SECURITY AND LOCKS

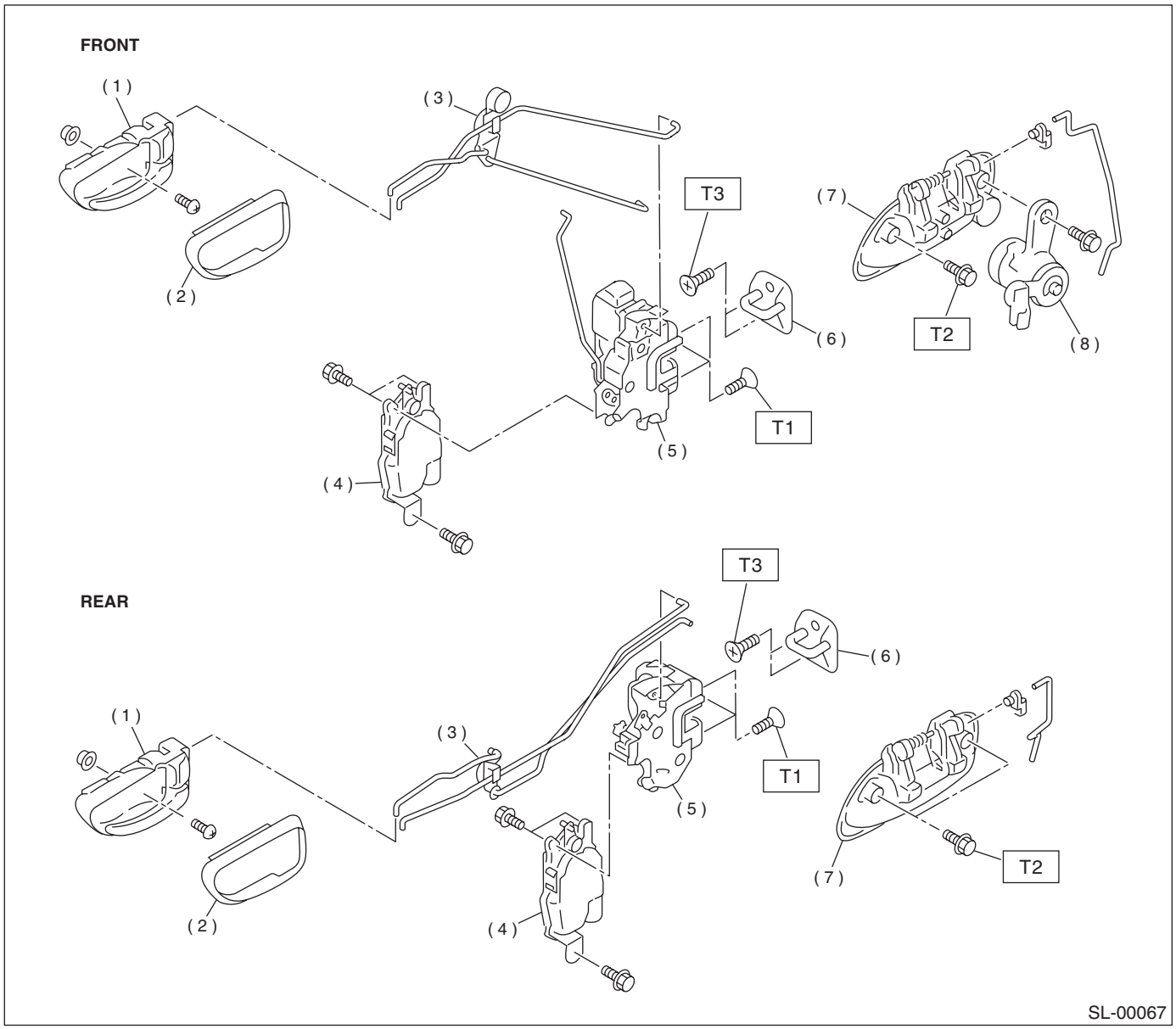
SL

1. General Description

A: SPECIFICATIONS

B: COMPONENT

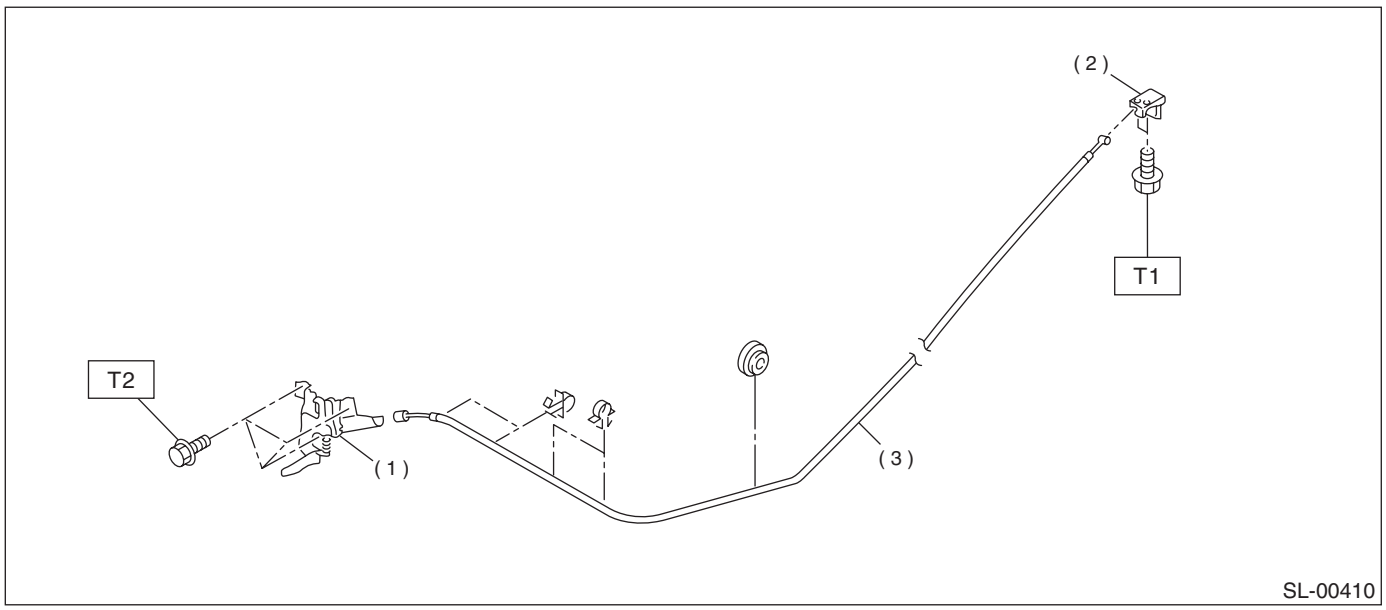
1. DOOR LOCK ASSEMBLY



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

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)

