

BODY SECTION

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.

This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.

Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

**HVAC SYSTEM
(HEATER, VENTILATOR AND A/C)** AC

**HVAC SYSTEM (AUTO A/C)
(DIAGNOSTICS)** AC

AIRBAG SYSTEM AB

AIRBAG SYSTEM (DIAGNOSTICS) AB

SEAT BELT SYSTEM SB

LIGHTING SYSTEM LI

WIPER AND WASHER SYSTEMS WW

ENTERTAINMENT ET

COMMUNICATION SYSTEM COM

GLASS/WINDOWS/MIRRORS GW

BODY STRUCTURE BS

INSTRUMENTATION/DRIVER INFO IDI

SEATS SE

SECURITY AND LOCKS SL

IMMOBILIZER (DIAGNOSTICS) IM

**SUNROOF/T-TOP/CONVERTIBLE TOP
(SUNROOF)** SR

EXTERIOR/INTERIOR TRIM EI

BODY SECTION

EXTERIOR BODY PANELS

EB

CRUISE CONTROL SYSTEM

CC

**CRUISE CONTROL SYSTEM
(DIAGNOSTICS)**

CC

SECURITY AND LOCKS

SL

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GENERAL DESCRIPTION

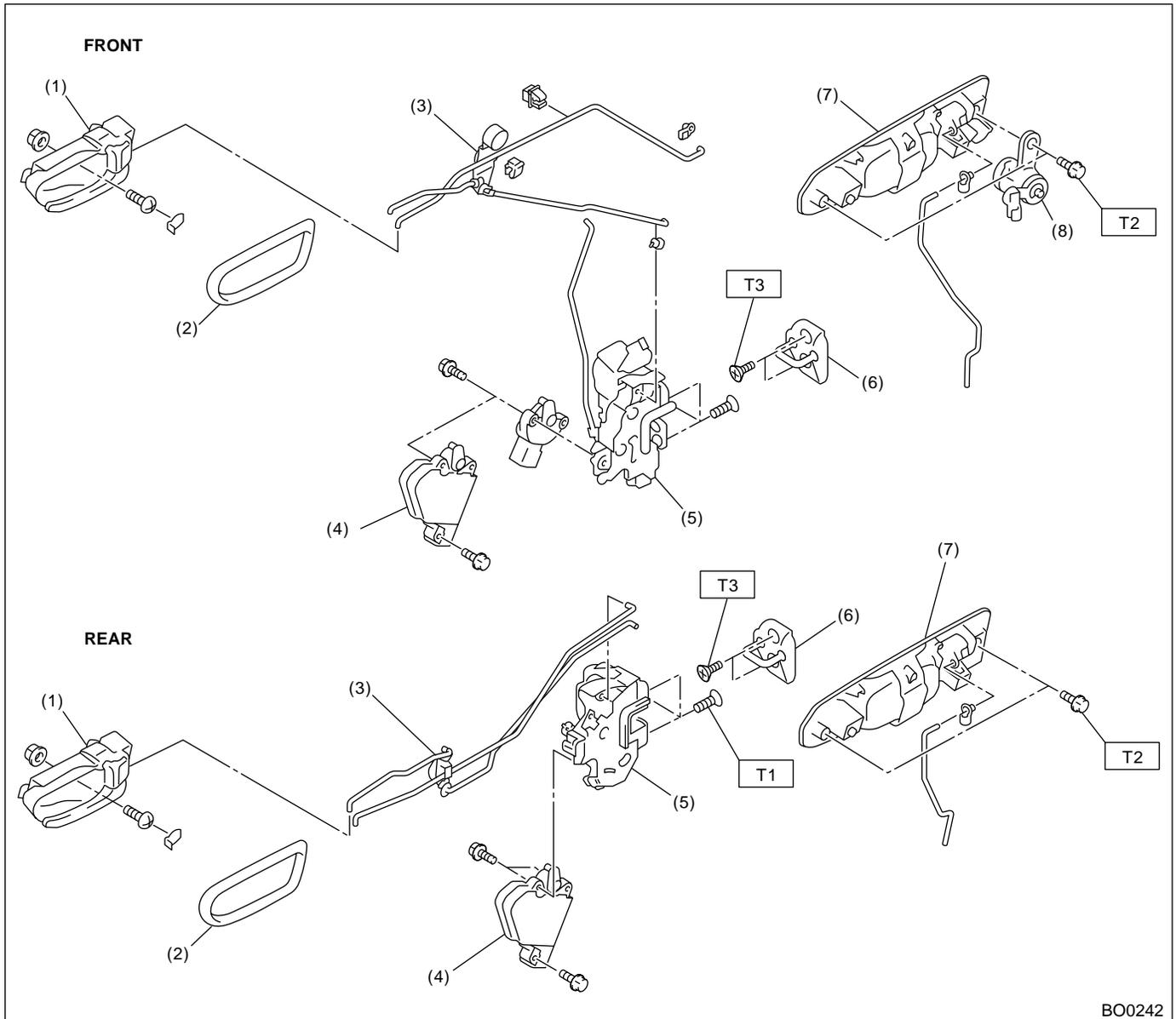
SECURITY AND LOCKS

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

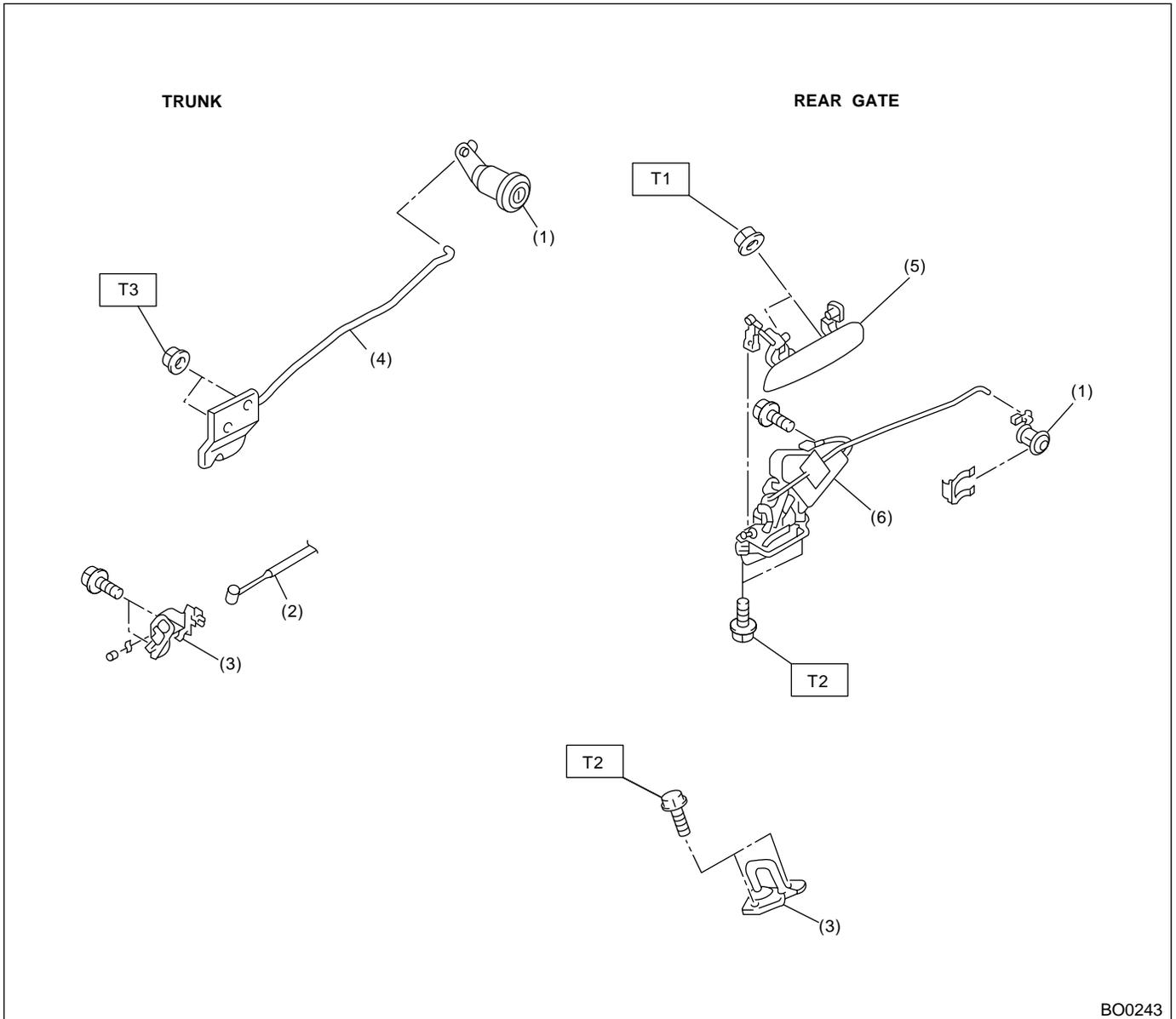
Tightening torque: N·m (kgf·m, ft·lb)

T1: 6.4 (0.65, 4.7)

T2: 7.4 (0.75, 5.4)

T3: 14 (1.4, 10.1)

2. TRUNK LID AND REAR GATE LOCK



BO0243

- | | |
|-------------------------|----------------------------|
| (1) Key cylinder | (5) Rear gate outer handle |
| (2) Cable | (6) Rear gate actuator |
| (3) Striker | |
| (4) Trunk lid lock ASSY | |

Tightening torque: N·m (kgf·m, ft·lb)

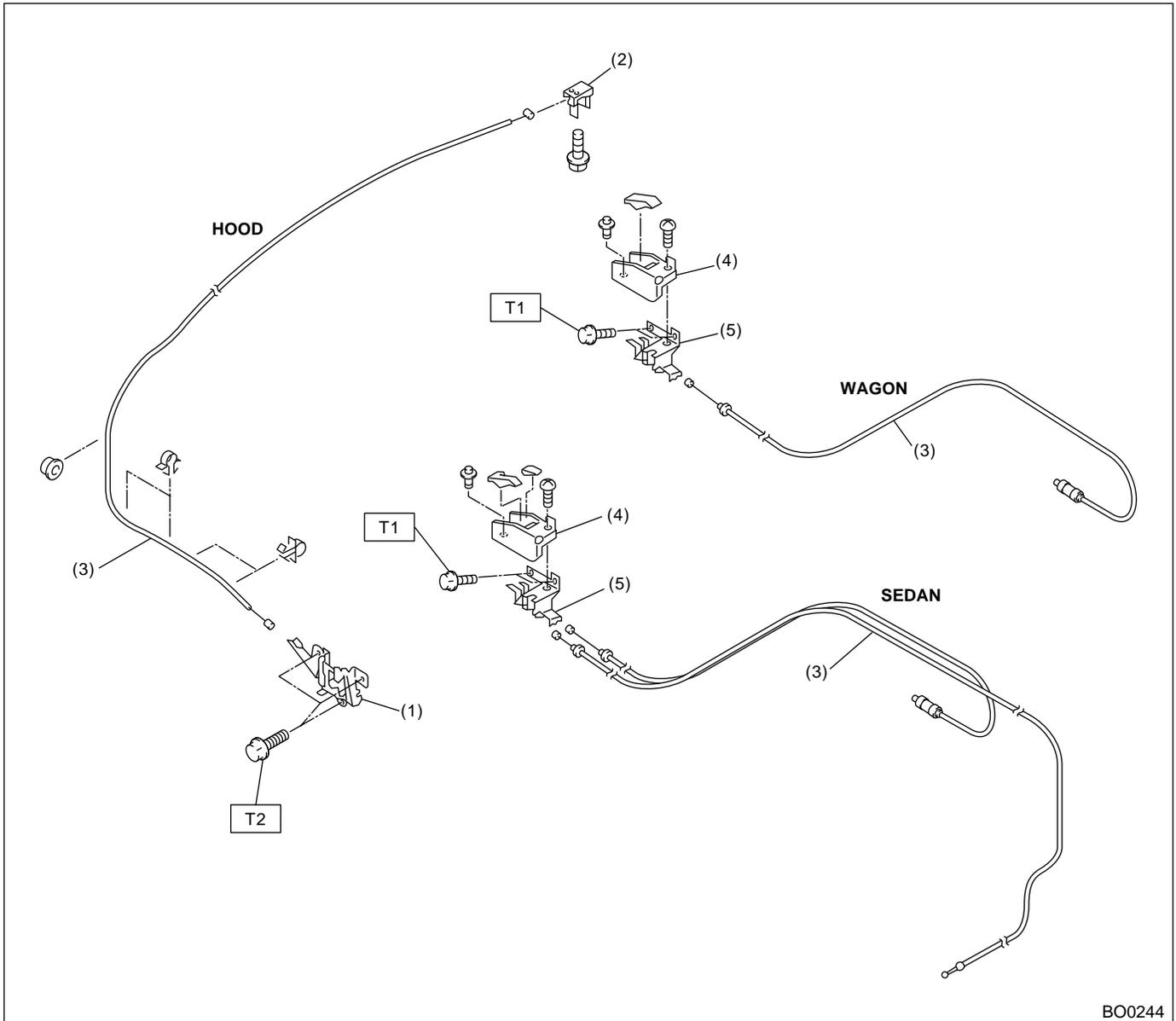
T1: 7.4 (0.75, 5.4)

T2: 25 (2.5, 18.1)

