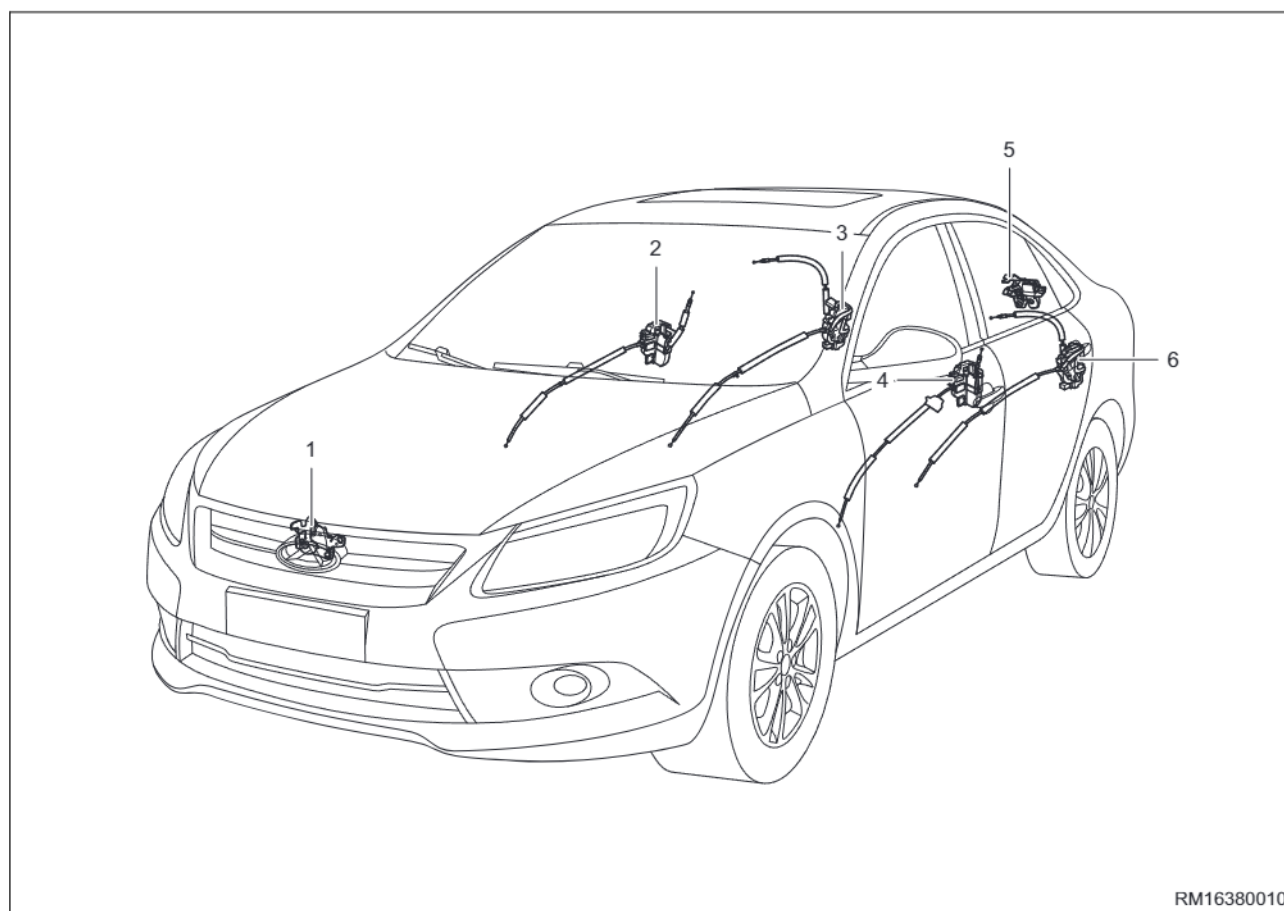


DOOR LOCK

GENERAL INFORMATION	38-3	Front Door Lock Assembly	38-53
Description	38-3	Removal	38-53
Specifications	38-11	Inspection	38-55
Tools	38-11	Installation	38-55
Circuit Diagram	38-12	Front Door Key Cylinder Assembly	38-56
DIAGNOSIS & TESTING	38-17	Removal	38-56
Problem Symptoms Table	38-17	Installation	38-57
Diagnosis Tools	38-18	Front Door Lock Striker Assembly	38-58
Diagnostic Help	38-18	Removal	38-58
Intermittent DTC Troubleshooting	38-19	Installation	38-58
Ground Inspection	38-19	Rear Door Lock Assembly	38-59
Diagnosis Procedure	38-19	Removal	38-59
Diagnostic Trouble Code (DTC)		Inspection	38-61
Chart	38-21	Installation	38-61
B101B-18	38-22	Rear Door Lock Striker Assembly	38-62
B101B-19	38-22	Removal	38-62
B101B-71	38-22	Installation	38-62
B101C-18	38-22	Luggage Compartment Lock	
B101C-19	38-22	Assembly	38-63
B101C-71	38-22	Removal	38-63
B101E-16	38-22	Inspection	38-63
B101E-17	38-22	Installation	38-64
B101D-18	38-36	Luggage Compartment Lock Striker	
B101D-19	38-36	Assembly	38-65
B101F-12	38-40	Removal	38-65
B101F-13	38-40	Installation	38-65
B1500-13	38-46	Low Frequency Antenna	38-66
B1501-13	38-46	Removal	38-66
B1505-13	38-46	Installation	38-68
ON-VEHICLE SERVICE	38-52	Wireless Key	38-69
Engine Hood Lock Assembly	38-52	Removal	38-69
Removal	38-52	Installation	38-70
Installation	38-52		

GENERAL INFORMATION

Description



RM16380010

38

1 - Engine Hood Lock Assembly	2 - Front Right Door Lock Assembly
3 - Rear Right Door Lock Assembly	4 - Front Left Door Lock Assembly
5 - Luggage Compartment Lock Assembly	6 - Rear Left Door Lock Assembly

1. Power door lock system function description

- a. Power door lock system can lock/unlock all doors by wireless key, mechanical key, center control switch and contact switch on the handle.
 - Wireless key sends the lock/unlock request signals to Passive Entry & Passive Start (PEPS) controller, which will control Body Control Module (BCM) via CAN line. Then, Body Control Module (BCM) sends these request signals to the lock fastener of each door in order to lock/unlock all doors simultaneously.
 - After inserting mechanical key into the driver side door key cylinder, doors can be locked/unlocked by turning the key clockwise or counterclockwise, but body anti-theft function cannot be set.
 - Contact switch on handle: when the wireless key is outside the vehicle and within a 1.5 m semicircle area around the front door handle, pressing the door handle switch can lock/unlock the doors.
 - Contact switch on luggage compartment door: when the wireless key is outside the luggage compartment door and within a 1.5 m semicircle area around the luggage compartment door handle, pressing the door handle switch can unlock the luggage compartment door.
 - Function active: effective at any time, even when engine starts.

- Lock success: when all doors are fully closed, input lock signal from center control switch, and execute the lock command.
- Lock failure: when at least one door is not fully closed, input lock signal from center control switch, execute the lock command, and then execute the unlock command after a 1 second delay.
- Unlock success: input the unlock signal from center control switch and execute lock command, regardless of whether the doors are fully closed.
- Door lock response: when the protection is not activated, Body Control Module (BCM) responses to each lock or unlock input.
- Door lock protection: lock then unlock the doors and repeat this sequence 4 times within 10 seconds (Note: door lock then unlock = 1 sequence). Once the protection is activated, door lock function will be disabled for 15 seconds. Before the disable function is activated, make sure that the final command is unlock, rather than lock.

b. Function

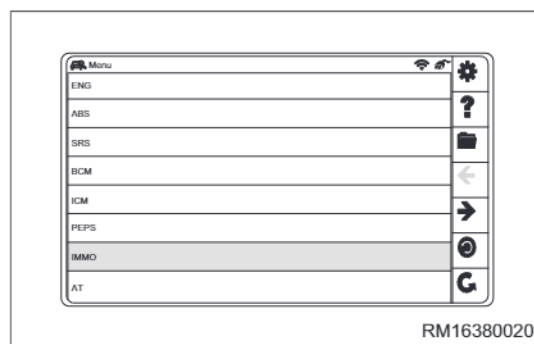
Component	Function
Wireless Key Lock/Unlock	Lock/unlock all doors. Wireless key sends an unlock/lock request signal to Passive Entry & Passive Start (PEPS) controller, which will control Body Control Module (BCM) via CAN line to output the unlock/lock signal to unlock/lock each door.
Mechanical Key Lock/Unlock	Lock/unlock all doors. Mechanical key sends the unlock/lock request signal to Body Control Module (BCM), which outputs an unlock/lock signal to unlock/lock each door.
Contact Switch on Handle Unlock/Lock	Lock/unlock all doors. Contact switch on handle sends the unlock/lock request signal to Passive Entry & Passive Start (PEPS) controller, which will control Body Control Module (BCM) via CAN line to output the unlock/lock signal to unlock/lock each door.
Center Control Switch Unlock/Lock	Lock/unlock all doors. Center control switch sends the unlock/lock request signal to Passive Entry & Passive Start (PEPS) controller, which will control Body Control Module (BCM) via CAN line to output the unlock/lock signal to unlock/lock each door.
Front Left Door Lock Assembly	Lock/Unlock front left door with fastener. It has built-in door unlock/lock switch and sends the unlock/lock signal to Body Control Module (BCM) to unlock/lock each door.
Front Right Door Lock Assembly Rear Left Door Lock Assembly Rear Right Door Lock Assembly	Lock/Unlock front right door with fastener. Lock/Unlock rear left door with fastener. Lock/Unlock rear right door with fastener.

c. Wireless key match

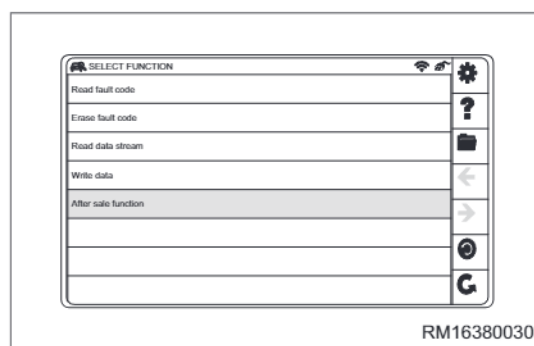
If the wireless key is lost, damaged, or the Body Control Module (BCM) is replaced, the wireless key needs to be matched again. There are 2 methods and detailed operation procedures are as follows:

Method 1:

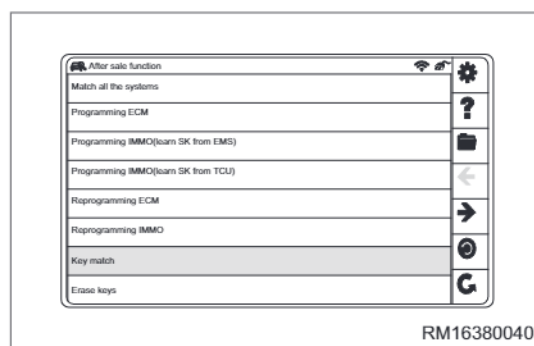
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network. Then select corresponding model (M16) on X-431 3G diagnostic tester (the latest software) to enter the system and select "IMMO" system.



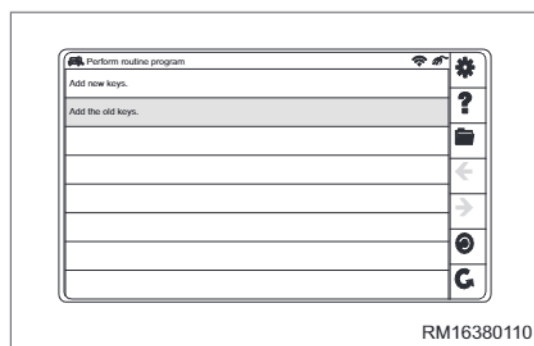
- Please select [After sale function] on SELECT FUNCTION screen.



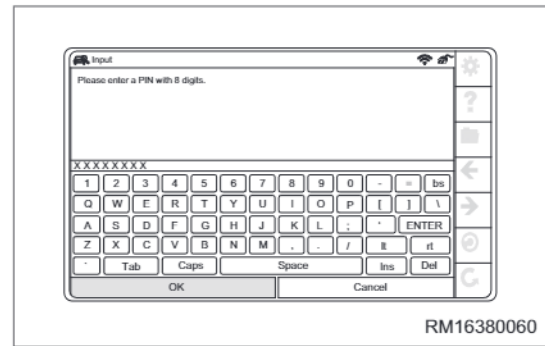
- Please select [Key match] on After sale function screen.



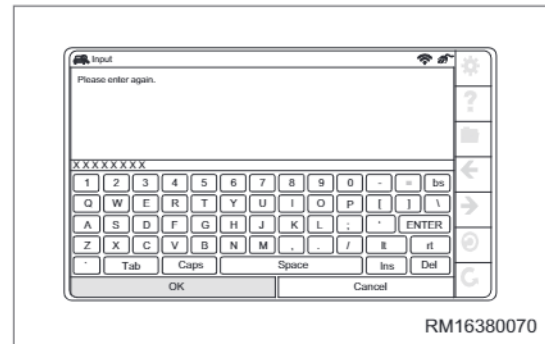
- Please select [Add the old keys] on Perform routine program screen.



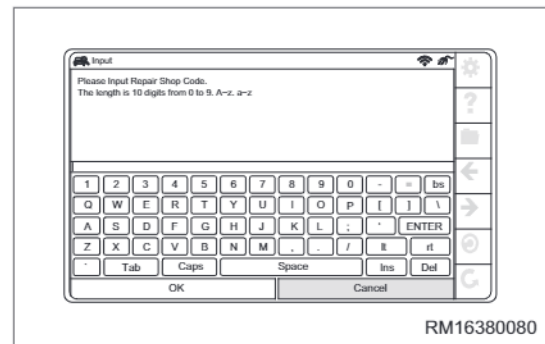
- When "Please enter a PIN with 8 digits" is displayed on Input screen, input PIN code and click "OK".



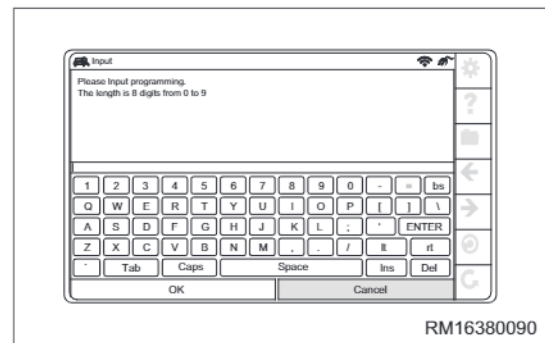
- When "Please enter again" is displayed on Input screen, input PIN code again and click "OK".



- When "Please Input Repair Shop Code. The length is 10 digits from 0 to 9. A~Z. a~z" is displayed, click "Cancel".



- When "Please Input programming. The length is 8 digits from 0 to 9" is displayed, click "Cancel".



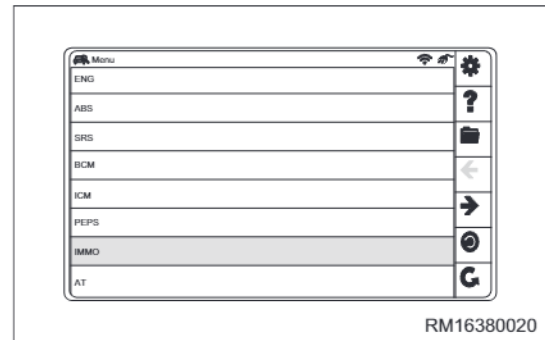
- When "Succeeded to add old key" is displayed on Key match screen, click "OK".



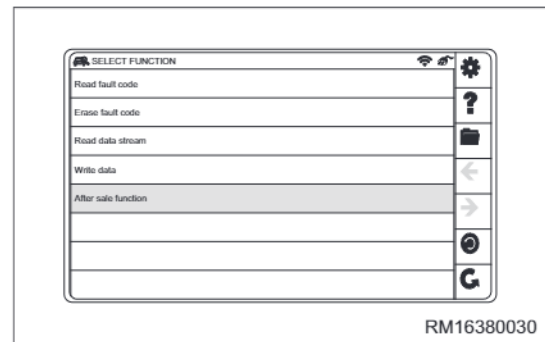
- Key match is completed.

Method 2:

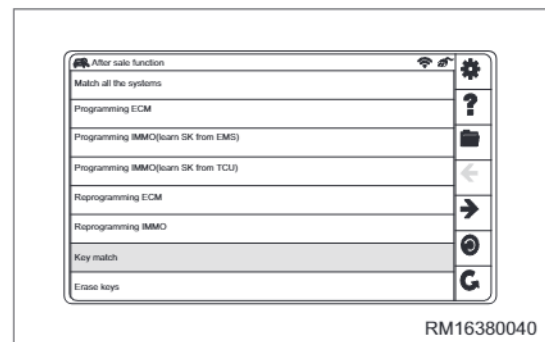
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network. Then select corresponding model (M16) on X-431 3G diagnostic tester (the latest software) to enter the system and select "IMMO" system.



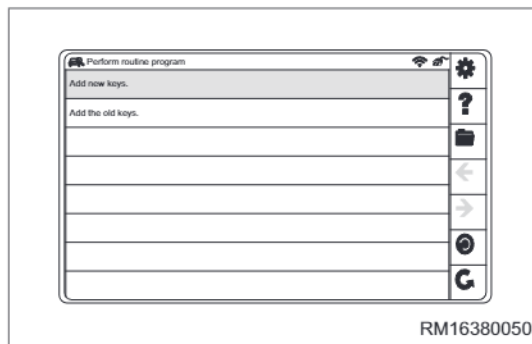
- Please select [After sale function] on SELECT FUNCTION screen.



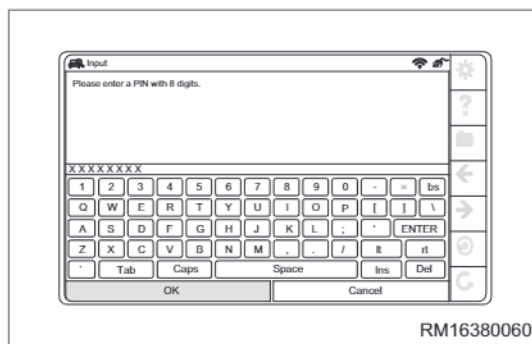
- Please select [Key match] on After sale function screen.



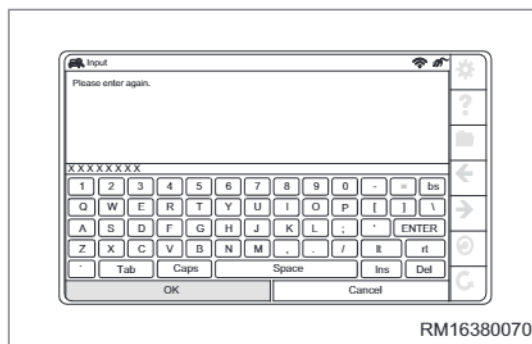
- Please select [Add new keys] on Perform routine program screen.