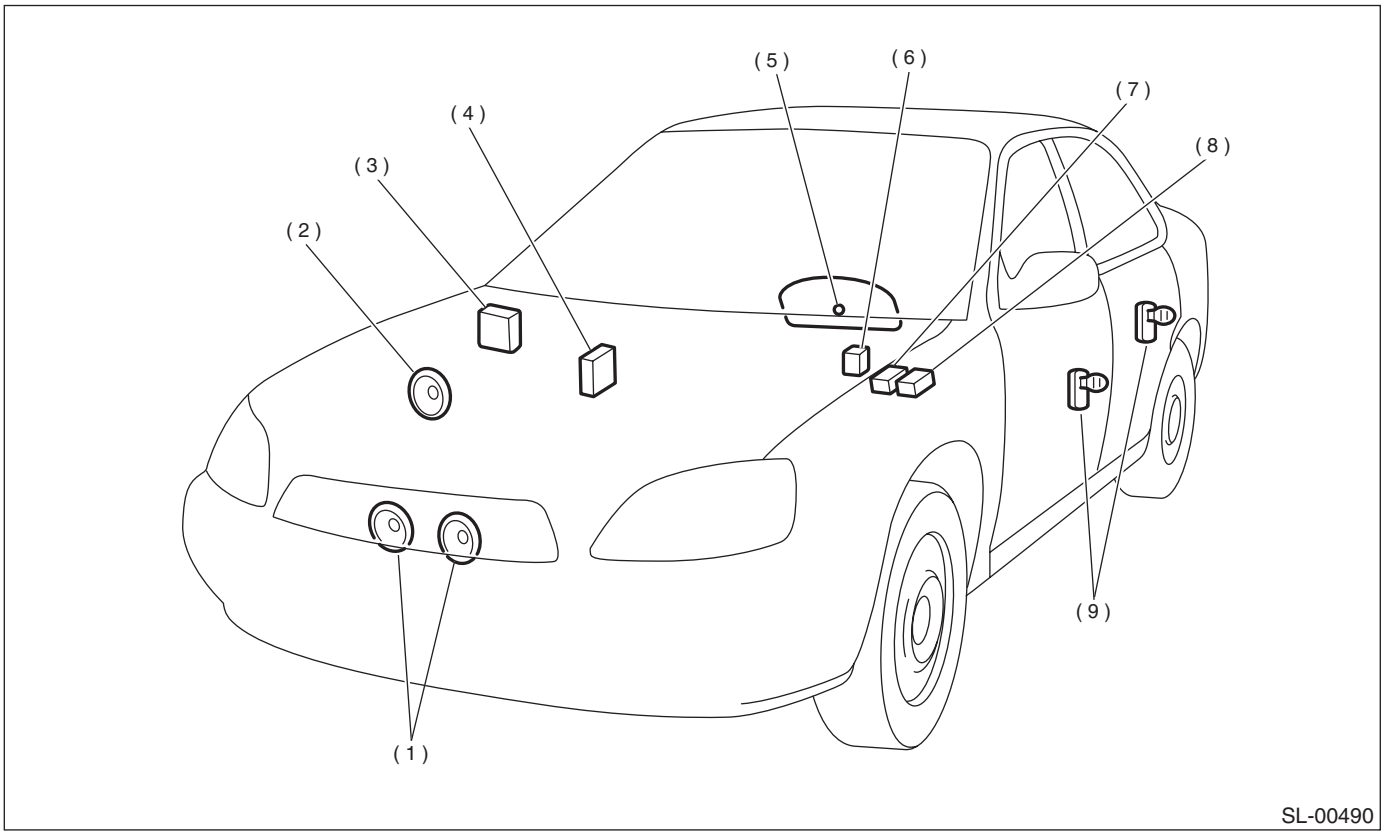
2. HOOD LOCK AND REMOTE OPENERS



(1) Hood lock ASSY
(2) Lever ASSY
(3) Cable

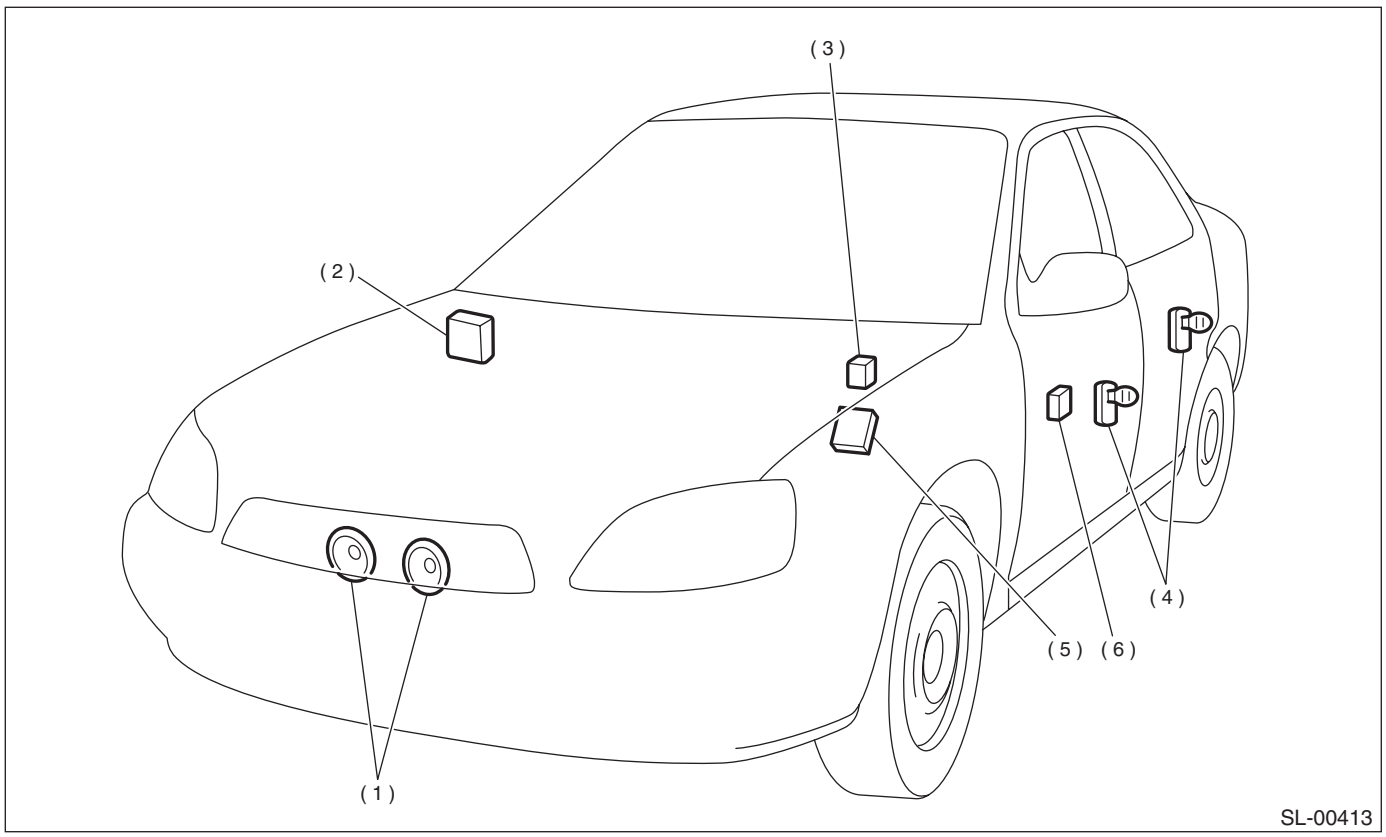
Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 32 (3.3, 23.9)

3. SECURITY SYSTEM



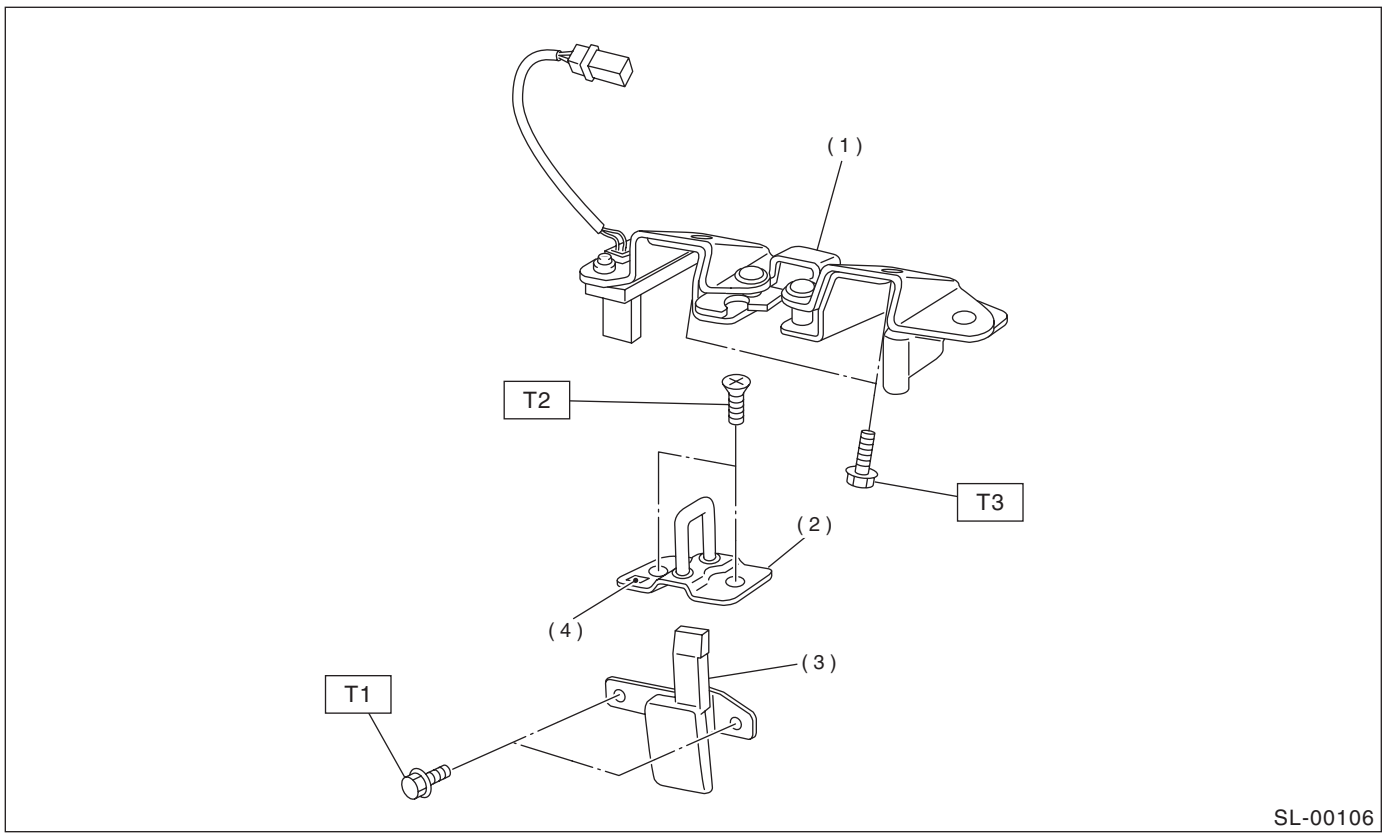
(1) Horn
(2) Security horn
(3) Keyless entry control module
(4) Impact sensor
(5) Security indicator light (in combination meter)
(6) Horn relay (in main fuse box)
(7) Interrupt relay
(8) Security horn relay
(9) Door switch

4. KEYLESS ENTRY SYSTEM



(1) Horn
(2) Keyless entry control module
(3) Horn relay
(4) Door switch
(5) Integrated module
(6) Keyless buzzer

5. SWITCH BACK GATE LOCK

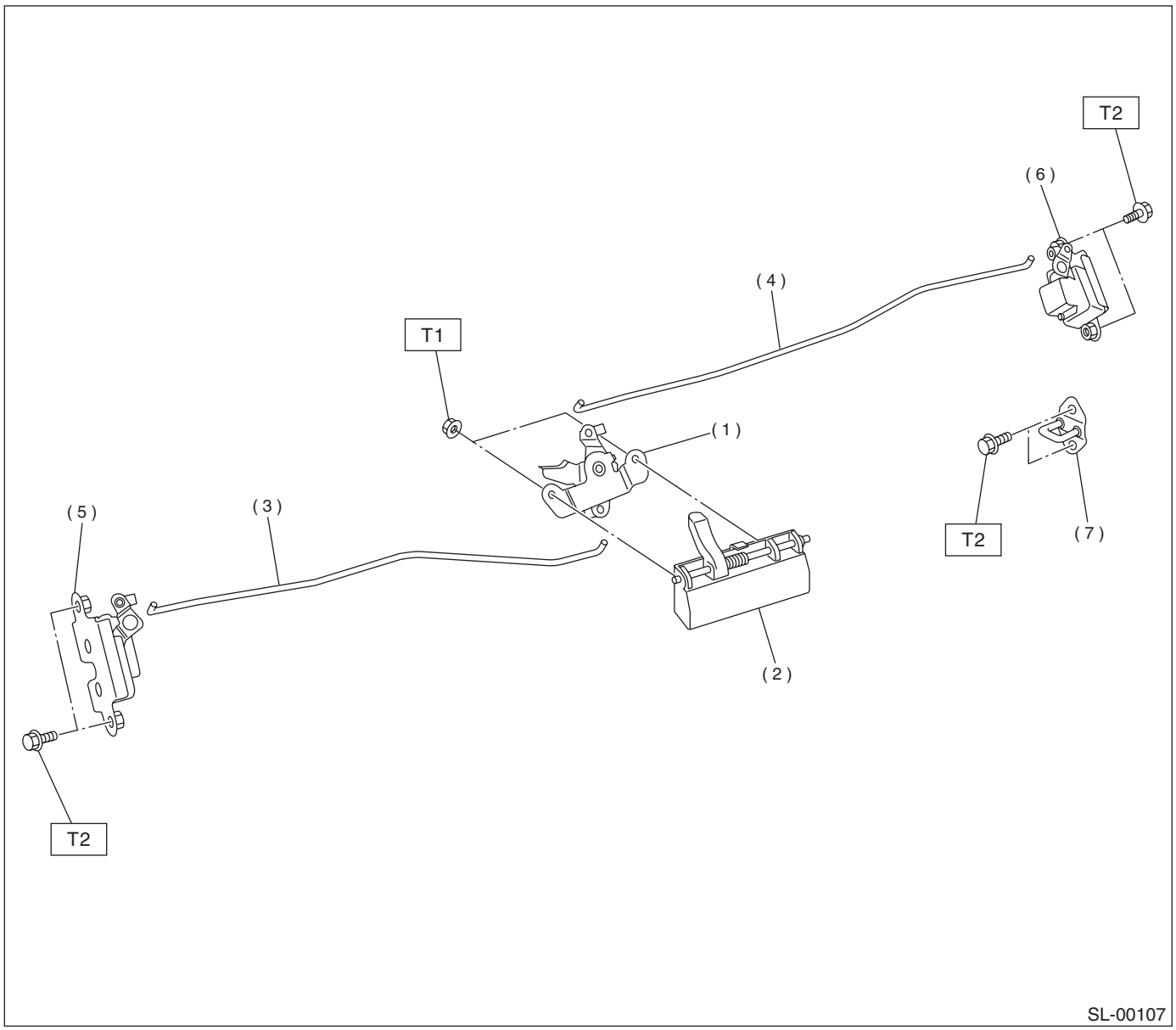


(1) Swtich back gate latch
(2) Striker
(3) Switch back gate release handle
(4) Marking

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.