GENERAL DESCRIPTION

SECURITY AND LOCKS

3. HOOD LOCK AND REMOTE OPENERS



BO0244

- (1) Hood lock ASSY
- (2) Lever ASSY
- (3) Cable
- (4) Cover

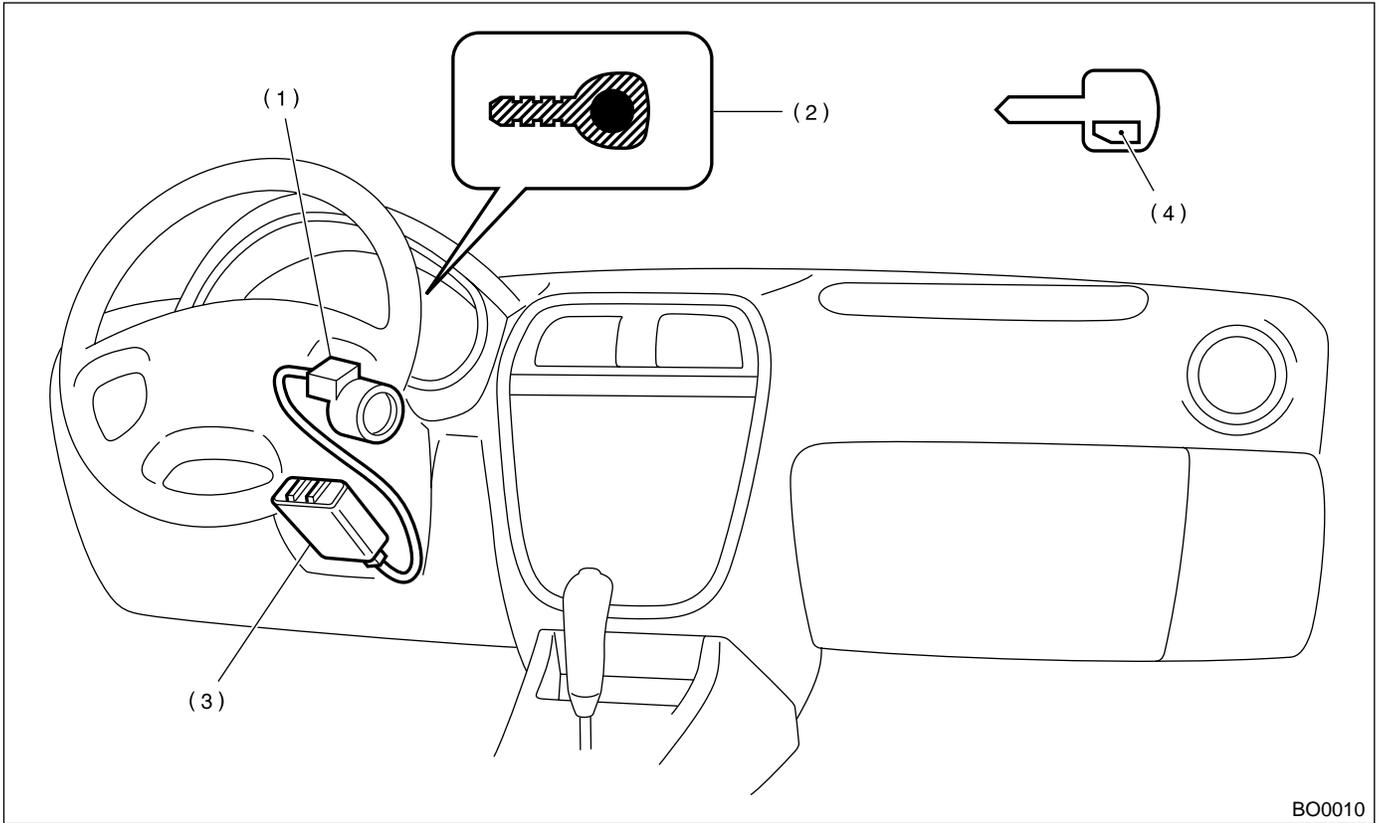
- (5) Pull handle ASSY

Tightening torque: N·m (kgf·m, ft·lb)

T1: 6.4 (0.65, 4.7)

T2: 32 (3.3, 23.9)

4. IMMOBILIZER SYSTEM



BO0010

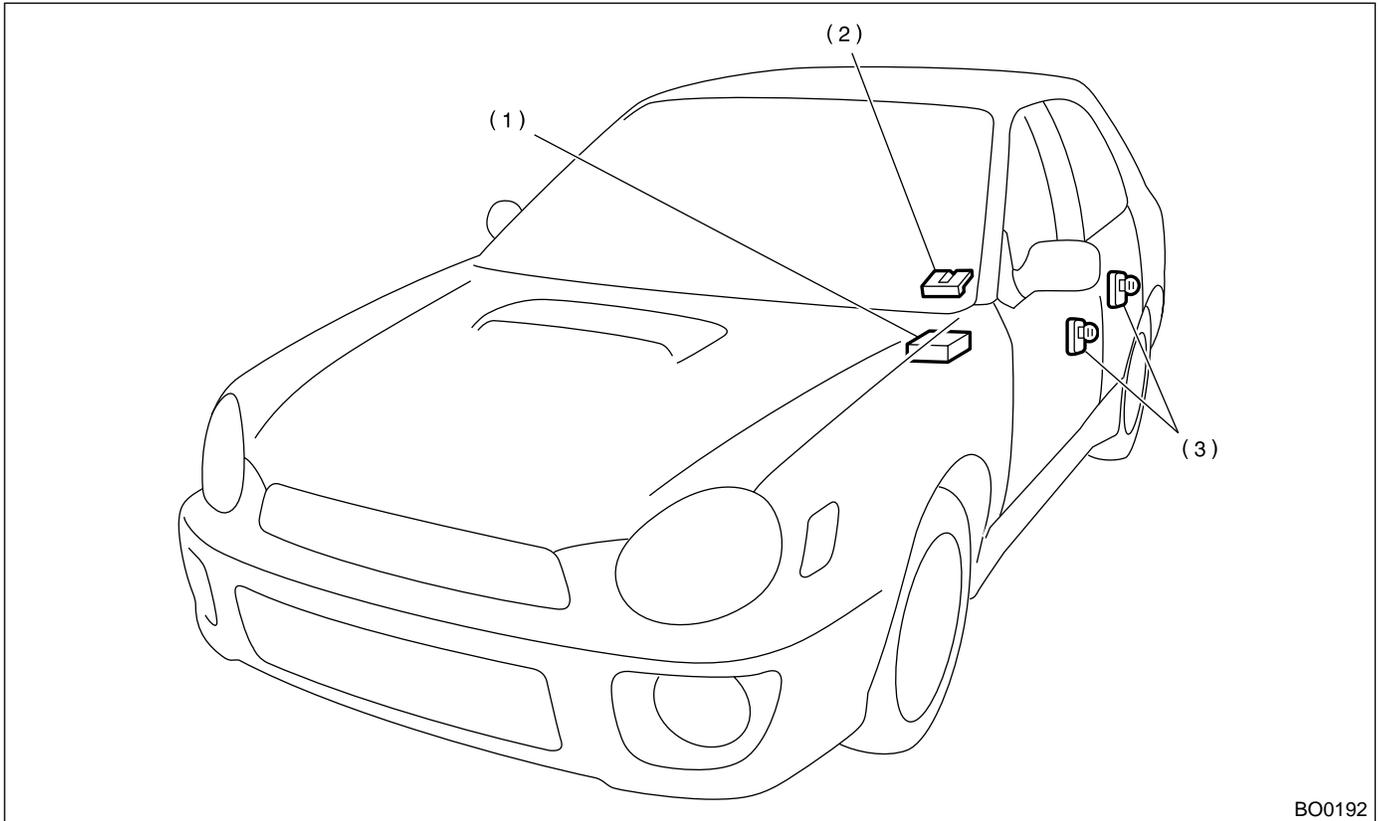
- (1) Antenna
- (2) Immobilizer indicator light (LED bulb)
- (3) Immobilizer control module (IMM ECM)
- (4) Transponder

NOTE:
IMM ECM location for RHD model is symmetrically opposite.

GENERAL DESCRIPTION

SECURITY AND LOCKS

5. KEYLESS ENTRY SYSTEM



BO0192

(1) Keyless entry control module

(2) Rear gate latch switch (Wagon)

(3) Door switch

C: CAUTION

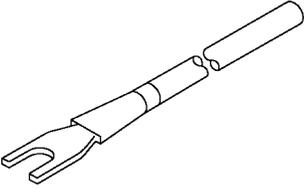
- Before disassembling or reassembling parts, always disconnect battery ground cable. When repairing radio, control module, etc. which are provided with memory functions, record memory contents before disconnecting battery ground cable. Otherwise, these contents are cancelled upon disconnection.
- Reassemble 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 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.

GENERAL DESCRIPTION

SECURITY AND LOCKS

D: PREPARATION TOOL

1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 B5M1120	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