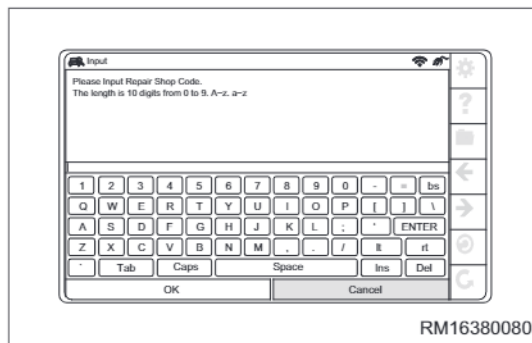
- When "Please enter a PIN with 8 digits" is displayed on Input screen, input PIN code and click "OK".



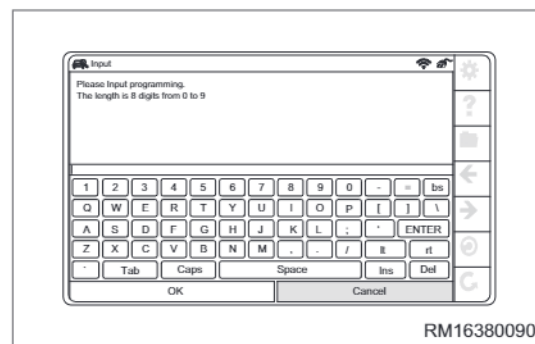
- When "Please enter again" is displayed on Input screen, input PIN code again and click "OK".



- When "Please Input Repair Shop Code. The length is 10 digits from 0 to 9. A~Z. a~z" is displayed, click "Cancel".



- When "Please Input programming. The length is 8 digits from 0 to 9" is displayed, click "Cancel".



- When "Succeeded to add new key" is displayed on Key match screen, click "OK".



- Key match is completed.

d. Vehicle security system has 6 modes:

Fortifying mode

- It will enter fortifying mode when following conditions are met:
 - Passive Entry & Passive Start switch is in OFF.
 - All doors, engine hood and luggage compartment door are closed.
 - Operate lock button of PEPS wireless key to lock all doors.
 - Operate front door handle button (RKE of PEPS in the detection range of this door handle antenna) to lock all the doors.
- When vehicle is in fortifying mode, following conditions will occur:
 - The turn signal lights blink once, anti-theft horn sounds once and anti-theft indicator on front left door inner protector blinks normally to indicate that vehicle is in fortifying mode.
 - In fortifying mode, if any door does not open within 30 seconds after unlocking the door by wireless key, the doors will lock again automatically.

Fortifying failure mode

- Fortifying failure mode is signified by any of followings:
 - If any door is not fully closed, turn signal lights blink twice, anti-theft horn does not sound and anti-theft indicator does not blink.
 - If engine hood is not fully closed, turn signal lights blink twice, anti-theft horn does not sound and anti-theft indicator does not blink.
 - If luggage compartment door is not fully closed, turn signal lights blink twice, doors are locked, anti-theft horn does not sound and anti-theft indicator does not blink.

Fortifying deactivation mode

- In fortifying mode, fortifying will be deactivated if either of following conditions occurs:
 - Press unlock button on PEPS wireless key.
 - Press front door handle button (RKE of PEPS in the detection range of this door handle antenna).

- Fortifying deactivation mode (using PEPS wireless key or front door handle door (RKE of PEPS in the detection range of this door handle antenna)) is signified by any of followings:
 - All doors are unlocked.
 - Turn signal lights blink twice, anti-theft horn does not sound and anti-theft indicator stops blinking.
 - If there is no further operation (open the door, engine hood and luggage compartment door) within 30s after unlocking with wireless key, the system enters fortifying mode again.
- If any of followings occurs within 30 s after the doors are unlocked by wireless key, the vehicle will neither return to fortifying state, nor lock automatically:
 - Passive Entry & Passive Start switch is in a position other than OFF.
 - Any door is open.
 - Engine hood is open.
 - Luggage compartment door is open.

Alarm mode

- When vehicle is in fortifying mode, the alarm will be triggered if any of the following condition occurs:
 - Manually open any door, engine hood or luggage compartment door.
 - Turn ignition switch to ON.
- When vehicle is in alarm mode, the following condition occurs:
 - After the alarm is triggered, turn signal lights blink and anti-theft horn sounds for 28 seconds. At the same time, security indicator blinks quickly to indicate that system is in a non-secure state.

Alarm deactivation mode

- The following operations will deactivate the alarm:
 - Press unlock button on wireless key.
 - Press front door handle button (RKE of PEPS in the detection range of this door handle antenna).

Luggage compartment door open mode

- In fortifying mode, if luggage compartment door opener switch on PEPS wireless key is pressed for more than 1.5 seconds, the luggage compartment door is opened and anti-theft horn does not sound.
- When PEPS wireless key is identified by luggage compartment door antenna, pressing the luggage compartment door opener button can open luggage compartment door without triggering the alarm.

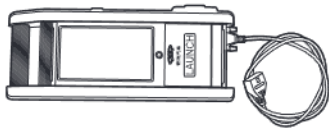
Specifications

Torque Specifications

Description	Torque (N·m)
Engine Hood Lock Assembly Fixing Bolt	9 ± 1
Front Door Lock Assembly Fixing Screw	5 ± 1
Front Door Key Cylinder Assembly Fixing Screw	7 ± 1
Front Door Lock Striker Assembly Fixing Screw	23 ± 1
Rear Door Lock Assembly Fixing Screw	5 ± 1
Rear Door Lock Striker Assembly Fixing Screw	23 ± 1
Luggage Compartment Lock Assembly Fixing Screw	9 ± 1
Luggage Compartment Lock Striker Assembly Fixing Screw	23 ± 1
Front Door Outside Handle Fixing Screw	1.5

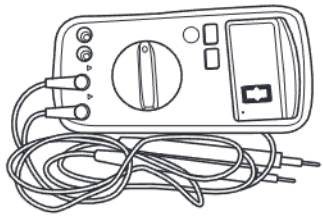
Tools

Special Tool

X-431 3G Diagnostic Tester	 RCH0000001
----------------------------	--

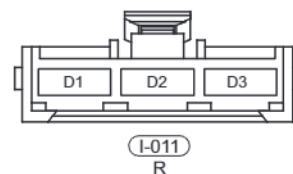
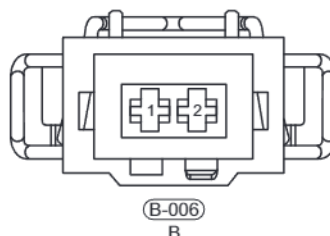
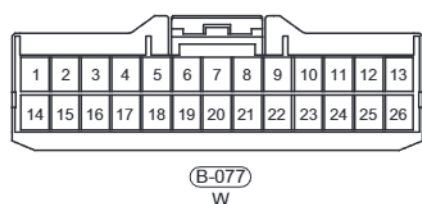
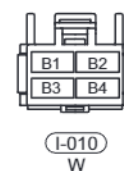
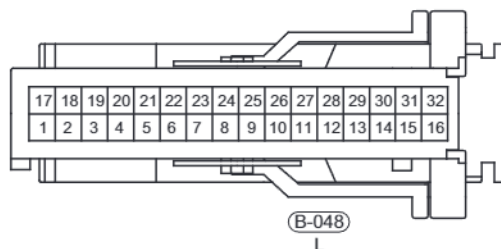
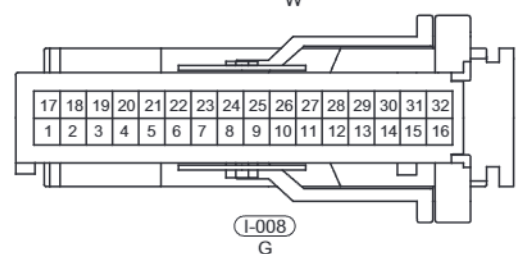
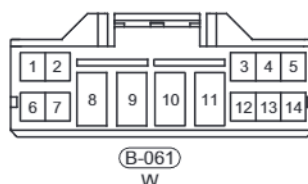
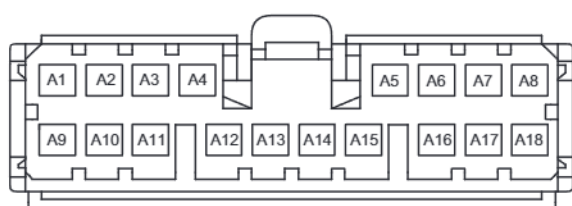
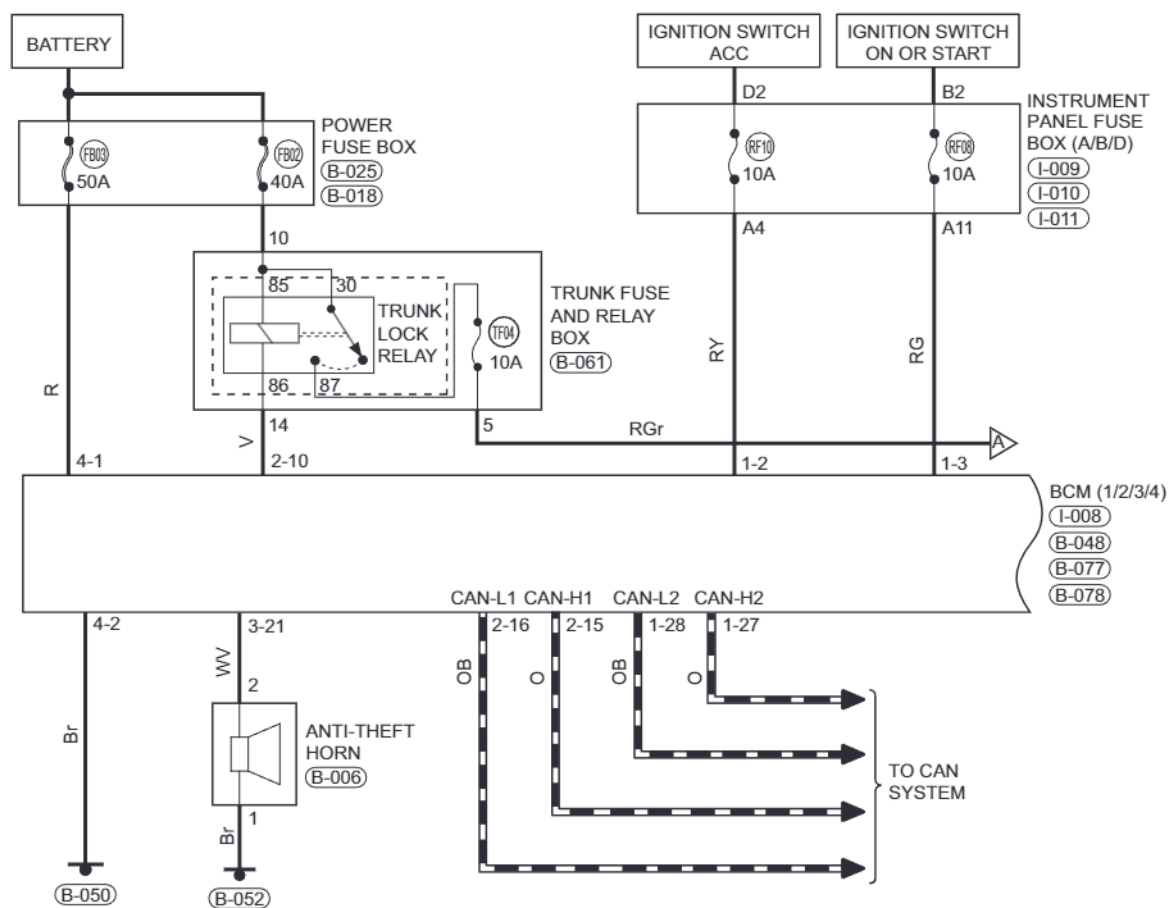
38

General Tool

Digital Multimeter	 RCH0000002
--------------------	--

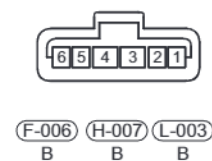
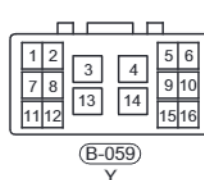
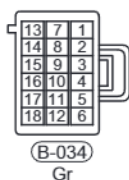
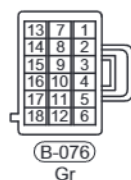
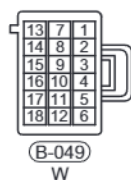
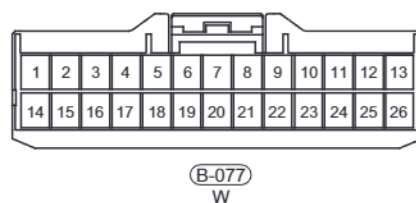
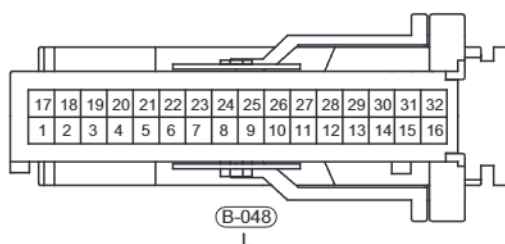
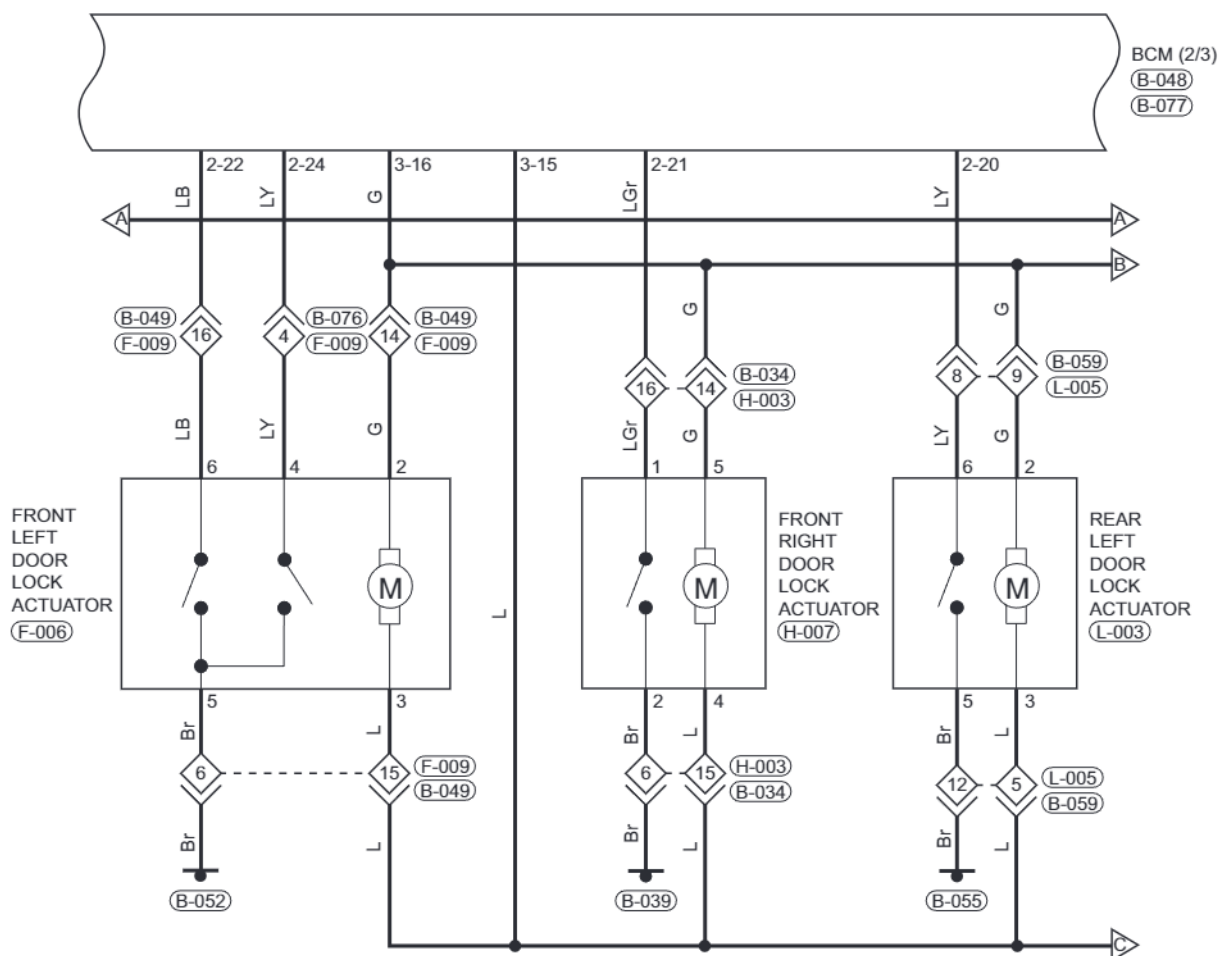
Circuit Diagram

Power Door Lock System (Page 1 of 5)



EM16380010

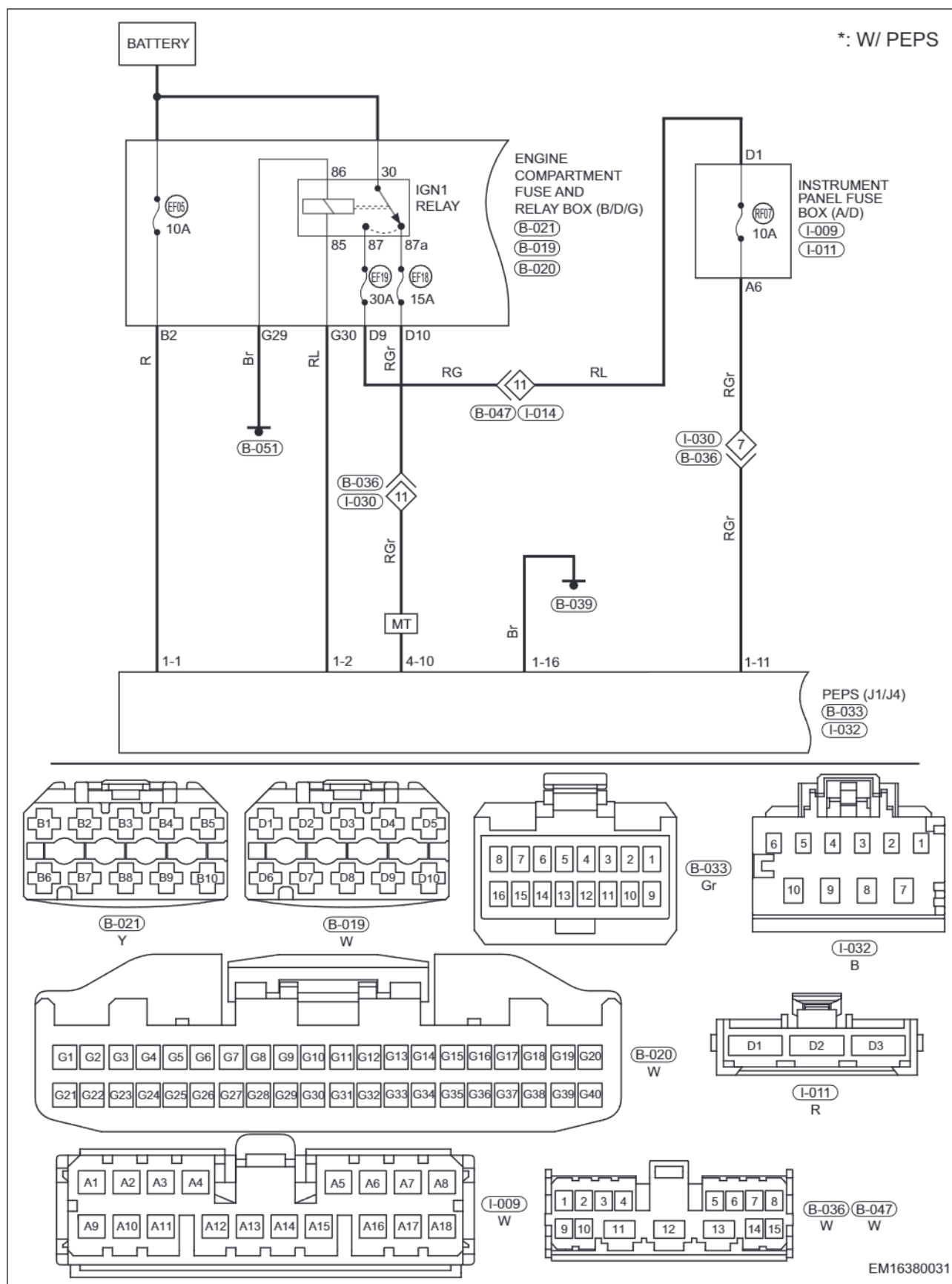
Power Door Lock System (Page 2 of 5)