6. 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

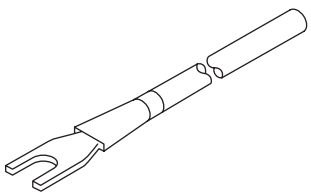
Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 25 (2.5, 18.1)

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.

2. Door Lock Control System

A: SCHEMATIC

1. DOOR LOCK CONTROL

<Ref. to WI-86, 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-9, CHECK FUSE, INSPECTION, Door Lock Control System.>
	2. Check the power supply and ground circuit for the integrated module.	<Ref. to SL-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the door lock switch and the circuit.	<Ref. to SL-10, CHECK DOOR LOCK SWITCH AND CIRCUIT, INSPECTION, Door Lock Control System.>
	4. Check the door lock actuator and the circuit.	<Ref. to SL-11, 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-10, 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-11, 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-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>	Replace the fuse with a new one.

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. 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.

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. ***Connector & terminal*** ***(B281) No. 6 (+) — Chassis ground (–):***	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. ***Connector & terminal*** ***(B281) No. 7, 8 (+) — Chassis ground (–):***	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-34, Front Door Lock Actuator.> Rear door lock actuator: <Ref. to SL-38, Rear Door 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

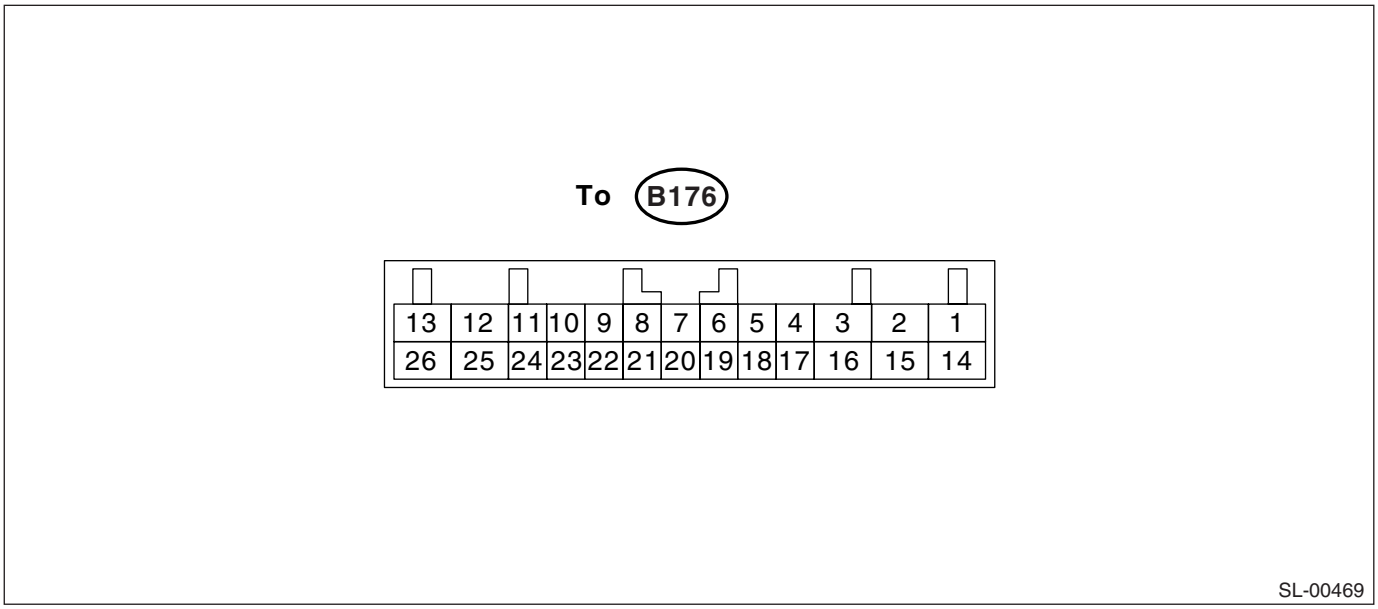
A: SCHEMATIC

1. KEYLESS ENTRY

<Ref. to WI-116, SCHEMATIC, Keyless Entry System.>

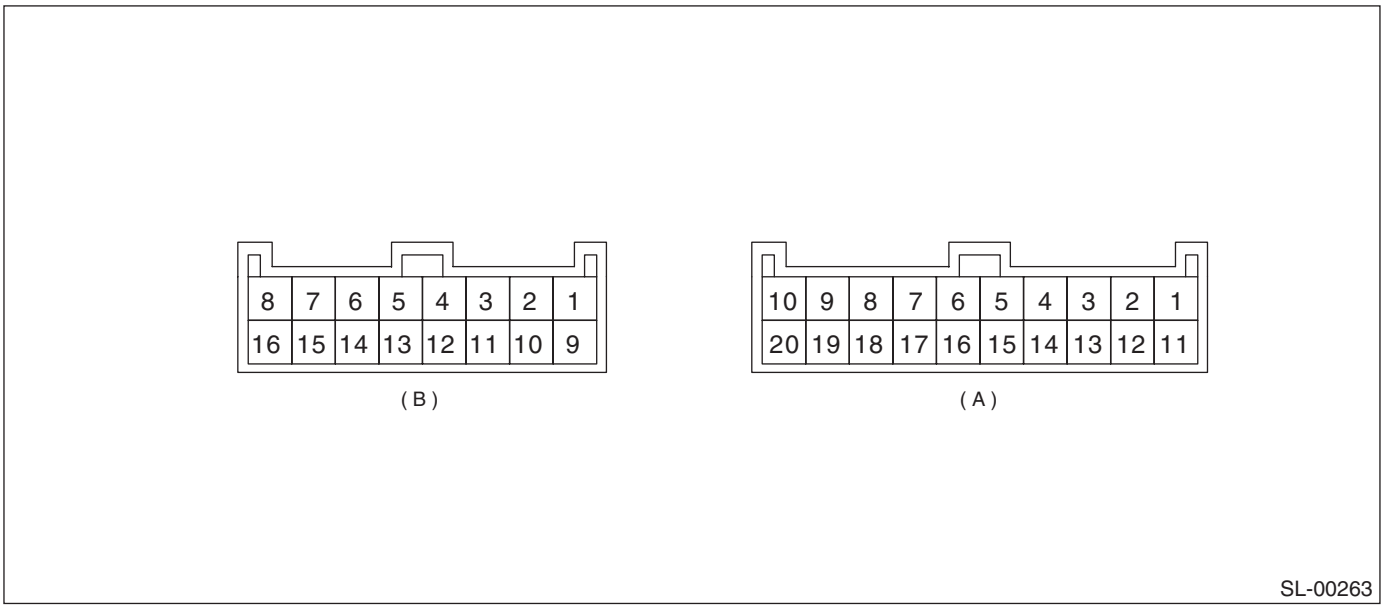
B: ELECTRICAL SPECIFICATION

1. KEYLESS ENTRY CONTROL MODULE



Content	Terminal No.	Measuring condition
Turn signal light (Left)	1 (OUTPUT)	Battery voltage is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button.
Power supply (Back-up)	2	Battery voltage is constantly present.
Keyless buzzer	3 (OUTPUT)	0 V is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button.
Door lock switch	4 (INPUT)	0 V is present when unlocking the door lock switch.
Door lock switch	5 (INPUT)	0 V is present when locking the door lock switch.
Door switch	6 (INPUT)	0 V is present when any door is opened.
Key warning switch	9 (INPUT)	Battery voltage is present when inserting the key into the ignition switch.
Ignition switch (ON)	10 (INPUT)	Battery voltage is present when ignition switch is turned to ON.
Turn signal light (Right)	13 (OUTPUT)	Battery voltage is present when pressing the transmitter UNLOCK/DISARM or LOCK/ARM button.
Ground	14	0 V is constantly present.
Integrated module	18 (OUTPUT)	0 V is present when pressing the transmitter UNLOCK/DISARM button.
Integrated module	19 (OUTPUT)	0 V is present when pressing the transmitter LOCK/ARM button.
Horn relay	24 (OUTPUT)	0 V is present when pressing the transmitter LOCK/ARM for approximately 2 seconds and the panic alarm is activated.
Power supply (Back-up)	26	Battery voltage is constantly present.

2. INTEGRATED MODULE



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	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 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 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-16, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the fuse.	<Ref. to SL-17, 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. Check the key warning switch.	<Ref. to SL-19, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	5. Check the door switch.	<Ref. to SL-18, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	6. Check the output signal to integrated module.	<Ref. to SL-20, CHECK OUTPUT SIGNAL TO INTEGRATED MODULE, INSPECTION, Keyless Entry System.>
	7. Replace the keyless entry control module.	<Ref. to SL-49, Keyless Entry Control Module.>
The transmitter cannot be programmed.	1. Check the transmitter battery and function.	<Ref. to SL-16, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the ignition switch circuit.	<Ref. to SL-18, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Keyless Entry System.>
	3. Check the door switch.	<Ref. to SL-18, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	4. Replace the keyless entry control module.	<Ref. to SL-49, 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-9, INSPECTION, Door Lock Control System.>	1. Check the transmitter battery and function.	<Ref. to SL-16, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-19, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	3. Check the door switch.	<Ref. to SL-18, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	4. Check the output signal to integrated module.	<Ref. to SL-20, CHECK OUTPUT SIGNAL TO INTEGRATED MODULE, INSPECTION, Keyless Entry System.>
	5. Replace the keyless entry control module.	<Ref. to SL-49, Keyless Entry Control Module.>
The panic alarm does not operate.	1. Check the transmitter battery and function.	<Ref. to SL-16, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the horn operation.	<Ref. to SL-21, CHECK HORN OPERATION, INSPECTION, Keyless Entry System.>
	3. Replace the keyless entry control module.	<Ref. to SL-49, Keyless Entry Control Module.>