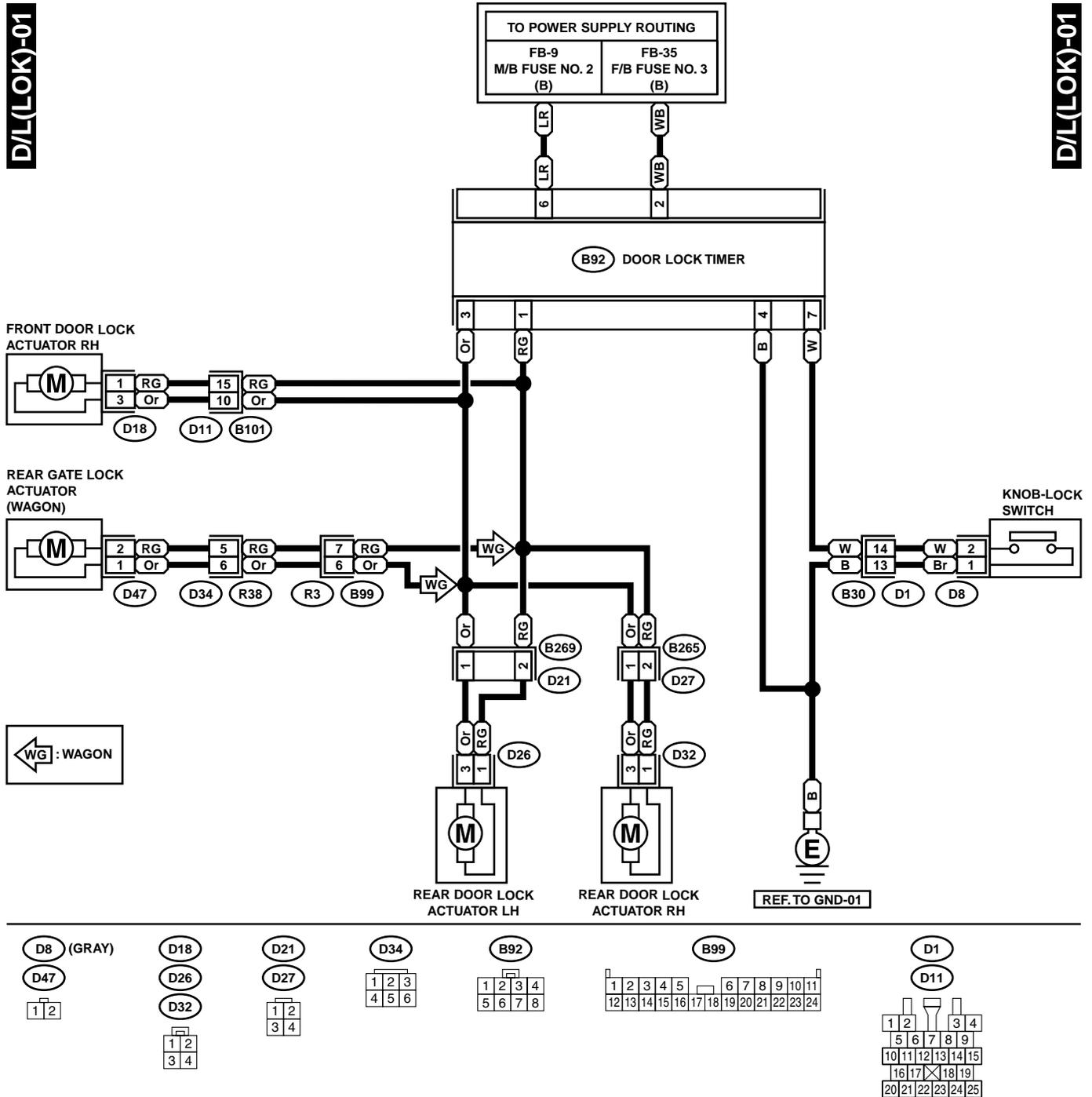
2. Door Lock Control System

A: SCHEMATIC

1. DOOR LOCK CONTROL LHD WITHOUT KEYLESS ENTRY MODEL

D/L(LOK)-01

D/L(LOK)-01



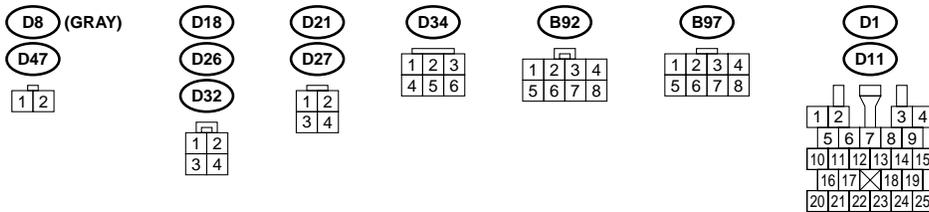
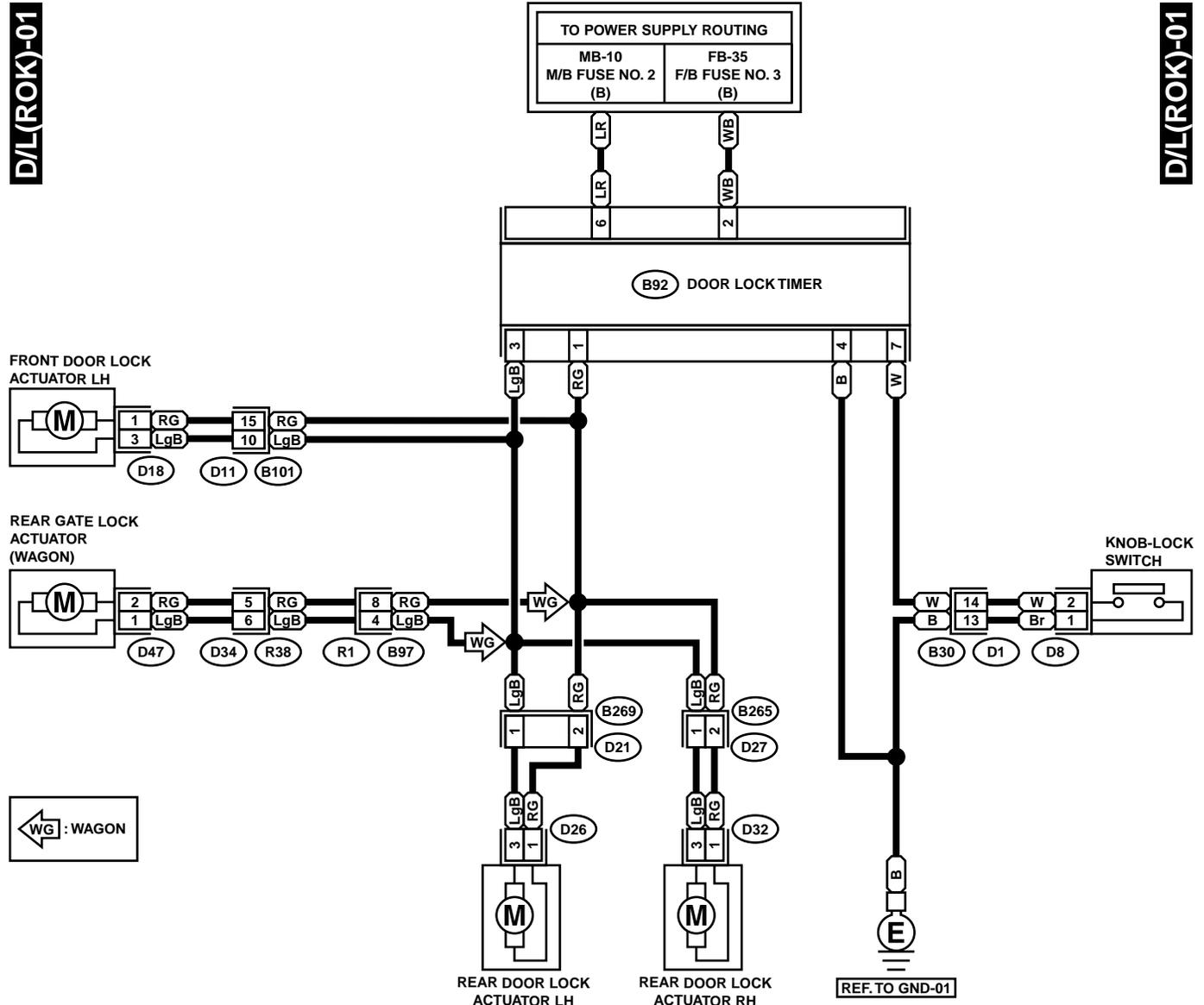
DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

2. DOOR LOCK CONTROL RHD WITHOUT KEYLESS ENTRY MODEL

D/L(ROK)-01

D/L(ROK)-01



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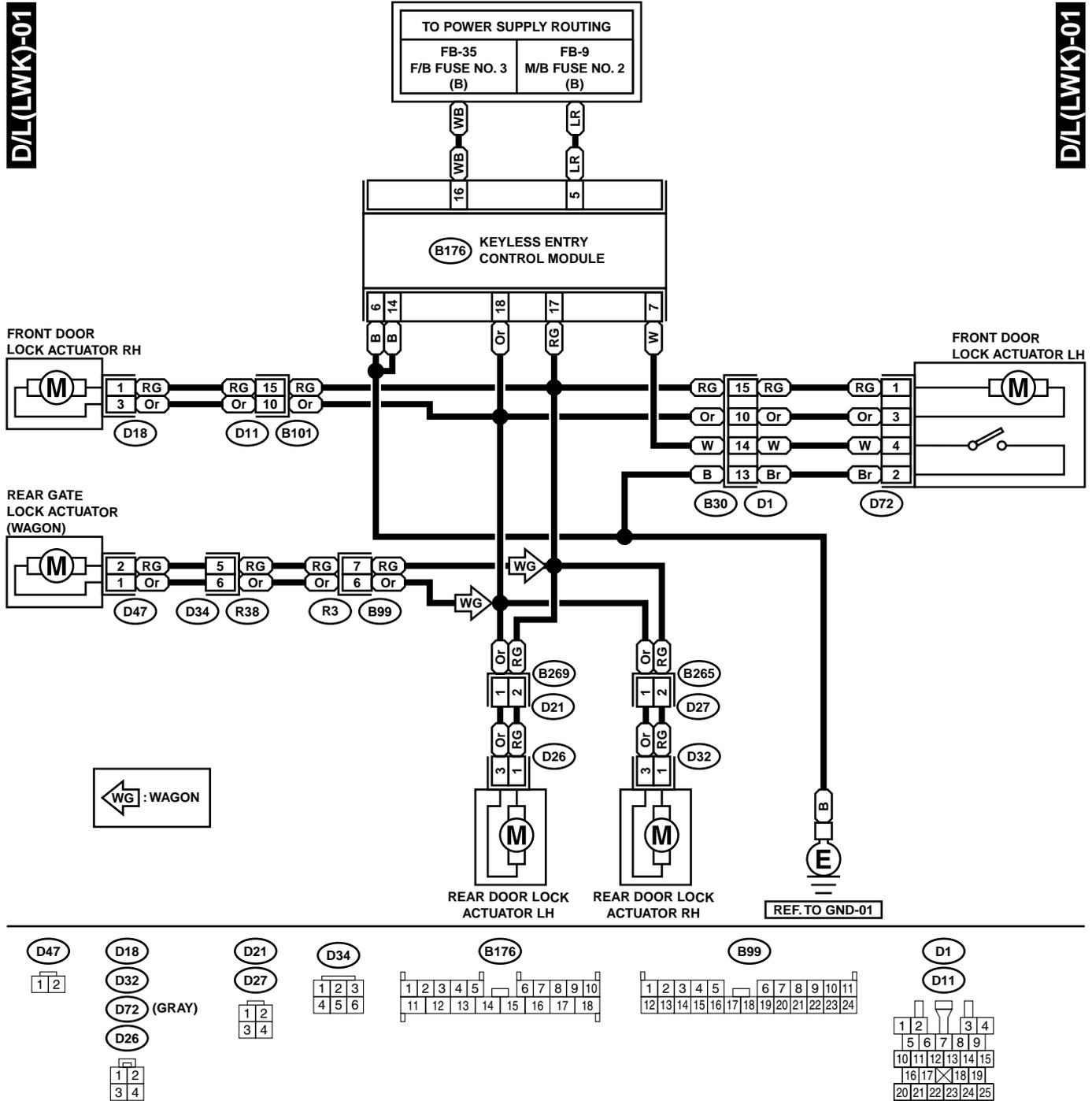
DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

3. DOOR LOCK CONTROL LHD WITH KEYLESS ENTRY MODEL

D/L(LWK)-01

D/L(LWK)-01



GL73-20

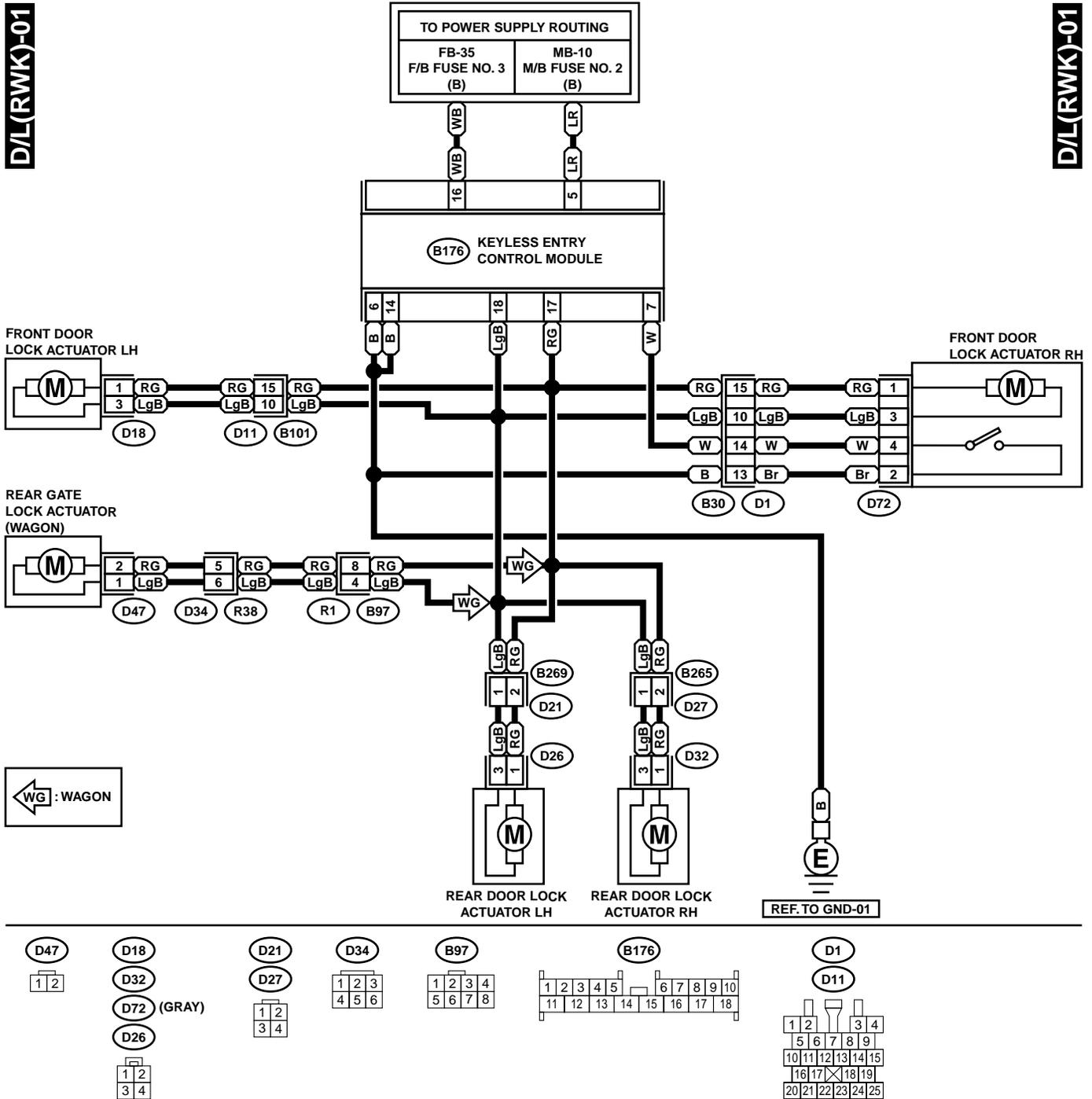
DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

4. DOOR LOCK CONTROL RHD WITH KEYLESS ENTRY MODEL

D/L(RWK)-01

D/L(RWK)-01



GR73-20

DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

B: INSPECTION

1. SYMPTOM CHART

Symptom	Repair order	Reference
The door lock control system does not operate.	1. Check the fuse.	<Ref. to SL-12, CHECK FUSE, INSPECTION, Door Lock Control System.>
	2. Check the power supply and ground circuit for the door lock timer (without keyless entry) or keyless entry control module (with keyless entry).	<Ref. to SL-12, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the door lock switch and the circuit.	<Ref. to SL-13, CHECK DOOR LOCK SWITCH AND CIRCUIT, INSPECTION, Door Lock Control System.>
	4. Check the door lock actuator and the circuit.	<Ref. to SL-14, CHECK DOOR LOCK ACTUATOR AND CIRCUIT, INSPECTION, Door Lock Control System.>
The door lock switch (knob) does not operate.	Check the door lock switch and the circuit.	<Ref. to SL-13, 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-14, 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 fuse No. 2 (in the main fuse box) and No. 3 (in the fuse and relay box).	Is the fuse blown (15A)?	Replace the fuse with a new one.	Check power supply and ground circuit. <Ref. to SL-12, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Step	Check	Yes	No
1 CHECK POWER SUPPLY. 1) Disconnect the door lock timer or keyless entry control module harness connector. 2) Measure the voltage between the harness connector terminal and chassis ground. Connector & terminal Without keyless entry: (B92) No. 2 (+) — Chassis ground (-): (B92) No. 6 (+) — Chassis ground (-): With keyless entry: (B176) No. 5 (+) — Chassis ground (-): (B176) No. 16 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 2.	Check the harness for open circuits or shorts between the door lock timer or keyless entry control module and the fuse.

DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

Step	Check	Yes	No
2 CHECK GROUND CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground. Connector & terminal Without keyless entry: <i>(B92) No. 4 (+) — Chassis ground (-):</i> With keyless entry: <i>(B176) No. 6 (+) — Chassis ground (-):</i> <i>(B176) No. 14 (+) — Chassis ground (-):</i>	Is the resistance less than 10 Ω ?	Power supply and ground circuit is OK.	Repair harness.

