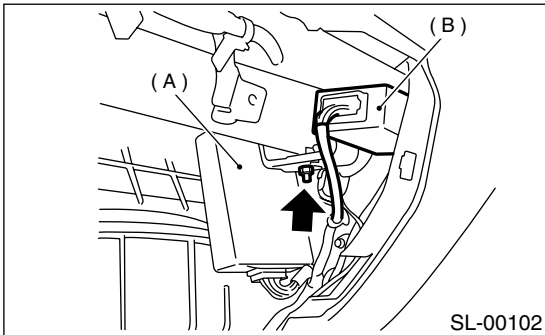
Current	Terminal No.	Standard
Flow	1 — 3	More than 1 MΩ
No flow		Less than 1 Ω

If the measured value is out of specifications indicated in table, replace security horn relay.

26. Keyless Entry Control Module

A: REMOVAL

- 1) Disconnect ground cable from battery.
- 2) Remove glove box. <Ref. to EI-42, REMOVAL, Glove Box.>
- 3) Remove nut, then remove keyless entry control module (B) and the other electrical control module (A) while disconnecting connector.



- 4) Disconnect keyless entry control module and the other control module.

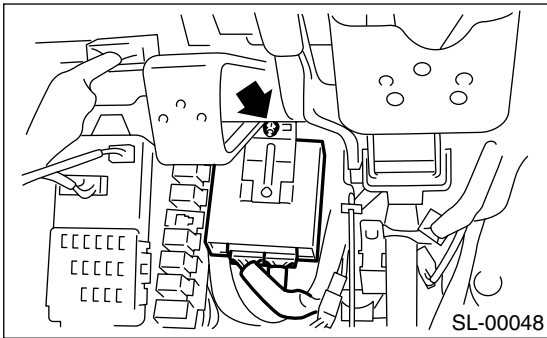
B: INSTALLATION

Install in the reverse order of removal.

27. Integrated Module

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the instrument panel lower cover. <Ref. to EI-46, REMOVAL, Instrument Panel Assembly.>
- 3) Remove the nut, then remove the integrated module while disconnecting the connector.



B: INSTALLATION

Install in the reverse order of removal.

28. Keyless Transmitter

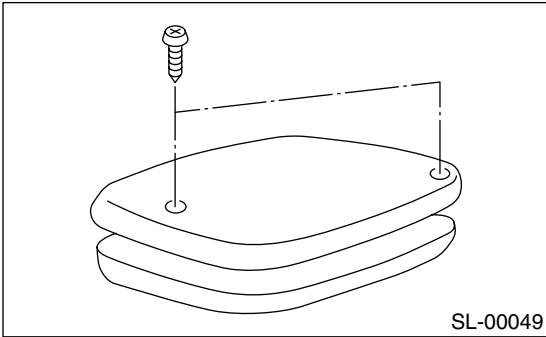
A: REMOVAL

1. TRANSMITTER BATTERY

Remove the battery from transmitter.

NOTE:

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



B: INSTALLATION

1. TRANSMITTER BATTERY

Install in the reverse order of removal.

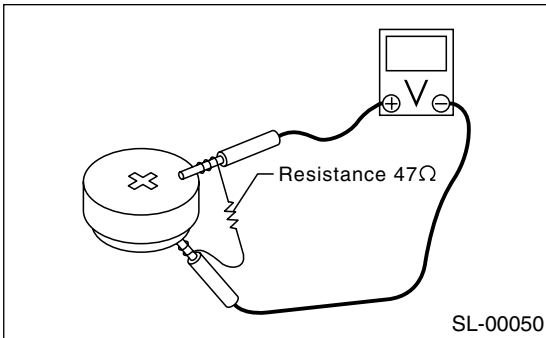
C: INSPECTION

1. TRANSMITTER BATTERY

Measure the voltage between battery (+) terminal and (-) terminal.

NOTE:

- Battery discharge occurs during measurement. Complete the measurement within 5 seconds.
- During battery voltage measurement, voltage falls more than 1.8 volts in 3 seconds period.



Tester connection		Standard
(+)	(-)	
Battery (+) terminal	Battery (-) terminal	2.5 — 3.0 V

If NG, replace the battery. (Use CR1620 or equivalent.)