Symptom	Repair order		Reference
The buzzer chirp and hazard light do not operate.	1. Check the buzzer chirp setting.		<Ref. to SL-17, CHECK BUZZER CHIRP SETTING, INSPECTION, Keyless Entry System.>
	2. Check the buzzer and hazard light operation.	Buzzer	<Ref. to SL-22, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
		Hazard light (Make sure that room light switch is set with door in engaged position.)	<Ref. to SL-21, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	3. Check the output signal to integrated module.		<Ref. to SL-20, CHECK OUTPUT SIGNAL TO INTEGRATED MODULE, INSPECTION, Keyless Entry System.>
	4. Replace the keyless entry control module.		<Ref. to SL-49, 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-20, CHECK ROOM LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	2. Replace the intergrated module.		<Ref. to SL-50, Integrated Module.>
The door ajar warning does not operate.	1. Check the door switch.		<Ref. to SL-18, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	2. Check the buzzer operation.		<Ref. to SL-22, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
	3. Replace the keyless entry control module.		<Ref. to SL-49, 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-51, REMOVAL, Keyless Transmitter.> 2) Check the battery voltage. <Ref. to SL-51, INSPECTION, Keyless Transmitter.>	Is the measured value more than 2.5 V?	Go to step **2.**	Replace the transmitter battery.
2	**CHECK TRANSMITTER.** Register a transmitter that can be normally operated in another vehicle with the vehicle that will be checked.<Ref. to SL-51, TRANSMITTER REGISTRATION USING SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.> 1) Close all the doors of the vehicle that will be checked. 2) Remove the key from the ignition switch. 3) Lock/unlock the doors by operating the transmitter.	Can normally lock/unlock the vehicle that will be checked?	Go to step **3.**	It is a vehicle malfunction. Continue the keyless entry system diagnosis.
3	**CHECK TRANSMITTER.** Register a transmitter of the vehicle that will be checked with another vehicle that can normally operate the transmitter.<Ref. to SL-51, TRANSMITTER REGISTRATION USING SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>	Can the transmitter be registered normally?	Go to step **4.**	Replace the transmitter. <Ref. to SL-51, TRANSMITTER REGISTRATION USING SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>
4	**CHECK TRANSMITTER.** Check the registered transmitter. 1) Close all the doors of the vehicle for which the keyless system is operated normally. 2) Remove the key from the ignition switch. 3) Lock/unlock the doors by operating the transmitter.	Can normally lock/unlock the vehicle?	Transmission is OK.	Replace the transmitter. <Ref. to SL-51, TRANSMITTER REGISTRATION USING SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>

CAUTION:
The transmitter registered from the other vehicle to vehicle that will be checked and the vehicle that the transmitter is registered with for the check should be returned to the original condition before performing the check (should be re-registered).

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. 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.** NOTE: When the operations of steps 1) to 5) are performed while the setting of the buzzer is OFF, the setting of the buzzer turns to ON. 1) Open the driver's door, and then remove the key from the ignition switch. 2) Insert the key into the ignition switch while pressing the door lock switch toward UNLOCK side. 3) Then, within 10 seconds, repeat the pulling out/inserting of the key five times. 4) Within 10 seconds, close the driver's door. 5) The setting of the buzzer turns ON ⇔ OFF, and then the hazard light blinks three times. NOTE: If the driver's door is not closed within 10 seconds, the hazard light blinks once. At that time, return to step 1). 6) 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-16, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>

4. CHECK FUSE

Step		Check	Yes	No
1	**CHECK FUSE.** Remove and visually check the fuses No. 2 and No. 6 (in the main fuse 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. 2, No. 26 (+) — 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. 14 — 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. 10 (+) — 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. 6 (+) — Chassis ground (–):***	Is the measured value is 0 V when any door 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. 6 (+) — Chassis ground (–):***	Does the measured value more than 10 V when all doors are 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:***	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:***	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.

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. 9 (+) — 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. 9 (+) — Chassis ground (–):***	Is the measured value is 0 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 MΩ?	**Check the following:** • 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. 18 (+) — Chassis ground (–):***	Is the measured value more than 10 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. 19 (+) — Chassis ground (–):***	Is the measured value more than 10 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. 18 — (B280) No. 14:*** ***(B176) No. 19 — (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.

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. 24 — 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. 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. 1, 13 (+) — 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

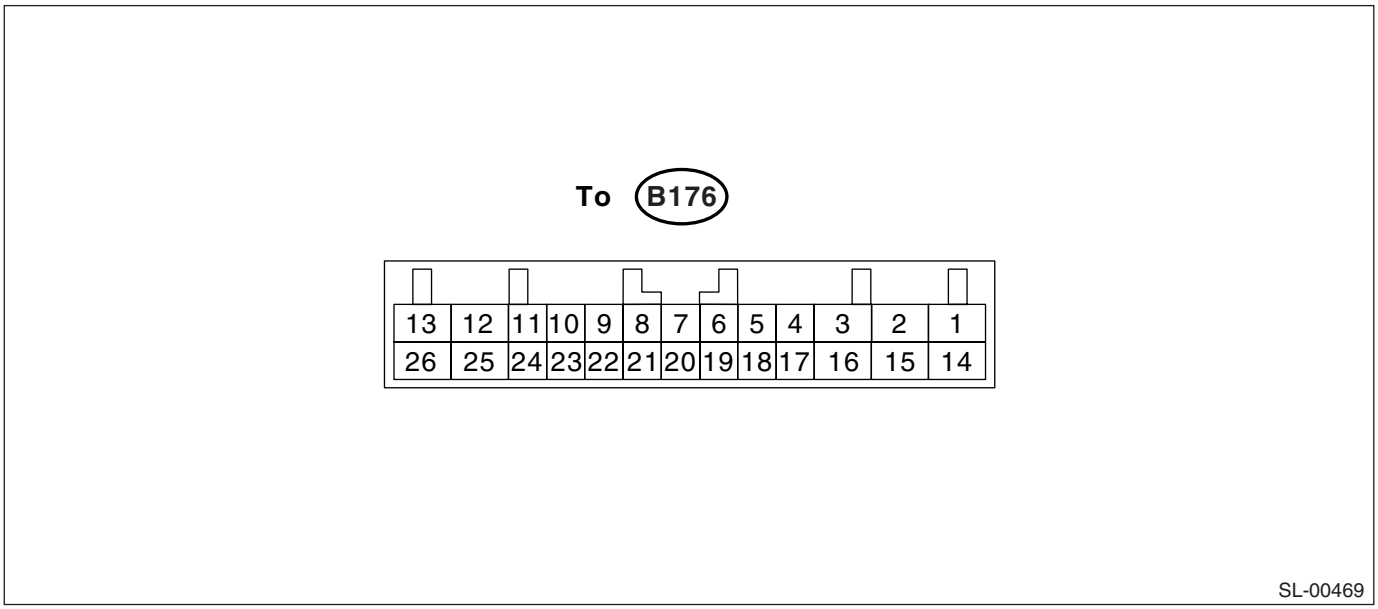
	Step	Check	Yes	No
1	**CHECK FUSE.** Remove and check the fuse No. 3 (located in fuse and relay box).	Is the fuse blown out?	Go to step **2.**	Replace the fuse with a new one.
2	**CHECK KEYLESS BUZZER POWER SUPPLY.** 1) Disconnect the connector from keyless buzzer. 2) Measure the voltage between keyless buzzer harness connector and chassis ground. ***Connector & terminal*** ***(D70) No. 2 (+) — Chassis ground (–):***	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. ***Connector & terminal*** ***(D70) No. 1 (+) — (B176) No. 3:***	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.

4. Security System

A: SCHEMATIC

<Ref. to WI-160, SCHEMATIC, Security System.>

B: ELECTRICAL SPECIFICATION



Content	Terminal No.	Measuring condition
Turn signal light (Left)	1 (OUTPUT)	Battery voltage is present when the alarm is activated.
Power supply (Back-up)	2	Battery voltage is constantly present.
Door switch	6 (INPUT)	0 V is present when any door is opened.
Impact sensor	8	0 V and battery voltage are alternately repeated each 45 msec. when the impact sensor is not affected by vibration.
Ignition switch (ON)	10 (INPUT)	Battery voltage is present when ignition switch is turned to ON.
Security horn relay	11 (OUTPUT)	0 V is present when the alarm is activated.
Interrupt relay	12 (OUTPUT)	Battery voltage is present when the alarm is activated.
Turn signal light (Right)	13 (OUTPUT)	Battery voltage is present when the alarm is activated.
Ground	14	0 V is constantly present.
Security indicator light	15 (OUTPUT)	0 V is present when the alarm is activated.
Power supply (Back-up)	26	Battery voltage is constantly present.

C: INSPECTION

1. BASIC DIAGNOSTIC PROCEDURE

	Step	Check	Yes	No
1	**CHECK SECURITY SYSTEM.** Turn the setting of the security system ON.<Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>	Was the setting performed normally?	Go to step **2.**	• Check the ignition switch circuit.<Ref. to SL-30, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.> • Check the door lock switch circuit.<Ref. to SL-10, CHECK DOOR LOCK SWITCH AND CIRCUIT, INSPECTION, Door Lock Control System.>
2	**CHECK SECURITY SYSTEM SETTING OPERATION.** 1) Before starting this diagnosis, open all doors. 2) Remove the key from the ignition key cylinder, and then close all doors. 3) Press the LOCK/ARM button of transmitter.	Can the security system be set?	Go to step **3.**	Go to symptom 1.<Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
3	**CHECK SECURITY INDICATOR LIGHT AND HAZARD LIGHT BLINKING.** Check the security indicator light and hazard light blinking. NOTE: The blinking pattern of the security indicator light is 2 blinks per 1 second at interval of 1 second.	Do the security indicator light and hazard light blink?	Go to step **4.**	Go to symptom 2.<Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
4	**CHECK SECURITY ALARM OPERATION.** 1) Unlock all doors using the door lock switch on the front door. 2) Open any door.	Does the security alarm operate when any door is opened?	Go to step **5.**	Go to symptom 3.<Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
5	**CHECK SECURITY ALARM OPERATION.** Check the security alarm operation.	Do all security alarms (horn, hazard light and security indicator light) operate? And is the starter motor deactivated?	Go to step **6.**	Go to symptom 4.<Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>
6	**CHECK SECURITY ALARM CANCEL OPERATION.** Press the UNLOCK/DISARM button of transmitter.	Do all security alarms (horn and hazard light) stop? And is the starter motor activated?	Go to step **7.**	Go to symptom 5.<Ref. to SL-26, SYMPTOM CHART, INSPECTION, Security System.>

Step		Check	Yes	No
7	**CHECK BATTERY DISCONNECT PROTECTION.** Make sure that the system operates properly if the battery cable is temporarily disconnected. <Ref. to SL-25, CHECK BATTERY DISCONNECT PROTECTION, INSPECTION, Security System.>	Does the system operate properly if the battery cable is temporarily disconnected?	Go to step **8.**	Replace the keyless control module.
8	**CHECK IMPACT SENSOR.** Perform the impact sensitivity test.<Ref. to SL-45, CHECK IMPACT SENSOR, ADJUSTMENT, Impact Sensor.> NOTE: This procedure is for the models equipped with the impact sensor (Option).	Is the impact sensitivity properly set?	Press UNLOCK/DISARM button of transmitter, and finish the diagnosis.	Adjust the impact sensitivity properly. <Ref. to SL-45, IMPACT SENSITIVITY ADJUSTMENT, ADJUSTMENT, Impact Sensor.>

2. CHECK BATTERY DISCONNECT PROTECTION

1) Remove the key from the ignition switch.
2) Close all the doors.
3) Open the front hood.
4) Press the LOCK/ARM button of transmitter, and then wait until the security indicator light repeats 2 blinks per 1 second at interval of 1 second.
5) Disconnect the ground cable from the battery.
6) Reconnect the cable to the battery.
7) Make sure that the security indicator light repeats 2 blinks per 1 second at interval of 1 second. If NG, replace the keyless entry control module.