4. CHECK DOOR LOCK SWITCH AND CIRCUIT

Step	Check	Yes	No
1 CHECK DOOR LOCK CONTROL SYSTEM TYPE.	Is the vehicle equipped with keyless entry system?	Go to step 6.	Go to step 2.
2 CHECK DOOR LOCK SWITCH CIRCUIT. 1)Disconnect the door lock timer harness connector. 2)Measure the resistance between the harness connector terminal and chassis ground when moving the driver's door lock knob to UNLOCK. Connector & terminal <i>(B92) No. 7 (+) — Chassis ground (-):</i>	Is the resistance less than 10 Ω ?	Go to step 3.	Go to step 4.
3 CHECK DOOR LOCK SWITCH CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground when the driver's door lock knob is moved to LOCK. Connector & terminal <i>(B92) No. 7 (+) — Chassis ground (-):</i>	Is the resistance less than 10 Ω ?	Go to step 4.	The door lock switch is OK.
4 CHECK DOOR LOCK SWITCH. 1)Disconnect the driver's door lock switch harness connector. 2)Check the continuity between the door lock switch terminals when moving the door lock knob to UNLOCK. Terminal No. 1 — No. 2:	Does continuity exist?	Go to step 5.	Replace the door lock switch.
5 CHECK DOOR LOCK SWITCH. Check the continuity between the door lock switch terminals when moving the door lock knob to LOCK. Terminal No. 1 — No. 2:	Does continuity exist?	Replace the door lock switch.	Check the harness for open circuits or shorts between the door lock timer and the door lock switch.
6 CHECK DOOR LOCK SWITCH CIRCUIT. 1)Disconnect the keyless entry control module harness connector. 2)Measure the resistance between the harness connector terminal and chassis ground when moving the driver's door lock knob to UNLOCK. Connector & terminal <i>(B176) No. 7 (+) — Chassis ground (-):</i>	Is the resistance less than 10 Ω ?	Go to step 7.	Go to step 8.

DOOR LOCK CONTROL SYSTEM

SECURITY AND LOCKS

Step	Check	Yes	No
7 CHECK DOOR LOCK SWITCH CIRCUIT. Measure the resistance between the harness connector terminal and chassis ground when the driver's door lock knob is moved to LOCK. Connector & terminal (B176) No. 7 (+) — Chassis ground (-):	Is the resistance less than 10 Ω ?	Go to step 8 .	The door lock switch is OK.
8 CHECK DOOR LOCK SWITCH. 1)Disconnect the driver's door lock switch (actuator) harness connector. 2)Check the continuity between the door lock switch terminals when moving the door lock knob to UNLOCK. Terminal No. 2 — No. 4:	Does continuity exist?	Go to step 9 .	Replace the door lock switch (actuator).
9 CHECK DOOR LOCK SWITCH. Check the continuity between the door lock switch terminals when moving the door lock knob to LOCK. Terminal No. 2 — No. 4:	Does continuity exist?	Replace the door lock switch (actuator).	Check the harness for open circuits or shorts between the keyless entry control module and the door lock switch.

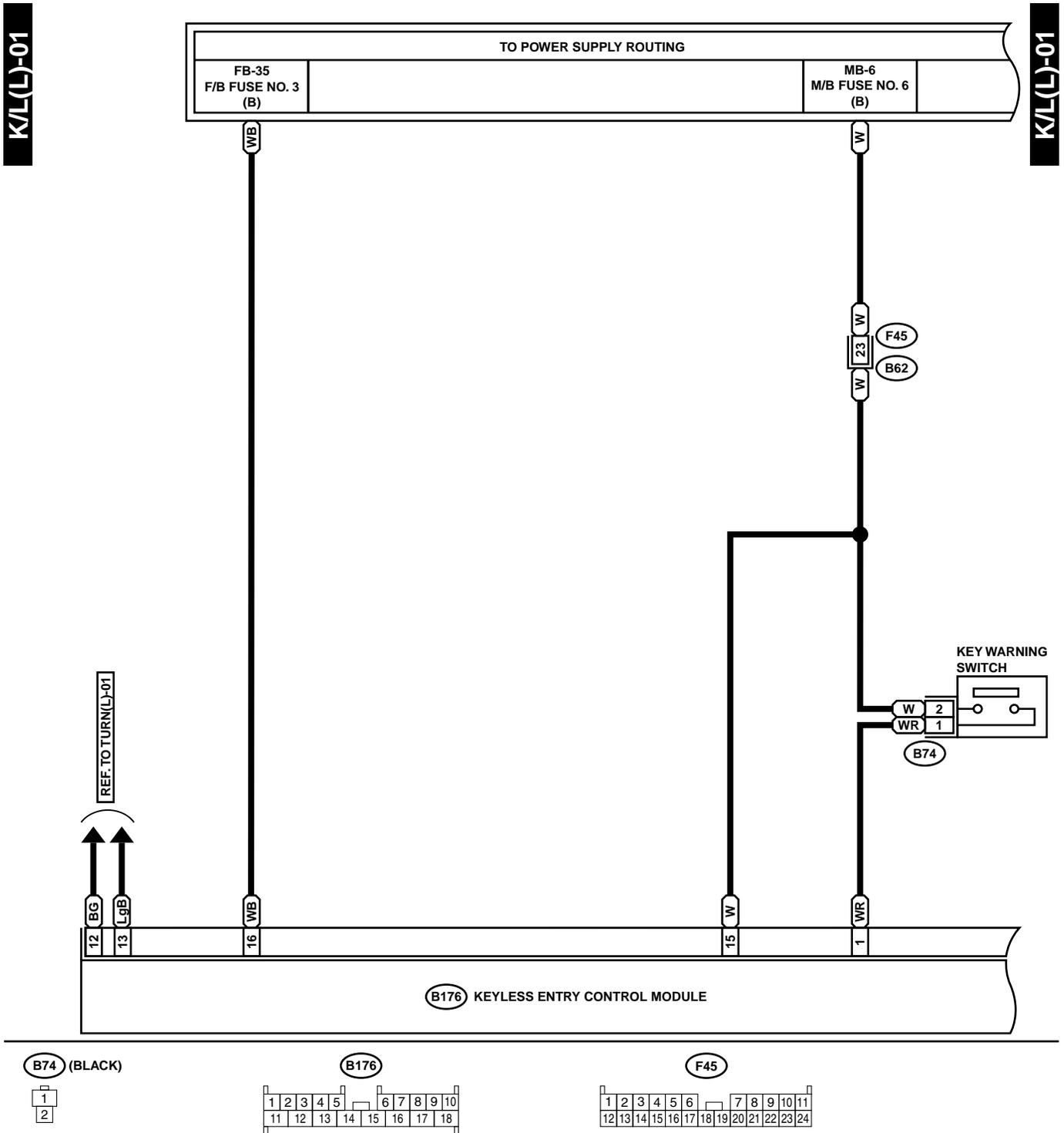
5. CHECK DOOR LOCK ACTUATOR AND CIRCUIT

Step	Check	Yes	No
1 CHECK OUTPUT SIGNAL. Measure the voltage between the harness connector terminal and chassis ground when moving the door lock knob to LOCK. Connector & terminal Without keyless entry: (B92) No. 3 — Chassis ground: With keyless entry: (B176) No. 18 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 2 .	Replace the door lock timer or keyless entry control module.
2 CHECK OUTPUT SIGNAL. Measure the voltage between the harness connector terminal and chassis ground when moving the door lock knob to UNLOCK. Connector & terminal Without keyless entry: (B92) No. 1 — Chassis ground: With keyless entry: (B176) No. 17 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 3 .	Replace the door lock timer or keyless entry control module.
3 CHECK DOOR LOCK ACTUATOR. Check the door lock actuator. Front door lock actuator: <Ref. to SL-31, Front Door Lock Actuator.> Rear door lock actuator: <Ref. to SL-35, Rear Door Lock Actuator.> Rear gate latch lock actuator: <Ref. to SL-38, Rear Gate Latch Lock Actuator.>	Is the door lock actuator OK?	Check the harness for open circuits or shorts between the door lock timer or keyless entry control module and the door lock actuator.	Replace the door lock actuator.

3. Keyless Entry System

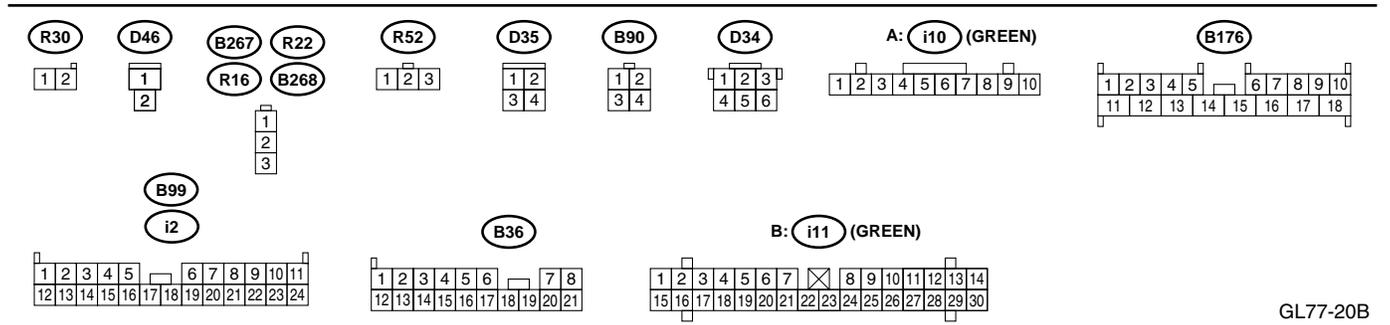
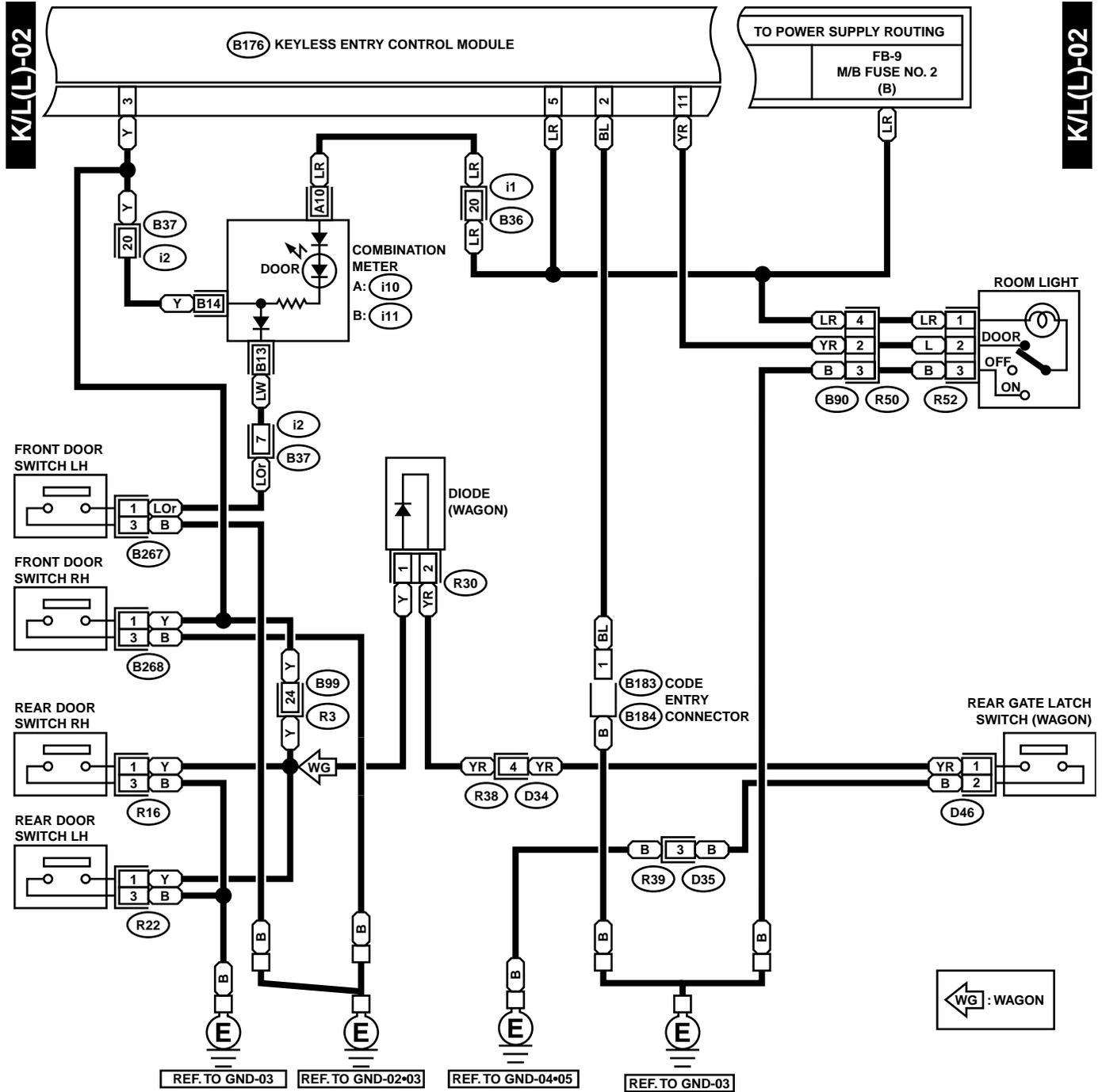
A: SCHEMATIC