D: REPLACEMENT

1. TRANSMITTER REGISTRATION

NOTE:

- A maximum of four transmitters can be registered for each individual vehicle.
- When replacing or adding the transmitter (key), registration is also necessary.
- Finish the operation from step 1) through 4) within 45 seconds.

- 1) Sit on the driver's seat and close all doors and rear gate.
- 2) Open the driver's door.
- 3) Close the driver's door.
- 4) Turn the ignition switch from ON to LOCK ten times within 15 seconds.

NOTE:

Do not start the engine at this time.

- 5) The horn chirps one time to indicate that the system has entered in the programming mode.
- 6) Open the driver's door.
- 7) Close the driver's door.
- 8) Press any button on the transmitter that you wish to program into the system.
- 9) Horn will chirp two times to indicate that the transmitter has been programmed.

NOTE:

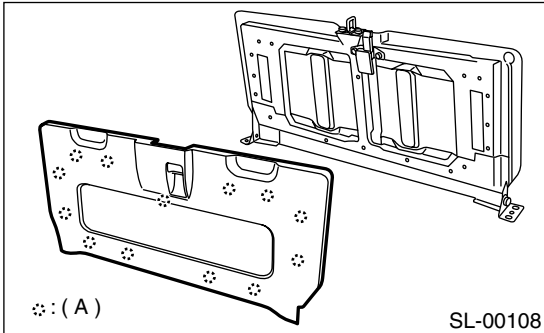
Repeat steps 6) through 9) for an additional transmitter.

- 10) Remove the ignition key from the ignition switch.
- 11) The horn will chirp three times to indicate that the system has exited the programming mode.
- 12) Check the keyless entry system properly operates by operating each transmitter.

29. Switch Back Gate Handle

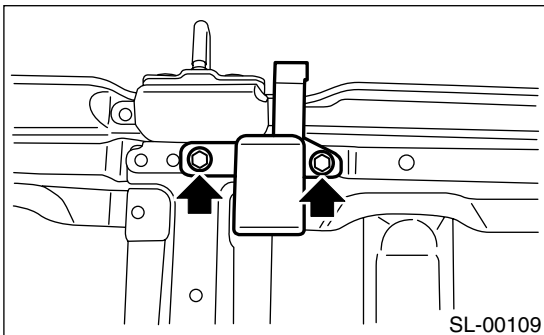
A: REMOVAL

- 1) Remove switch back gate. <Ref. to EB-23, REMOVAL, Switch Back Gate.>
- 2) Remove switch back gate inner cover.



(A) Clip

- 3) Remove bolts and detach switch back gate handle.



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

7.5 N·m (0.76 kgf·m, 5.5 ft-lb)

NOTE:

After installing, make sure that switch back gate operates smoothly.

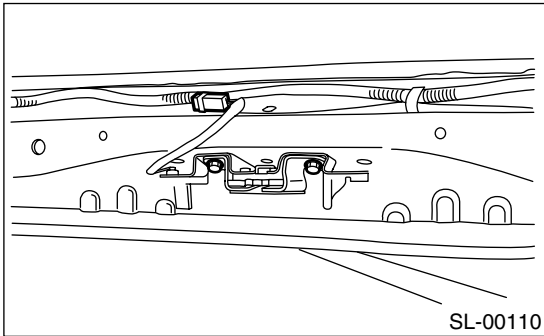
C: INSPECTION

Make sure that lever operates smoothly.

30. Switch Back Gate Latch

A: REMOVAL

- 1) Remove rear bulk head trim. <Ref. to EI-71, REMOVAL, Rear Bulkhead Trim.>
- 2) Remove connector. Remove bolts and switch back gate latch.



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

27.5 N·m (2.80 kgf-m, 20.3 ft-lb)

NOTE:

After installing, make sure that lock operates smoothly.

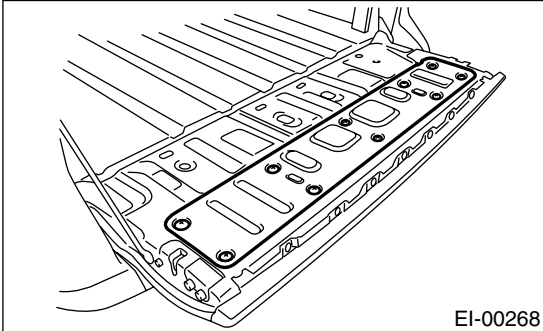
C: INSPECTION

Make sure that lever works smoothly.