3. ON/OFF SETTING OF SECURITY SYSTEM

NOTE:
When the operations of steps 1) to 4) are performed while the setting of the security system is ON, the setting of the security system turns to OFF.

1) Close all the doors, and then sit in the driver's seat. Press the UNLOCK button of transmitter.
2) Turn the ignition switch ON.
3) Press the door lock switch toward the UNLOCK side and open the driver's door. Maintain this condition for 10 seconds.
4) Switch the setting of the security system (ON ⇔ OFF), and then sound the horn.

Setting	Horn
OFF → ON	Once
ON → OFF	Twice

NOTE:
Refer to the following for the ON/OFF setting of the security system using the select monitor.<Ref. to SL-43, PROCEDURE, Security Control Module.>

4. SYMPTOM CHART

Symptom			Repair order	Reference
1	Security system cannot be set.		1. Check the transmitter function.	<Ref. to SL-16, 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 keyless entry 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 keyless entry control module.	<Ref. to SL-43, Security Control Module.>
2	Security system can be set, but the security indicator light or hazard light does not blink.	Security indicator light	Check the security indicator light circuit.	<Ref. to SL-28, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
		Hazard light	Check the hazard light operation.	<Ref. to SL-30, 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-28, 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-30, CHECK HAZARD LIGHT OPERATION, INSPECTION, Security System.>
		Starter motor deactivation	Check the interrupt relay circuit.	<Ref. to SL-30, CHECK INTERRUPT RELAY CIRCUIT, INSPECTION, Security System.>
5	Security system cannot be canceled.	Transmitter	Check the transmitter function.	<Ref. to SL-16, CHECK TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
		Ignition switch	Check the ignition switch circuit.	<Ref. to SL-30, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.>

5. CHECK FUSE

	Step	Check	Yes	No
1	**CHECK FUSE.** Remove and visually check the fuses No. 2 and No. 6 (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.

6. 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. 2, 26 (+) — 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. 14 — Chassis ground:***	Is the measured value less than 10 Ω?	The power supply and ground circuit are OK.	Repair the harness.

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 door:*** ***(B176) No. 6 (+) — Chassis ground (–):***	Is the measured value 0 V when any door 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 door:*** ***(B176) No. 6 (+) — Chassis ground (–):***	Does the measured value exceed the 10 V when all doors are 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:***	Is the measured value more than 1 MΩ when door switch is pushed?	Go to step **4.**	Replace the door switch.

	Step	Check	Yes	No
4	**CHECK DOOR SWITCH.** Measure the resistance between the door switch terminals. ***Terminal*** ***Door switch:*** ***No. 1 — No. 3:***	Is the measured value less than 1Ω when door switch is released?	Check the harness for open circuits and shorts between the keyless entry control module and door switch.	Replace the door switch.

8. CHECK SECURITY INDICATOR LIGHT CIRCUIT

	Step	Check	Yes	No
1	**CHECK SECURITY INDICATOR LIGHT.** 1) Disconnect the keyless entry control module harness connector. 2) Ground the harness connector terminal with a suitable wire. ***Connector & terminal*** ***(B176) No. 15 — Chassis ground:***	Does the security indicator light illuminate?	Replace the keyless entry 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 keyless entry control module harness connector terminal. ***Connector & terminal*** ***(i12) No. 1 — (B176) No. 15:***	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 keyless entry control module.

9. CHECK SECURITY HORN

	Step	Check	Yes	No
1	**CHECK SECURITY HORN RELAY.** Remove and check the security horn relay. <Ref. to SL-47, 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*** ***(B243) No. 1 (+) — 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*** ***(B243) No. 2 (+) — 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.
4	**CHECK HARNESS BETWEEN SECURITY HORN RELAY AND KEYLESS ENTRY CONTROL MODULE.** 1) Disconnect the keyless entry control module harness connector. 2) Measure the resistance between the security horn relay harness connector terminal and keyless entry control module harness connector terminal. ***Connector & terminal*** ***(B243) No. 4 — (B176) No. 11:***	Is the measured value less than 10 Ω?	Go to step **5.**	Check the harness for open circuits and shorts between the security horn relay and keyless entry control module.
5	**CHECK HARNESS BETWEEN SECURITY HORN RELAY AND SECURITY HORN.** 1) Disconnect the security horn harness connector. 2) Measure the resistance between the security horn relay harness connector terminal and security horn harness connector terminal. ***Connector & terminal*** ***(B243) No. 3 — (B204) No. 1:***	Is the measured value less than 10 Ω?	Go to step **6.**	Check the harness for open circuits and shorts between the security horn relay and security horn.
6	**CHECK SECURITY HORN.** Remove and check the security horn. <Ref. to SL-46, Security Horn.>	Is the security horn OK?	Replace the keyless entry control module.	Replace the security horn.

10.CHECK HAZARD LIGHT OPERATION

	Step	Check	Yes	No
1	**CHECK HAZARD LIGHT OPERATION** Check if the hazard light illuminates when the hazard switch is turned to ON.	Does the hazard light blink?	Go to step **2.**	Check the hazard light circuit.
2	**CHECK KEYLESS ENTRY CONTROL MODULE OUTPUT SIGNAL.** 1) Remove the key from the ignition switch. 2) Open the driver's window, and then close all doors. 3) Lock all doors with the transmitter to arm the security system. 4) Unlock all doors with the door lock switch. 5) Measure the voltage between the keyless entry control module harness connector terminal and chassis ground when any door is open. ***Connector & terminal*** ***(B176) No. 1, 13 (+) — Chassis ground (-):***	Is the measured value more than 10 V?	Check the harness for open circuits and shorts between the keyless entry control module and turn signal light.	Replace the keyless entry control module.

11.CHECK INTERRUPT RELAY CIRCUIT

	Step	Check	Yes	No
1	**CHECK INTERRUPT RELAY.** Remove and check the interrupt relay. <Ref. to SL-48, 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*** ***(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 KEYLESS ENTRY CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the keyless entry control module harness connector. 3) Measure the resistance between the interrupt relay harness connector terminal and keyless entry control module harness connector terminal. ***Connector & terminal*** ***(B59) No. 2 — (B176) No. 12:***	Is the measured value less than 10 Ω?	Replace the keyless entry control module.	Check the harness for open circuits and shorts between the interrupt relay and keyless entry control module.

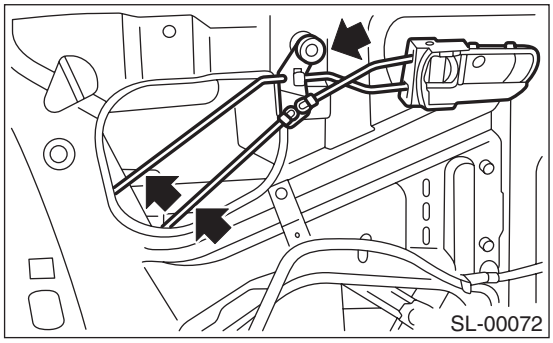
12.CHECK IGNITION SWITCH CIRCUIT

	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 the harness connector terminal and chassis ground. ***Connector & terminal*** ***(B176) No. 10 (+) — 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 switch.

5. Front Inner Remote

A: REMOVAL

1) Remove the door trim. <Ref. to EI-32, REMOVAL, Front Door Trim.>
2) Remove the sealing cover. <Ref. to EB-13, 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.

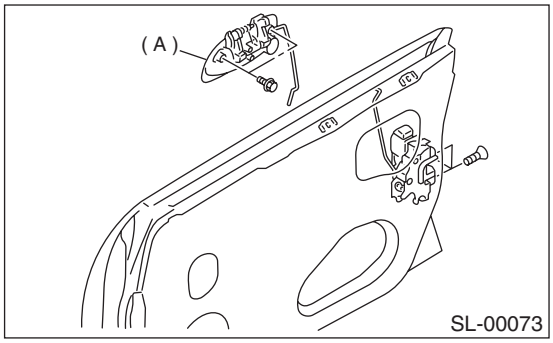
C: INSPECTION

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-33, 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.

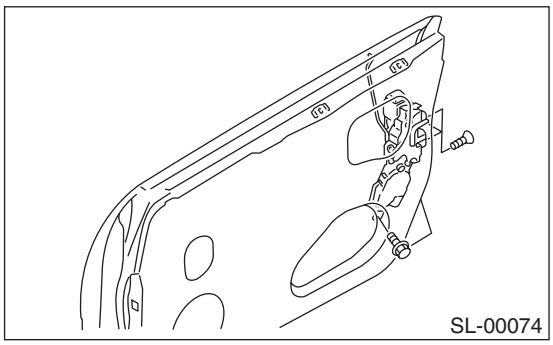
C: INSPECTION

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-32, REMOVAL, Front Door Trim.>
3) Remove the sealing cover. <Ref. to EB-13, REMOVAL, Front Sealing Cover.>
4) Remove the front inner remote. <Ref. to SL-31, REMOVAL, Front Inner Remote.>
5) Remove the front door glass. <Ref. to GW-11, 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.

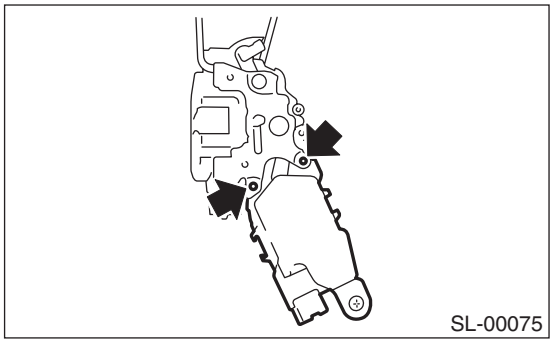
C: INSPECTION

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

8. Front Door Lock Actuator

A: REMOVAL

1) Remove the front door latch assembly. <Ref. to SL-33, REMOVAL, Front Door Latch Assembly.>
2) Remove the bolt. Remove the front door lock actuator.