1. KEYLESS ENTRY LHD MODEL



KEYLESS ENTRY SYSTEM

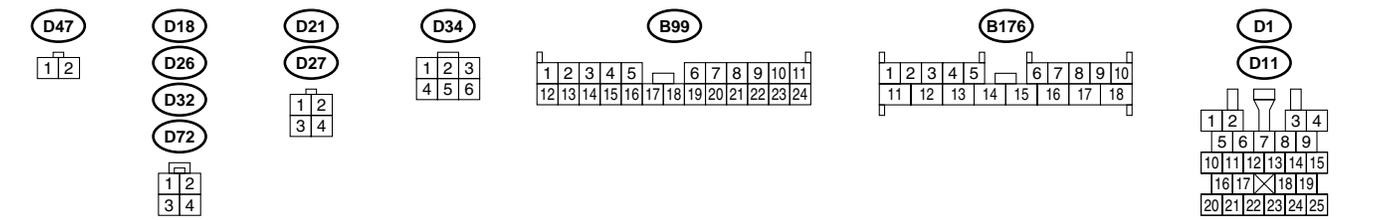
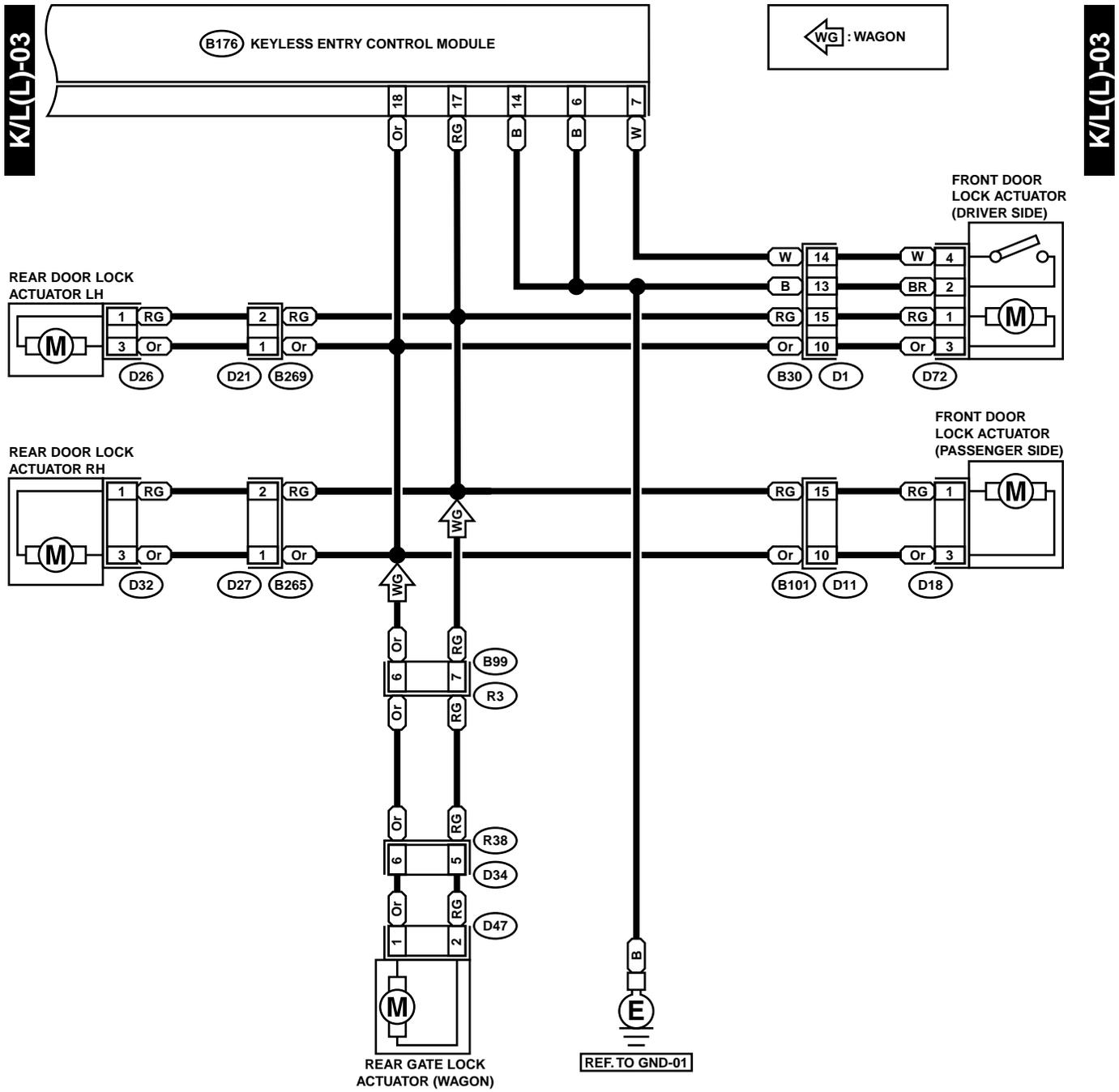
SECURITY AND LOCKS



GL77-20B

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

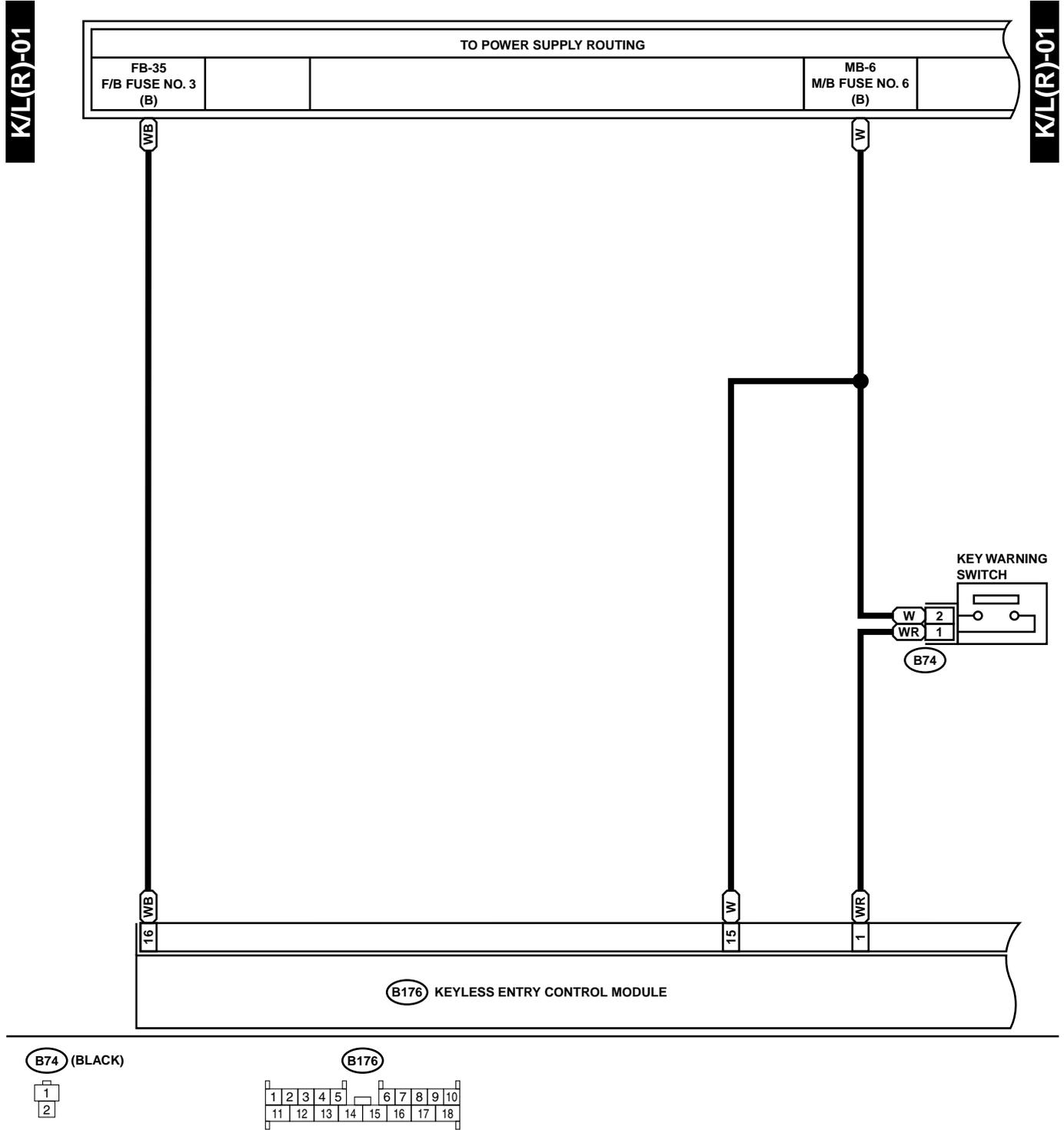


GL77-20C

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

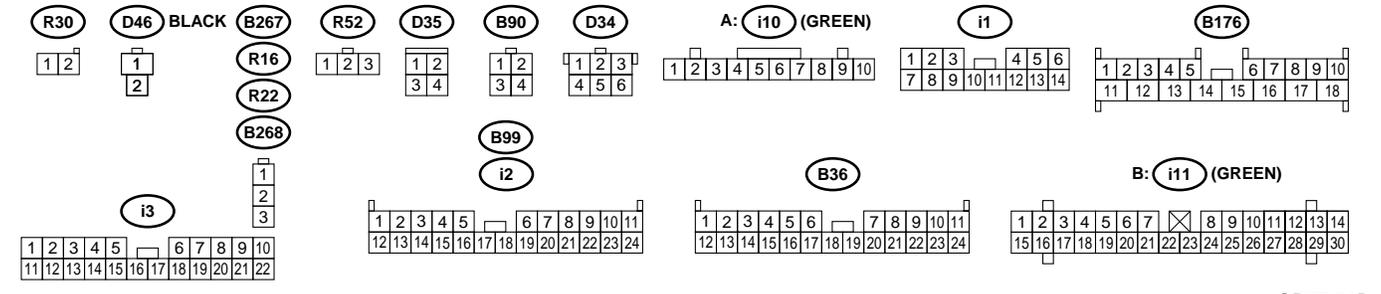
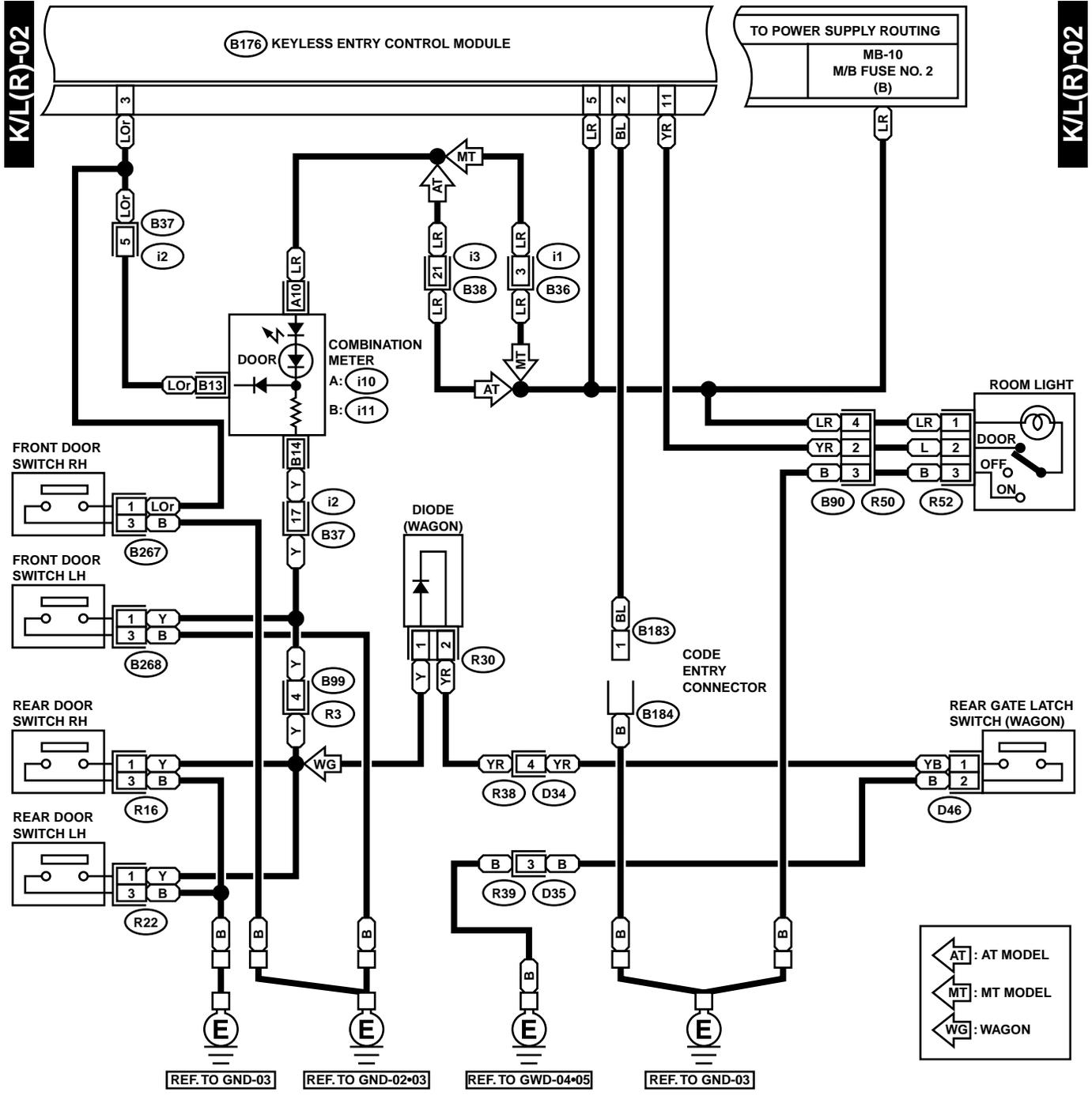
2. KEYLESS ENTRY RHD MODEL