EM16380020

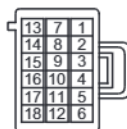
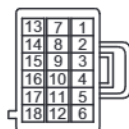
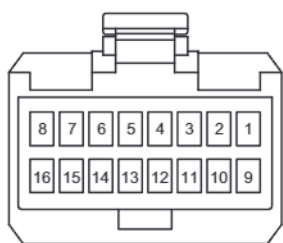
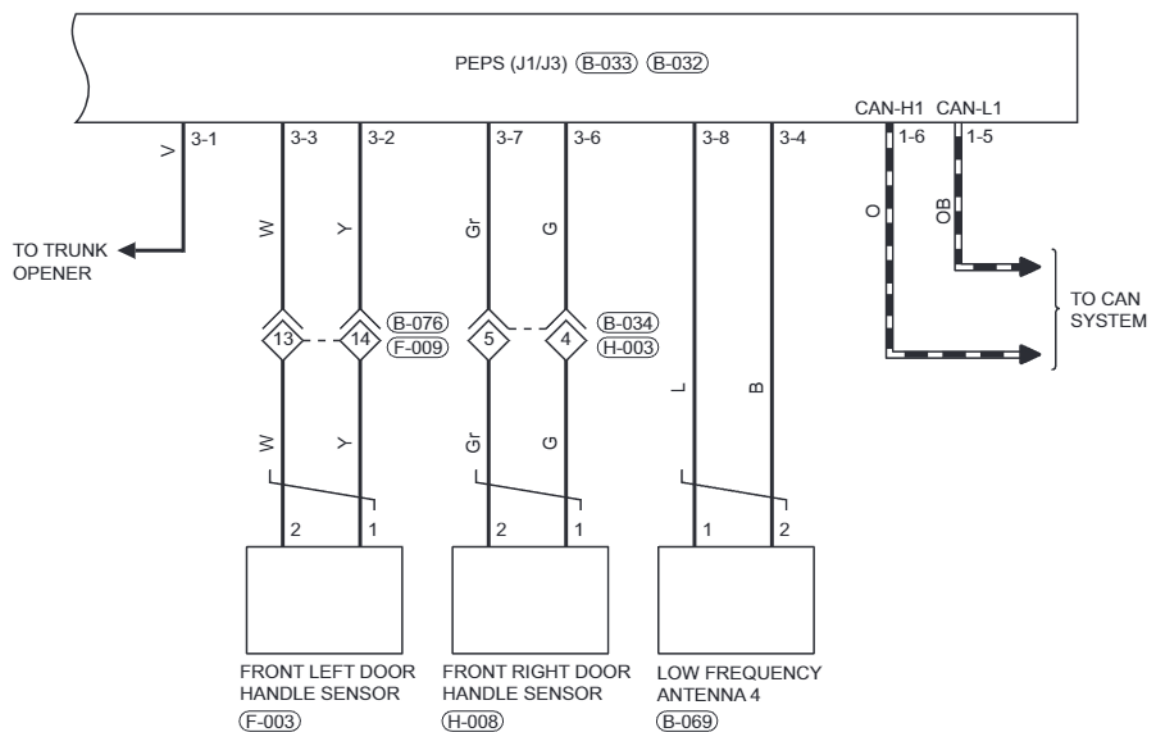


Power Door Lock System (Page 4 of 5)



Power Door Lock System (Page 5 of 5)

*: W/ PEPS



EM16380032

DIAGNOSIS & TESTING

Problem Symptoms Table

HINT:

Use symptoms table below to help determine cause of problem. Check each suspected area in sequence. Repair or adjust faulty components, or replace as necessary.

Power Door Lock Control System

Symptom	Suspected Area	See page
All door lock/unlock functions do not operate	Fuse	53-36
	Power door unlock/lock switch button	-
	Front left door lock assembly	38-53
	Other door lock assemblies	-
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only driver side door lock/unlock function does not operate	Power door unlock/lock switch button	-
	Front left door lock assembly	38-53
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only front passenger side door lock/unlock function does not operate	Front right door lock assembly	38-53
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only rear left door lock/unlock function does not operate	Rear left door lock assembly	38-59
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only rear right door lock/unlock function does not operate	Rear right door lock assembly	38-59
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-

Symptom	Suspected Area	See page
Only luggage compartment door open/close function does not operate	Luggage Compartment Lock Assembly	38-63
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-

Wireless Door Lock Control System

Symptom	Suspected Area	See page
Only wireless control function does not operate	Wireless key battery	38-69
	Anti-theft match	38-5
	Passive Entry & Passive Start (PEPS) Controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only no answer-back	Turn signal light	-
	Body Control Module (BCM)	-

Diagnosis Tools

X-431 3G Diagnostic Tester

When connecting X-431 3G diagnostic tester:

- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC) for communication with vehicle.
- DLC is located at the driver side instrument panel crossmember.
- DLC uses a trapezoidal design which can hold 16 terminals.

Digital Multimeter

When using a digital multimeter:

- Troubleshoot the electrical malfunctions and wire harness system.
- Troubleshoot the basic malfunction.
- Measure voltage, current and resistance.

Diagnostic Help

1. Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network.
2. Confirm that malfunction is present, and carry out diagnostic test and repair procedures.
3. If DTC cannot be cleared, malfunction is present.
4. Only use a digital multimeter to measure the voltage of electronic system.
5. Refer to any Technical Bulletin that may apply to the malfunction.
6. Visually check the related wire harness.
7. Check and clean all the door lock system ground points related to the latest DTC.
8. If multiple trouble codes were set, use circuit diagrams and look for any common ground circuit or power supply circuit applied to the DTC.

Intermittent DTC Troubleshooting

If malfunction is intermittent, perform the followings:

- Check if connectors are loose.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Wiggle related wire harnesses and connectors and observe if the signal is interrupted in the related circuit.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for data that has changed or DTC to reset during wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect the mounting areas of power door lock assembly, wire harnesses or wire harness connectors and so on for damage, foreign matter, etc. that will cause incorrect signals.
- Check and clean all wire harness connectors and grounds related to the current DTC.
- Remove the Body Control Module (BCM) from malfunctioning vehicle and install it to a new vehicle and perform a test. If DTC cannot be cleared, Body Control Module (BCM) is malfunctioning. If DTC can be cleared, reinstall Body Control Module (BCM) to the original vehicle.
- If multiple trouble codes were set, refer to circuit diagrams to look for any common ground circuit or power supply circuit applied to the DTC.
- Refer to any Technical Bulletin that may apply to the malfunction.

Ground Inspection

Groundings are very important to entire circuit system, which are normal or not can seriously affect the entire circuit system. Groundings are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) and oxidation may increase load resistance. This situation will seriously affect the circuit operation. Perform the following operations when checking the ground points:

1. Remove the ground bolt or nut.
2. Check all contact surfaces for tarnish, dirt and rust, etc.
3. Clean as necessary to ensure that contacting is in good condition.
4. Reinstall the ground bolt or nut securely.
5. Check if add-on accessories interfere with ground circuit.
6. If several wire harnesses are crimped into one ground eyelet terminal, check for proper crimps. Make sure all wire harnesses are clean, securely fastened to provide a good ground line.

Diagnosis Procedure

HINT:

Use following procedures to troubleshoot the power door lock control system.

1	Vehicle brought to workshop
----------	------------------------------------

NEXT

2	Check battery voltage
----------	------------------------------

Standard voltage: 11 to 14 V

If voltage is below 11 V, recharge or replace the battery before proceeding to next step.

NEXT



3 Customer problem analysis

NEXT

4 Check for DTCs (current DTC and history DTC)

DTC
occurs

For current DTC, go to step 6

No
DTC

For history DTC, go to step 7

5 Problem repair (for no DTC), then go to step 8

NEXT

6 Troubleshoot according to Diagnostic Trouble Code (DTC) chart, then go to step 8

38

NEXT

7 Troubleshoot according to Problem Symptoms Table, then go to step 8

NEXT

8 Adjust, repair or replace

NEXT

9 Conduct test and confirm malfunction has been repaired

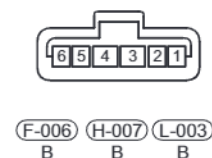
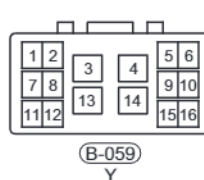
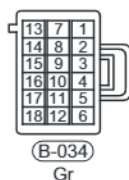
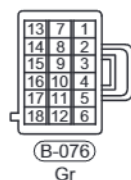
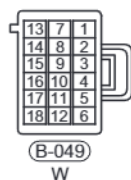
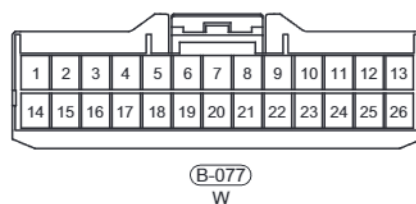
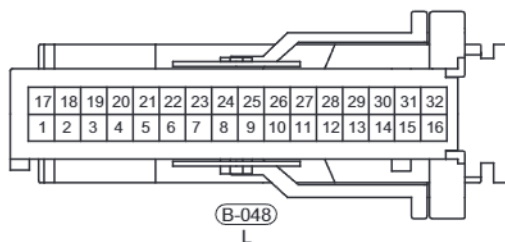
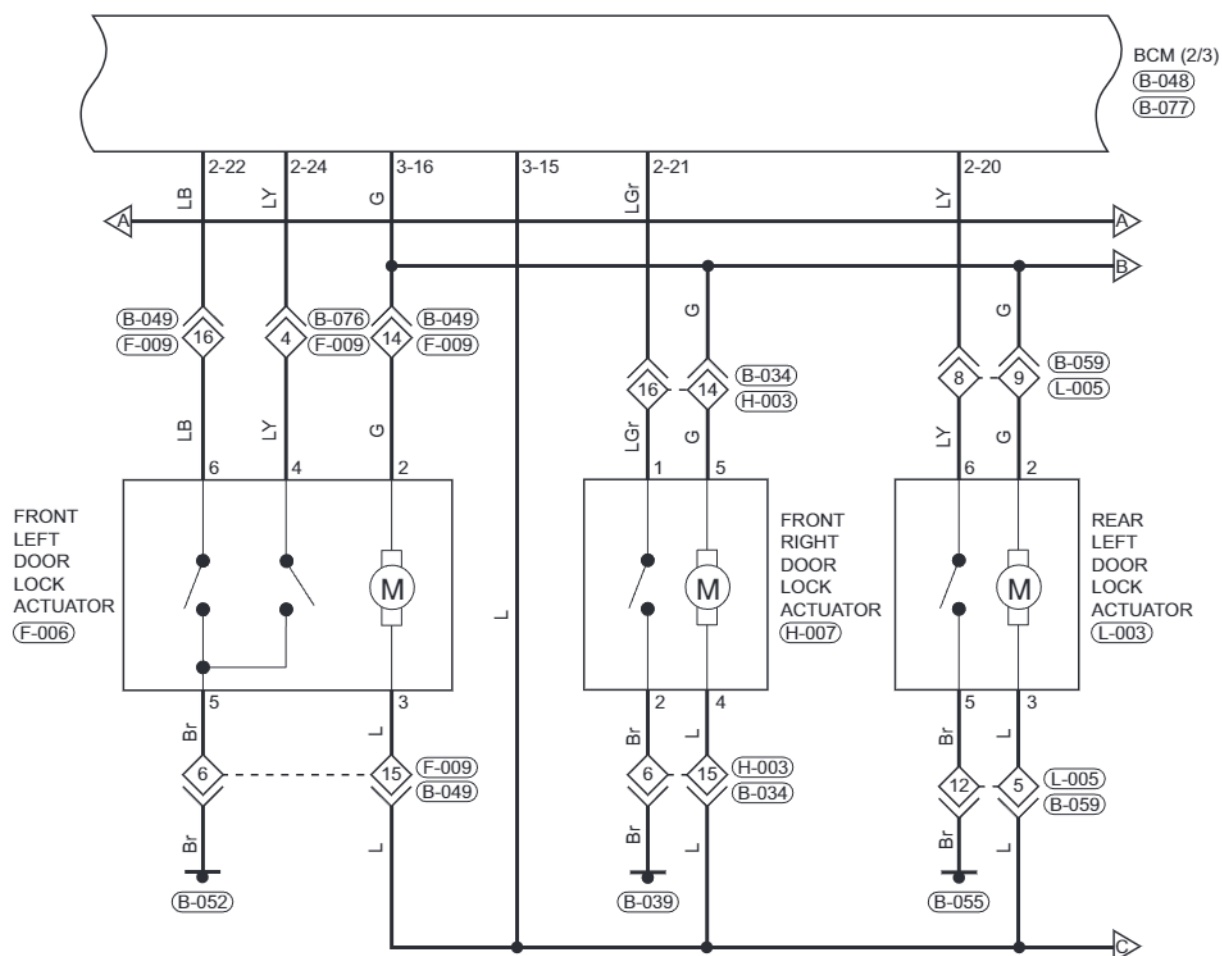
NEXT

10 End

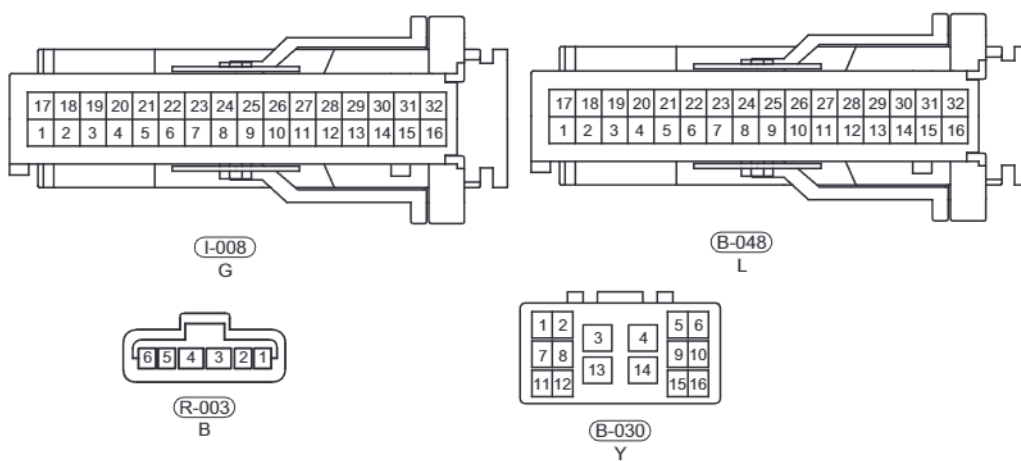
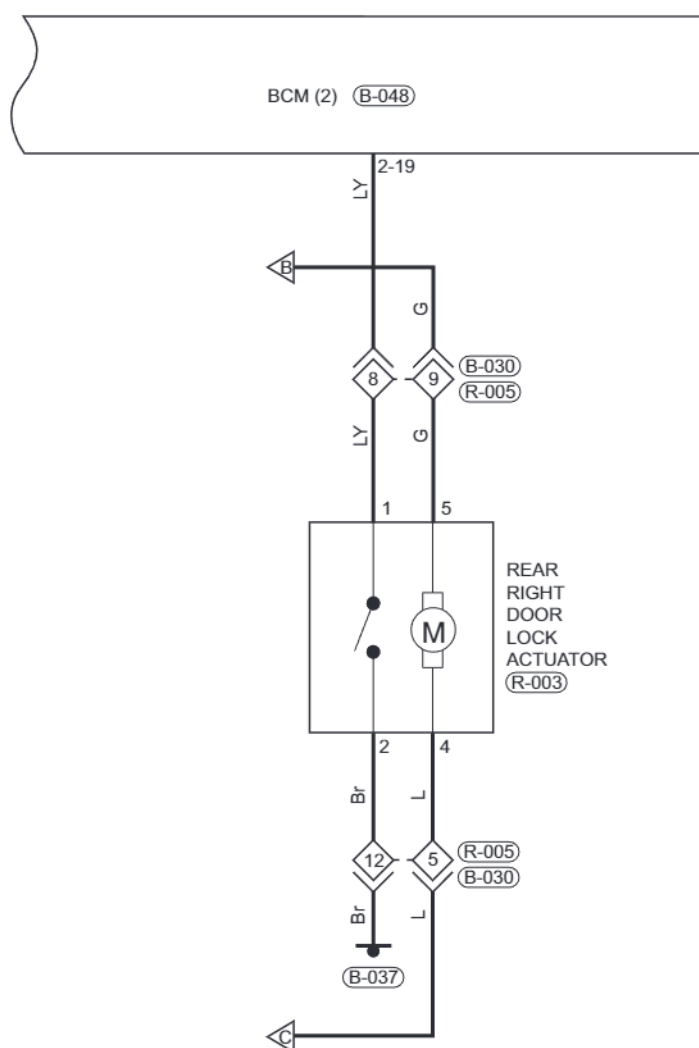
Diagnostic Trouble Code (DTC) Chart

DTC Code	DTC Definition
B101B-18	Central Unlock Control Circuit Current Below Threshold
B101B-19	Central Unlock Control Circuit Current Above Threshold
B101B-71	Central Unlock Control Circuit Actuator Stuck
B101C-18	Central Lock Control Circuit Current Below Threshold
B101C-19	Central Lock Control Circuit Current Above Threshold
B101C-71	Central Lock Control Circuit Actuator Stuck
B101D-18	Siren Control Circuit Current Below Threshold
B101D-19	Siren Control Circuit Current Above Threshold
B101E-16	Key Lock Control Circuit Voltage Below Threshold
B101E-17	Key Lock Control Circuit Voltage Over Threshold
B101F-12	Trunk Control Circuit Short to Battery
B101F-13	Trunk Control Circuit Open
B1500-13	Driver Door Outside LF Antenna Circuit Open
B1501-13	Passenger Door Outside LF Antenna Circuit Open
B1505-13	Bumper LF Antenna Circuit Open

DTC	B101B-18	Central Unlock Control Circuit Current Below Threshold
DTC	B101B-19	Central Unlock Control Circuit Current Above Threshold
DTC	B101B-71	Central Unlock Control Circuit Actuator Stuck
DTC	B101C-18	Central Lock Control Circuit Current Below Threshold
DTC	B101C-19	Central Lock Control Circuit Current Above Threshold
DTC	B101C-71	Central Lock Control Circuit Actuator Stuck
DTC	B101E-16	Key Lock Control Circuit Voltage Below Threshold
DTC	B101E-17	Key Lock Control Circuit Voltage Over Threshold



EM16380020



EM16380040

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Suspected Area
B101B-18	Central Unlock Control Circuit Current Below Threshold	Ignition switch ON	• Front Door Lock Assembly • Rear Door Lock Assembly • Wire harness or connector • Body Control Module (BCM)
B101B-19	Central Unlock Control Circuit Current Above Threshold		
B101B-71	Central Unlock Control Circuit Actuator Stuck		
B101C-18	Central Lock Control Circuit Current Below Threshold		
B101C-19	Central Lock Control Circuit Current Above Threshold		
B101C-71	Central Lock Control Circuit Actuator Stuck		
B101E-16	Key Lock Control Circuit Voltage Below Threshold		
B101E-17	Key Lock Control Circuit Voltage Over Threshold		

38

DTC Confirmation Procedure

Confirm that battery voltage is between 11 to 14 V before performing following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in Body Control Module (BCM).
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON, and then select Read Code.
- If DTC is detected, malfunction indicated by DTC is present. Go to Diagnosis Procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent ([See page 38-19](#)).