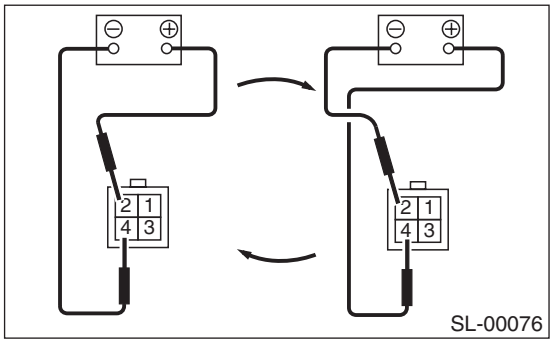
B: INSTALLATION

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.



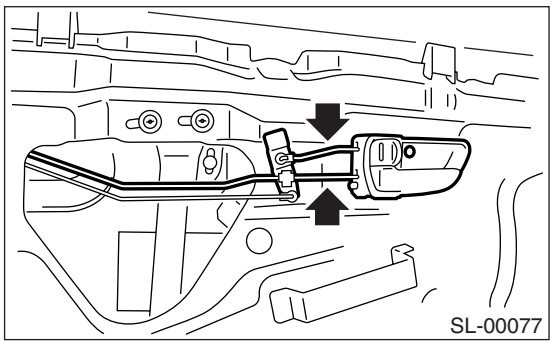
Terminal No.	Actuator operation
No. 2 (+) and No. 4 (–)	Unlocked → Locked
No. 4 (+) and No. 2 (–)	Locked → Unlocked

If NG, replace the door lock actuator.

9. Rear Inner Remote

A: REMOVAL

1) Remove the rear door trim. <Ref. to EI-33, REMOVAL, Rear Door Trim.>
2) Remove the sealing cover. <Ref. to EB-16, 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.

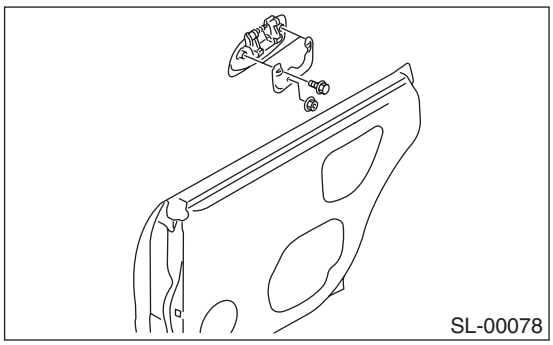
C: INSPECTION

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-33, REMOVAL, Rear Door Trim.>
2) Remove the sealing cover. <Ref. to EB-16, REMOVAL, Rear Sealing Cover.>
3) Remove the rear inner remote. <Ref. to SL-35, REMOVAL, Rear Inner Remote.>
4) Remove the rear door latch assembly. <Ref. to SL-37, 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.

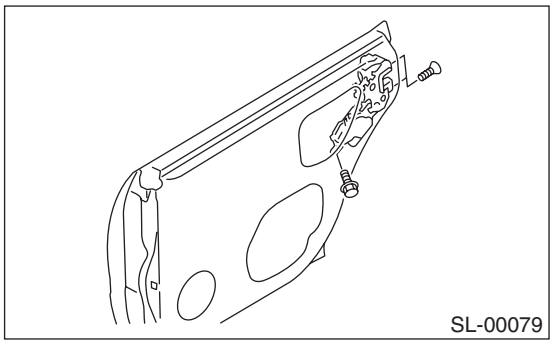
C: INSPECTION

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-33, REMOVAL, Rear Door Trim.>
3) Remove the sealing cover. <Ref. to EB-16, REMOVAL, Rear Sealing Cover.>
4) Remove the rear inner remote. <Ref. to SL-35, 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.

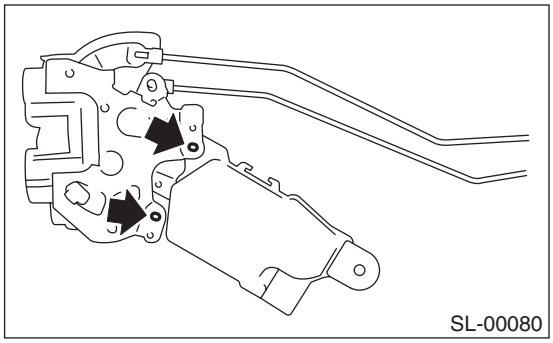
C: INSPECTION

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-37, REMOVAL, Rear Door Latch Assembly.>
2) Remove the bolt. Remove the rear door lock actuator.



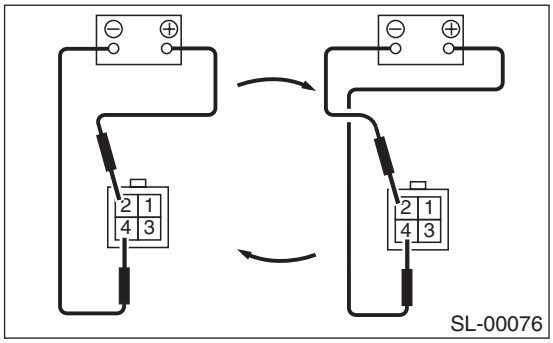
B: INSTALLATION

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.



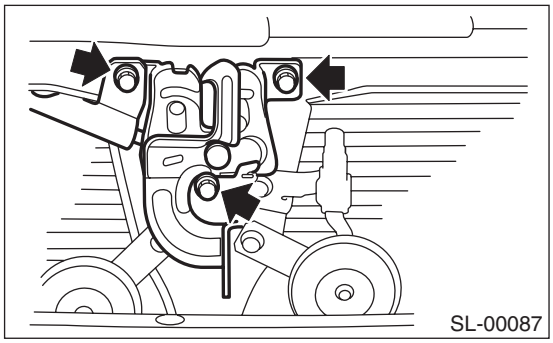
Terminal No.	Actuator operation
No. 2 (+) and No. 4 (–)	Unlocked → Locked
No. 4 (+) and No. 2 (–)	Locked → Unlocked

If NG, replace the door lock actuator.

13.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.



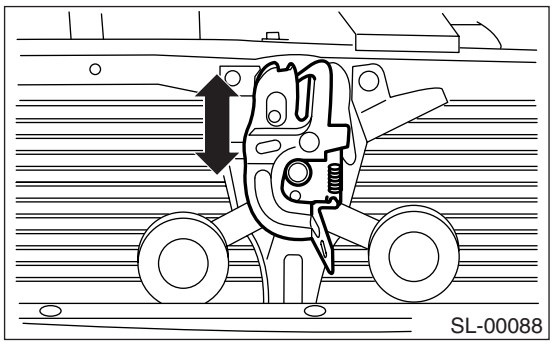
B: INSTALLATION

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

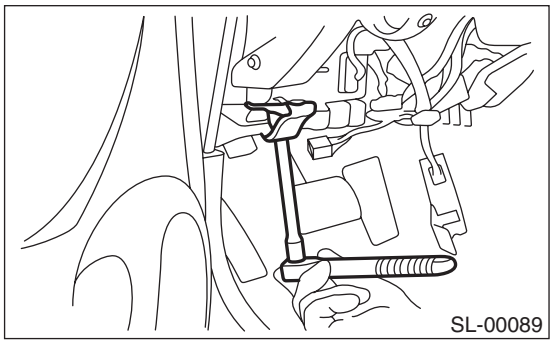
1) Check the striker for bending or abnormal wear.
2) Check the safety lever for improper movement.
3) Check other levers and the spring for rust formation and unsmooth movement.

14.Remote Openers

A: REMOVAL

1. HOOD OPENER

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



B: INSTALLATION

1. HOOD OPENER

Install in the reverse order of removal.

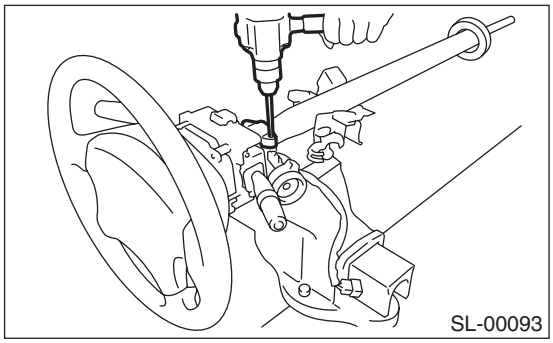
C: INSPECTION

Make sure the hood opens and closes smoothly.

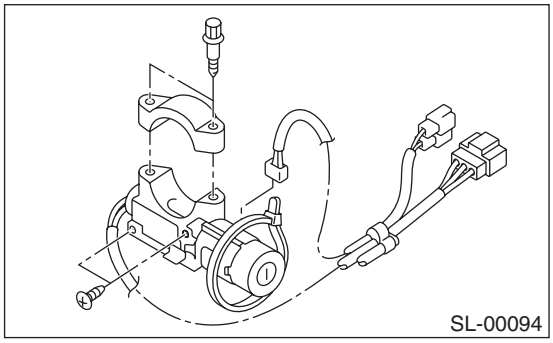
15.Ignition Key Lock

A: REPLACEMENT

1) Disconnect ground cable from battery.
2) Remove the steering column. <Ref. to PS-20, 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

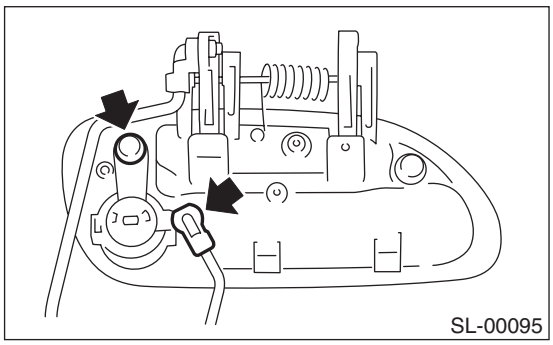
If continuity dose not exist, replace the ignition switch.

16.Key Lock Cylinders

A: REPLACEMENT

1. FRONT DOOR

1) Remove the front outer handle. <Ref. to SL-32, REMOVAL, Front Outer Handle.>
2) Remove the rod clamp. Replace the key cylinder.



17.Security Control Module

A: NOTE

Security system is controlled by the keyless entry control module.