GR77-20A

KEYLESS ENTRY SYSTEM

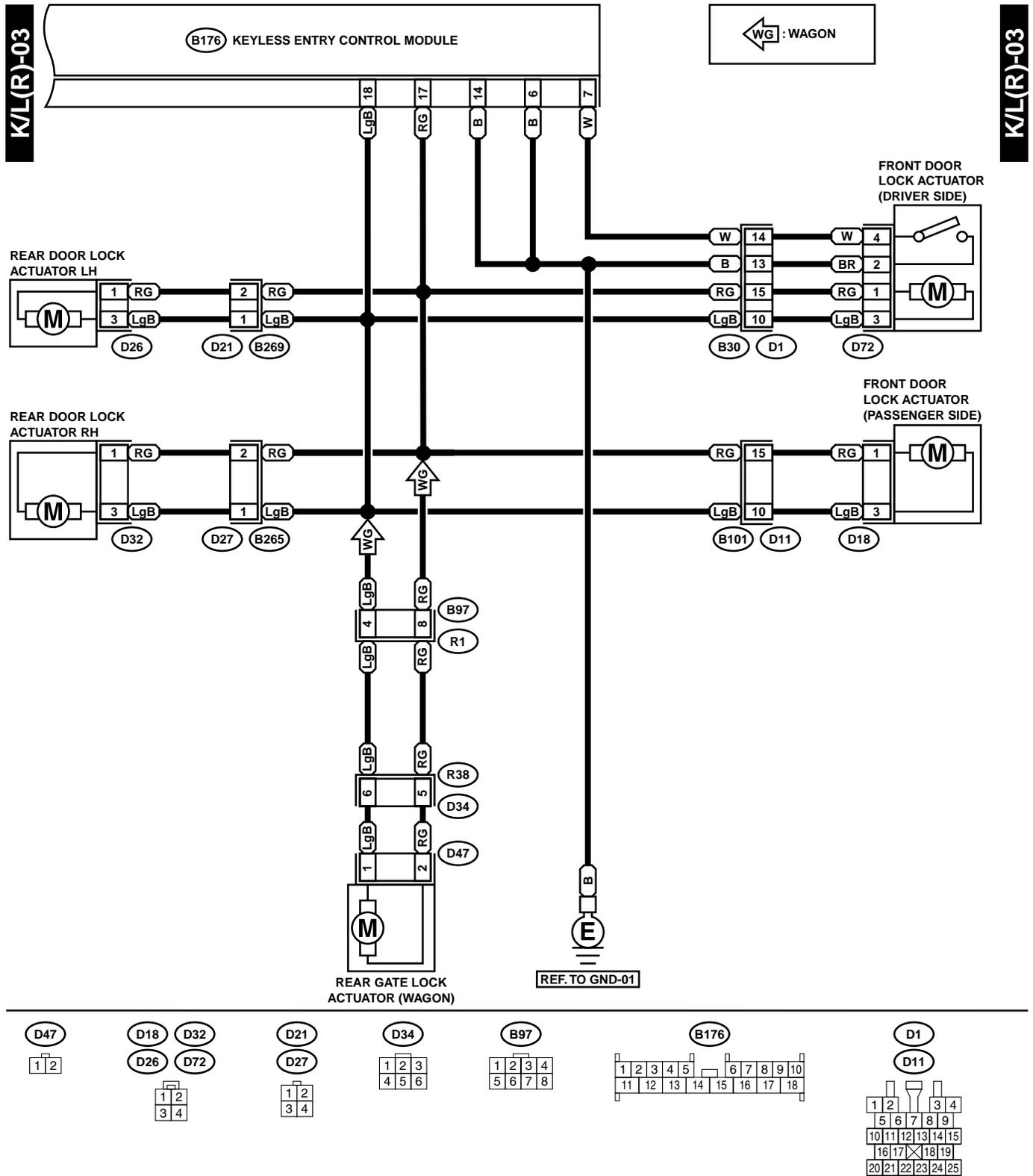
SECURITY AND LOCKS



GR77-20B

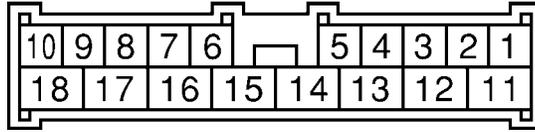
KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS



GR77-20C

B: ELECTRICAL SPECIFICATION



B5M1141

Content	Terminal No.	Measuring condition
Key warning switch	1 (INPUT)	Battery voltage is present when inserting the key into the ignition switch.
Registration connector	2 (INPUT)	0 V is present when connecting the registration connector.
Door switch	3 (INPUT)	0 V is present when any door is open.
Power supply	5	Battery voltage is constantly present.
Ground	6	0 V is constantly present.
Door lock switch	7 (INPUT)	0 V is present when driver's door is unlocked.
Empty	8	—
Empty	9	—
Empty	10	—
Room light	11 (OUTPUT)	<ul style="list-style-type: none"> • 0 V is present when pressing the transmitter OPEN button. • 0 V is present when any door is open.
Turn signal light (Right)	12 (OUTPUT)	Battery voltage is present when pressing the transmitter OPEN or LOCK button.
Turn signal light (Left)	13 (OUTPUT)	Battery voltage is present when pressing the transmitter OPEN or LOCK button.
Ground	14	0 V is constantly present.
Power supply (Hazard light)	15	Battery voltage is constantly present.
Power supply	16	Battery voltage is constantly present.
Door and rear gate lock actuator (Unlock)	17 (OUTPUT)	Battery voltage is present when pressing the transmitter OPEN button.
Door and rear gate lock actuator (Lock)	18 (OUTPUT)	Battery voltage is present when pressing the transmitter LOCK button.

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

C: INSPECTION

1. SYMPTOM CHART

Symptom	Repair order	Reference
None of the functions of the keyless entry system operate.	1. Check the transmitter battery.	<Ref. to SL-23, CHECK TRANSMITTER BATTERY, INSPECTION, Keyless Entry System.>
	2. Check the fuse.	<Ref. to SL-23, CHECK FUSE, INSPECTION, Keyless Entry System.>
	3. Check the keyless entry control module power supply and ground circuit.	<Ref. to SL-24, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Keyless Entry System.>
	4. Replace the keyless entry control module.	<Ref. to SL-46, Keyless Entry Control Module.>
The transmitter cannot be registered.	1. Check the transmitter battery.	<Ref. to SL-23, CHECK TRANSMITTER BATTERY, INSPECTION, Keyless Entry System.>
	2. Check the registration connector circuit.	<Ref. to SL-24, CHECK REGISTRATION CONNECTOR CIRCUIT, INSPECTION, Keyless Entry System.>
	3. Replace the keyless entry control module.	<Ref. to SL-46, 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-12, INSPECTION, INSPECTION, Door Lock Control System.>	1. Check the transmitter battery.	<Ref. to SL-23, CHECK TRANSMITTER BATTERY, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-26, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	3. Check the door switch.	<Ref. to SL-24, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	4. Replace the keyless entry control module.	<Ref. to SL-46, Keyless Entry Control Module.>
The hazard light does not operate.	1. Check the transmitter battery	<Ref. to SL-23, CHECK TRANSMITTER BATTERY, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-26, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	3. Check the door switch.	<Ref. to SL-24, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	4. Check the hazard light operation.	<Ref. to SL-26, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	5. Replace the keyless entry control module.	<Ref. to SL-46, Keyless Entry Control Module.>

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

Symptom	Repair order	Reference
The room light does not activate.	1. Check the transmitter battery.	<Ref. to SL-23, CHECK TRANSMITTER BATTERY, INSPECTION, Keyless Entry System.>
	2. Check the room light operation.	<Ref. to SL-27, CHECK ROOM LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	3. Check the key warning switch.	<Ref. to SL-26, CHECK KEY WARNING SWITCH, INSPECTION, Keyless Entry System.>
	4. Check the door switch.	<Ref. to SL-24, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	5. Replace the keyless entry control module.	<Ref. to SL-46, Keyless Entry Control Module.>

2. CHECK TRANSMITTER BATTERY

	Step	Check	Yes	No
1	CHECK TRANSMITTER BATTERY. 1)Remove the battery from the transmitter. <Ref. to SL-47, REMOVAL, Keyless Transmitter.> 2)Check the battery voltage. <Ref. to SL-47, INSPECTION, Keyless Transmitter.>	Is the battery voltage OK?	Further inspection is necessary, refer to "SYMPTOM CHART". <Ref. to SL-22, SYMPTOM CHART, INSPECTION, Keyless Entry System.>	Replace the transmitter battery.

3. CHECK FUSE

	Step	Check	Yes	No
1	CHECK FUSE. Remove and visually check fuse No. 2 (in the main fuse box), No. 3 (in the fuse and relay box) and SBF-6 (in the main fuse box)	Is the fuse blown? (15 A and 30 A)	Replace the fuse with a new one.	Check power supply and ground circuit. <Ref. to SL-24, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Keyless Entry System.>

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

4. 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. 5, No. 15, No. 16 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 2.	Check the harness for open circuits or 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. 6, No. 14 (+) — Chassis ground (-):	Is the resistance less than 10 Ω ?	The power supply and ground circuit are OK.	Repair the harness.

5. CHECK REGISTRATION CONNECTOR CIRCUIT

	Step	Check	Yes	No
1	REGISTRATION CONNECTOR INPUT VOLTAGE INSPECTION 1) Disconnect registration connector. 2) Measure voltage between keyless entry control module harness connector and chassis ground. Connector & terminal (B176) No. 2 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 2.	Repair harness, and (or) connector.
2	REGISTRATION CONNECTOR INPUT VOLTAGE INSPECTION 1) Connect registration connector. 2) Measure voltage between keyless entry control module harness connector and chassis ground. Connector & terminal (B176) No. 2 (+) — Chassis ground (-):	Is the voltage 0 V?	Registration connector circuit is OK.	Repair harness, and (or) connector.

6. 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 (B176) No. 3 (+) — Chassis ground (-):	Is the voltage 0 V when each door and rear gate 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 (B176) No. 3 (+) — chassis ground (-):	Is the voltage more than 10 V when each door and rear gate is closed?	The door switch is OK.	Go to step 3.

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

	Step	Check	Yes	No
3	CHECK DOOR SWITCH. 1)Disconnect the door switch harness connector. 2)Check the continuity between the door switch terminals. <i>Terminal</i> <i>Front LH No. 1 — No. 3:</i> <i>Front RH No. 1 — No. 3:</i> <i>Rear LH No. 1 — No. 3:</i> <i>Rear RH No. 1 — No. 3:</i> <i>Rear gate No. 1 — No. 2:</i>	Does continuity exist when the door switch is pushed?	Replace the door switch.	Go to step 4.
4	CHECK DOOR SWITCH. Check continuity between the door switch terminals. <i>Terminal</i> <i>Front LH No. 1 — No. 3:</i> <i>Front RH No. 1 — No. 3:</i> <i>Rear LH No. 1 — No. 3:</i> <i>Rear RH No. 1 — No. 3:</i> <i>Rear gate No. 1 — No. 2:</i>	Does continuity exist when the 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.

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

7. CHECK KEY WARNING SWITCH

	Step	Check	Yes	No
1	CHECK FUSE. Remove and visually check fuse No. 6 (in the main fuse box).	Is the fuse blown? (15A)	Replace the fuse with a new one.	Go to step 2.
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. 1 (+) — chassis ground (-):	Is the voltage 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. 1 (+) — chassis ground (-):	Is the voltage 0 V?	The 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)Check the continuity between the key warning switch terminals. Terminal No. 1 — No. 2:	Does continuity exist?	Go to step 5.	Replace key warning switch.
5	CHECK KEY WARNING SWITCH. 1)Remove the key from the ignition switch. 2)Check the continuity between the key warning switch terminals. Terminal No. 1 — No. 2:	Does continuity exist?	Replace key warning switch.	Check the following: <ul style="list-style-type: none"> • Harness for open circuits or shorts between the key warning switch and fuse • Harness for open circuits and shorts between the keyless entry control module and key warning switch

8. CHECK HAZARD LIGHT OPERATION

	Step	Check	Yes	No
1	CHECK HAZARD LIGHT OPERATION. Make sure the hazard light blinks when hazard switch is turned ON.	Does hazard light blink?	Go to step 2.	Check hazard light circuit.

KEYLESS ENTRY SYSTEM

SECURITY AND LOCKS

	Step	Check	Yes	No
2	CHECK OUTPUT SIGNAL. 1)Remove the key from ignition switch. 2)Close all doors and rear gate. 3)Measure voltage between keyless entry control module harness connector terminal and chassis ground when LOCK or OPEN button of transmitter is pressed. Connector & terminal (B176) No. 12, No. 13 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Check harness for open or short between keyless entry control module and turn signal lights.	Replace the keyless entry control module.

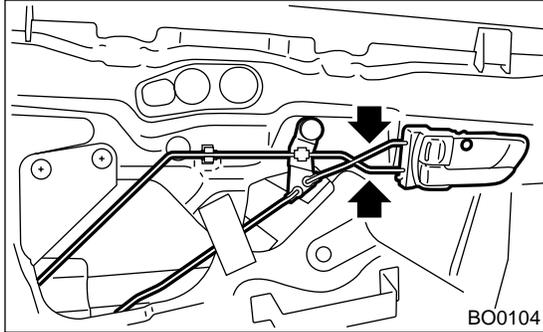
9. CHECK ROOM LIGHT OPERATION

	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 KEYLESS ENTRY CONTROL MODULE. 1)Disconnect the keyless entry control module harness connector and room light harness connector. 2)Measure the resistance between the keyless entry control module harness connector terminal and the room light harness connector terminal. Connector & terminal (B176) No. 11 — (R52) No. 2:	Is the resistance less than 10 Ω ?	The room light operation circuit is OK.	Check the harness for open circuits or shorts between the keyless entry control module and room light.

4. Front Inner Remote

A: REMOVAL

- 1) Remove the door trim. <Ref. to EI-20, REMOVAL, Front Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-13, REMOVAL, Front Sealing Cover.>
- 3) Remove screw and the two rod joints.
- 4) Remove the front inner remote.



B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

Make sure the lock works properly after installation.

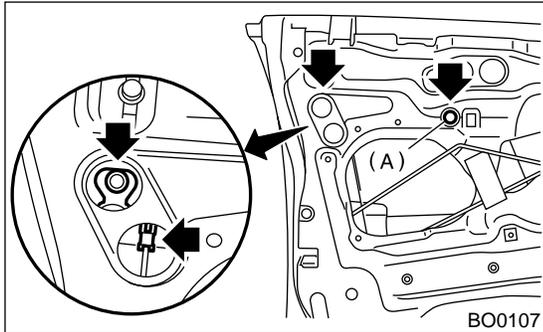
C: INSPECTION

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

5. Front Outer Handle

A: REMOVAL

- 1) Remove the door trim. <Ref. to EI-20, REMOVAL, Front Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-13, REMOVAL, Front Sealing Cover.>
- 3) Remove bolt (A).
- 4) Move front door glass downward. Remove bolt and rod clamp.
- 5) Remove the front 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.

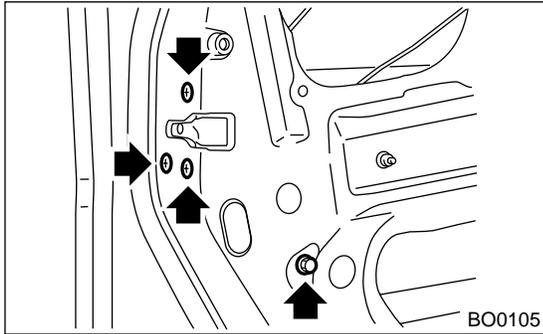
C: INSPECTION

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

6. Front Door Latch Assembly

A: REMOVAL

- 1) Remove the front door trim. <Ref. to EI-20, REMOVAL, Front Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-13, REMOVAL, Front Sealing Cover.>
- 3) Remove the front inner remote. <Ref. to SL-28, REMOVAL, Front Inner Remote.>
- 4) Remove the 3 screws and bolt.



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

B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

Make sure the lock works properly after installation.

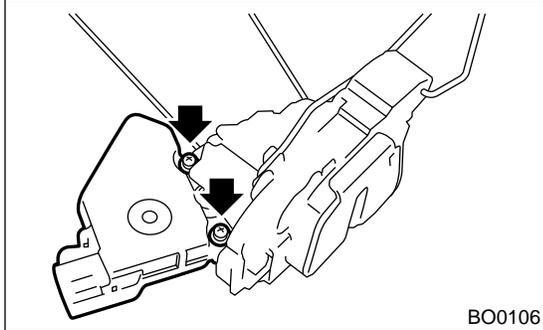
C: INSPECTION

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

7. Front Door Lock Actuator

A: REMOVAL

- 1) Remove the front door latch assembly. <Ref. to SL-28, REMOVAL, Front Inner Remote.>
- 2) Loosen 2 screws to remove the front door lock actuator.

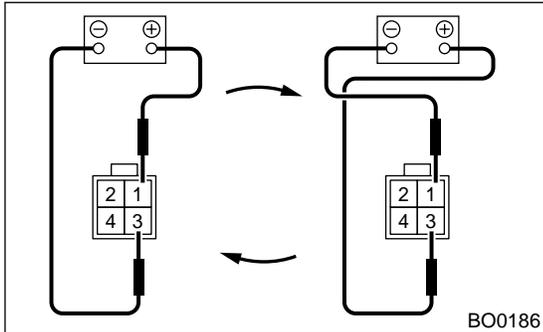


B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

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



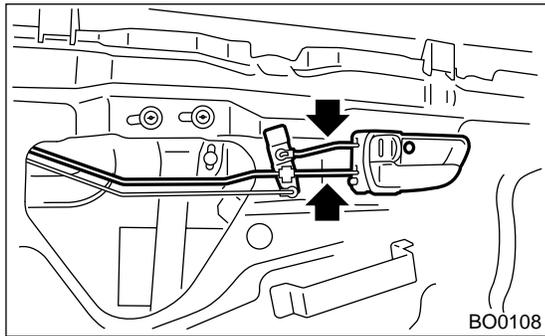
Battery connection	Actuator operation
No. 3 (+) — No. 1 (-)	Unlocked → Locked
No. 1 (+) — No. 3 (-)	Locked → Unlocked

If NG, replace the door lock actuator.

8. Rear Inner Remote

A: REMOVAL

- 1) Remove the rear door trim. <Ref. to EI-21, REMOVAL, Rear Door Trim.>
- 2) Remove the sealing cover. <Ref. to EB-16, REMOVAL, Rear Sealing Cover.>
- 3) Remove screw and the two rod joints.
- 4) Remove the inner remote.



B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

Make sure the lock works properly after installation.

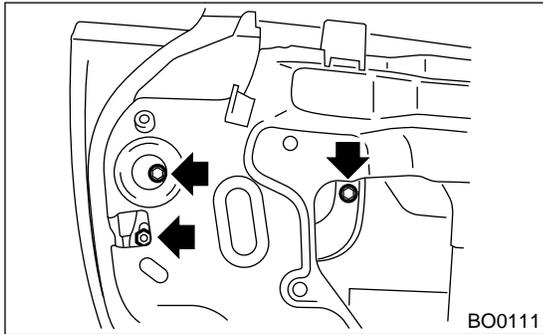
C: INSPECTION

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

9. Rear Outer Handle

A: REMOVAL

- 1) Remove the rear door trim. <Ref. to EI-21, 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-32, REMOVAL, Rear Inner Remote.>
- 4) Remove the rear door latch assembly. <Ref. to SL-34, REMOVAL, Rear Door Latch Assembly.>
- 5) Loosen 2 bolts and nut to remove 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.

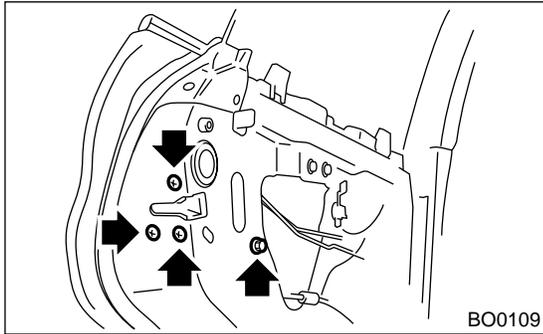
C: INSPECTION

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

10.Rear Door Latch Assembly

A: REMOVAL

- 1) Remove the rear door trim. <Ref. to EI-21, 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-32, REMOVAL, Rear Inner Remote.>
- 4) Remove the 3 screws and bolt.



- 5) Disconnect the connector, and then remove the rear door latch assembly.

B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

Make sure the lock works properly after installation.

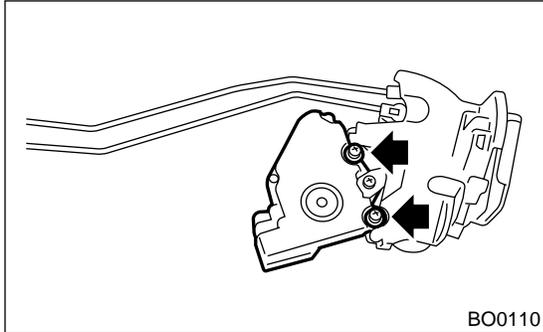
C: INSPECTION

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

11. Rear Door Lock Actuator

A: REMOVAL

- 1) Remove the rear door latch assembly. <Ref. to SL-34, REMOVAL, Rear Door Latch Assembly.>
- 2) Loosen 2 screws to remove rear door lock acuator.



B: INSTALLATION

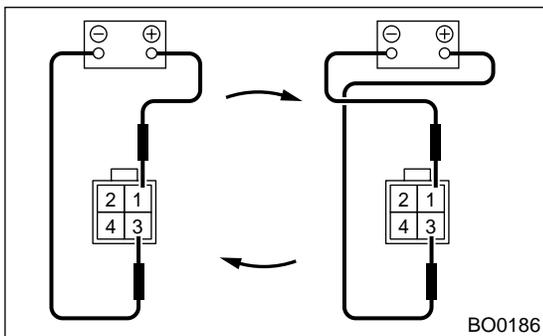
Install in the reverse order of removal.

CAUTION:

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.



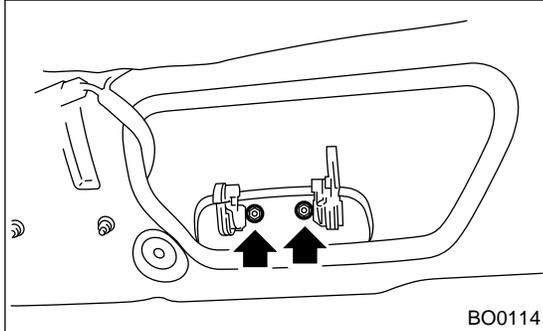
Battery connection	Actuator operation
No. 3 (+) — No. 1 (-)	Unlocked → Locked
No. 1 (+) — No. 3 (-)	Locked → Unlocked

If NG, replace the door lock actuator.

12.Rear Gate Outer Handle

A: REMOVAL

- 1) Remove the rear gate trim. <Ref. to EI-34, REMOVAL, Rear Gate Trim.>
- 2) Remove the rear gate latch assembly. <Ref. to SL-37, REMOVAL, Rear Gate Latch Assembly.>
- 3) Loosen 2 nuts to remove rear gate outer handle.



B: INSTALLATION

Install in the reverse order of removal.

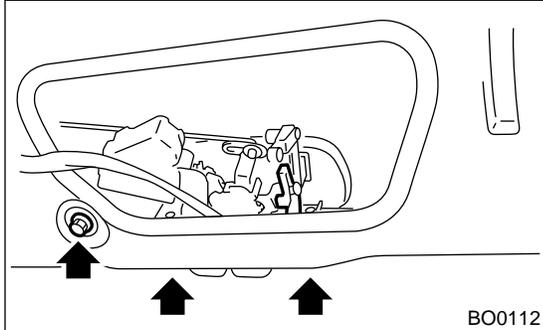
C: INSPECTION

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

13.Rear Gate Latch Assembly

A: REMOVAL

- 1) Remove the rear gate trim. <Ref. to EI-34, REMOVAL, Rear Gate Trim.>
- 2) Remove the rear gate key cylinder rod clamp.
- 3) Remove the 3 bolts.



- 4) Disconnect connectors, and then remove rear gate latch assembly.

B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

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.

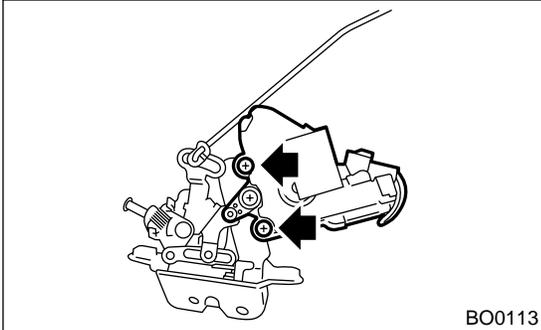
REAR GATE LATCH LOCK ACTUATOR

SECURITY AND LOCKS

14. Rear Gate Latch Lock Actuator

A: REMOVAL

- 1) Remove the rear gate latch assembly. <Ref. to SL-37, REMOVAL, Rear Gate Latch Assembly.>
- 2) Loosen 2 screws to remove rear gate lock actuator.

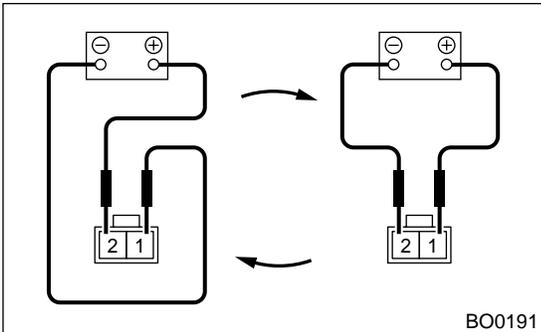


B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

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



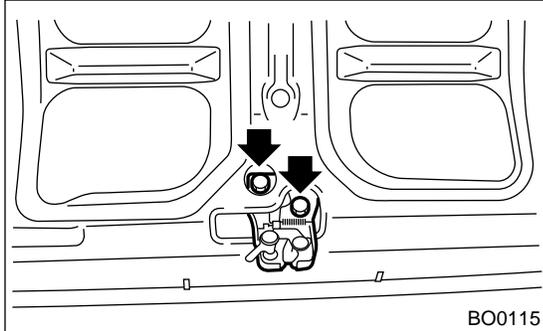
Battery connection	Actuator operation
No. 1 (+) — No. 2 (-)	Unlocked → Locked
No. 2 (+) — No. 1 (-)	Locked → Unlocked

If NG, replace the rear gate latch lock actuator.

15. Trunk Lid Lock Assembly

A: REMOVAL

- 1) Remove the trunk lid key cylinder rod clamp.
- 2) Loosen 2 bolts to remove trunk lid lock assembly.



B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

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

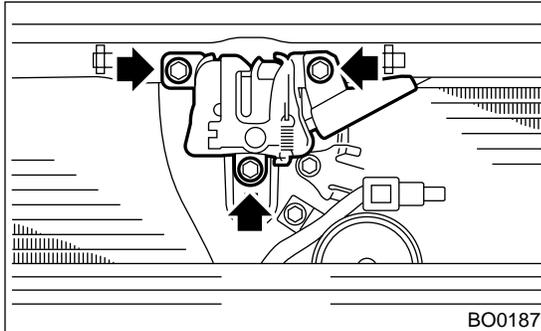
C: INSPECTION

- 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.

16. 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

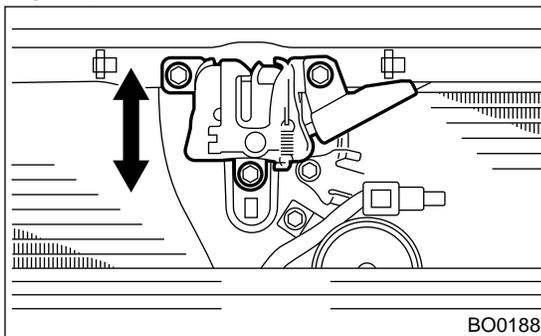
Install in the reverse order of removal.

CAUTION:

- 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

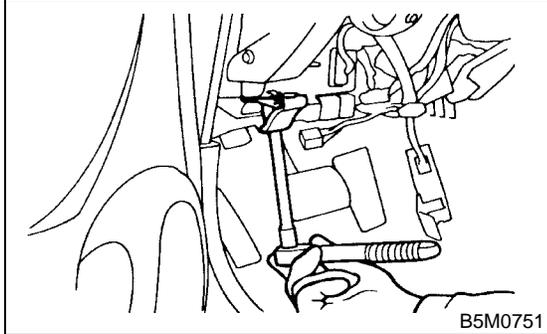
- 1) Check the striker for bending or abnormal wear.
- 2) Check the safety lever for improper movement.
- 3) Check other levers and the spring for rust formation and unsmooth movement.

17. Remote Openers

A: REMOVAL

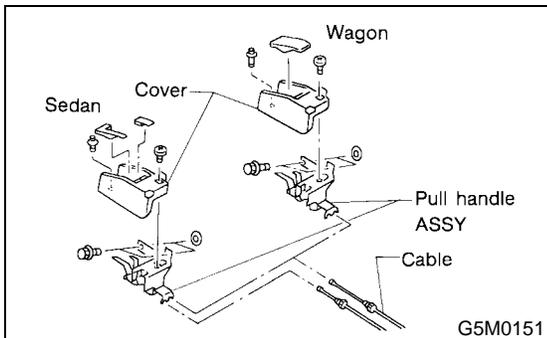
1. HOOD OPENER

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

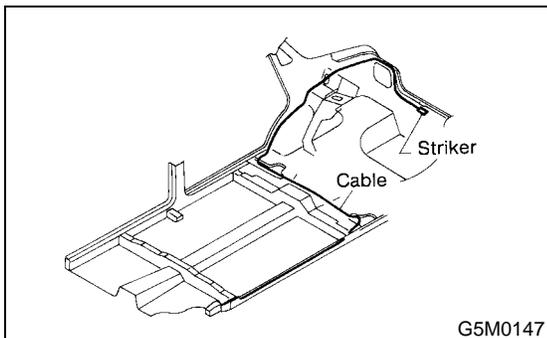


2. TRUNK LID OPENER

- 1) Remove the rear seat. <Ref. to SE-11, 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.

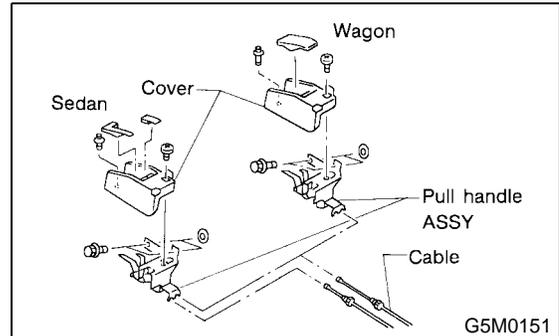


- 4) Remove the cable from the opener pull handle.
- 5) Remove the striker from the trunk lid.
- 6) Remove the cable from the striker.

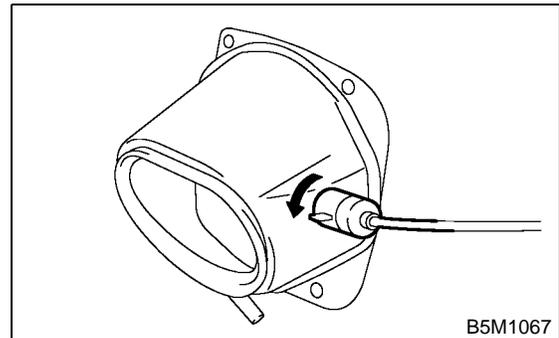


3. FUEL FLAP OPENER

- 1) Remove the rear seat. <Ref. to SE-11, 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-30, 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.

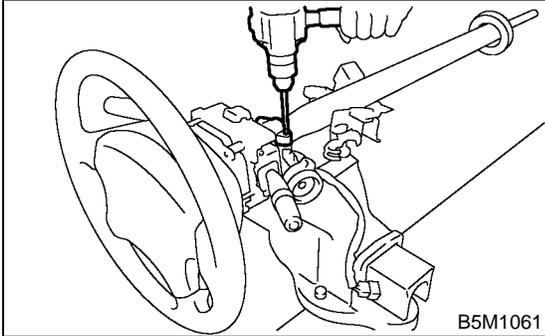
C: INSPECTION

Make sure the fuel flap opens and closes smoothly.

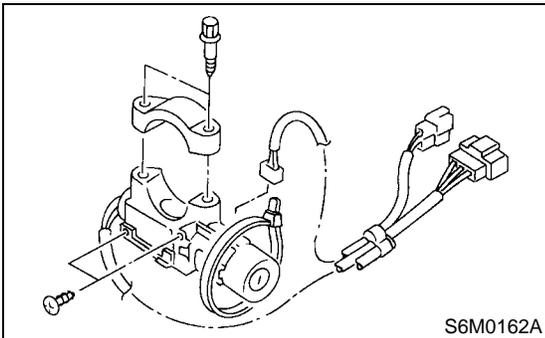
18. Ignition Key Lock

A: REPLACEMENT

- 1) Remove the battery ground cable.
- 2) Remove the steering column. <Ref. to PS-30, 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 holddown 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	Tester connection	Specified condition
LOCK		
ACC	No. 1 — No. 2	Continuity
ON	No. 1 — No. 2 — No. 4	Continuity
ST	No. 1 — No. 3 — No. 4	Continuity

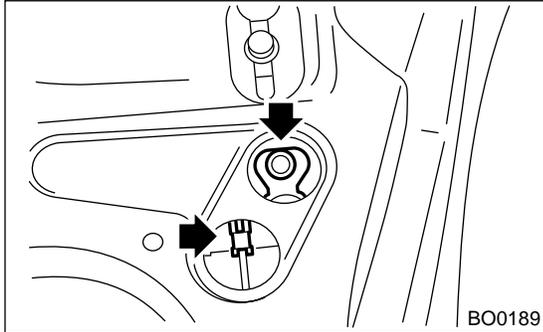
If NG, replace the ignition switch.

19. Key Lock Cylinders

A: REPLACEMENT

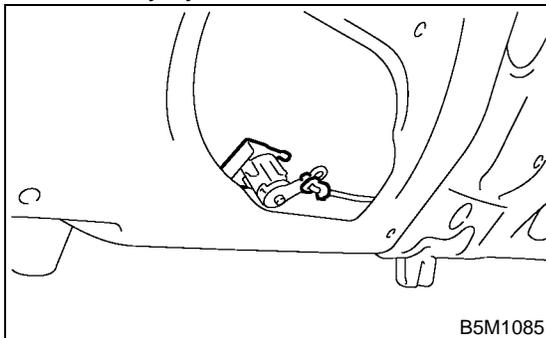
1. FRONT DOOR

- 1) Remove the door trim. <Ref. to EI-20, REMOVAL, Front Door Trim.>
- 2) Pull back the sealing cover.
- 3) Move front door glass downward.
- 4) Remove the rod clamp. Remove the bolt. Replace the key cylinder.



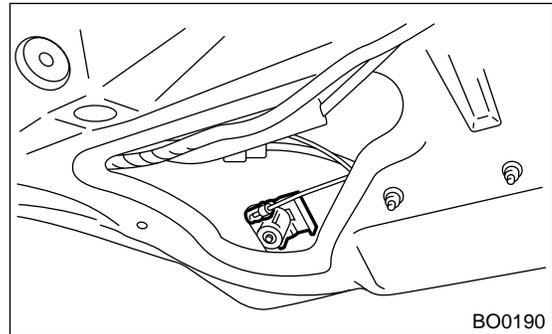
2. TRUNK LID

- 1) Remove the trunk trim. <Ref. to EI-36, REMOVAL, Trunk Trim.>
- 2) Remove the rod clamp. Remove the lock plate. Replace the key cylinder.



3. REAR GATE

- 1) Remove the rear gate trim. <Ref. to EI-34, REMOVAL, Rear Gate Trim.>
- 2) Remove the rod clamp. Remove the lock plate. Replace the key cylinder.



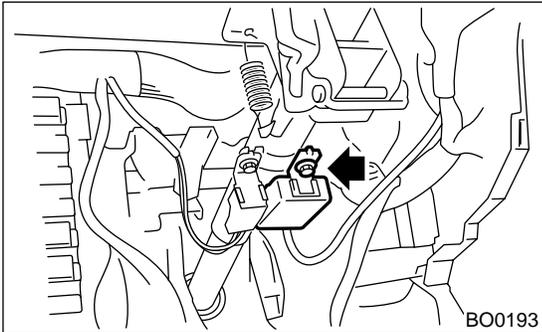
20. Immobilizer Control Module

A: REMOVAL

NOTE:

The following positions for removal and installation are for LHD models. The positions for RHD models are symmetrically opposite.

- 1) Disconnect GND cable from battery.
- 2) Remove instrument panel lower cover. <Ref. to EI-25, REMOVAL, Instrument Panel Assembly.>
- 3) Disconnect connector from immobilizer control module.
- 4) Remove immobilizer control module.



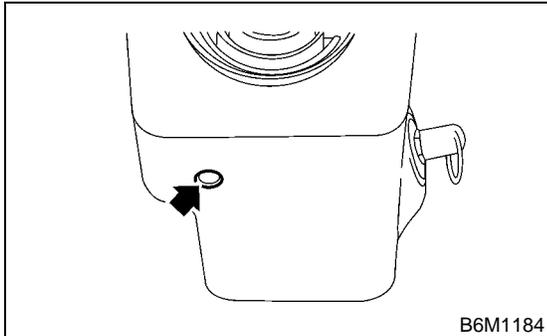
B: INSTALLATION

Install in the reverse order of removal.

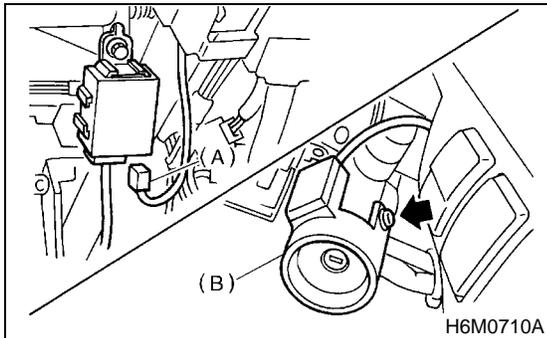
21. Immobilizer Antenna

A: REMOVAL

- 1) Disconnect GND cable from battery.
- 2) Remove instrument panel lower cover. <Ref. to EI-25, REMOVAL, Instrument Panel Assembly.>
- 3) Remove screws, separate upper column cover and lower column cover.



- 4) Disconnect immobilizer antenna connector (A) from immobilizer control module.
- 5) Remove immobilizer antenna (B).



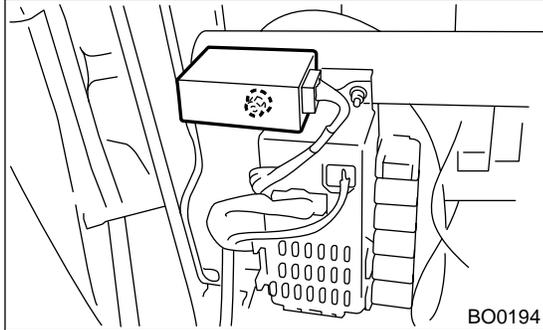
B: INSTALLATION

Install in the reverse order of removal.

22. Keyless Entry Control Module

A: REMOVAL

- 1) Disconnect battery ground cable.
- 2) Remove instrument panel lower cover. <Ref. to EI-25, REMOVAL, Instrument Panel Assembly.>
- 3) Remove nut, then remove keyless entry control module while disconnecting connector.



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

B: INSTALLATION

Install in the reverse order of removal.

23. Keyless Transmitter

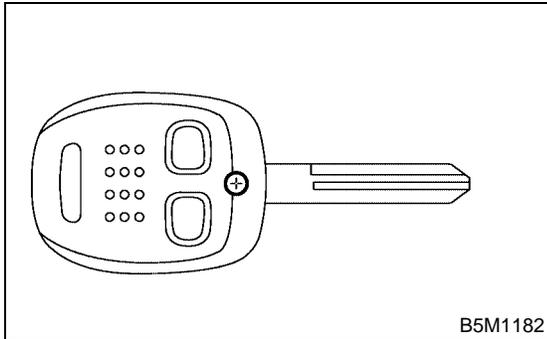
A: REMOVAL

1. TRANSMITTER BATTERY

Remove battery from transmitter.

NOTE:

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



B5M1182

B: INSTALLATION

1. TRANSMITTER BATTERY

Install in the reverse order of removal.

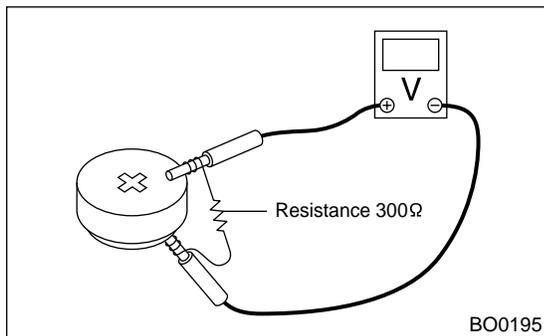
C: INSPECTION

1. TRANSMITTER BATTERY

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

NOTE:

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



BO0195

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

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

D: REPLACEMENT

1. TRANSMITTER REGISTRATION

NOTE:

A maximum of 3 transmitters can be registered for each individual vehicle.

- 1) Remove the side sill cover at the driver's side, then connect the registration connectors at the front pillar lower section.
- 2) Unlock the door lock.
- 3) Press the OPEN button of the transmitter to be registered. Immediately afterwards, press the LOCK button.
- 4) The door lock will automatically lock and unlock in sequence. This indicates the completion of transmitter registration for the first transmitter.
- 5) If registration of a second transmitter is now to be carried out, press the OPEN button of that transmitter. Immediately afterwards, press the LOCK button.
- 6) The door lock will automatically lock and unlock in sequence. This indicates the completion of transmitter registration for the second transmitter.
- 7) Disconnect the registration connectors after the completion of all registration operations. After confirming the operation of the door lock using the newly registered transmitter(s), reinstall the side sill cover at the driver's side.

KEYLESS TRANSMITTER

SECURITY AND LOCKS