CAUTION

- When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

Diagnosis Procedure

1 Check front door lock assembly

- Remove the front door lock assembly from malfunctioning vehicle, then install it to a new vehicle and perform a test.
- Connect all connectors.
- Connect the negative battery cable and turn ignition switch to ON.
- Check the front door lock assembly operation.

NG

Replace front door lock assembly

OK

2 Check rear door lock assembly

- Remove the rear door lock assembly from malfunctioning vehicle, then install it to a new vehicle and perform a test.
- Connect all connectors.
- Connect the negative battery cable and turn ignition switch to ON.
- Check the rear door lock assembly operation.

NG

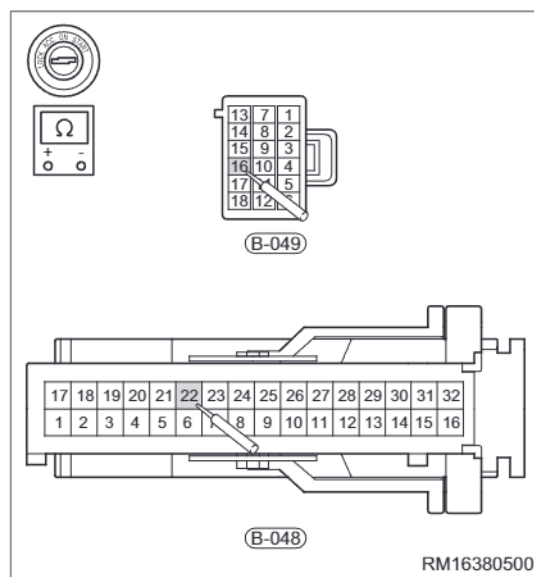
Replace rear door lock assembly

OK

3 Check body wire harness and connector

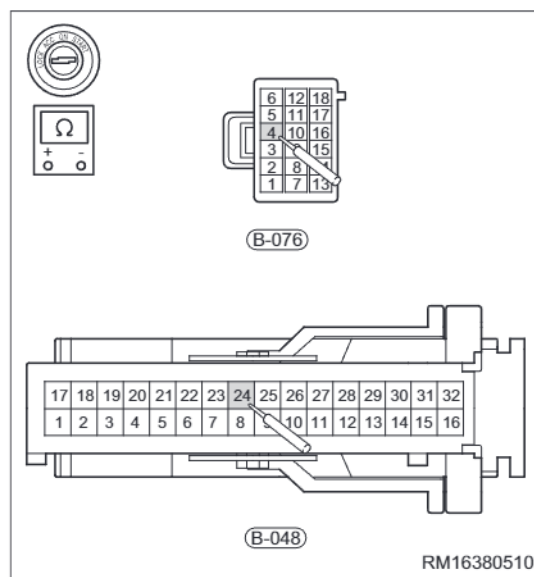
- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the body wire harness connectors B-048 and B-049.
- Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-049 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-048 (22) - B-049 (16)	Always	Continuity



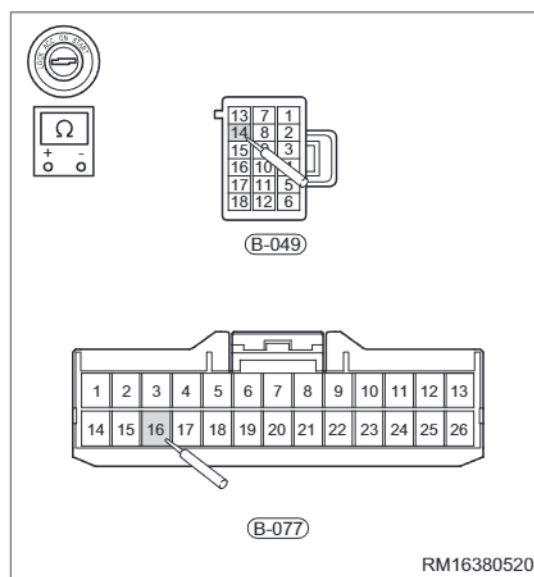
- e. Disconnect the body wire harness connectors B-048 and B-076.
- f. Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-076 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-048 (24) - B-076 (4)	Always	Continuity



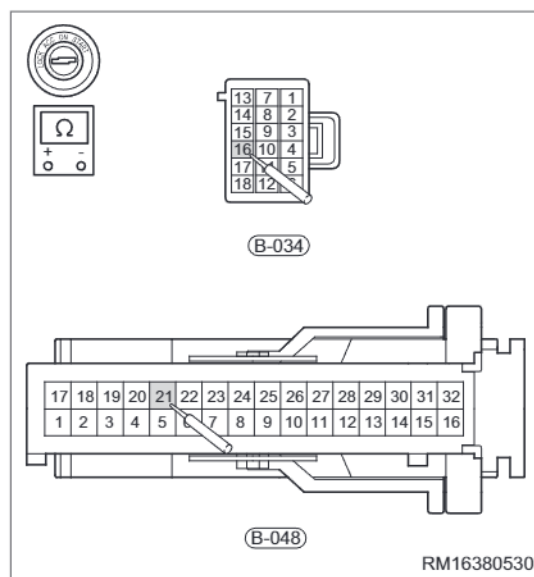
- g. Disconnect the body wire harness connectors B-077 and B-049.
- h. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-049 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-077 (16) - B-049 (14)	Always	Continuity



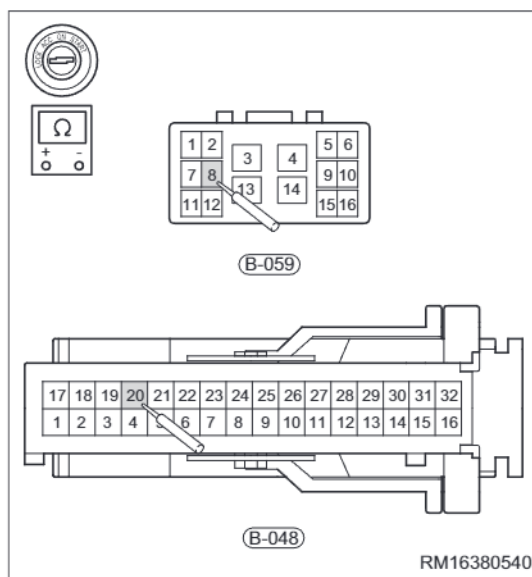
- i. Disconnect the body wire harness connectors B-048 and B-034.
- j. Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-034 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-048 (21) - B-034 (16)	Always	Continuity



- k. Disconnect the body wire harness connectors B-048 and B-059.
- l. Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-059 according to the table below.

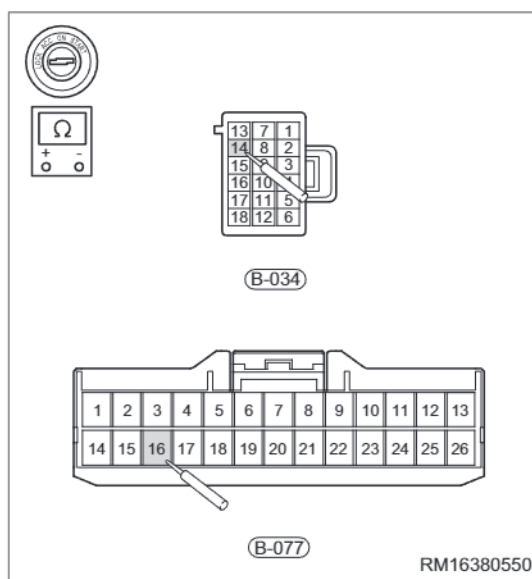
Multimeter Connection	Condition	Specified Condition
B-048 (20) - B-059 (8)	Always	Continuity



- m. Disconnect the body wire harness connectors B-077 and B-034.
- n. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-034 according to the table below.

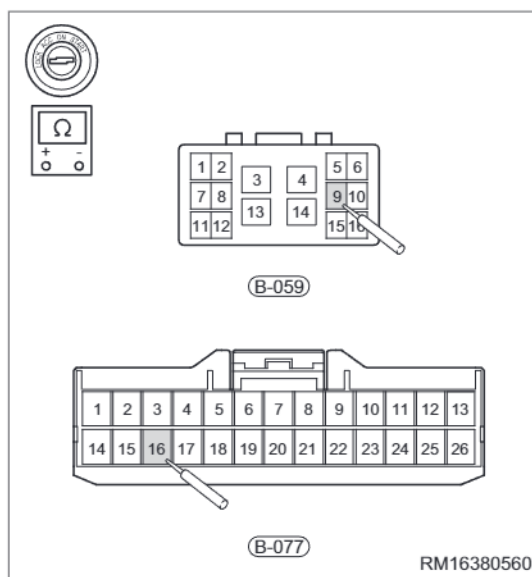
38

Multimeter Connection	Condition	Specified Condition
B-077 (16) - B-034 (14)	Always	Continuity



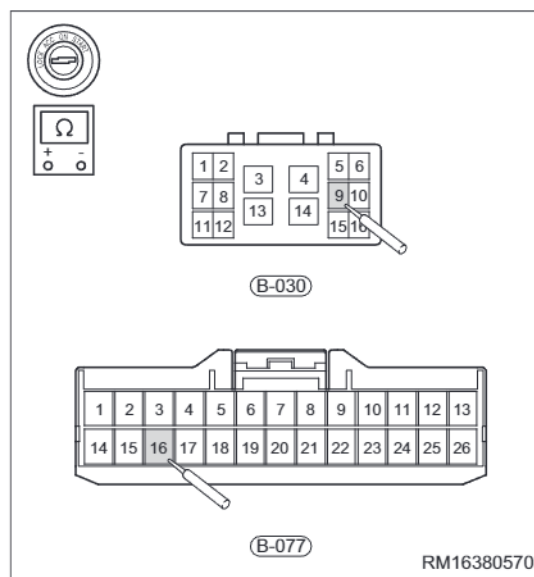
- o. Disconnect the body wire harness connectors B-077 and B-059.
- p. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-059 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-077 (16) - B-059 (9)	Always	Continuity



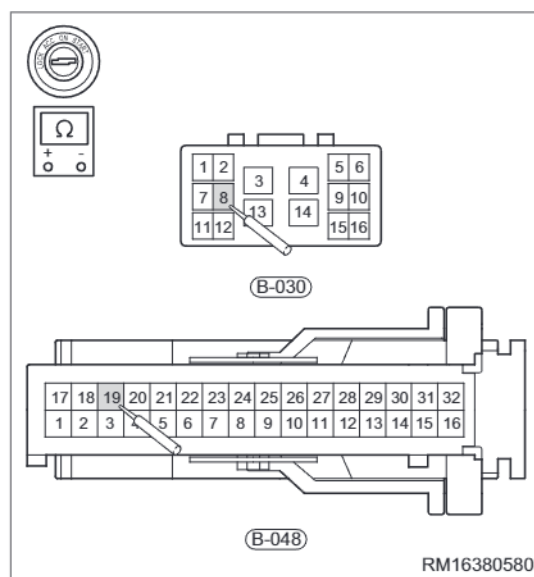
- q. Disconnect the body wire harness connectors B-077 and B-030.
- r. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-030 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-077 (16) - B-030 (9)	Always	Continuity



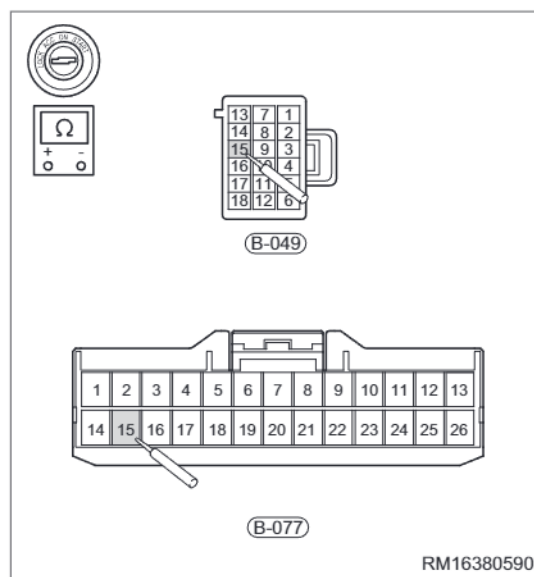
- s. Disconnect the body wire harness connectors B-048 and B-030.
- t. Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-030 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-048 (19) - B-030 (8)	Always	Continuity



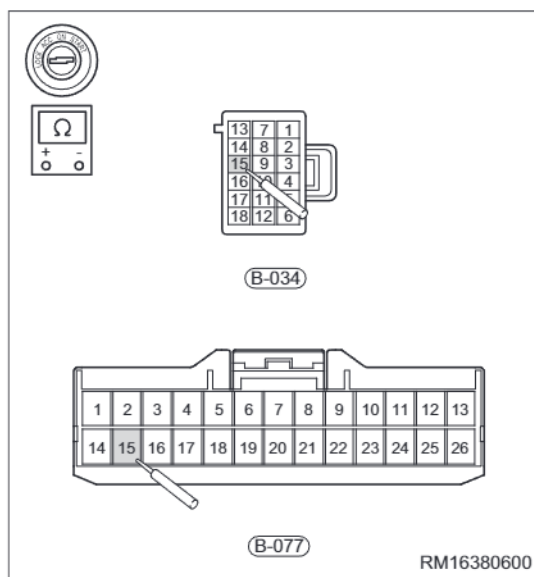
- u. Disconnect the body wire harness connectors B-077 and B-049.
- v. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-049 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-077 (15) - B-049 (15)	Always	Continuity



- w. Disconnect the body wire harness connectors B-077 and B-034.
- x. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-034 according to the table below.

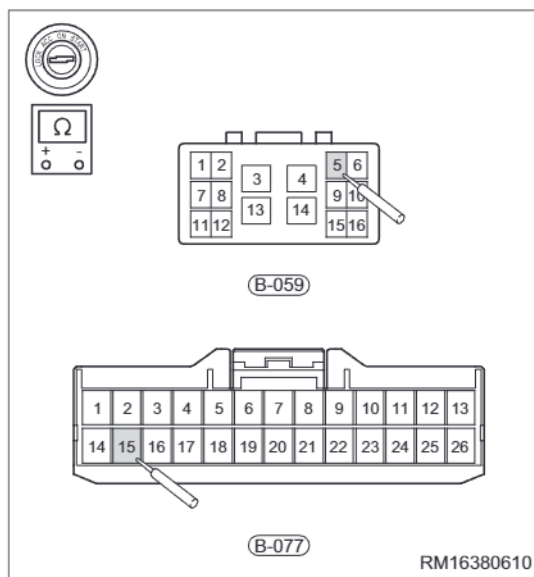
Multimeter Connection	Condition	Specified Condition
B-077 (15) - B-034 (15)	Always	Continuity



- y. Disconnect the body wire harness connectors B-077 and B-059.
- z. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-059 according to the table below.

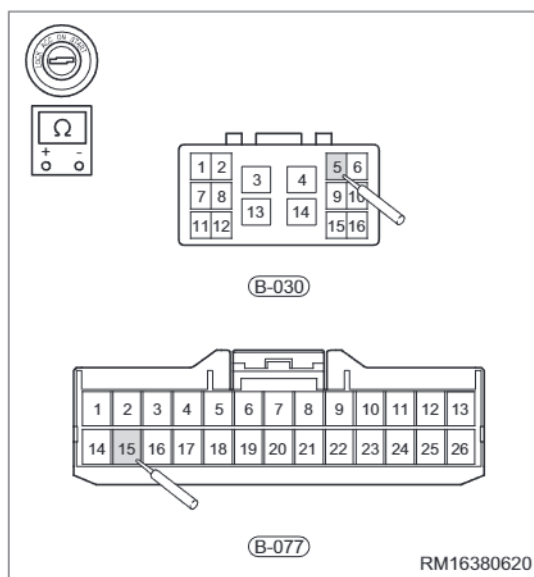
38

Multimeter Connection	Condition	Specified Condition
B-077 (15) - B-059 (5)	Always	Continuity



- aa. Disconnect the body wire harness connectors B-077 and B-030.
- ab. Using a digital multimeter, check for continuity between body wire harness connectors B-077 and B-030 according to the table below.

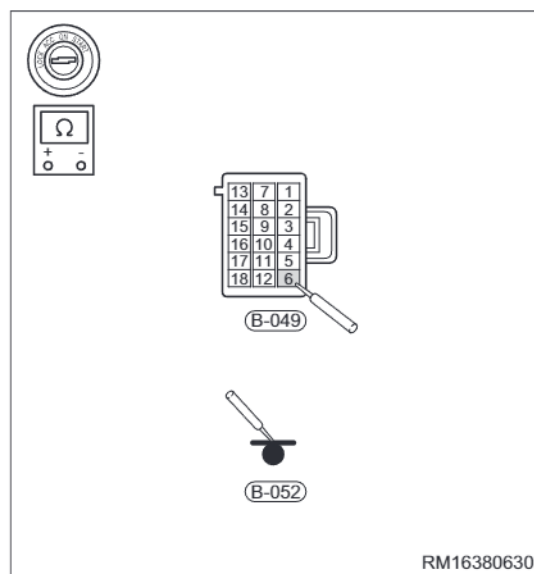
Multimeter Connection	Condition	Specified Condition
B-077 (15) - B-030 (5)	Always	Continuity



ac. Disconnect the body wire harness connector B-049 and ground B-052.

ad. Using a digital multimeter, check for continuity between body wire harness connector B-049 and ground B-052 according to the table below.

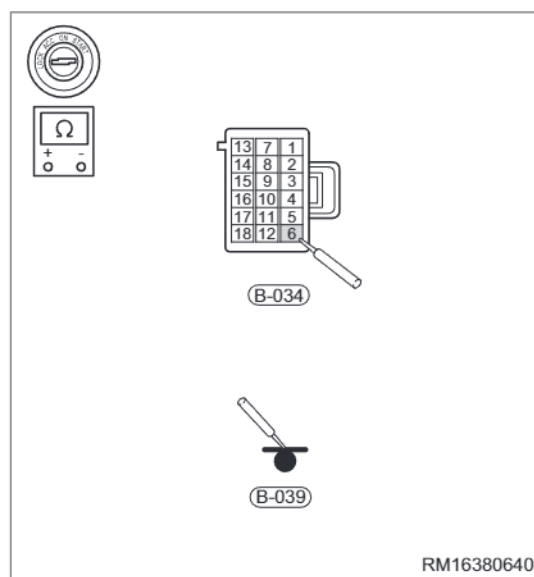
Multimeter Connection	Condition	Specified Condition
B-049 (6) - B-052	Always	Continuity



ae. Disconnect the body wire harness connector B-034 and ground B-039.

af. Using a digital multimeter, check for continuity between body wire harness connector B-034 and ground B-039 according to the table below.

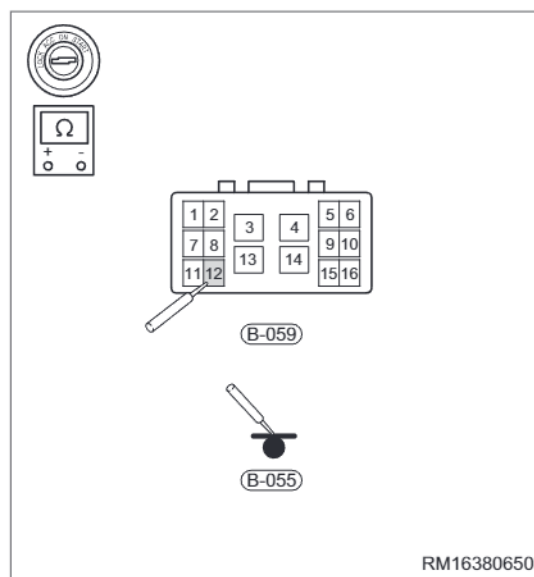
Multimeter Connection	Condition	Specified Condition
B-034 (6) - B-039	Always	Continuity



ag. Disconnect the body wire harness connector B-059 and ground B-055.

ah. Using a digital multimeter, check for continuity between body wire harness connector B-059 and ground B-055 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-059 (12) - B-055	Always	Continuity

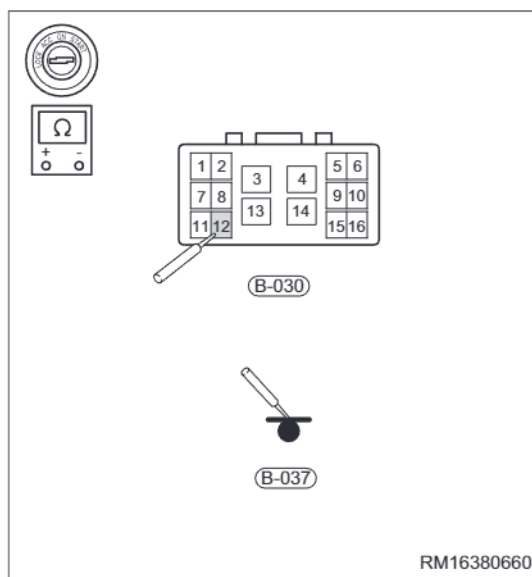


- ai. Disconnect the body wire harness connector B-030 and ground B-037.
- aj. Using a digital multimeter, check for continuity between body wire harness connector B-030 and ground B-037 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-030 (12) - B-037	Always	Continuity

NG

Repair or replace body wire harness and connector



OK

4

Check front left door wire harness and connector

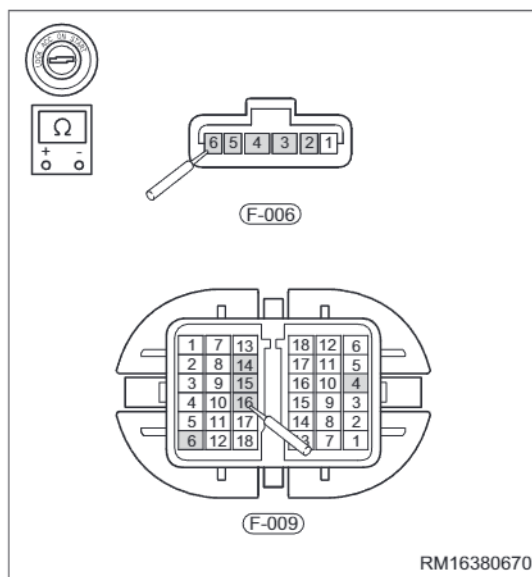
38

- a. Turn ignition switch to LOCK.
- b. Disconnect the negative battery cable.
- c. Disconnect the front left door wire harness connectors F-006 and F-009.
- d. Using a digital multimeter, check for continuity between front left door wire harness connectors F-006 and F-009 according to the table below.

Multimeter Connection	Condition	Specified Condition
F-006 (2) - F-009 (14)	Always	Continuity
F-006 (3) - F-009 (15)	Always	Continuity
F-006 (4) - F-009 (4)	Always	Continuity
F-006 (5) - F-009 (6)	Always	Continuity
F-006 (6) - F-009 (16)	Always	Continuity

NG

Repair or replace front left door wire harness and connector

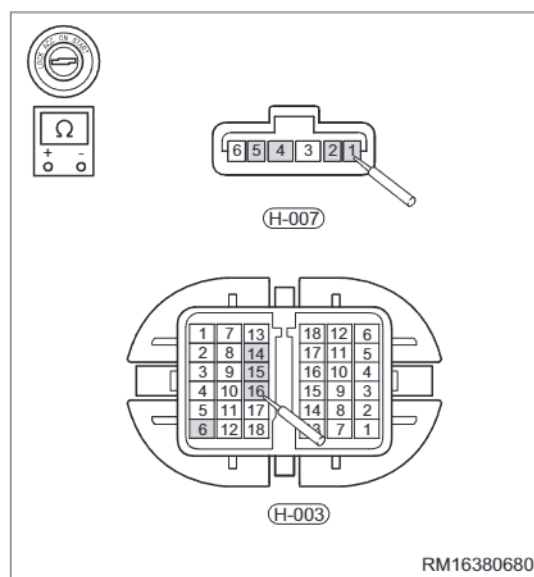


OK

5 Check front right door wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the front right door wire harness connectors H-003 and H-007.
- Using a digital multimeter, check for continuity between front right door wire harness connectors H-003 and H-007 according to the table below.

Multimeter Connection	Condition	Specified Condition
H-003 (1) - H-007 (16)	Always	Continuity
H-003 (2) - H-007 (6)	Always	Continuity
H-003 (4) - H-007 (15)	Always	Continuity
H-003 (5) - H-007 (14)	Always	Continuity



NG

Repair or replace front right door wire harness and connector

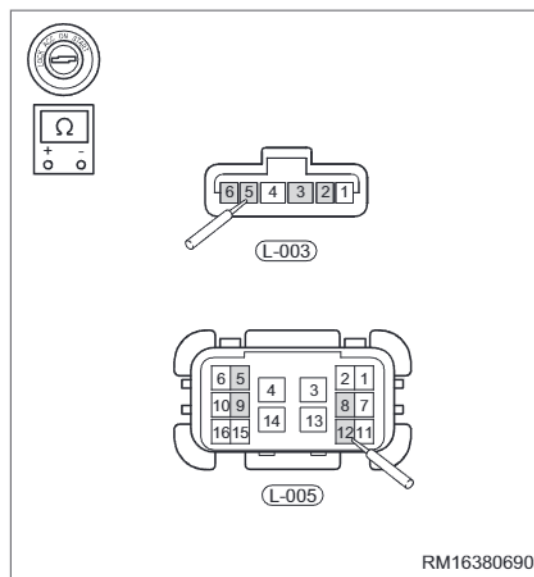
38

OK

6 Check rear left door wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the rear left door wire harness connectors L-003 and L-005.
- Using a digital multimeter, check for continuity between rear left door wire harness connectors L-003 and L-005 according to the table below.

Multimeter Connection	Condition	Specified Condition
L-003 (2) - L-005 (9)	Always	Continuity
L-003 (3) - L-005 (5)	Always	Continuity
L-003 (5) - L-005 (12)	Always	Continuity
L-003 (6) - L-005 (8)	Always	Continuity



NG

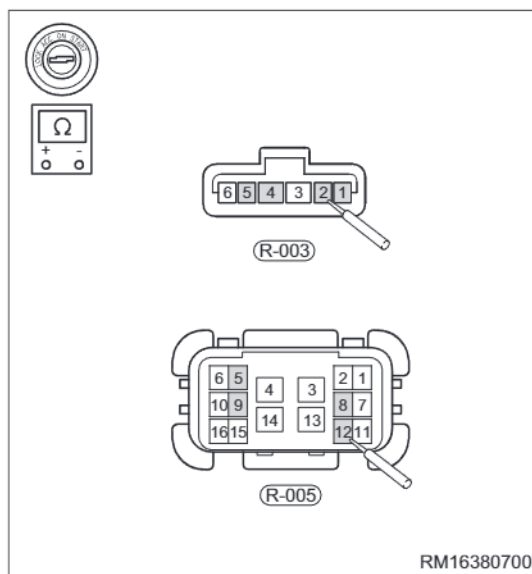
Repair or replace rear left door wire harness and connector

OK

7 Check rear right door wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the rear right door wire harness connectors R-003 and R-005.
- Using a digital multimeter, check for continuity between rear right door wire harness connectors R-003 and R-005 according to the table below.

Multimeter Connection	Condition	Specified Condition
R-003 (1) - R-005 (8)	Always	Continuity
R-003 (2) - R-005 (12)	Always	Continuity
R-003 (4) - R-005 (5)	Always	Continuity
R-003 (5) - R-005 (9)	Always	Continuity



38

NG

Repair or replace rear right door wire harness and connector

OK

8 Reconfirm DTCs

- Connect all connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in Body Control Module (BCM).
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester (the latest software) to read DTCs stored in Body Control Module (BCM) again.
- Read the DTCs.

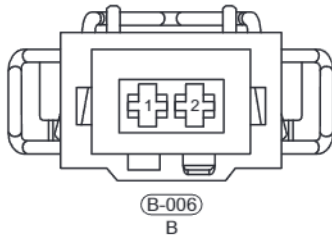
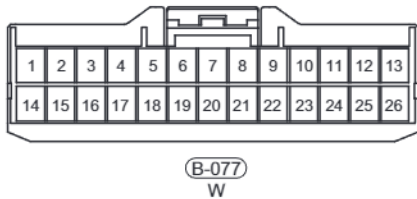
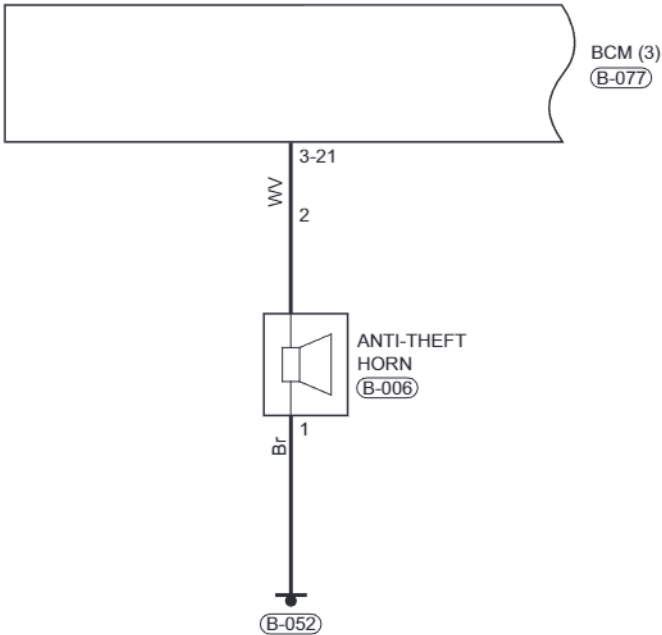
Result	Proceed to
DTCs B101B-18, B101B-19, B101B-71, B101C-18, B101C-19, B101C-71, B101E-16, B101E-17 are output	NG
No DTC is output	OK

NG

Replace Body Control Module (BCM)

OKSystem is normal

DTC	B101D-18	Siren Control Circuit Current Below Threshold
DTC	B101D-19	Siren Control Circuit Current Above Threshold



EM16380050

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Suspected Area
B101D-18	Siren Control Circuit Current Below Threshold	Ignition switch ON	• Anti-theft horn • Wire harness or connector • Body Control Module (BCM)
B101D-19	Siren Control Circuit Current Above Threshold		

DTC Confirmation Procedure

Confirm that battery voltage is over 12 V before performing following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in Body Control Module (BCM).
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON, and then select Read Code.
- If DTC is detected, malfunction indicated by DTC is present. Go to Diagnosis Procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent ([See page 38-19](#)).

38

CAUTION

- When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

Diagnosis Procedure

1 Check anti-theft horn

- Remove the anti-theft horn from malfunctioning vehicle, then install it to a new vehicle and perform test.
- Connect all connectors.
- Connect the negative battery cable and turn ignition switch to ON.
- Check the anti-theft horn operation.

NG

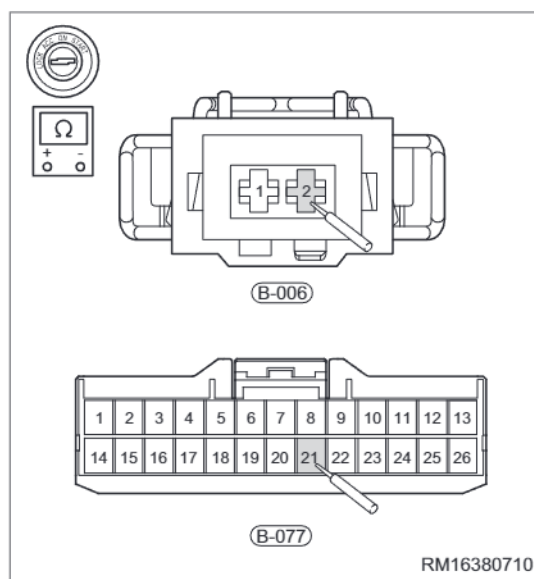
Replace anti-theft horn

OK

2 Check body wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the body wire harness connectors B-006 and B-077.
- Using a digital multimeter, check for continuity between body wire harness connectors B-006 and B-077 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-006 (2) - B-077 (21)	Always	Continuity

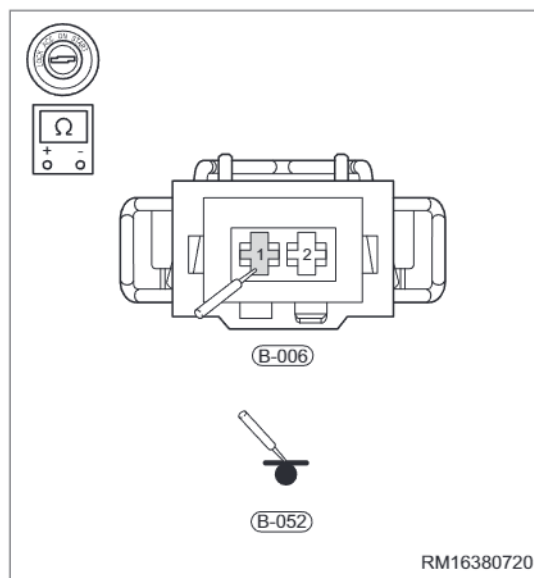


- Disconnect the body wire harness connector B-006 and ground B-052.
- Using a digital multimeter, check for continuity between body wire harness connector B-006 and ground B-052 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-006 (1) - B-052	Always	Continuity

NG

Repair or replace body wire harness and connector



OK

3 Reconfirm DTCs

- Connect all connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in Body Control Module (BCM).
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester (the latest software) to read the DTCs stored in Body Control Module (BCM) again.

h. Read the DTCs.

Result	Proceed to
DTCs B101D-18 and B101D-19 are output	NG
No DTC is output	OK

NG

Replace Body Control Module (BCM)

OK

System is normal

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Suspected Area
B101F-12	Trunk Control Circuit Short to Battery	Ignition switch ON	ON	- Wire harness or connector - Body Control Module (BCM)
B101F-13	Trunk Control Circuit Open			

DTC Confirmation Procedure

Confirm that battery voltage is between 11 to 14 V before performing following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in Body Control Module (BCM).
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON, and then select Read Code.
- If DTC is detected, malfunction indicated by DTC is present. Go to Diagnosis Procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent ([See page 38-19](#)).

CAUTION

- When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

38

Diagnosis Procedure

1 Check fuse

- Unplug the fuse TF04 (10A) from luggage compartment fuse and relay box.
- Check the resistance of fuse TF04.

Standard resistance: less than 1 Ω

NG

Replace fuse

OK

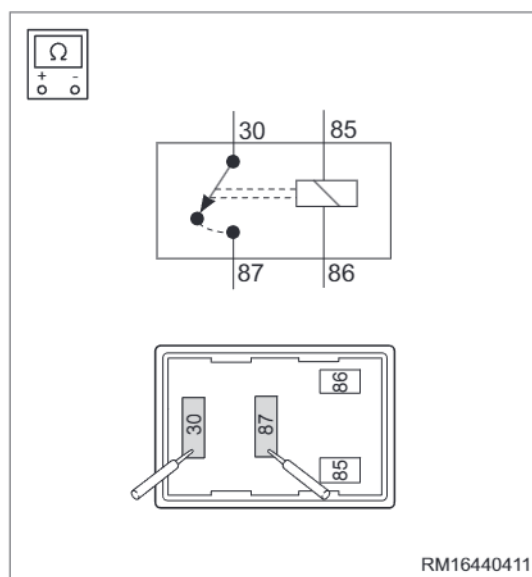
2 Check luggage compartment lock relay

- Unplug the luggage compartment lock relay from luggage compartment fuse and relay box.
- Check the luggage compartment lock relay terminals.

Multimeter Connection	Specified Condition
Terminal 30 - Terminal 87	No continuity
Terminal 30 - Terminal 87	Continuity (When battery voltage is applied between terminal 85 and terminal 86)

NG

Replace luggage compartment lock relay



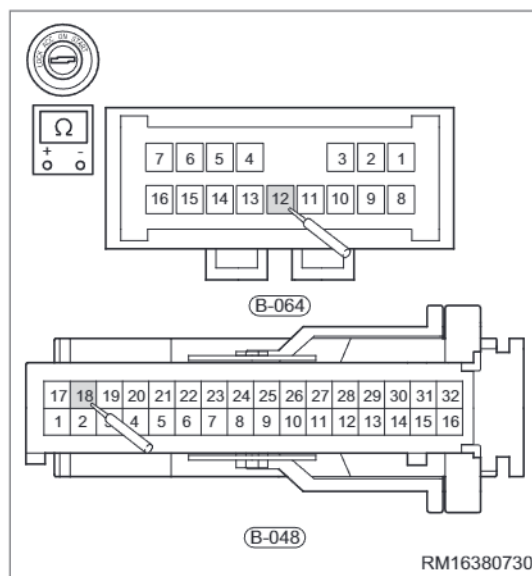
OK

38

3 Check body wire harness and connector

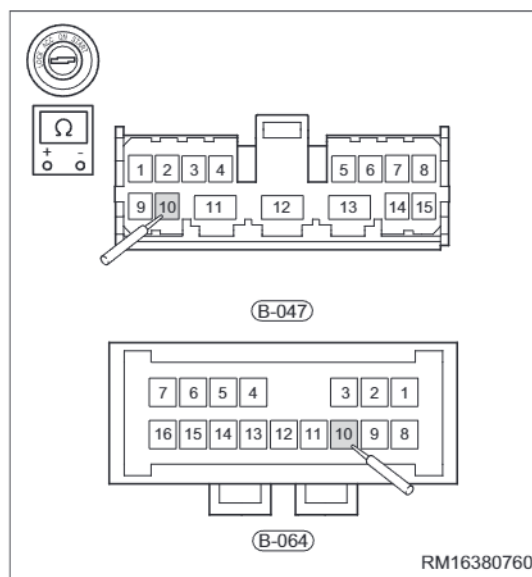
- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the body wire harness connectors B-048 and B-064.
- Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-064 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-048 (18) - B-064 (12)	Always	Continuity



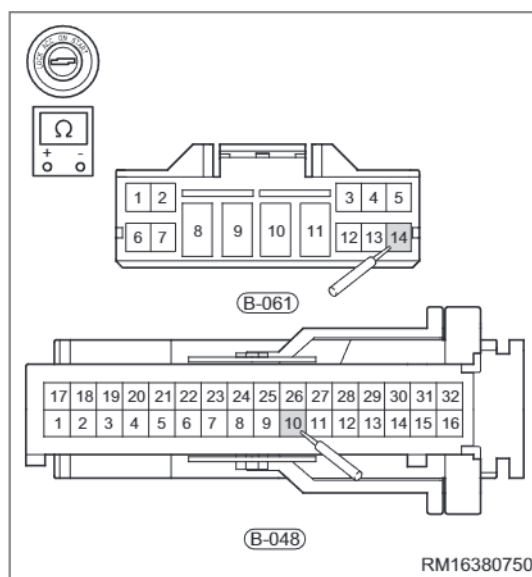
- e. Disconnect the body wire harness connectors B-047 and B-064.
- f. Using a digital multimeter, check for continuity between body wire harness connectors B-047 and B-064 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-047 (10) - B-064 (10)	Always	Continuity



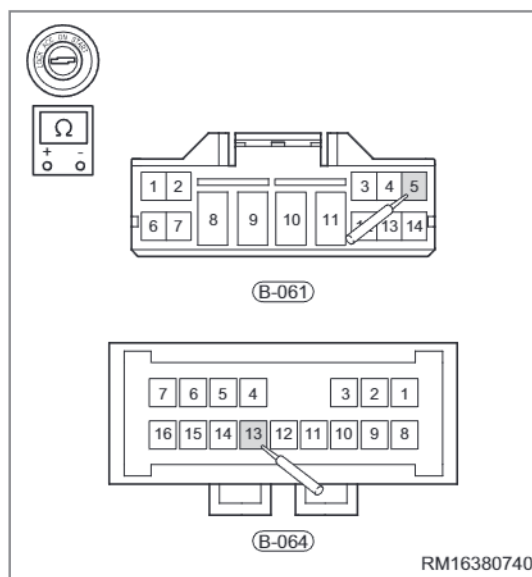
- g. Disconnect the body wire harness connectors B-048 and B-061.
- h. Using a digital multimeter, check for continuity between body wire harness connectors B-048 and B-061 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-048 (10) - B-061 (14)	Always	Continuity



- i. Disconnect the body wire harness connectors B-061 and B-064.
- j. Using a digital multimeter, check for continuity between body wire harness connectors B-061 and B-064 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-061 (5) - B-064 (13)	Always	Continuity

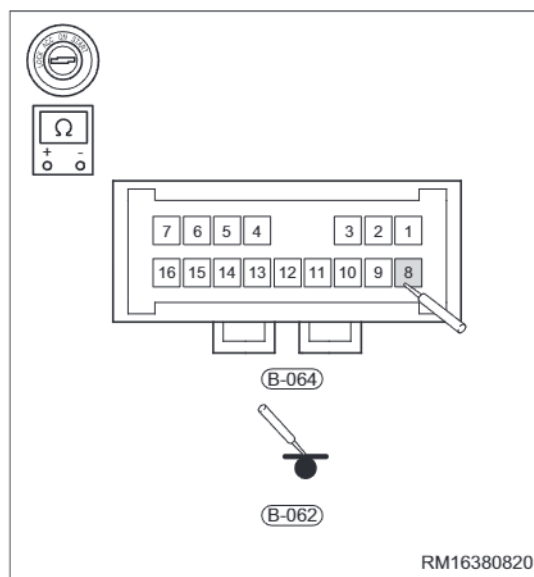


- k. Disconnect the body wire harness connector B-064 and ground B-062.
- l. Using a digital multimeter, check for continuity between body wire harness connector B-064 and ground B-062 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-064 (8) - B-062	Always	Continuity

NG

Repair or replace body wire harness and connector



OK

4

Check instrument panel wire harness and connector

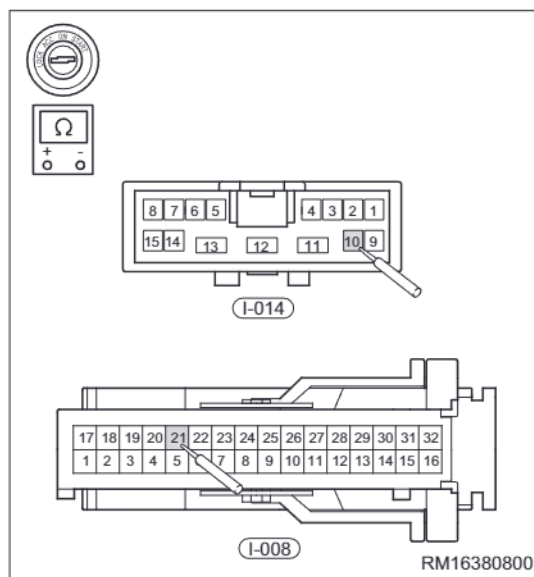
38

- a. Turn ignition switch to LOCK.
- b. Disconnect the negative battery cable.
- c. Disconnect the instrument panel wire harness connectors I-008 and I-014.
- d. Using a digital multimeter, check for continuity between instrument panel wire harness connectors I-008 and I-014 according to the table below.

Multimeter Connection	Condition	Specified Condition
I-008 (21) - I-014 (10)	Always	Continuity

NG

Repair or replace instrument panel wire harness and connector

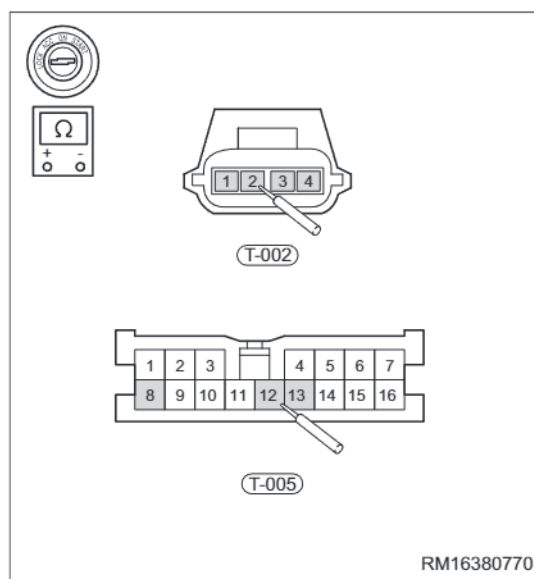


OK

5 Check luggage compartment harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the luggage compartment wire harness connectors T-005 and T-002.
- Using a digital multimeter, check for continuity between luggage compartment wire harness connectors T-005 and T-002 according to the table below.

Multimeter Connection	Condition	Specified Condition
T-005 (8) - T-002 (1, 3)	Always	Continuity
T-005 (12) - T-002 (2)	Always	Continuity
T-005 (13) - T-002 (4)	Always	Continuity



NG

Repair or replace luggage compartment wire harness and connector

OK

38

6 Reconfirm DTCs

- Connect all connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in Body Control Module (BCM).
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester (the latest software) to read DTCs stored in Body Control Module (BCM) again.
- Read the DTCs.

Result	Proceed to
DTCs B101F-12 and B101F-13 are output	NG
No DTC is output	OK

NG

Replace Body Control Module (BCM)

OK

System is normal

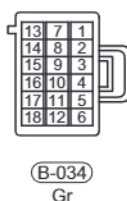
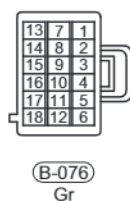
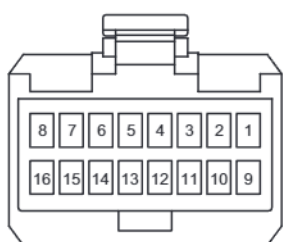
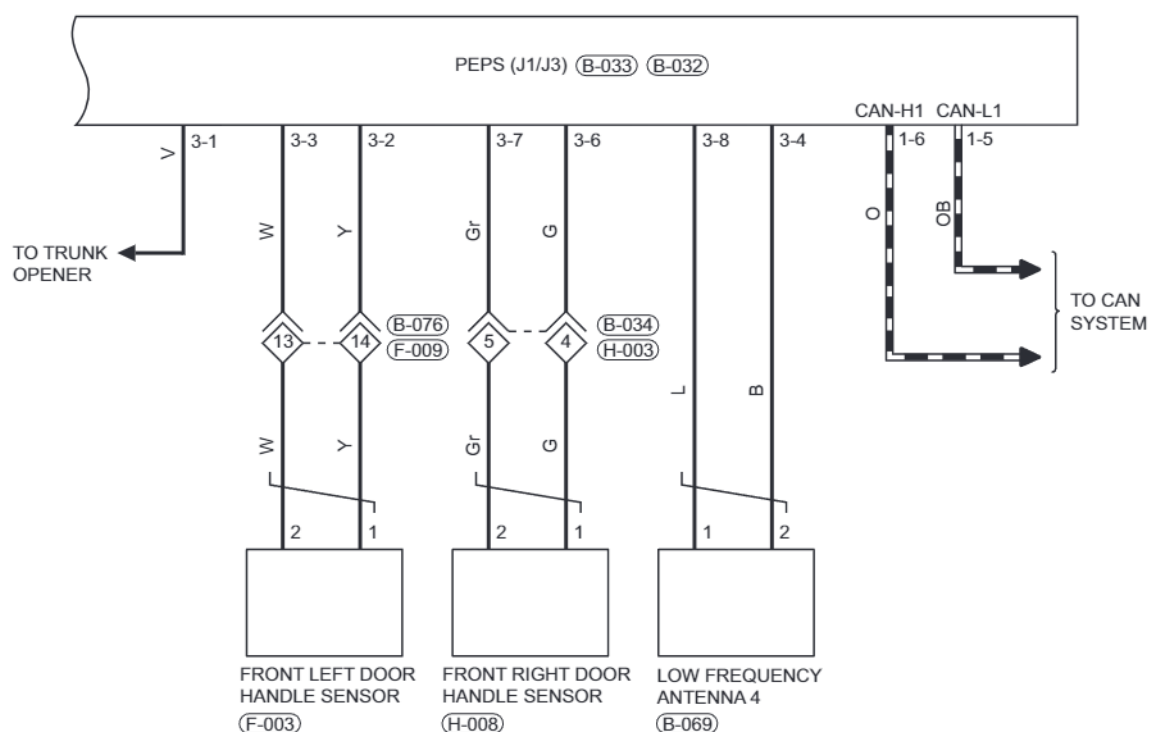


DTC	B1500-13	Driver Door Outside LF Antenna Circuit Open
-----	----------	---

DTC	B1501-13	Passenger Door Outside LF Antenna Circuit Open
-----	----------	--

DTC	B1505-13	Bumper LF Antenna Circuit Open
-----	----------	--------------------------------

*: W/ PEPS



EM16380032

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Definition	Suspected Area
B1500-13	Driver Door Outside LF Antenna Circuit Open	Ignition switch ON	- Front left door handle sensor (built-in low frequency antenna) - Front right door handle sensor (built-in low frequency antenna) - Luggage compartment door handle sensor - Wire harness or connector - PEPS controller
B1501-13	Passenger Door Outside LF Antenna Circuit Open		
B1505-13	Bumper LF Antenna Circuit Open		

DTC Confirmation Procedure

Confirm that battery voltage is between 11 to 14 V before performing following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network.
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in PEPS system.
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON, and then select Read Code.
- If DTC is detected, malfunction indicated by DTC is present. Go to Diagnosis Procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent ([See page 38-19](#)).

38

CAUTION

- When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

Diagnosis Procedure

1

Check front left door handle sensor (built-in low frequency antenna)

- Remove the front left door handle sensor (built-in low frequency antenna) from malfunctioning vehicle, install it to a new vehicle and perform a test.
- Connect all connectors.
- Connect the negative battery cable and turn ignition switch to ON.
- Check the front left door handle sensor (built-in low frequency antenna) operation.

NG

Replace front left door handle sensor
(built-in low frequency antenna)

OK

2 Check front right door handle sensor (built-in low frequency antenna)

- Remove the front right door handle sensor (built-in low frequency antenna) from malfunctioning vehicle, install it to a new vehicle and perform a test.
- Connect all connectors.
- Connect the negative battery cable and turn ignition switch to ON.
- Check the front right door handle sensor (built-in low frequency antenna) operation.

NG

**Replace front right door handle sensor
(built-in low frequency antenna)**

OK**3 Check luggage compartment door handle sensor**

- Remove the luggage compartment door handle sensor from malfunctioning vehicle, install it to a new vehicle and perform a test.
- Connect all connectors.
- Connect the negative battery cable and turn ignition switch to ON.
- Check luggage compartment door handle sensor operation.

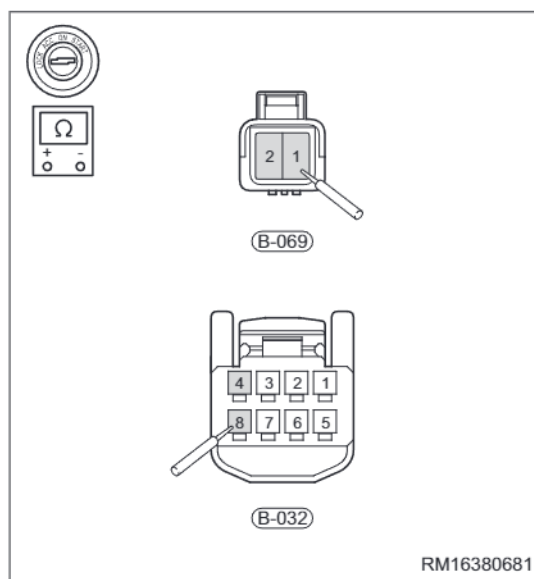
38**NG**

**Replace luggage compartment door
handle sensor**

OK**4 Check body wire harness and connector**

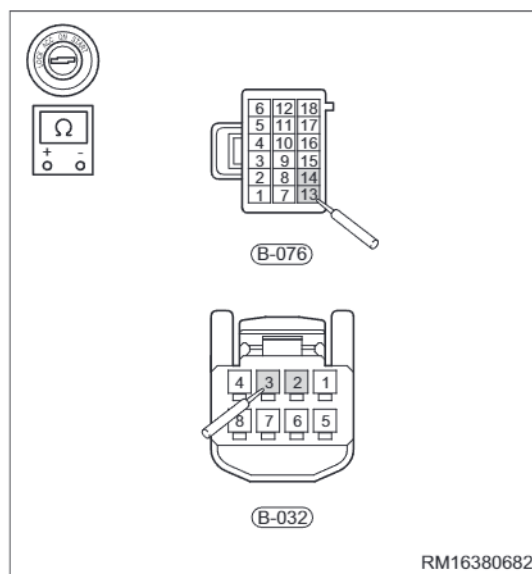
- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the body wire harness connectors B-032 and B-069.
- Using a digital multimeter, check for continuity between body wire harness connectors B-032 and B-069 according to the value(s) in the table below.

Multimeter Connection	Condition	Specified Condition
B-032 (4) - B-069 (2)	Always	Continuity
B-032 (8) - B-069 (1)	Always	Continuity



- e. Disconnect the body wire harness connectors B-032 and B-076.
- f. Using a digital multimeter, check for continuity between body wire harness connectors B-032 and B-076 according to the value(s) in the table below.

Multimeter Connection	Condition	Specified Condition
B-032 (2) - B-076 (14)	Always	Continuity
B-032 (3) - B-076 (13)	Always	Continuity

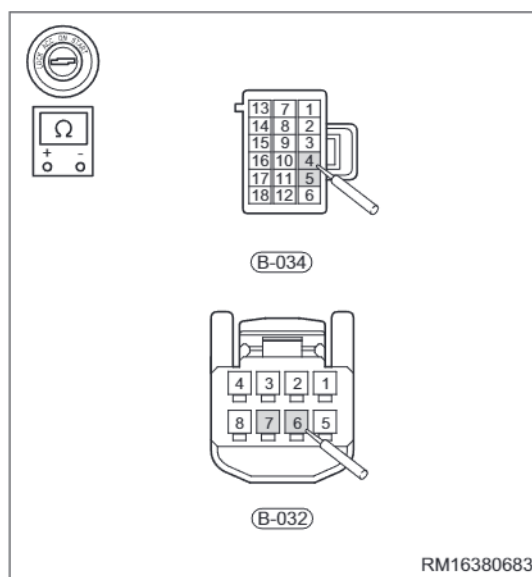


- g. Disconnect the body wire harness connectors B-032 and B-034.
- h. Using a digital multimeter, check for continuity between body wire harness connectors B-032 and B-034 according to the value(s) in the table below.

Multimeter Connection	Condition	Specified Condition
B-032 (6) - B-034 (4)	Always	Continuity
B-032 (7) - B-034 (5)	Always	Continuity

NG

Repair or replace body wire harness and connector



OK

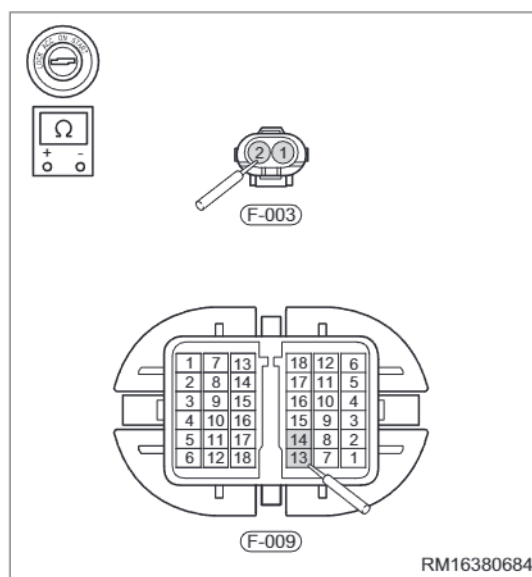
5 Check front left door wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the front left door wire harness connectors F-003 and F-009.
- Using a digital multimeter, check for continuity between front left door wire harness connectors F-003 and F-009 according to the value(s) in the table below.

Multimeter Connection	Condition	Specified Condition
F-003 (1) - F-009 (14)	Always	Continuity
F-003 (2) - F-009 (13)	Always	Continuity

NG

Repair or replace front left door wire harness and connector



OK

38

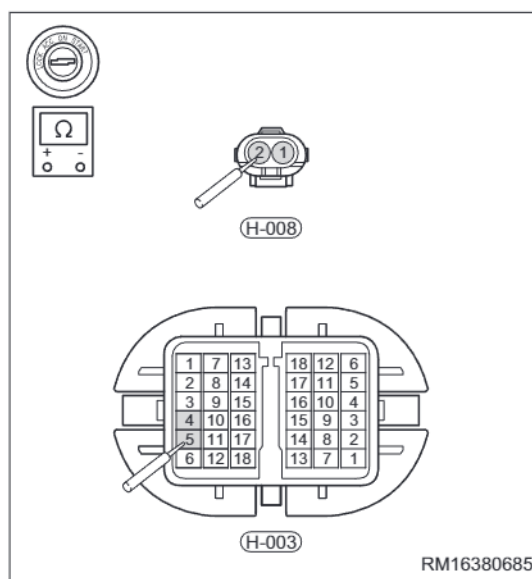
6 Check front right door wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the front right door wire harness connectors H-003 and H-008.
- Using a digital multimeter, check for continuity between front right door wire harness connectors H-003 and H-008 according to the value(s) in the table below.

Multimeter Connection	Condition	Specified Condition
H-003 (4) - H-008 (1)	Always	Continuity
H-003 (5) - H-008 (2)	Always	Continuity

NG

Repair or replace front right door wire harness and connector



OK

7**Reconfirm DTCs**

- a. Connect all connectors.
- b. Connect the negative battery cable.
- c. Turn ignition switch to ON.
- d. Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in PEPS system.
- e. Turn ignition switch to LOCK and wait for a few seconds.
- f. Turn ignition switch to ON.
- g. Use X-431 3G diagnostic tester (the latest software) to read DTCs stored in PEPS system again.
- h. Read the DTCs.

Result	Proceed to
DTC B1500-13, B1501-13, B1505-13 are output	NG
No DTC is output	OK

NG

**Replace Passive Entry & Passive Start
(PEPS) controller**

OK**System is normal****38**

ON-VEHICLE SERVICE

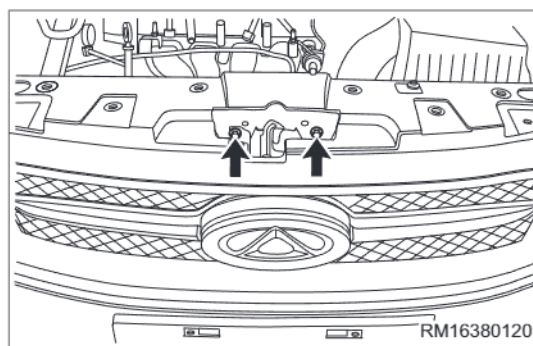
Engine Hood Lock Assembly

Removal

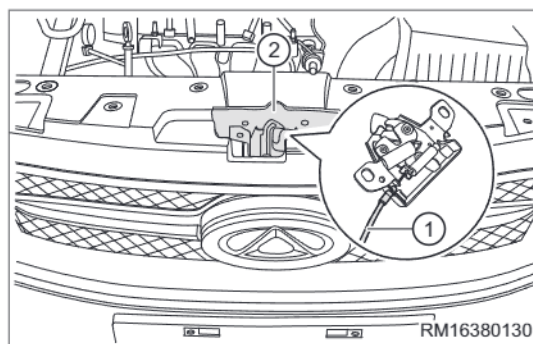
CAUTION

- Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood lock assembly.
- Try to prevent body paint surface from being scratched, when removing engine hood lock assembly.

1. Remove the engine hood lock assembly.
 - a. Remove 2 fixing bolts (arrow) from engine hood lock assembly.
(Tightening torque: 9 ± 1 N·m)



- b. Disengage the engine hood cable assembly (1) from slot and remove the engine hood lock assembly (2).



Installation

Installation is in the reverse order of removal.

CAUTION

- Check if engine hood operates properly, after installing engine hood lock assembly.

Front Door Lock Assembly

Removal

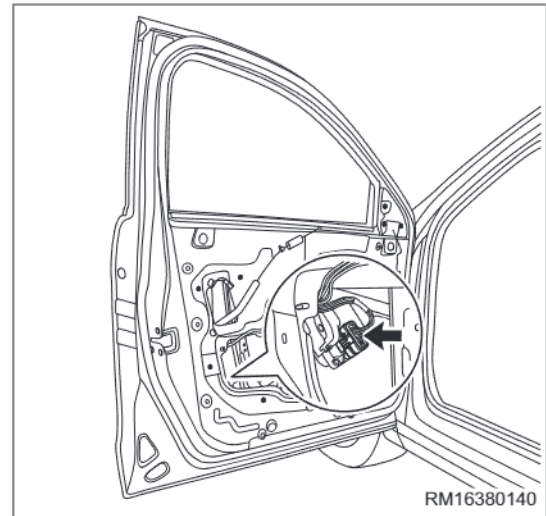
HINT:

- Use same procedures for right and left sides.
- Procedures listed below are for left side.

CAUTION

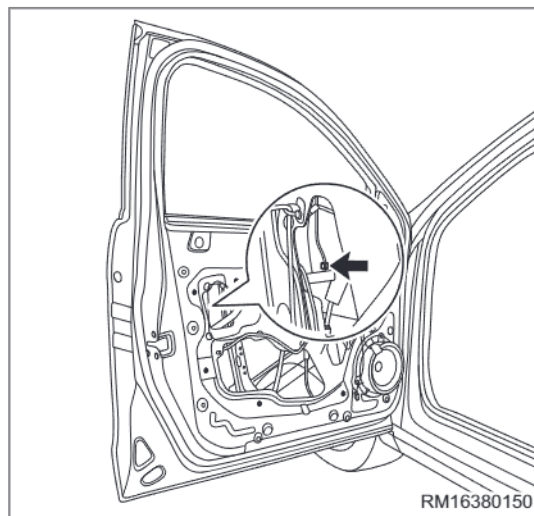
- Be sure to wear necessary safety equipment to prevent accidents, when removing front door lock assembly.
- Try to prevent interior and body paint from being scratched, when removing front door lock assembly.

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front left door inner protector assembly ([See page 48-22](#)).
4. Remove the front left door metal bracket ([See page 48-26](#)).
5. Remove the front left door protective film assembly ([See page 48-26](#)).
6. Remove the front left door glass rear guide rail assembly ([See page 44-56](#)).
7. Remove the front left door lock assembly.
 - a. Disconnect the connector (arrow) from front door lock assembly.

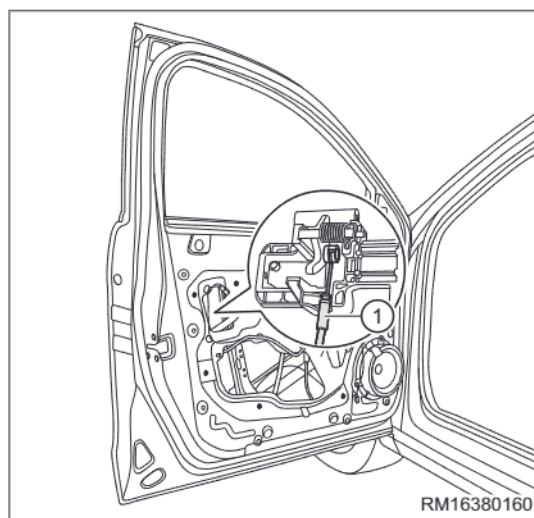


38

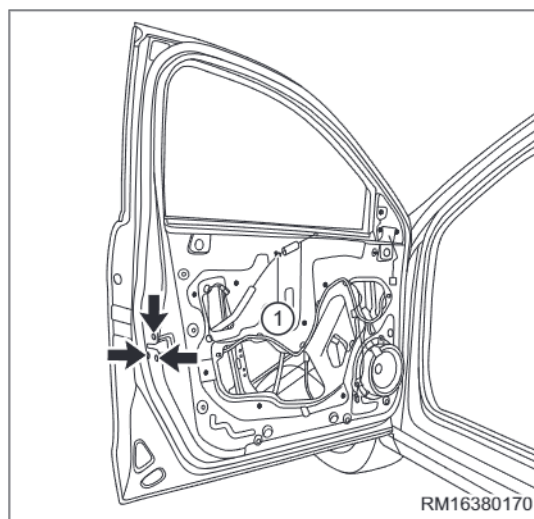
- b. Disengage the clip (arrow) between front door lock assembly and front door key cylinder lever.



- c. Disengage the front door outside handle cable (1) from the slot of front door handle base.



- d. Disengage the clip (1) from front door inside handle cable.
- e. Remove 3 fixing screws (arrow) from front door lock assembly, and remove the front door lock assembly. (Tightening torque: 5 ± 1 N·m)



Inspection

1. Check the front door lock assembly (fastener assembly).
 - a. Apply battery voltage to the terminals of front door lock assembly (fastener assembly) connector and check if front door lock assembly operates normally according to the table below.

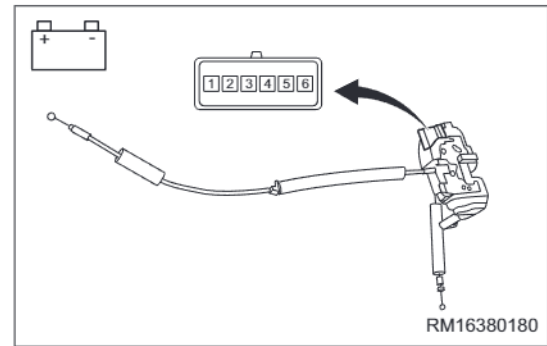
Front left door lock assembly

Measurement Condition	Specified Condition
Battery positive (+) - Terminal 3 Battery negative (-) - Terminal 2	Lock
Battery positive (+) - Terminal 2 Battery negative (-) - Terminal 3	Unlock

Front right door lock assembly

Measurement Condition	Specified Condition
Battery positive (+) - Terminal 4 Battery negative (-) - Terminal 5	Lock
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 4	Unlock

If result is not as specified, replace front door lock assembly.



Installation

Installation is in the reverse order of removal.

CAUTION

- Check if connector is installed correctly, when installing front door lock assembly.
- Install the clips and cables in place, when installing front door lock assembly.
- Check if front door lock operates properly, after installing front door lock assembly.

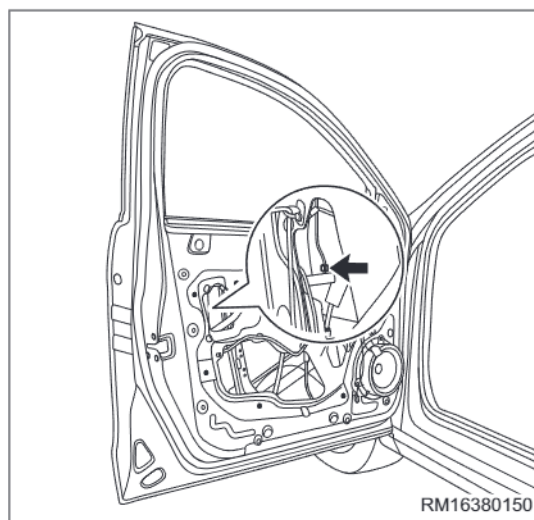
Front Door Key Cylinder Assembly

Removal

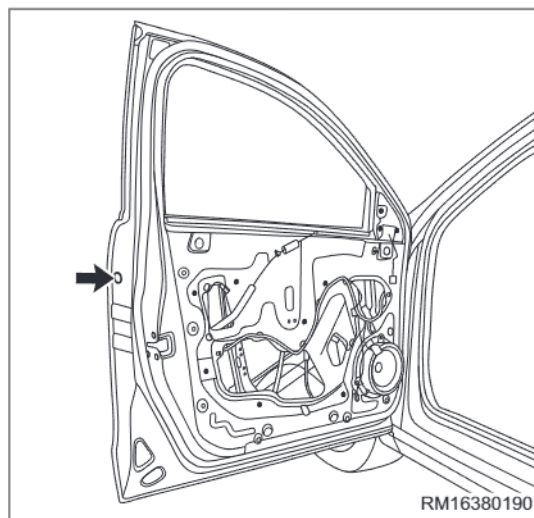
CAUTION

- Be sure to wear necessary safety equipment to prevent accidents, when removing front door key cylinder assembly.
- Try to prevent body paint surface from being scratched, when removing front door key cylinder assembly.

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front left door inner protector assembly ([See page 48-22](#)).
4. Remove the front left door metal bracket ([See page 48-26](#)).
5. Remove the front left door protective film assembly ([See page 48-26](#)).
6. Remove the front left door key cylinder assembly.
 - a. Disengage the clip (arrow) between front door lock assembly and front door key cylinder lever.



- b. Remove the front door outside handle protective cover block cover (arrow).

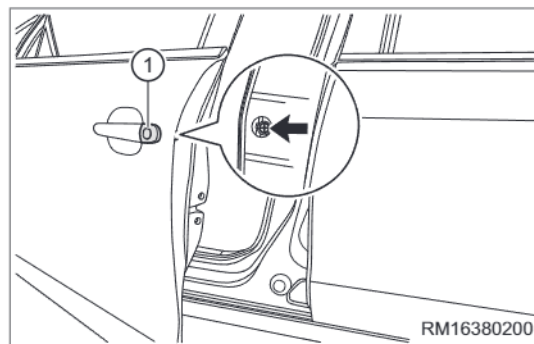


- c. Loosen the fixing screw (arrow) from front door key cylinder assembly, and remove the front door key cylinder assembly and front door handle protective cover (1).

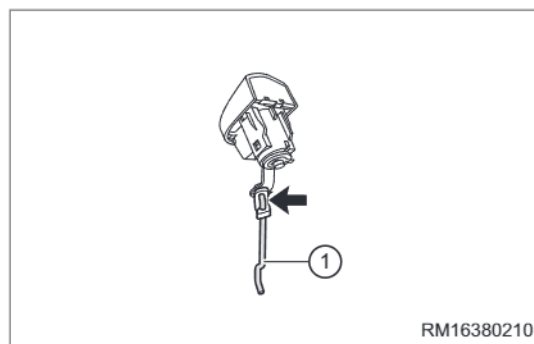
(Tightening torque: $7 \pm 1 \text{ N}\cdot\text{m}$)

HINT:

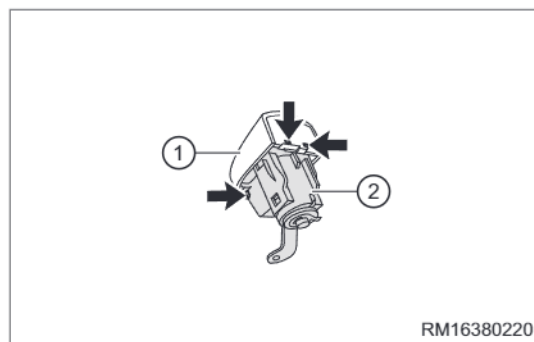
It is unnecessary to remove the fixing screw on the front door key cylinder assembly, because the fixing screw is integrated with the front door handle base.



- d. Disengage the clip (arrow) from front door key cylinder lever, and remove the front door key cylinder lever (1).



- e. Using a screwdriver wrapped with protective tape, disengage the claws (arrow) and separate the front door handle protective cover (1) from front door key cylinder assembly (2).



38

Installation

Installation is in the reverse order of removal.

CAUTION

- Install the clip on the lever in place, when installing front door key cylinder assembly.
- Check if front door key cylinder operates properly, after installing front door key cylinder assembly.

Front Door Lock Striker Assembly

Removal

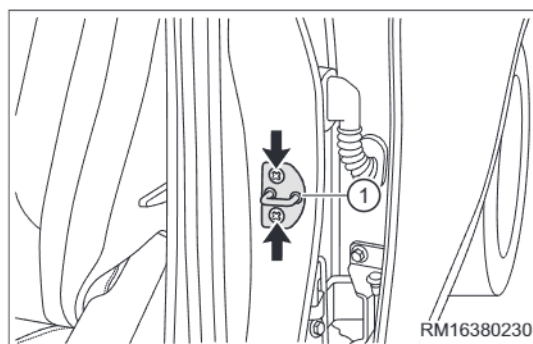
HINT:

- Use same procedures for right and left sides.
- Procedures listed below are for left side.

CAUTION

- Be sure to wear necessary safety equipment to prevent accidents, when removing front door lock striker assembly.
- Try to prevent body paint surface from being scratched, when removing front door lock striker assembly.

1. Remove the front left door lock striker assembly.
 - a. Remove 2 fixing screws (arrow) from front door lock striker assembly, and remove the front left door lock striker assembly (1).
(Tightening torque: 23 ± 1 N·m)



Installation

Installation is in the reverse order of removal.

Rear Door Lock Assembly

Removal

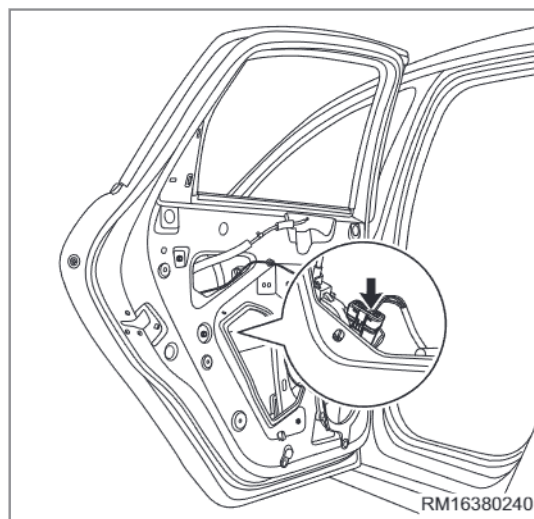
HINT:

- Use same procedures for right and left sides.
- Procedures listed below are for left side.

CAUTION

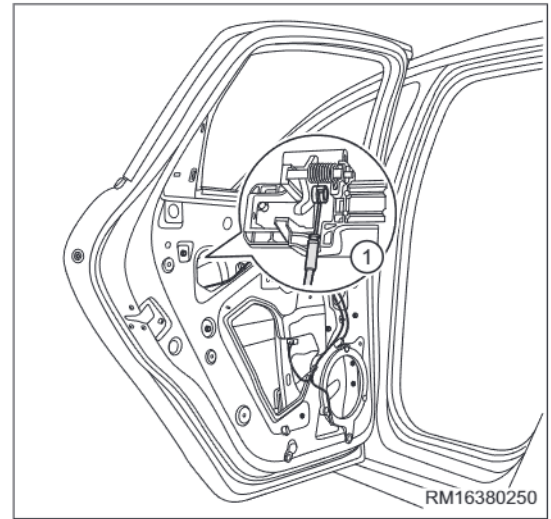
- Be sure to wear necessary safety equipment to prevent accidents, when removing rear door lock assembly.
- Try to prevent interior and body paint from being scratched, when removing rear door lock assembly.

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the rear left door inner protector assembly ([See page 48-34](#)).
4. Remove the rear left door metal bracket ([See page 48-37](#)).
5. Remove the rear left door protective film assembly ([See page 48-37](#)).
6. Remove the rear left door glass rear guide rail assembly ([See page 44-68](#)).
7. Remove the rear left door lock assembly.
 - a. Disconnect the connector (arrow) from rear door lock assembly.

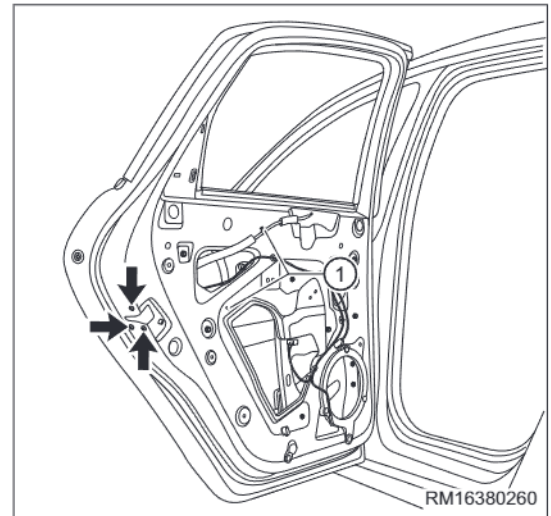


38

- b. Disengage the rear door outside handle cable (1) from the slot of rear door handle base.



- c. Disengage the clips (1) from rear door inside handle cable.
- d. Remove 3 fixing screws (arrow) from rear door lock assembly, and remove the rear door lock assembly. (Tightening torque: 5 ± 1 N·m)



Inspection

1. Check the rear door lock assembly (fastener assembly).
 - a. Apply battery voltage to the terminals of rear door lock assembly (fastener assembly) connector and check the operation of rear door lock assembly according to the table below.

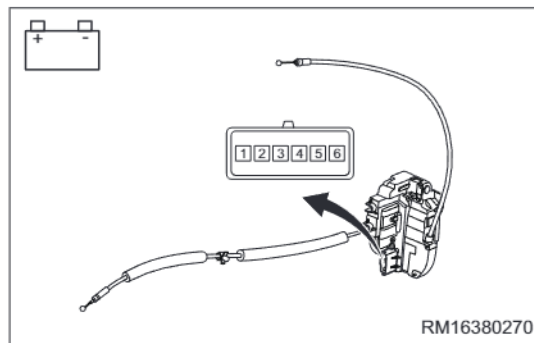
Rear left door lock assembly

Measurement Condition	Specified Condition
Battery positive (+) - Terminal 3 Battery negative (-) - Terminal 2	Lock
Battery positive (+) - Terminal 2 Battery negative (-) - Terminal 3	Unlock

Rear right door lock assembly

Measurement Condition	Specified Condition
Battery positive (+) - Terminal 4 Battery negative (-) - Terminal 5	Lock
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 4	Unlock

If result is not as specified, replace the rear door lock assembly.



Installation

Installation is in the reverse order of removal.

CAUTION

- Check if connector is installed correctly, when installing rear door lock assembly.
- Install the cable in place, when installing rear door lock assembly.
- Check if rear door lock operates properly, after installing rear door lock assembly.

Rear Door Lock Striker Assembly

Removal

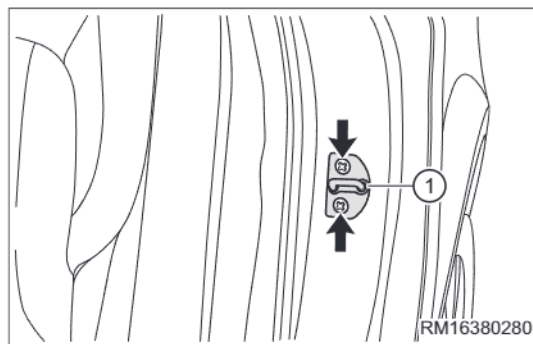
HINT:

- Use same procedures for right and left sides.
- Procedures listed below are for left side.

CAUTION

- Be sure to wear necessary safety equipment to prevent accidents, when removing rear door lock striker.
- Try to prevent body paint surface from being scratched, when removing rear door lock striker.

1. Remove the rear left door lock striker assembly.
 - a. Remove 2 fixing screws (arrow) from rear door lock striker, and remove the rear left door lock striker assembly (1).
(Tightening torque: 23 ± 1 N·m)



Installation

Installation is in the reverse order of removal.

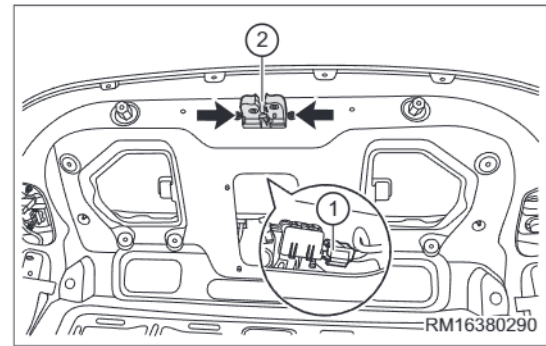
Luggage Compartment Lock Assembly

Removal

CAUTION

- Be sure to wear necessary safety equipment to prevent accidents, when removing luggage compartment lock assembly.
- Try to prevent interior and body paint from being scratched, when removing luggage compartment lock assembly.

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the luggage compartment door trim assembly (See page 48-45).
4. Remove the luggage compartment lock assembly.
 - a. Disconnect the connector (1) from luggage compartment lock assembly.
 - b. Remove 2 fixing screws (arrow) from luggage compartment lock assembly, and remove the luggage compartment lock assembly (2).
(Tightening torque: $9 \pm 1 \text{ N}\cdot\text{m}$)



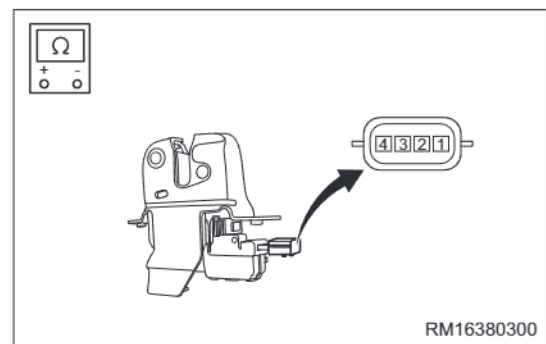
38

Inspection

1. Check the luggage compartment lock assembly.
 - a. Using a digital multimeter, check for continuity between terminals of luggage compartment lock assembly according to the table below.

Multimeter Connection	Switch Condition	Specified Condition
Terminal 1 - Terminal 2	ON	Continuity
	OFF	No continuity
Terminal 3 - Terminal 4	ON	Continuity
	OFF	Continuity

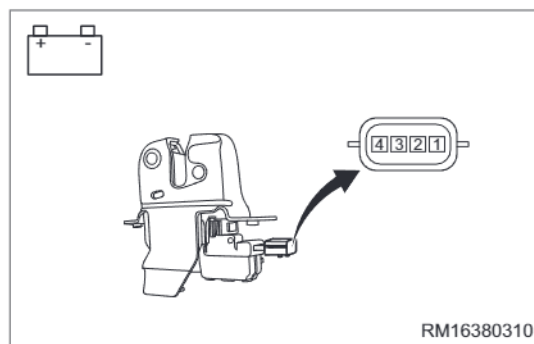
If result is not as specified, replace the luggage compartment lock assembly.



- b. Apply battery voltage to the terminals of luggage compartment lock assembly connector and check the operation of luggage compartment lock assembly according to the table below.

Measurement Condition	Specified Condition
Battery positive (+) - Terminal 4	ON
Battery negative (-) - Terminal 3	

If result is not as specified, replace the luggage compartment lock assembly.



Installation

Installation is in the reverse order of removal.

CAUTION

- Check if connector is installed correctly, when installing luggage compartment lock assembly.
- Check if luggage compartment lock operates properly, after installing luggage compartment lock assembly.

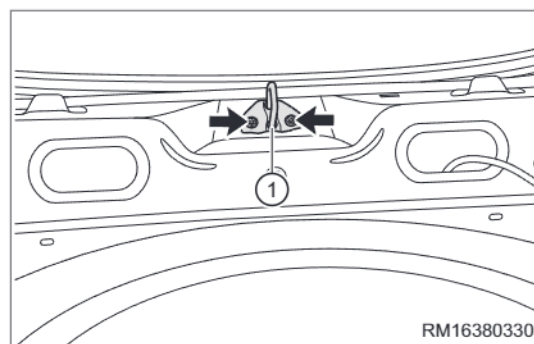
Luggage Compartment Lock Striker Assembly

Removal

CAUTION

- Be sure to wear necessary safety equipment to prevent accidents, when removing luggage compartment lock striker assembly.
- Try to prevent body paint surface from being scratched, when removing luggage compartment lock striker assembly.

1. Remove the luggage compartment doorsill pressure plate assembly ([See page 50-11](#)).
2. Remove the luggage compartment lock striker assembly.
 - a. Remove 2 fixing screws (arrow) from luggage compartment lock assembly, and remove the luggage compartment lock striker assembly (1).
(Tightening torque: 23 ± 1 N·m)



38

Installation

Installation is in the reverse order of removal.

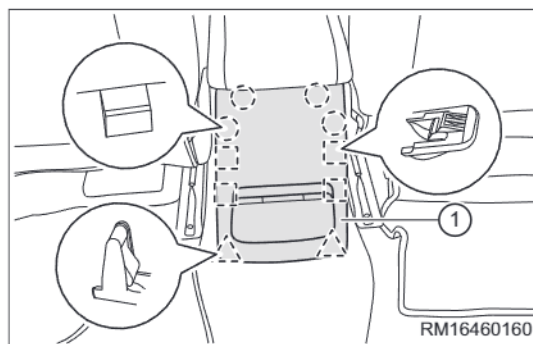
Low Frequency Antenna

Removal

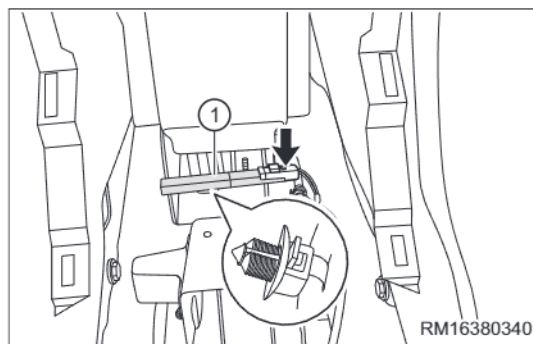
CAUTION

- Be sure to wear safety equipment to prevent accidents, when removing low frequency antenna.
- Try to prevent body paint surface from being scratched, when removing low frequency antenna.

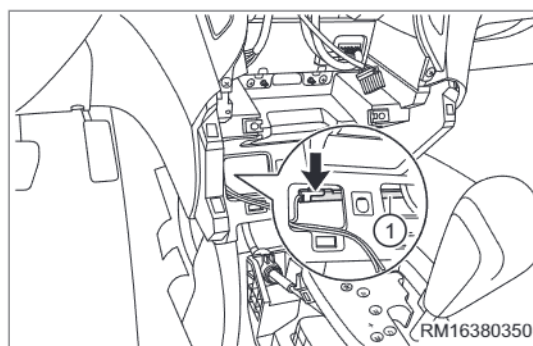
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the center low frequency antenna.
 - a. Using a screwdriver wrapped with protective tape, pry off the clips on auxiliary fascia console rear cover plate assembly, and remove the auxiliary fascia console rear cover plate assembly (1).



- b. Disconnect the center low frequency antenna connector (arrow).
- c. Disengage the clip on center low frequency antenna, and remove the center low frequency antenna (1).

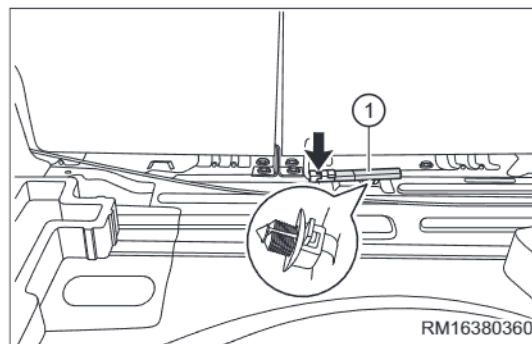


4. Remove the front low frequency antenna.
 - a. Remove the auxiliary fascia console assembly (See page 46-10).
 - b. Disconnect the front low frequency antenna connector (arrow).
 - c. Disengage the clip on front low frequency antenna, and remove the front low frequency antenna (1).



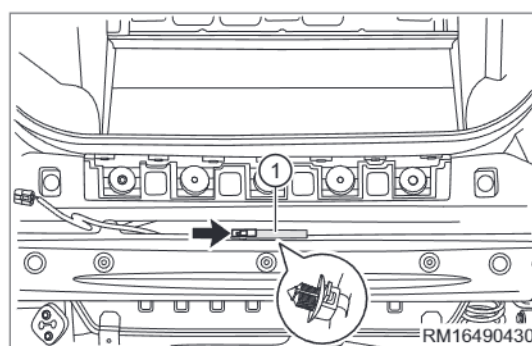
5. Remove the rear low frequency antenna.

- a. Remove the luggage compartment carpet assembly (See page 50-36).
- b. Disconnect the rear low frequency antenna connector (arrow).
- c. Disengage the clip on rear low frequency antenna, and remove the rear low frequency antenna (1).



6. Remove the luggage compartment door handle sensor.

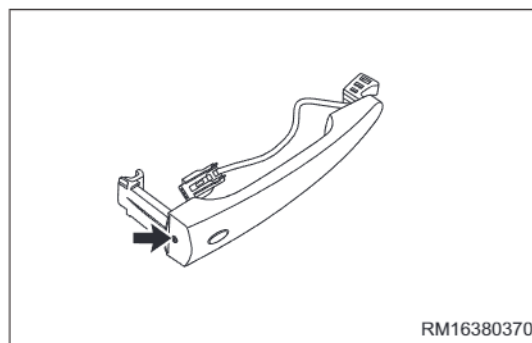
- a. Remove the rear bumper assembly (See page 49-23).
- b. Disconnect the luggage compartment door handle sensor (arrow).
- c. Disengage the clip on luggage compartment door handle sensor, and remove the luggage compartment door handle sensor (1).



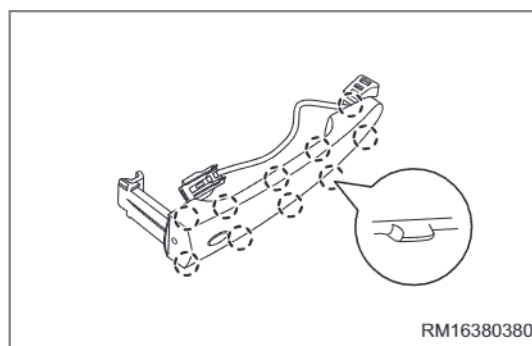
38

7. Remove the front left door handle sensor (built-in low frequency antenna) (take left side as an example).

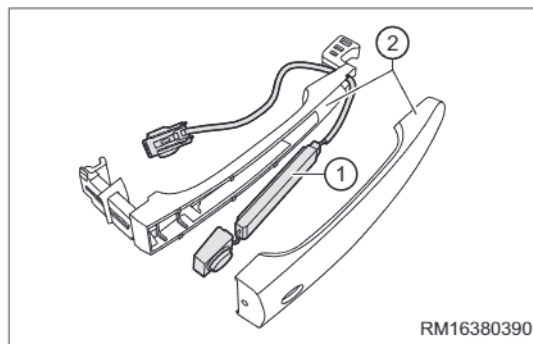
- a. Remove the front left door outside handle (See page 48-27).
- b. Remove the fixing screw (arrow) from front door outside handle.
(Tightening torque: 1.5 N·m)



- c. Using a screwdriver wrapped with protective tape, pry up the claws from front door outside handle.



- d. Separate the front door handle sensor (1) from front door outside handle (2).



Installation

Installation is in the reverse order of removal.

CAUTION

- When installing each low frequency antenna, low antenna clip should be well fitted with the antenna mounting bracket.
- Check if low frequency antenna functions properly after installation.

Wireless Key

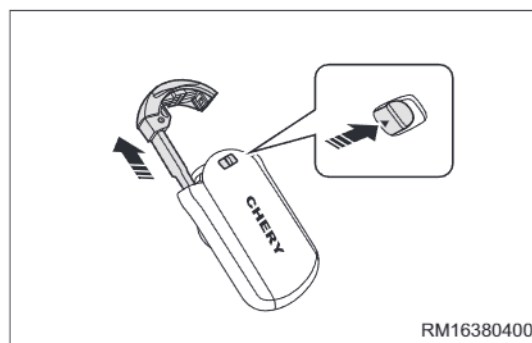
Removal

CAUTION

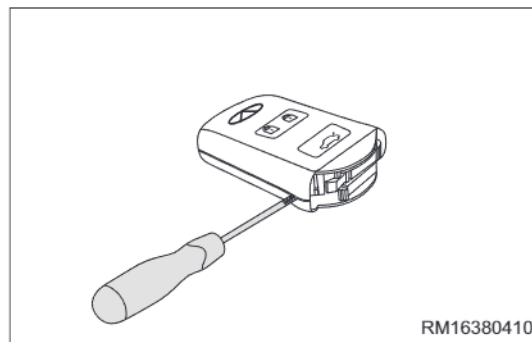
- DO NOT push the terminals with your hands, when removing wireless key.
- DO NOT pry up the battery forcibly when removing wireless key; otherwise, the terminals may be damaged.
- DO NOT touch the battery with wet hands when removing wireless key; otherwise, the water may cause rust.
- DO NOT touch or move any components inside the transmitter, when removing wireless key. Failure to do so may interfere with proper operation.

1. Remove the wireless key.

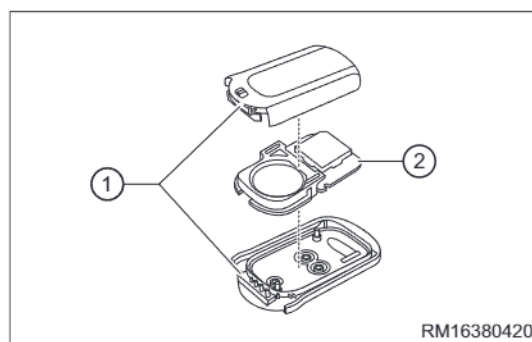
- a. Remove the mechanical key billet in direction of arrow as shown in illustration.



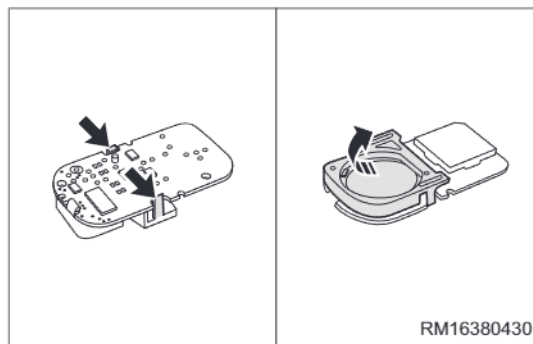
- b. Using a screwdriver wrapped with protective tape, pry out the wireless key cover.



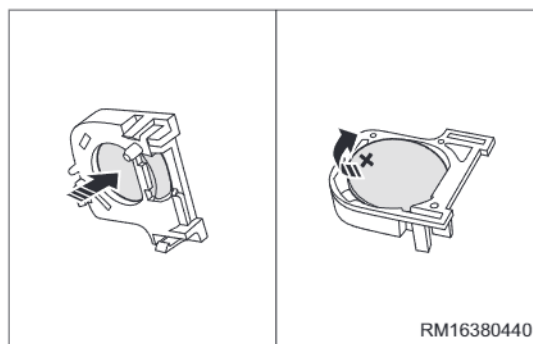
- c. Separate the wireless key covers (1) and chip (2).



- d. Disengage the claws (arrow) from battery holder, and remove the battery holder in direction of arrow.



- e. Remove the battery in direction of arrow as shown in illustration.



Installation

38

Installation is in the reverse order of removal.

CAUTION

- Make sure the positive side and the negative side of battery are placed correctly, when installing wireless key.
- Check that wireless key operates properly, after installing the wireless key.