B: REMOVAL

<Ref. to SL-49, REMOVAL, Keyless Entry Control Module.>

C: INSTALLATION

<Ref. to SL-49, INSTALLATION, Keyless Entry Control Module.>

D: PROCEDURE

1. FUNCTION SETTING (CUSTOMIZE UNIT)

1) Connect the SUBARU Select Monitor to the data link connector.
2) Turn the ignition switch ON.
3) Select {CHECK INDIVIDUAL SYSTEM} on the «MAIN MENU» screen, and then press the [YES] key.
4) Select {KEYLESS UNIT MODE} on the «SYSTEM SELECT MENU» screen, and then press the [YES] key.
5) Select {CUSTOMIZE UNIT} on the «INTEGRATED UNIT MODE DIAGNOSIS» screen, and then press the [YES] key.
6) Change the contents using the UP/DOWN key, and then set using the [YES] key.

- Function Setting (Customize Unit) Item List

No.	Data	Initial setting	Customized setting	Remarks
1	Alarm ON/OFF setting	ON	ON	Operates the alarm (hazard, horn).
			OFF	Stops the alarm operation.
2	Alarm monitoring delay setting	ON		After keyless locking, the alarm monitoring operates after the following delay time.
			ON	The delay time is 30 seconds.
			OFF	The delay time is 0 seconds.
3	Impact sensor ON/OFF setting	OFF	ON	Activates the impact sensor function when the setting of the impact sensor is "YES".
			OFF	Deactivates the impact sensor function. (For the models without the impact sensor, it should set to "OFF".)
4	Setting with/without impact sensor (Option)	NO	YES	Controls the impact sensor mounted mode. [For the models without the impact sensor, it should be set to "NO". If it is set to "YES", the hazard or horn operates under the keyless lock (start alarm monitoring).]
			NO	Controls the impact sensor not mounted mode.
5	Passive ARM switching	OFF	ON	The function automatically shifts to ARM even if the user does not lock (ARM) it on purpose.
			OFF	Activates when the passive ARM switching is set to "ON".

7) After completing the setting, make sure that the contents of the change are adapted to the vehicle equipment in {CURRENT DATA DISPLAY/STORE}.

CAUTION:
• The alarm is operated normally by matching the above setting and the vehicle equipment specification.
• Do not change the setting for items other than the above items during the function setting operation.
• Perform resetting when installing a new keyless unit.
• In the passive mode, the security alarm is operated automatically, but the doors are not locked. At this time, always lock the doors to prevent crime because it is very dangerous.

NOTE:
For the details of the operation procedure, refer to the "SUBARU SELECT MONITOR OPERATION MANUAL".

8) Turn the ignition switch OFF, and then remove the SUBARU Select Monitor.

2. ALARM HISTORY INFORMATION MODE

1) Turn the ignition switch ON.
2) The indicator light blinks.

The frequency of indicator light blinks	Vehicle state
Once	A light warning is activated by the impact sensor (Option). This may indicate that your vehicle has been lightly struck by an outside force or tampered with by an unauthorized person.
Twice	A strong warning is activated by the impact sensor (Option). This may indicate that your vehicle has been strongly struck by an outside force or tampered with by an unauthorized person.
3 times	The ignition switch has been turned ON.
5 times	Any door has been opened.

NOTE:
• If the ALARM/WARNING occurred in ARM mode, the indicator light blinks at the time when the ignition switched OFF → ON in the next DISARM.
• If the ALARM/WARNING did not occur, the indicator light does not blink.
• When multiple alarms were detected at the same time, a lot of blinking frequencies are given priority and blinked.
• All indicator lights blink when the ignition switch is turned ON in DISARM mode, and then the history is updated at the next ARM mode.

18.Impact Sensor

A: REMOVAL

NOTE:
The impact sensor is an optional part installed by the dealer.

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

B: INSTALLATION

1) Remove the key from the ignition switch.
2) Close all the doors.
3) Press the UNLOCK button of transmitter.
4) Disconnect the ground cable from the battery.
5) Install the impact sensor.
6) Connect the ground cable to the battery.
7) Change the setting of the impact sensor using the SUBARU Select Monitor.

C: OPERATION

1. SETTING WITH/WITHOUT IMPACT SENSOR USING SUBARU SELECT MONITOR

1) Connect the SUBARU Select Monitor to the data link connector.
2) Turn the ignition switch ON.
3) Select {KEYLESS UNIT} from the main menu.
4) {Select {CUSTOMIZE UNIT}.
5) Perform the setting with/without impact sensor.
- Installation: ON
- Removal: OFF

6) Perform the impact sensor ON/OFF setting.
- Installation: ON
- Removal: OFF

7) Turn the ignition switch OFF, and then remove the SUBARU Select Monitor.

D: ADJUSTMENT

1. CHECK IMPACT SENSOR

1) Remove the key from the ignition switch.
2) Close all the windows.
3) Close all the doors. However, open the front hood.
4) Press the LOCK button of the transmitter from the outside of the vehicle.
5) After 30 seconds, make sure that the security indicator light blinks twice for 0.5 second at the interval of 2 seconds.
6) Make sure that the security alarm surely operates by banging the glass several times with hands or lifting the front hood approximately 12 cm (4.7 in) or more and letting it fall freely.
7) If the security alarm does not operate, adjust the impact sensitivity.

2. IMPACT SENSITIVITY ADJUSTMENT

1) Connect the SUBARU Select Monitor to the data link connector.
2) Turn the ignition switch ON.
3) Select {IMPACT SENSOR} from the main menu.
4) Perform {SENSITIVITY ADJUSTMENT MODE}.
- The sensitivity can be adjusted at 11 steps (0 to 10).
- The initial value is 5.
- The smaller value indicates that it is more sensitive.
- The bigger value indicates that it is less sensitive.

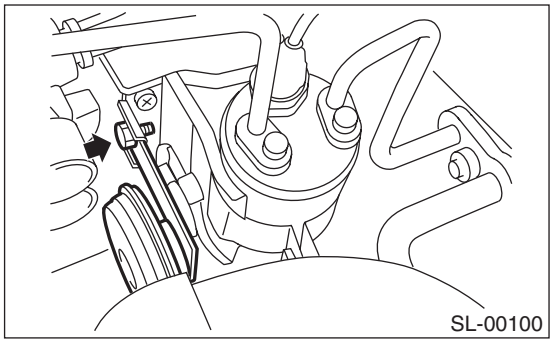
5) Turn the ignition switch OFF, and then remove the SUBARU Select Monitor.

NOTE:
- Set the sensitivity not to sound the warning for a normal vibration that occurs daily (e.g. a person leans against the door or a ball hits the vehicle).
- Set the sensitivity to sound the warning for a vibration that may be like subversive activities by a thief (e.g. banging the glass or door repeatedly).
- Even if it is not a theft, when a vibration that is similar to a theft (e.g. a road work) is applied to the vehicle, the warning may be sounded. Contact the customer and ask about the parking environment, and then set the sensitivity corresponding to the parking location.

19.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.

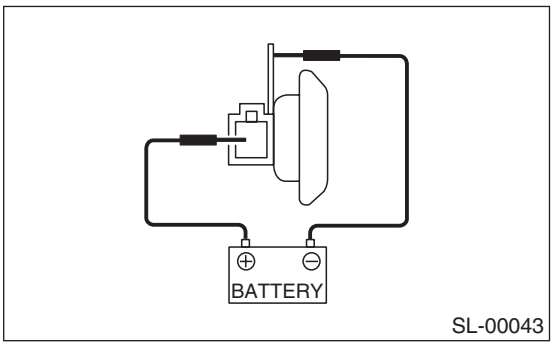


B: INSTALLATION

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.

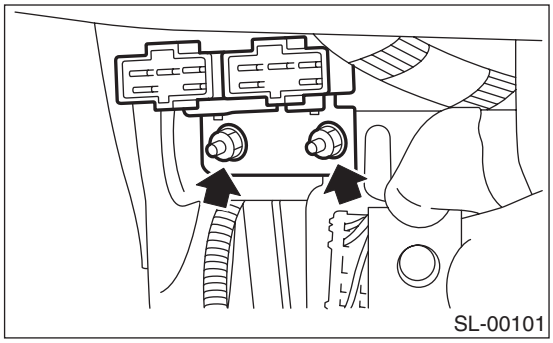


If NG, replace the security horn.

20.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).



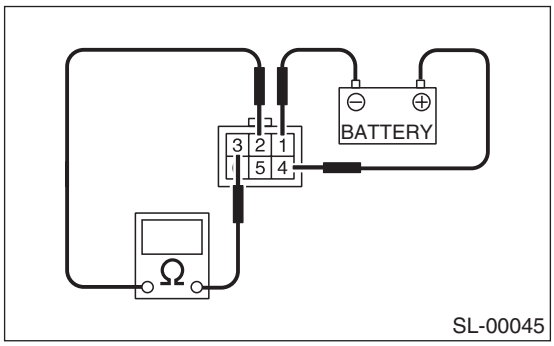
B: INSTALLATION

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 to battery positive terminal and terminal No. 4 to battery ground terminal.

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



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

21.Interrupt Relay

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the mounting nuts and detach the interrupt relay (installed on the knee panel at driver side).

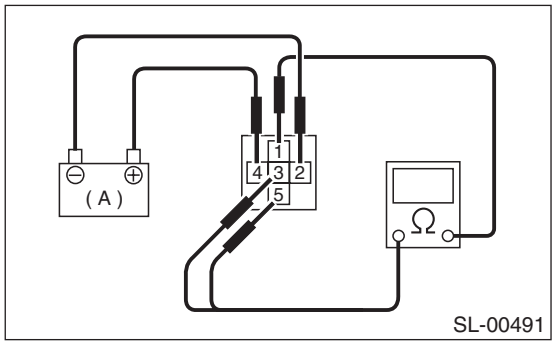
B: INSTALLATION

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. 4 to battery positive terminal and terminal No. 2 to battery ground terminal.

Current	Terminal No.	Standard
Flow	1 — 3	More than 1 MΩ
	1 — 5	Less than 1 Ω
No flow	1 — 3	Less than 1 Ω
	1 — 5	More than 1 MΩ



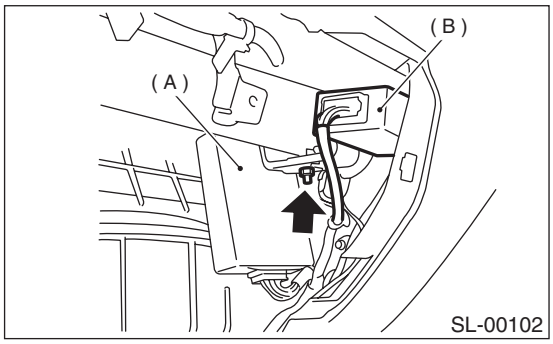
(A) Battery

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

22.Keyless Entry Control Module

A: REMOVAL

1) Disconnect ground cable from battery.
2) Remove glove box. <Ref. to EI-34, REMOVAL, Glove Box.>
3) Remove nut, then remove keyless entry control module (A) and the other electrical control module (B) while disconnecting connector.