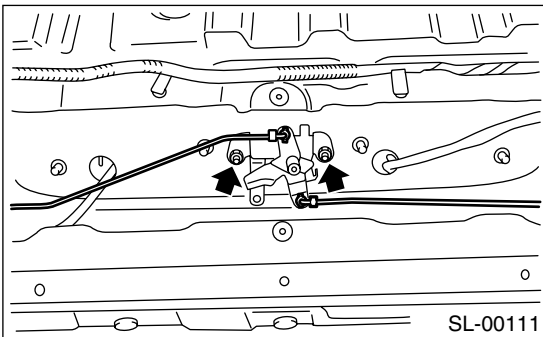
31. Tail Gate Outer Handle

A: REMOVAL

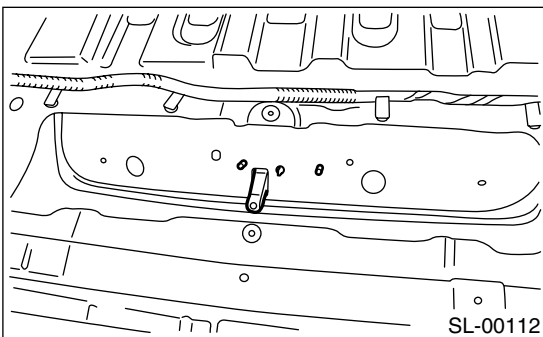
- 1) Remove tail gate tray. <Ref. to EI-73, REMOVAL, Tail Gate Tray.>
- 2) Remove tail gate cover.



- 3) Remove rod clamp. Remove nuts and detach lock handle.



- 4) Remove tail gate outer handle.



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:

After installing, make sure that outer handle works properly.

C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

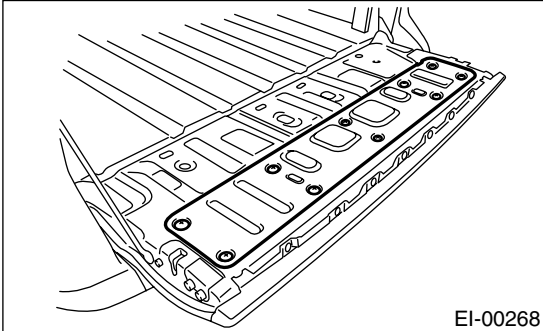
TAIL GATE LATCH ASSEMBLY

SECURITY AND LOCKS

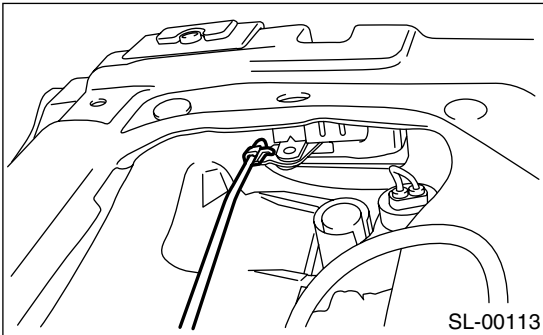
32. Tail Gate Latch Assembly

A: REMOVAL

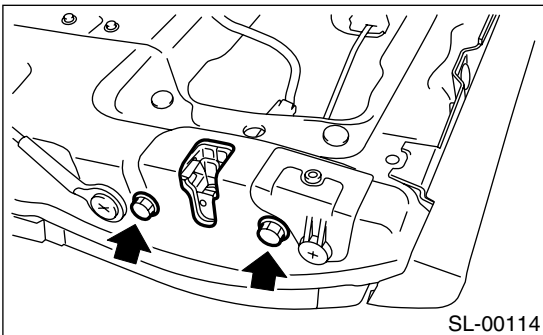
- 1) Remove tail gate tray. <Ref. to EI-73, REMOVAL, Tail Gate Tray.>
- 2) Remove tail gate cover.



- 3) Remove rod clamp.



- 4) Remove bolts and tail gate latch.



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

25 N·m (2.5 kgf-m, 18.1 ft-lb)

NOTE:

After installing, make sure the lock operates properly.

C: INSPECTION

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.