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

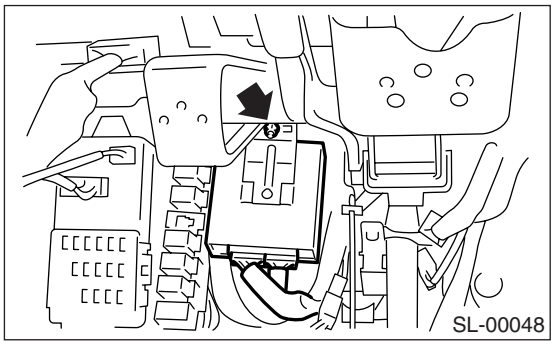
B: INSTALLATION

Install in the reverse order of removal.

23.Integrated Module

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the instrument panel lower cover. <Ref. to EI-37, 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.

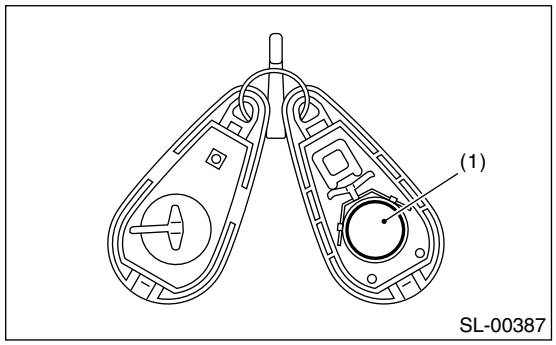
24.Keyless Transmitter

A: REMOVAL

1. TRANSMITTER BATTERY

Remove the battery (1) 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

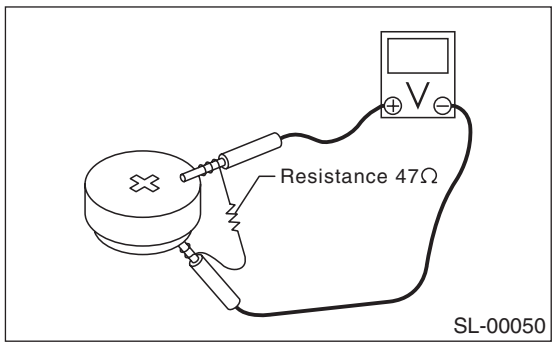
Install in the reverse order of removal.

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.



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

If NG, replace the battery. (Use CR2025 or equivalent.)

D: REPLACEMENT

1. TRANSMITTER REGISTRATION USING SUBARU SELECT MONITOR

NOTE:
• A maximum of 4 transmitters can be registered with a vehicle.
• When the transmitter is replaced or added, it is necessary to register a new transmitter.

1) Connect the SUBARU Select Monitor to the vehicle.
2) Turn the ignition switch ON.
3) Select {2. CHECK INDIVIDUAL SYSTEM} → {7. KEYLESS UNIT MODE} → {8. KEYLESS ID REGISTRATION} from the «MAIN MENU», and then press the [YES] key.
4) Enter the ID number with eight digits that is printed on the vinyl package that stored the transmitter or the transmitter internal circuit from the last digit. And then, press the [YES] key.

NOTE:
The number increases by pressing the [▲] key of SUBARU Select Monitor, decreases by pressing the [▼] key, moves to the left by pressing the [<] key, and moves to the right by pressing the [>] key.

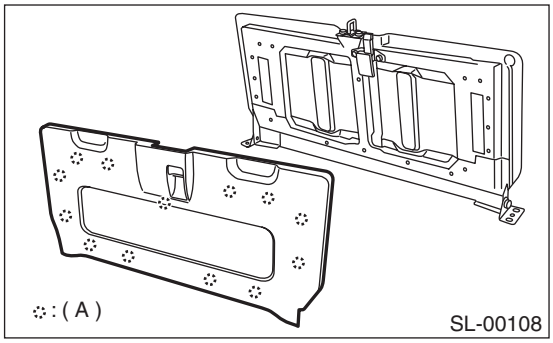
5) The entered ID number is displayed. Make sure that the number is the same as the number printed on the vinyl package.
6) If these numbers match, press the [YES] key. If NG, press the [NO] key and return to step 3) to enter the ID number again.
7) «ID REGISTERING...» is displayed and the registration starts.
8) If the «ID REGISTRATION IS COMPLETED» is displayed, the registration of the transmitter is completed.
9) End the registration: Select «END: NO», and then press the [NO] key to return to {8. KEYLESS ID REGISTRATION}. Add the successive transmitters as necessary: Select «NEXT: YES», and then press the [YES] key to return to 3).

NOTE:
• When the registration has failed, «CANNOT ID REGISTRATION. TRY AGAIN.» is displayed. At this time, the system returns to {8. KEYLESS ID REGISTRATION} by pressing the [YES] key. Try the procedures again from step 2).
• When the 4th transmitter registration has been completed, «END: NO» is displayed on the SUBARU Select Monitor screen. At this time, the system returns to {8. KEYLESS ID REGISTRATION} by pressing the [NO] key.

25.Switch Back Gate Handle

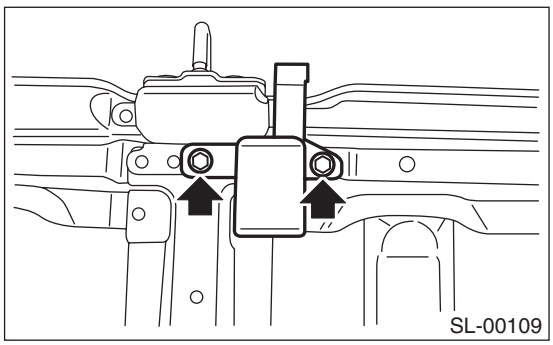
A: REMOVAL

1) Remove switch back gate. <Ref. to EB-18, 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.

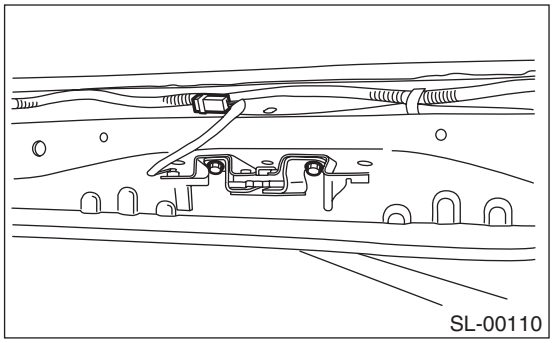
C: INSPECTION

Make sure that lever operates smoothly.

26.Switch Back Gate Latch

A: REMOVAL

1) Remove rear bulk head trim. <Ref. to EI-54, 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.

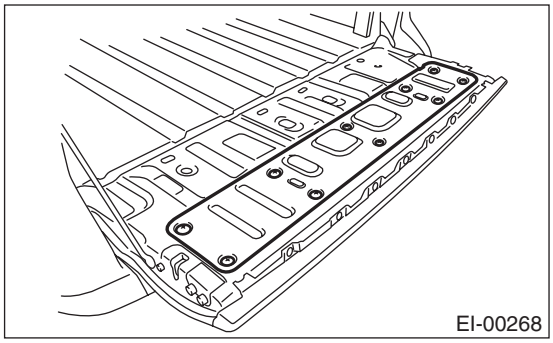
C: INSPECTION

Make sure that lever works smoothly.

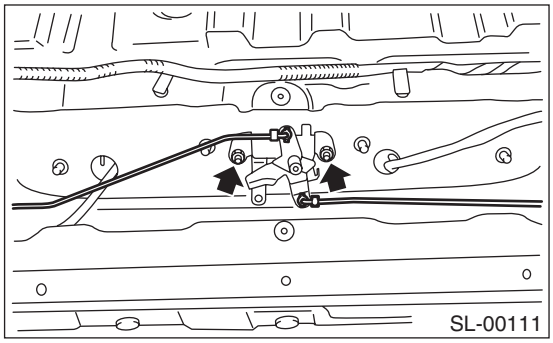
27.Tail Gate Outer Handle

A: REMOVAL

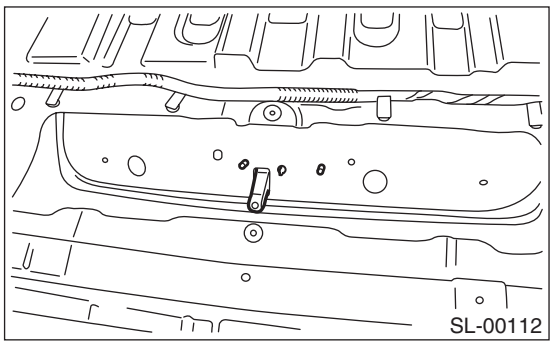
1) Remove tail gate tray. <Ref. to EI-56, REMOVAL, Tail Gate Tray.>
2) Remove tail gate cover.



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.

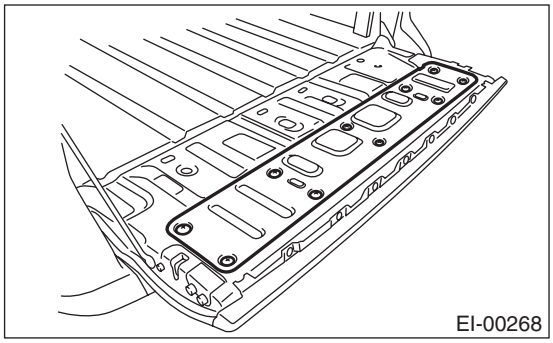
C: INSPECTION

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

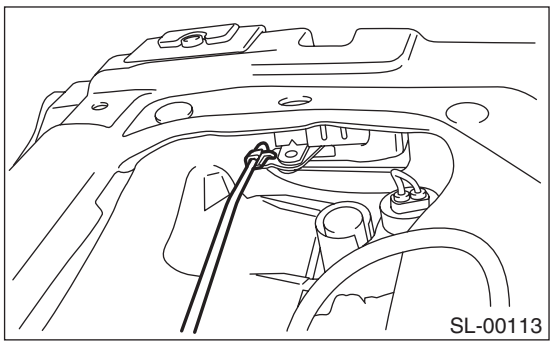
28.Tail Gate Latch Assembly

A: REMOVAL

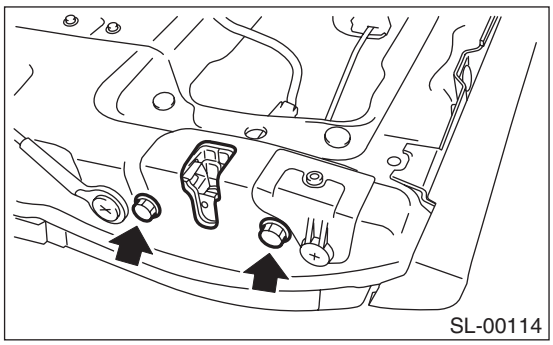
1) Remove tail gate tray. <Ref. to EI-56, REMOVAL, Tail Gate Tray.>
2) Remove tail gate cover.



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.

MEMO: