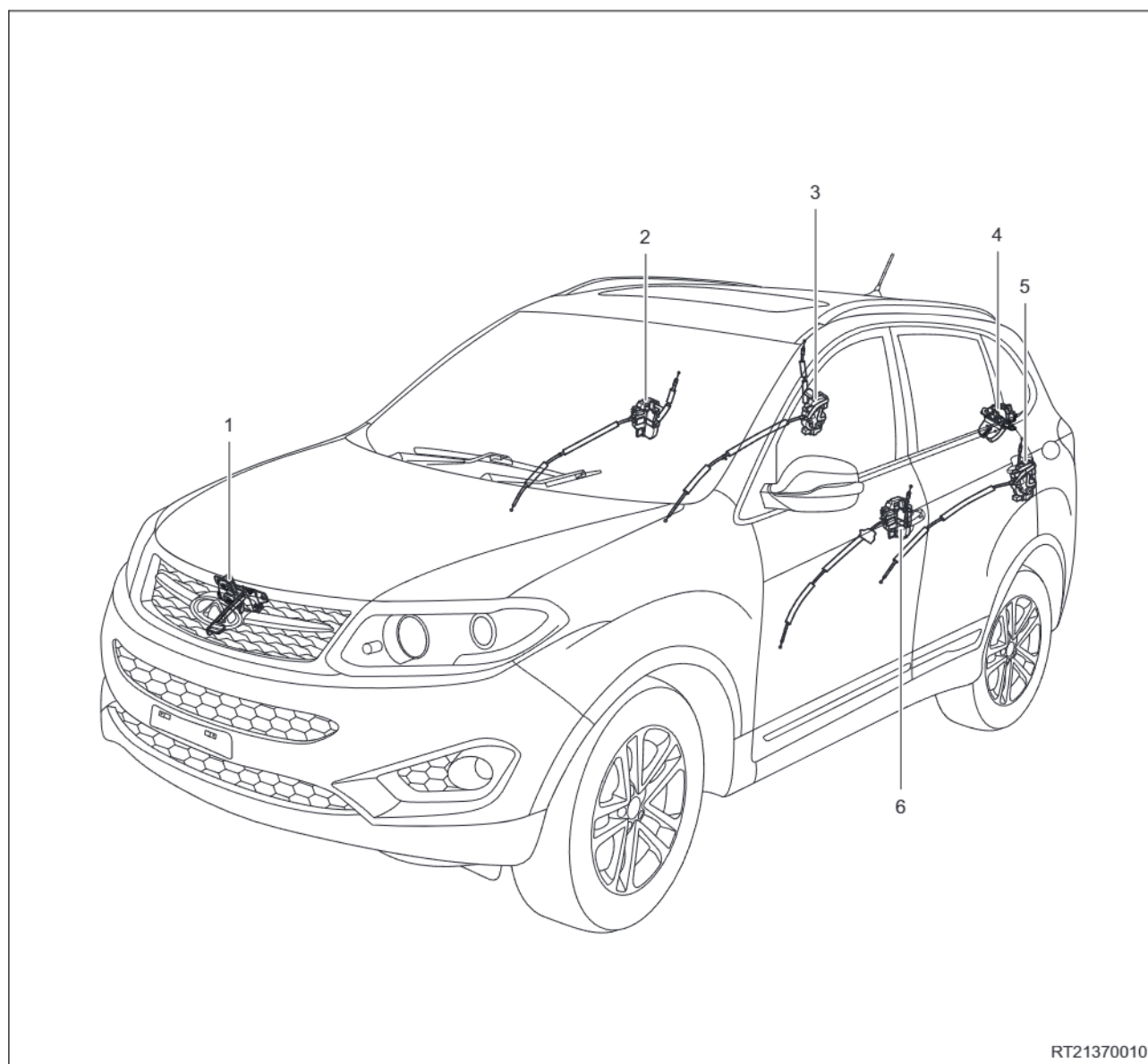


DOOR LOCK

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GENERAL INFORMATION

Description



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RT21370010

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

1. Power door lock system function description (w/o passive entry & passive start)

- a. Power door lock system can lock/unlock all doors by remote controller, mechanical key and center controls operation.
 - Remote controller sends the lock/unlock request signals to Body Control Module (BCM). 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 the mechanical key into the driver side door key cylinder, all doors can be locked/unlocked by turning the key clockwise or counterclockwise, but anti-theft function cannot be set.

- Function active: effective at any time, even when engine starts.
- Lock success: when all doors are closed fully, lock signal from the center controls is input to execute the lock command.
- Lock failure: when at least one door is not closed fully, lock signal from the center controls is input to execute the lock command, and then lock command is executed after 1 second delay.
- Unlock success: unlock signal from the center controls is input to execute the unlock command, regardless of whether the doors are closed fully.
- Door lock response: when the protection is not activated, Body Control Module (BCM) responses to each input of lock or unlock.

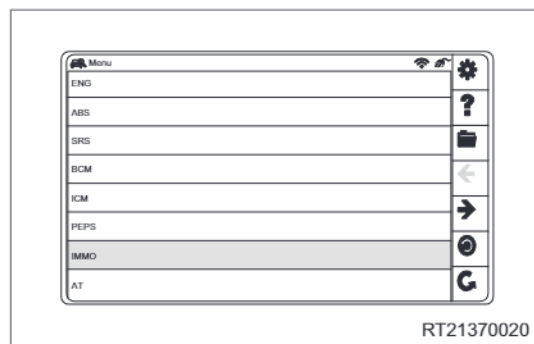
b. Function (w/o passive entry & passive start)

Component	Function
Remote Controller Lock/Unlock	Lock/unlock all doors. Remote controller lock/unlock request is input to Body Control Module (BCM), which outputs lock/unlock signal to lock/unlock each door.
Mechanical Key Lock/Unlock	Lock/unlock all doors. Mechanical key lock/unlock request is input to Body Control Module (BCM), which outputs lock/unlock signal to lock/unlock each door.
Center Controls Lock/Unlock	Lock/unlock all doors. Center controls lock/unlock request is input to Body Control Module (BCM), which outputs lock/unlock signal to lock/unlock each door.
Front Left Door Lock Assembly	Lock/unlock front left door with a fastener. Built-in door lock/unlock switch sends lock/unlock signal to Body Control Module (BCM) to lock/unlock each door.
Front Right Door Lock Assembly Rear Left Door Lock Assembly Rear Right Door Lock Assembly	Lock/unlock front right door with a fastener. Lock/unlock rear left door with a fastener. Lock/unlock rear right door with a fastener.

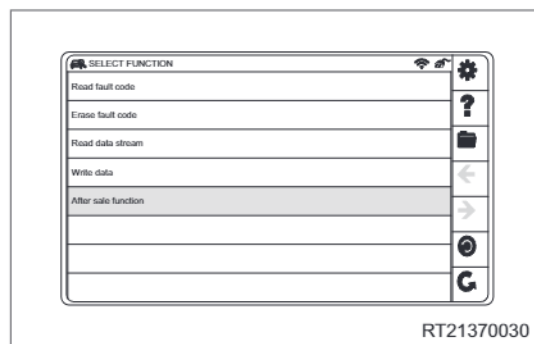
c. Wireless key match (w/o passive entry & passive start)

If the wireless key is lost, damaged, or Body Control Module (BCM) is replaced, the wireless key needs to rematch. There are two ways and detailed operation procedures are as follows:

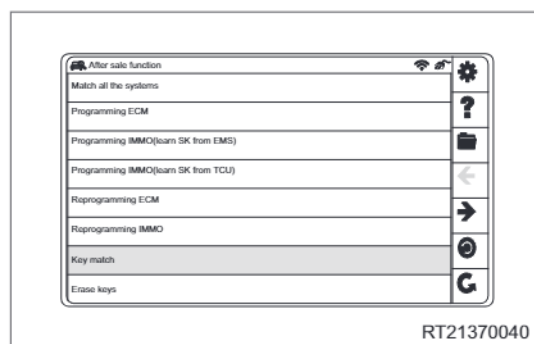
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module by the data network. Then select corresponding model (T21) on X-431 3G diagnostic tester (the latest software) to enter system and select "IMMO" system.



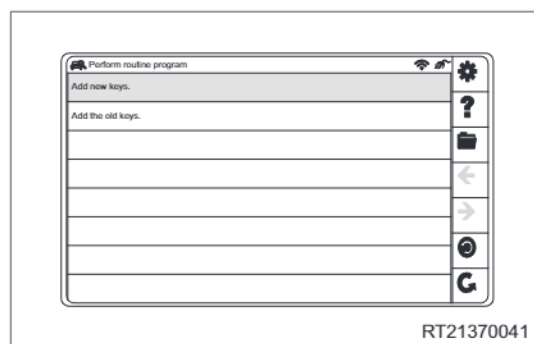
- Please select [After sale function] on SELECT FUNCTION screen.



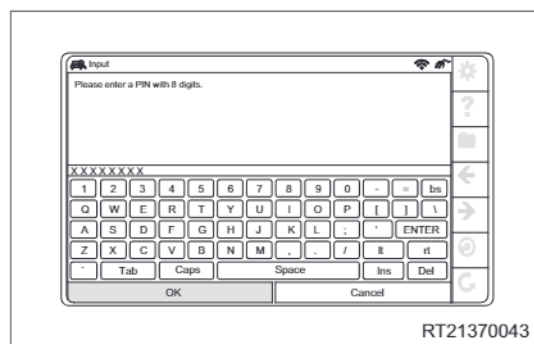
- Please select [Key match] on After sale function screen.



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

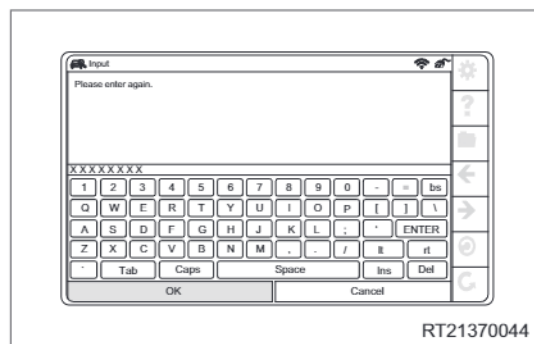


- When "Please enter a PIN with 8 digits" is displayed on Input screen, input PIN code and click "OK".

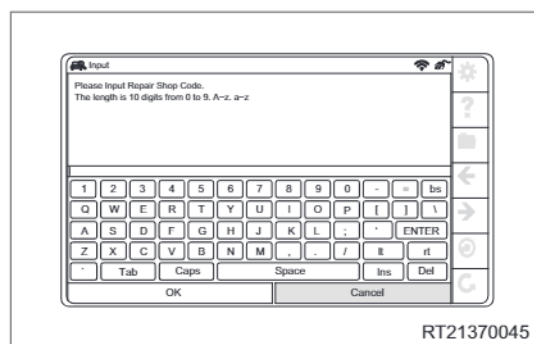


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- When "Please enter again" is displayed on Input screen, input PIN code again and click "OK".

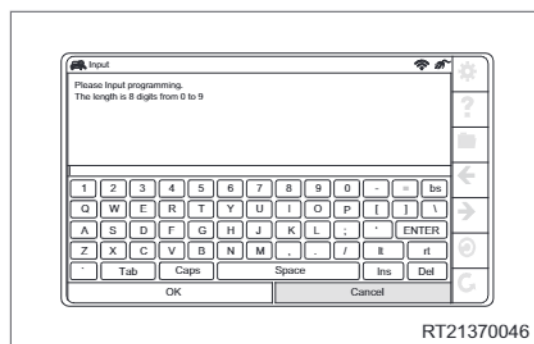


- When "Please Input Repair Shop Code. The length is 10 digits from 0 to 9, A-Z, a-z" is displayed, click "Cancel".



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- 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, click "OK".



- Key match is completed.
- d. The vehicle security has 6 modes (w/o passive entry & passive start):
- Lock mode
- Enter lock mode when the following conditions are met:
 - Remove the key.
 - All doors, engine hood and back door are closed.
 - All doors are locked by the lock button on wireless key.

- When vehicle is in lock mode, following features will occur:
 - Turn signal lights blink once, anti-theft horn sounds once and anti-theft indicator on the front left door protector blinks normally to indicate that vehicle is in lock state.
 - In lock state, if no door is opened within 30 seconds after unlocking the doors by wireless key, the doors will lock again automatically.

Lock failure mode

- System will enter lock failure mode under the following conditions and will show the following features:
 - When any door is not closed fully, turn signal lights blink twice and anti-theft horn does not sound.
 - When engine hood is not closed fully, turn signal lights blink twice, doors are locked and horn does not sound.
 - When back door is not closed fully, turn signal lights blink twice, doors are locked and horn does not sound.

Lock deactivation mode

- In lock mode, the locking mode of entire vehicle will be deactivated if the following condition occurs:
 - Press the unlock button on the wireless key.
- The following features occur in lock deactivation mode (by wireless key):
 - All doors are unlocked.
 - Turn signal lights blink twice, anti-theft horn does not sound and anti-theft indicator stops blinking.
 - Within 30 s after the doors are unlocked by wireless key, when no further operation is performed (opening a door, turning the key or opening engine hood and back door), the vehicle will return to the locking state.
- If the following conditions occur within 30 s after the doors are unlocked by wireless key, the vehicle will not return to the locking state and the doors will not lock automatically:
 - Turn ignition switch to ON.
 - Any door is opened.
 - Engine hood is opened.
 - Back door is opened.

Alarm mode

- When vehicle is in lock mode, the alarm will be triggered if the following occurs:
 - Open any door, engine hood and back door manually.
 - Turn ignition switch to ON.
- When vehicle is in alarm mode, the following occurs:
 - After the alarm is triggered, turn signal lights blink and anti-theft horn sounds for 25 seconds. The condition will occur again after an interval of 5 seconds. This process will repeat for 3 times. At the same time, the security indicator blinks quickly to indicate system is in a non-secure state. If all doors/engine hood are fully closed or ignition switch is turned off during the cycle, the turn signal lights will complete the cycle and all doors will lock again automatically after an interval of 5 seconds. At this time, the vehicle anti-theft system will be reactivated.

Alarm deactivation mode

- The following operation will deactivate the alarm mode:
 - Press the unlock button on wireless key.

Back door open mode

- In lock mode, if the back door opener switch on remote controller is pressed for more than 1.5 seconds, turn signal lights will come on for 1 second. After that, if the back door opener switch is pressed with 30 seconds, BCM will open the back door, but the anti-theft horn will not alarm. After 30 seconds, the back door cannot be opened.

2. Power door lock system function description (w/ passive entry & passive start)

a. Power door lock system can lock/unlock all doors by remote controller, mechanical key, central controls and contact switch on handle operation.

- Remote controller sends lock/unlock request signals to Passive Entry & Passive Start (PEPS) controller to control the Body Control Module (BCM) by CAN. 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 the mechanical key into the driver side door key cylinder, all doors can be locked/unlocked by turning the key clockwise or counterclockwise, but anti-theft function cannot be set.
- When the remote controller is outside vehicle, in an operation range of 1.5 m from front door handle, the door can be locked/unlocked by pressing door handle contact switch.
- When the remote controller is outside back door, in a operation range of 1.5 m from back door handle, the door can be locked/unlocked by pressing back door handle contact switch.
- Function active: effective at any time, even when engine starts.
- Lock success: when all doors are closed fully, lock signal from the center controls is input to execute the lock command.
- Lock failure: when at least one door is not closed fully, lock signal from the center controls is input to execute the lock command, and then lock command is executed after 1 second delay.
- Unlock success: unlock signal from the center controls is input to execute the lock command, regardless of whether the doors are closed fully.
- Door lock response: when the protection is not activated, Body Control Module (BCM) responses to each input of lock or unlock.

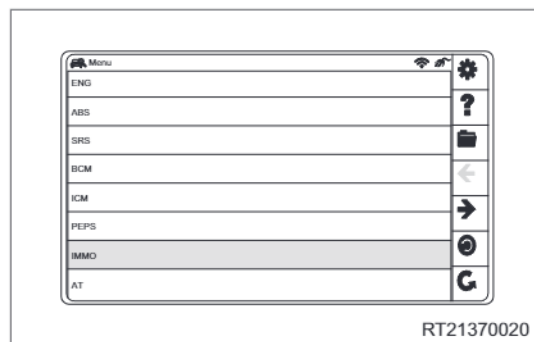
b. Function (w/ passive entry & passive start)

Component	Function
Remote Controller Lock/Unlock	Lock/unlock all doors. Remote controller inputs lock/unlock request to Passive Entry & Passive Start (PEPS), which controls Body Control Module (BCM) by CAN to output lock/unlock signals to lock/unlock each door.
Mechanical Key Lock/Unlock	Lock/unlock all doors. Mechanical key lock/unlock request is input Body Control Module (BCM), which outputs lock/unlock signal to lock/unlock each door.
Contact Switch on Handle Lock/Unlock Button	Lock/unlock all doors. Contact switch on handle inputs lock/unlock request to Passive Entry & Passive Start (PEPS), which controls Body Control Module (BCM) by CAN to output lock/unlock signals to lock/unlock each door.
Center Controls Lock/unlock Button	Lock/unlock all doors. Center Controls input lock/unlock request to Passive Entry & Passive Start (PEPS), which controls Body Control Module (BCM) by CAN to output lock/unlock signals to lock/unlock each door.
Front Left Door Lock Assembly	Lock/unlock front left door with a fastener. Built-in door lock/unlock switch sends lock/unlock signal to Body Control Module (BCM) to lock/unlock each door.

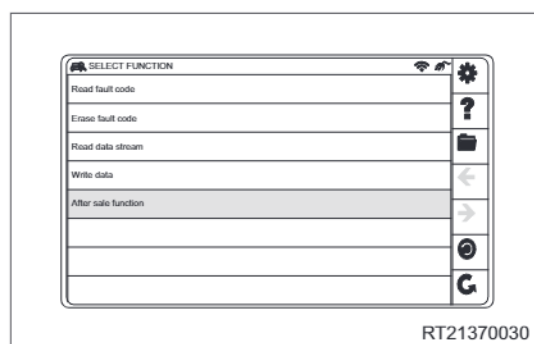
Component	Function
Front Right Door Lock Assembly	Lock/unlock front right door with a fastener.
Rear Left Door Lock Assembly	Lock/unlock rear left door with a fastener.
Rear Right Door Lock Assembly	Lock/unlock rear right door with a fastener.

c. Wireless key match (w/ passive entry & passive start)

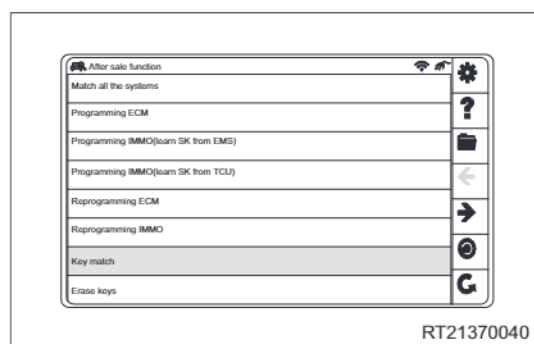
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module by the data network. Then select corresponding model (T21) from X-431 3G diagnostic tester (the latest software) to enter the system and select "IMMO" system.



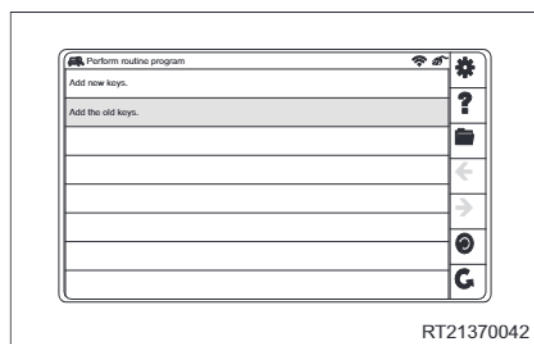
- Please select [After sale function] on SELECT FUNCTION screen.



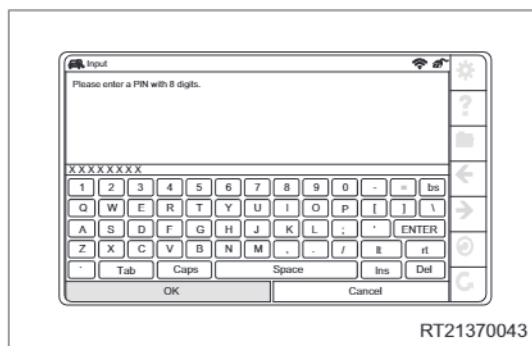
- Please select [Key match] on After sale function screen.



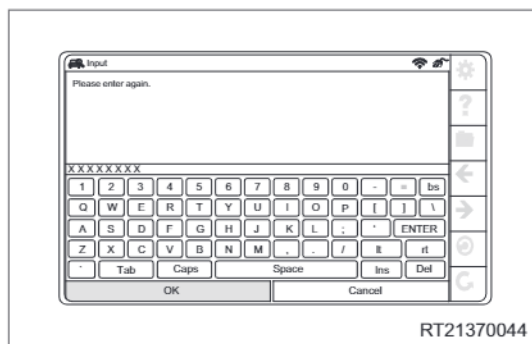
- Please select [Add the old keys] on Perform routine program screen.



- 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".

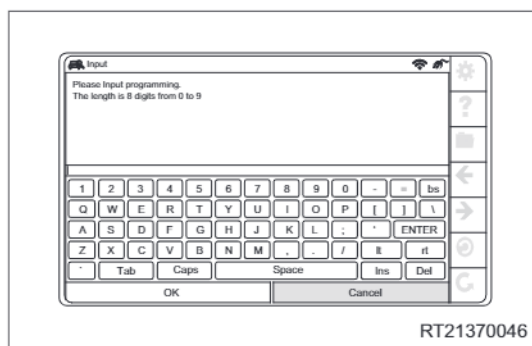


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- When "Please Input Repair Shop Code. The length is 10 digits from 0 to 9, A-Z, a-z" is displayed, click "Cancel".



- 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, click "OK".



- Key match is completed.
- d. The vehicle security has 6 modes (w/ passive entry & passive start):
- Locking mode
- Enter lock mode when the following conditions are met:
 - All doors, engine hood and back door are closed.
 - All doors are locked by operating the lock button on PEPS controller.
 - All doors are locked by operating the front door handle button (REK of PEPS in the detecting range of this door handle antenna).
 - When vehicle is in lock mode, following features will occur:
 - Turn signal lights blink once, anti-theft horn sounds once and anti-theft indicator on the front left door protector blinks normally to indicate that vehicle is in lock state.
 - In lock state, if no door is opened within 30 seconds after unlocking the doors by wireless key, the doors will lock again automatically.

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Locking failure mode

- System will enter lock failure mode under the following conditions and will show the following features:
 - When any door is not closed fully, turn signal lights blink twice anti-theft and horn does not sound.
 - When engine hood is not closed fully, turn signal lights blink twice, doors are locked and horn does not sound.
 - When back door is not closed fully, turn signal lights blink twice, doors are locked and horn does not sound.

Lock deactivation mode

- In lock mode, the locking mode of entire vehicle will be deactivated if the following condition occurs:
 - Press the unlock button on PEPS controller.
 - Press the front door handle button (REK of PEPS in the detecting range of this door handle antenna).
- When vehicle is in lock deactivation mode (by PEPS controller and front door handle button (REK of PEPS in the detecting range of this door handle antenna)), following conditions will occur:
 - All doors are unlocked.
 - Turn signal lights blink twice, anti-theft horn does not sound and anti-theft indicator stops blinking.
 - Within 30 s after the doors are unlocked by wireless key, when no further operation is performed (opening a door, opening engine hood and back door), the vehicle will return to the lock state.
- If the following conditions occur within 30 s after the doors are unlocked by wireless key, the vehicle will not return to the locking state, also not lock automatically:
 - PEPS switch is in a position other than OFF.
 - Any door is opened.
 - Engine hood is opened.

- Back door is opened.

Alarm mode

- When vehicle is in lock mode, the alarm will be triggered if the following occurs:
 - Open any door, engine hood and back door manually.
 - Turn ignition switch to ON.
- When vehicle is in alarm mode, the following occurs:
 - After the alarm is triggered, turn signal lights blink and anti-theft horn sounds for 25 seconds. The condition will occur again after an interval of 5 seconds. This process will repeat for 3 times. At the same time, the security indicator blinks quickly to indicate system is in a state of insecurity. If all doors/engine hood are fully closed or ignition switch is turned off during the cycle, the turn signal lights will complete the cycle and all doors will lock again automatically after an interval of 5 seconds. At this time, the vehicle anti-theft system will be reactivated.

Alarm deactivation mode

- The following operations will deactivate the alarm mode:
 - Press the unlock button on PEPS controller.
 - Press the front door handle button (REK of PEPS in the detecting range of this door handle antenna).

Back door open mode

- In the lock mode, if the back door opener switch on PEPS controller is pressed for more than 1.5 seconds, the back door will be opened but the anti-theft horn will not alarm.
- When PEPS controller can be recognized by back door antenna, pressing the back door opener switch can open the back door without sounding an alarm.

Specifications

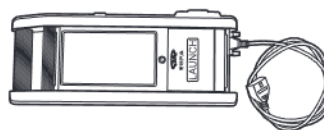
Torque Specifications

Description	Torque (N·m)
Tank Upper Crossmember Deflector Fixing Nut	10 ± 1
Engine Hood Lock Assembly Fixing Nut	10 ± 1
Front Door Lock Assembly Fixing Screw	5.8 ± 0.7
Front Door Key Cylinder Cover Fixing Screw	5 ± 1
Front Door Lock Striker Assembly Fixing Screw	10 ± 1
Rear Door Lock Assembly Fixing Screw	5.8 ± 0.7
Rear Door Lock Striker Assembly Fixing Screw	10 ± 1
Back Door Lock Assembly Fixing Bolt	10 ± 1
Back Door Lock Striker Assembly Fixing Screw	10 ± 1
Auxiliary Fascia Console Rear Cover Plate Assembly Fixing Screw	1.5 ± 0.5
Front Door Outside Handle Fixing Screw	1.5
Wireless Key Upper Cover Fixing Screw	0.4 ± 0.1

Tools

Special Tool

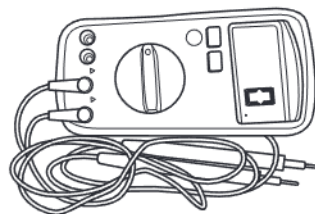
X-431 3G Diagnostic Tester



RCH0000001

General Tool

Digital Multimeter

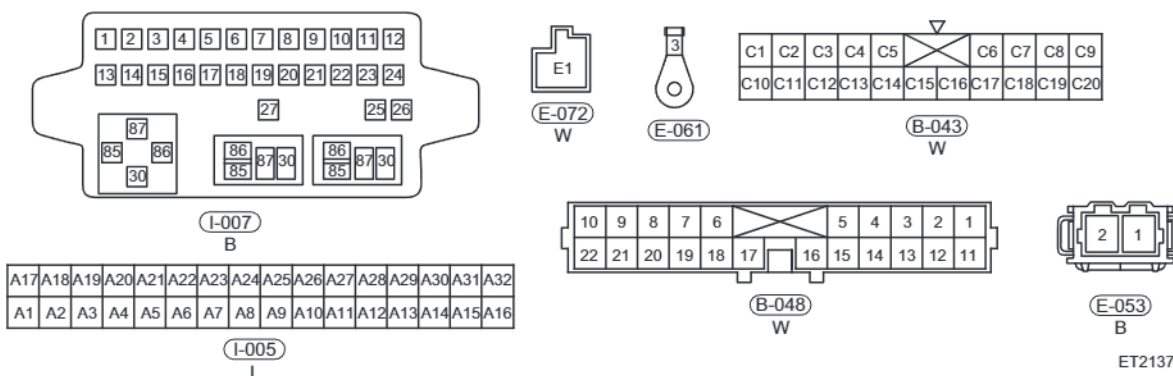
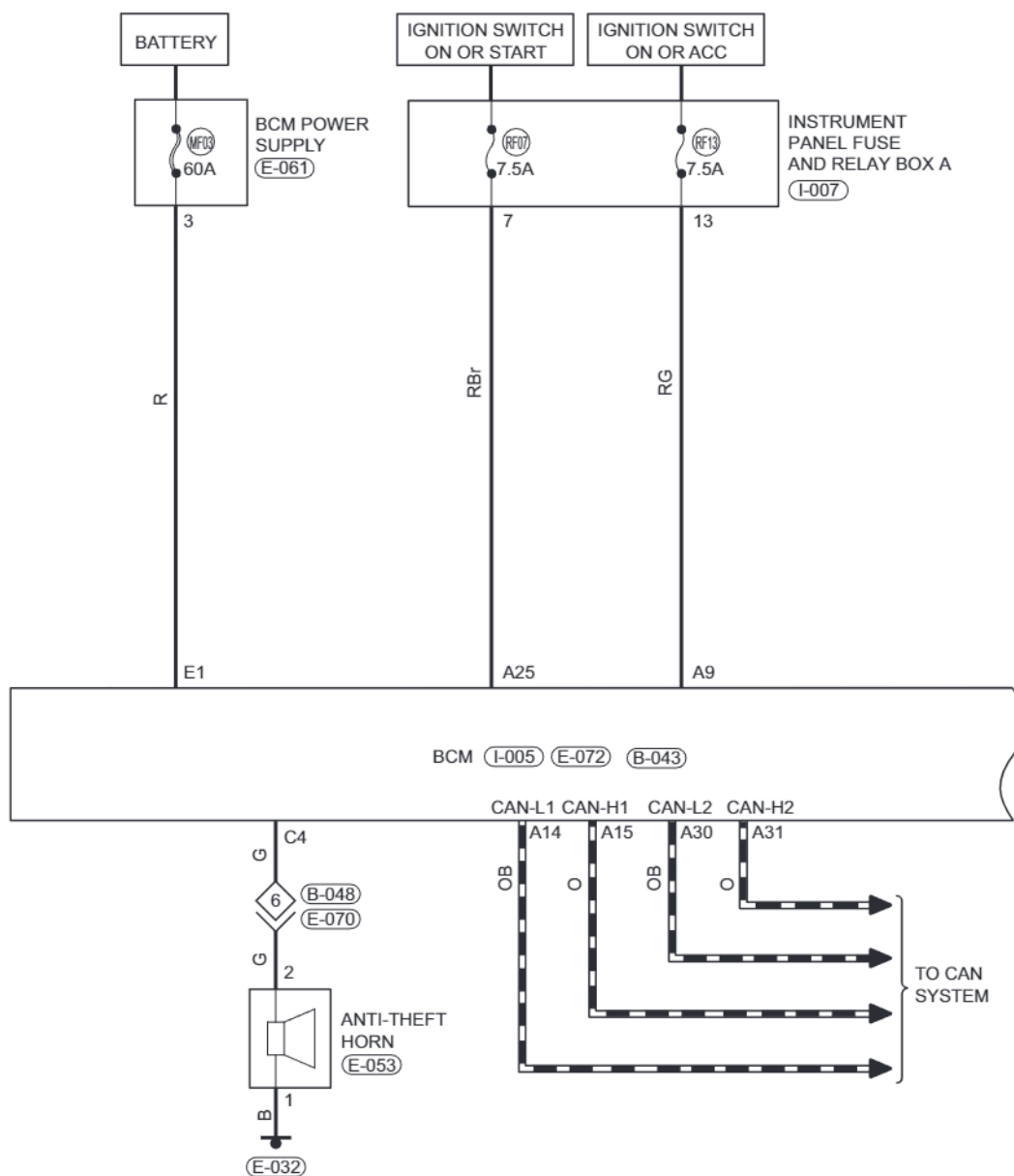


RCH0000002

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Circuit Diagram

Power Door Lock System (Page 1 of 3)

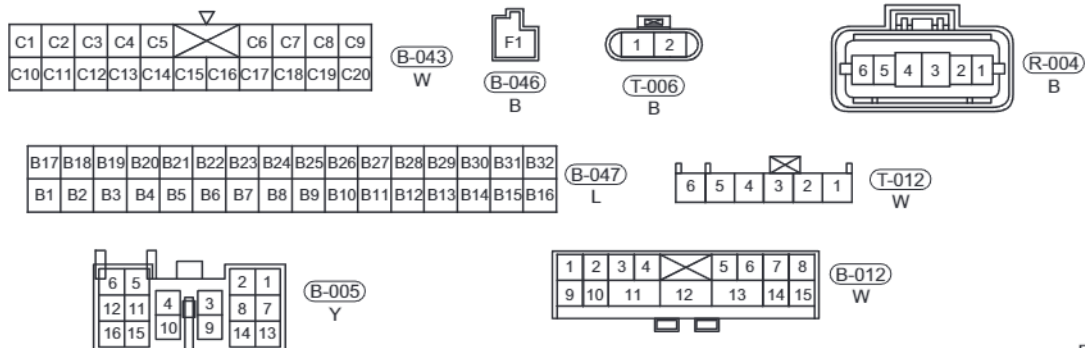
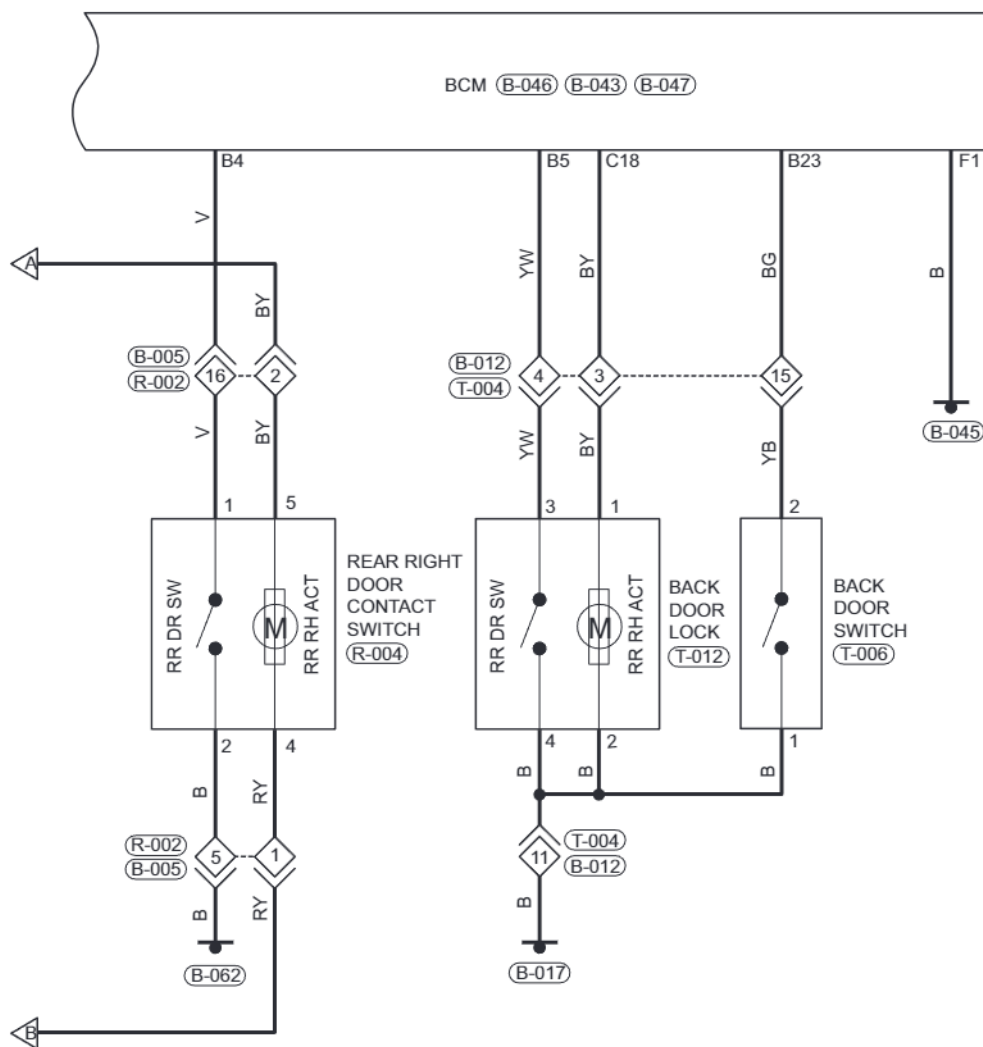


ET21370010

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Power Door Lock System (Page 3 of 3)



ET21370030

DIAGNOSIS & TESTING

Problem Symptoms Table

HINT:

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

Power Door Lock Control System

Symptom	Suspected Area	See page
All doors lock/unlock functions do not operate	Power door unlock/lock switch button	-
	Front left door lock assembly	37-41
	Other door lock assemblies	-
	Passive Entry & Passive Start (PEPS) controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only driver side door lock/unlock functions do not operate	Power door unlock/lock switch button	-
	Front left door lock assembly	37-41
	Passive Entry & Passive Start (PEPS) controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only passenger side door lock/ unlock functions do not operate	Front right door lock assembly	37-41
	Passive Entry & Passive Start (PEPS) controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only rear left door lock/unlock functions do not operate	Rear left door lock assembly	37-47
	Passive Entry & Passive Start (PEPS) controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only rear right door lock/unlock functions do not operate	Rear right door lock assembly	37-47
	Passive Entry & Passive Start (PEPS) controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-

Symptom	Suspected Area	See page
Only back door Close/Open functions do not operate	Back door lock assembly	37-51
	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	37-58
	Anti-theft match	37-4
	Passive Entry & Passive Start (PEPS) controller	-
	Wire harness or connector	-
	Body Control Module (BCM)	-
Only no answer-back	Turn signal lights	-
	Body Control Module (BCM)	-

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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 digital multimeter:

- Troubleshoot electrical malfunctions and wire harness system.
- Look for basic fault.
- Measure voltage, current and resistance.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the 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 by the data network.
- Turn ignition switch to ON.
- Using X-431 3G diagnostic tester to record and clear the DTCs stored in the 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, the malfunction indicated by the DTC is current. Go to the diagnosis procedure - Step 1.
- If DTC is not detected, the malfunction indicated by the DTC is intermittent. Please refer to Intermittent DTC Troubleshooting.

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 signal is interrupted in the related circuit.
- If possible, try to duplicate the conditions under which the DTC was set.
- Look for the data that has changed or the DTC to be reset during the wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect the mounting areas of power door lock assembly, wire harness or wire harness connector and so on for damage, foreign matter, etc. that will cause incorrect signals.
- Check and clean all wire harness connectors and grounding parts related to the current DTC.
- Remove the Body Control Module (BCM) from the malfunctioning vehicle and install it to a new vehicle and perform a test. If DTC cannot be cleared, the Body Control Module (BCM) is malfunctioning. If DTC can be cleared, reinstall the Body Control Module (BCM) to original vehicle.
- If multiple trouble codes were set, refer to the circuit diagrams to look for any common ground circuit or power supply circuit applied to the DTC.
- Refer to Technical Bulletin that is applied 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. Ground points are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) and oxidation may increase load resistance. This situation will seriously affect the normal operation of the circuit. The operations to check the ground points are as follows:

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 a good condition.
4. Reinstall the ground bolt or nut securely.
5. Check if add-on accessories interfere with the ground circuit.
6. If several wire harnesses are crimped into one ground terminal, check if they are installed correctly. Make sure all wire harnesses are clean, securely fastened and providing a good ground path.

Diagnosis Procedure

HINT:

Use the following procedure 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 (no DTC), then go to step 8
---	--

NEXT

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

NEXT

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

NEXT

8	Adjust, repair or replace
---	---------------------------

NEXT

9	Confirm troubleshooting, perform test
---	---------------------------------------

NEXT

10	End
----	-----

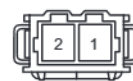
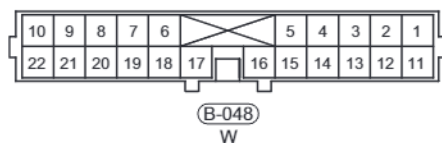
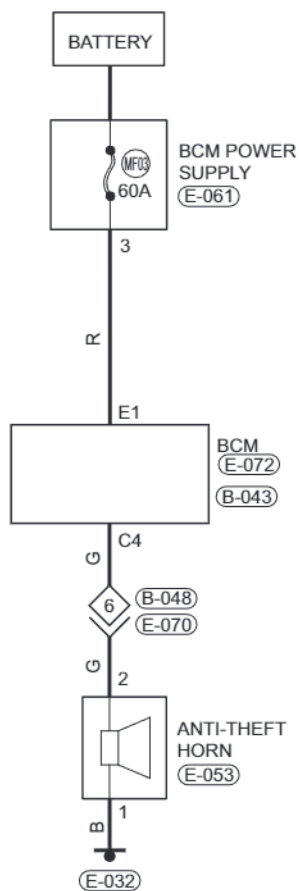
Diagnostic Trouble Code (DTC) Chart

DTC Code	DTC Definition
B101D11	Siren Output Control Circuit Circuit Short to Ground
B101D13	Siren Output Control Circuit Circuit Open
B101D12	Siren Output Control Circuit Circuit Short to Battery
B102471	Trunk Lock Control Circuit Actuator Stuck
B102711	Battery Saver Output Control Circuit Circuit Short to Ground

DTC	B101D11	Siren Output Control Circuit Circuit Short to Ground
-----	---------	--

DTC	B101D13	Siren Output Control Circuit Circuit Open
-----	---------	---

DTC	B101D12	Siren Output Control Circuit Circuit Short to Battery
-----	---------	---



ET21370040

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B101D11	Siren Output Control Circuit Circuit Short to Ground	Ignition switch ON	ON	- Fuse - Anti-theft horn - Wire harness or connector - Body Control Module (BCM)
B101D13	Siren Output Control Circuit Circuit Open			
B101D12	Siren Output Control Circuit Circuit Short to Battery			

 CAUTION

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

Diagnosis Procedure

37

1 Check fuse MF03 (60A)

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Pull out the fuse MF03 (60A).
- Check if the fuse is blown.

NG

Replace fuse MF03 (60A)

OK

2 Check anti-theft horn

- Remove the anti-theft horn from the malfunctioning vehicle and install it to a new vehicle and perform a test.

NG

Replace anti-theft horn

OK

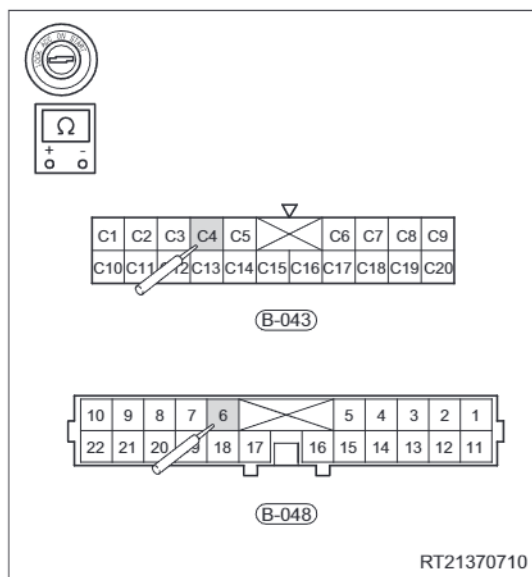
3 Check body wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the body wire harness connector B-043 and B-048.
- Using a digital multimeter, check for continuity between body wire harness connectors B-043 and B-048 according to the table below.

Multimeter Connection	Condition	Specified Condition
B-043 (C4) - B-048 (6)	Always	Continuity

NG

Repair or replace body wire harness and connector



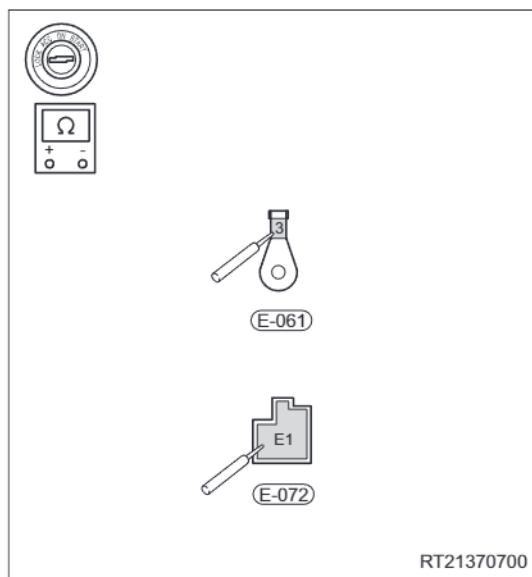
OK

37

4 Check wire harness and connector

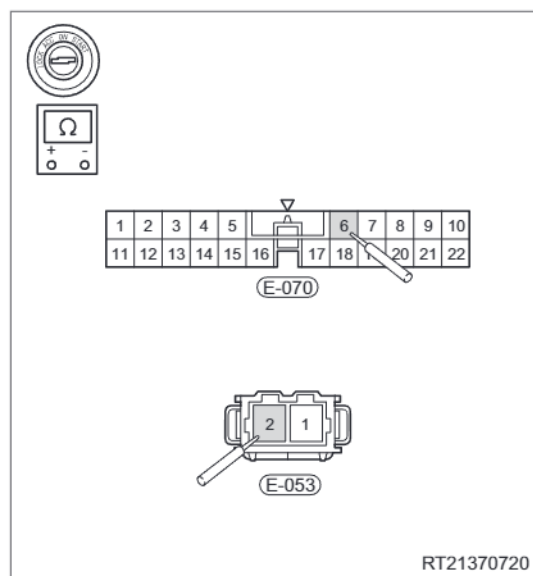
- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the engine compartment wire harness connectors E-061 and E-072.
- Using a digital multimeter, check for continuity between engine compartment wire harness connectors E-061 and E-072 according to the table below.

Multimeter Connection	Condition	Specified Condition
E-061 (3) - E-072 (E1)	Always	Continuity



- e. Disconnect the engine compartment wire harness connectors E-070 and E-053.
- f. Using a digital multimeter, check for continuity between engine compartment wire harness connectors E-070 and E-053 according to the table below.

Multimeter Connection	Condition	Specified Condition
E-070 (6) - E-053 (2)	Always	Continuity

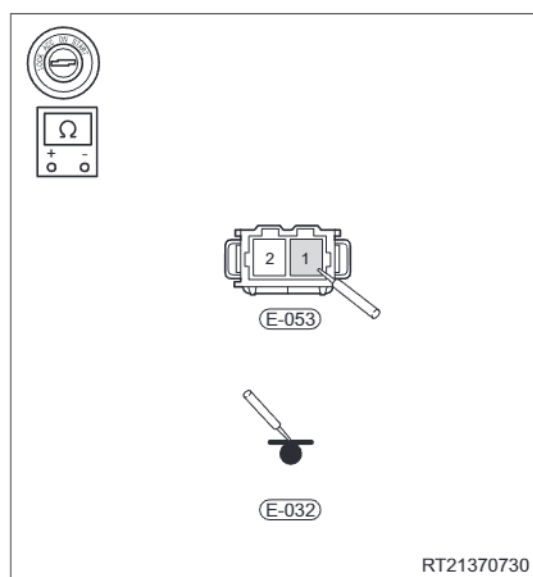


- g. Disconnect the engine compartment wire harness connector E-053 and ground E-032.
- h. Using a digital multimeter, check for continuity between engine compartment wire harness connector E-053 and ground E-032 according to the value(s) in the table below.

Multimeter Connection	Condition	Specified Condition
E-053 (1) - E-032	Always	Continuity

NG

Repair or replace engine compartment wire harness and connector



OK

5

Reconfirm DTCs

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

Result	Proceed to
DTC B101D11, B101D13 and B101D12 are output	NG
No DTC is output	OK

NG

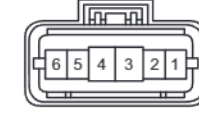
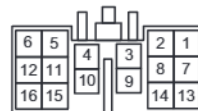
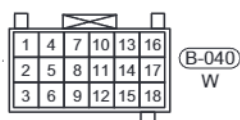
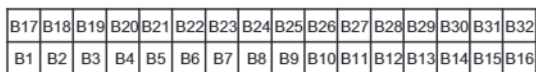
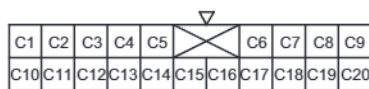
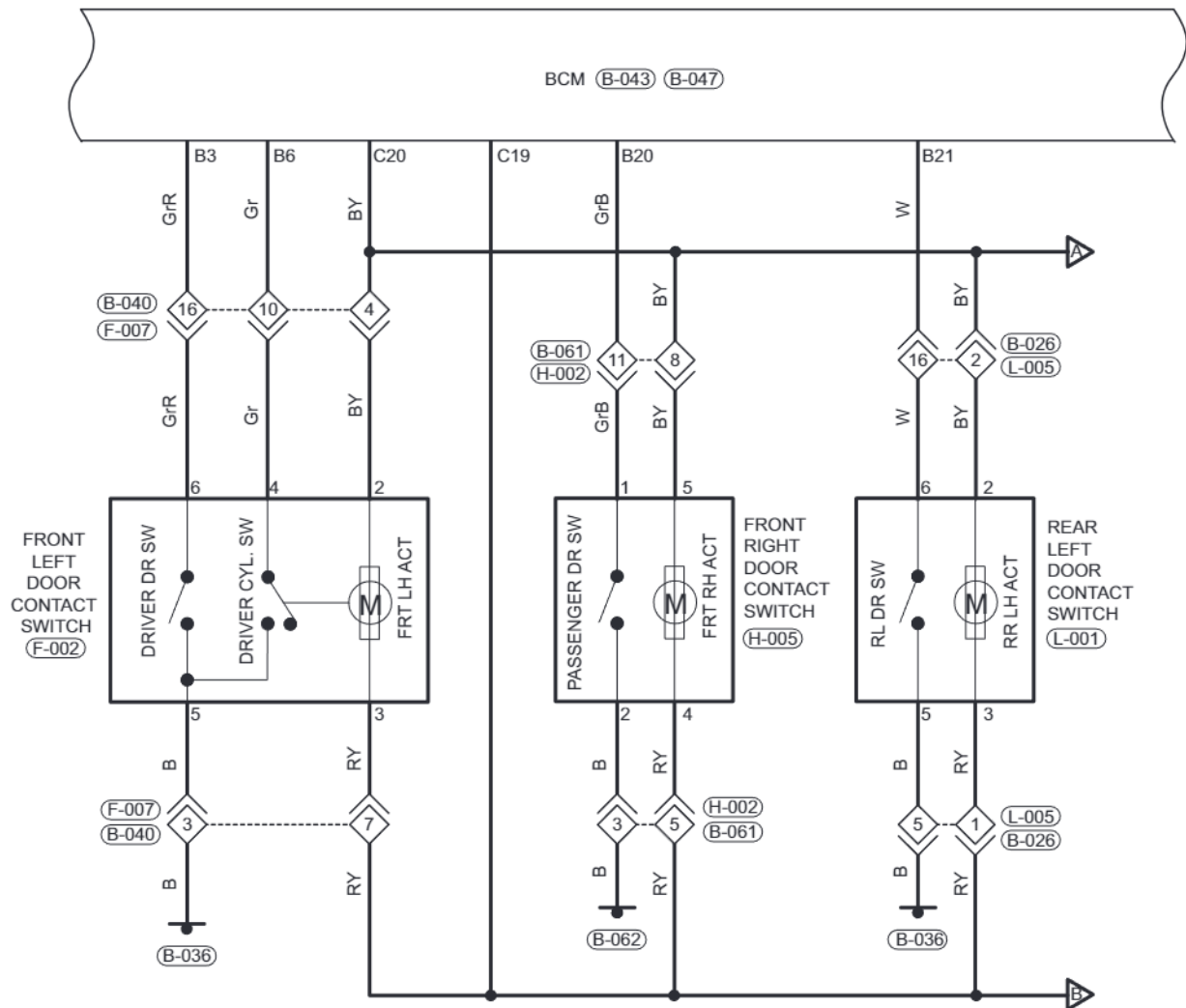
Replace Body Control Module (BCM)

OK

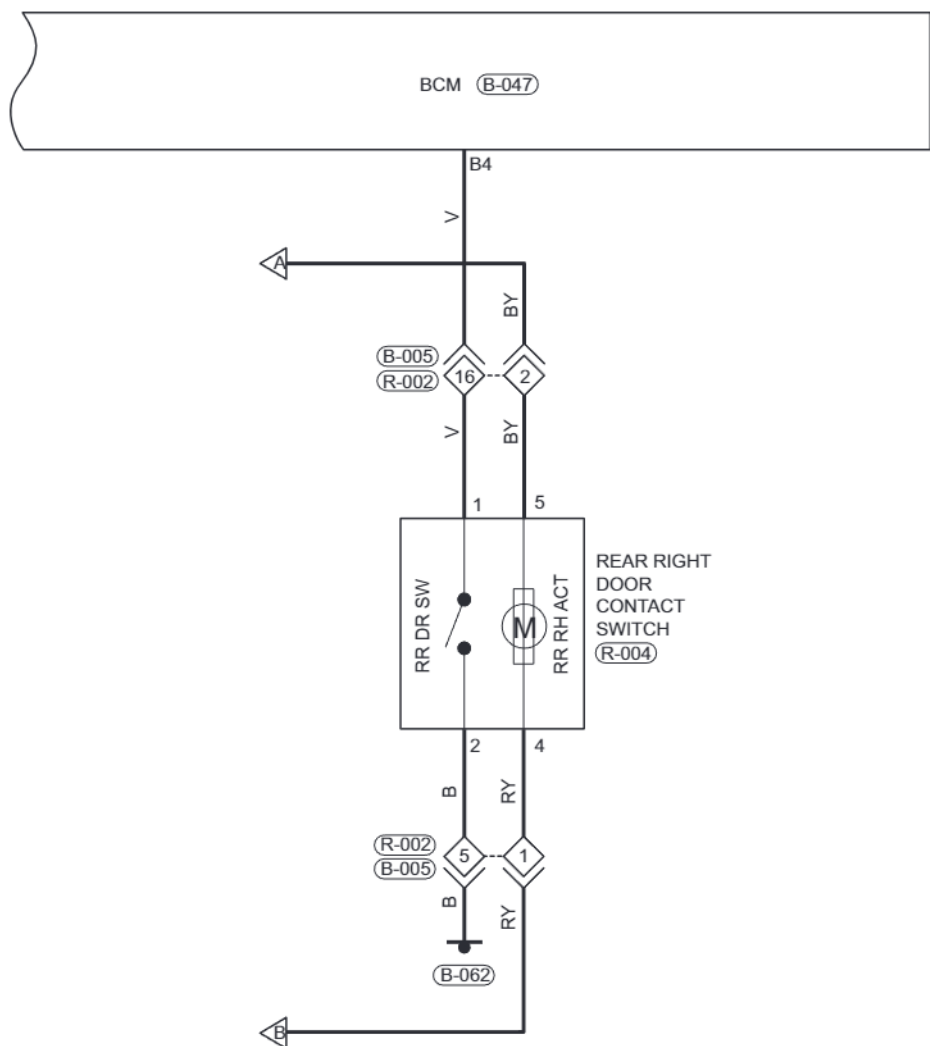
System is normal

DTC	B102471	Trunk Lock Control Circuit Actuator Stuck
-----	---------	---

DTC	B102711	Battery Saver Output Control Circuit Circuit Short to Ground
-----	---------	--

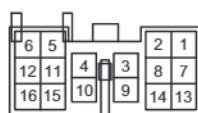


ET21370020



B17	B18	B19	B20	B21	B22	B23	B24	B25	B26	B27	B28	B29	B30	B31	B32
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16

(B-047)
L



(B-005)
Y



(R-004)
B

ET21370050

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B102471	Trunk Lock Control Circuit Actuator Stuck	Ignition switch ON	ON	• Front door lock assembly • Rear door lock assembly • Wire harness or connector • Body Control Module (BCM)
B102711	Battery Saver Output Control Circuit Circuit Short to Ground			

CAUTION

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

1 Check front door lock assembly

- a. Remove the front door lock assembly from malfunctioning vehicle, and install it to a new vehicle to perform a test.

NG

Replace front door lock assembly

OK

2 Check rear door lock assembly

- a. Remove the rear door lock assembly from malfunctioning vehicle, and install it to a new vehicle to perform a test.

NG

Replace rear door lock assembly

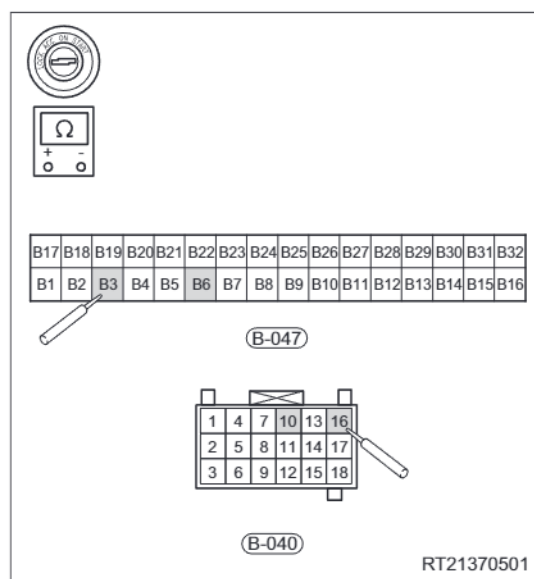
OK

3

Check body wire harness and connector

- Turn ignition switch to LOCK.
- Disconnect the negative battery cable.
- Disconnect the body wire harness connectors B-047 and B-040.
- Using a digital multimeter, check for continuity between body wire harness connectors B-047 and B-040 according to the table below.

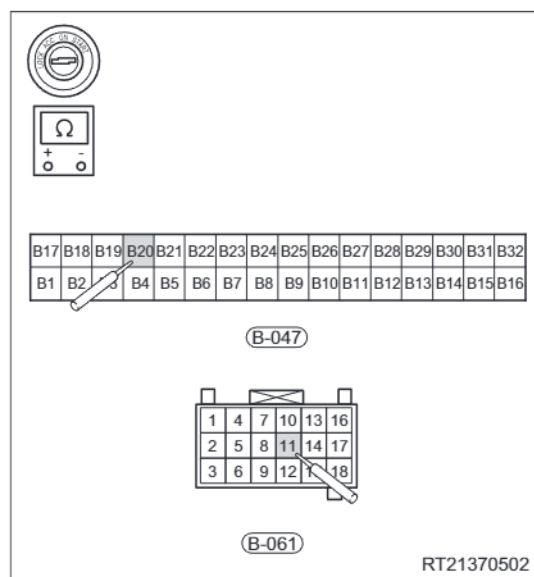
Multimeter Connection Terminal	Condition	Specified Condition
B-047 (B3) - B-040 (16)	Always	Continuity
B-047 (B6) - B-040 (10)	Always	Continuity



37

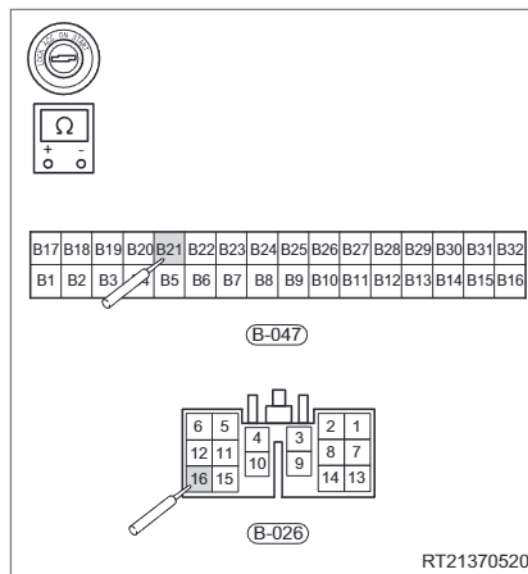
- Disconnect the body wire harness connectors B-047 and B-061.
- Using a digital multimeter, check for continuity between body wire harness connectors B-047 and B-061 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-047 (B20) - B-061 (11)	Always	Continuity



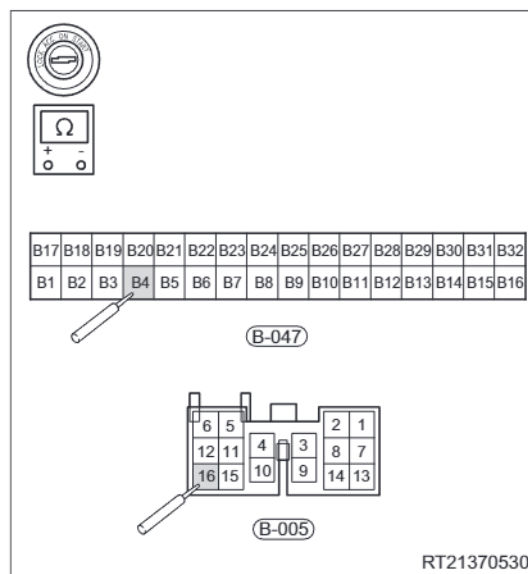
- g. Disconnect the body wire harness connectors B-047 and B-026.
- h. Using a digital multimeter, check for continuity between body wire harness connectors B-047 and B-026 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-047 (B21) - B-026 (16)	Always	Continuity



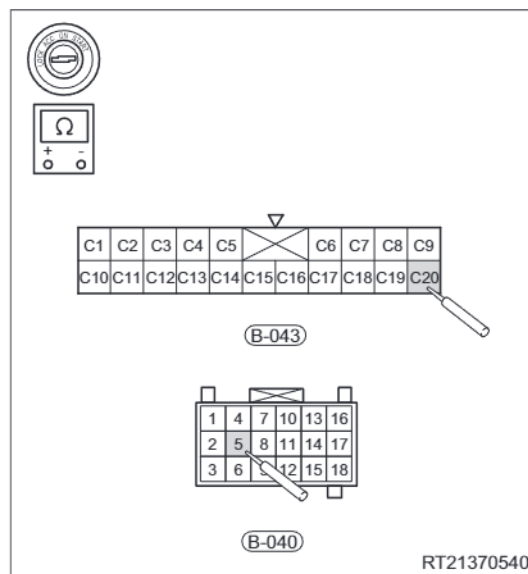
- i. Disconnect the body wire harness connectors B-047 and B-005.
- j. Using a digital multimeter, check for continuity between body wire harness connectors B-047 and B-005 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-047 (B4) - B-005 (16)	Always	Continuity



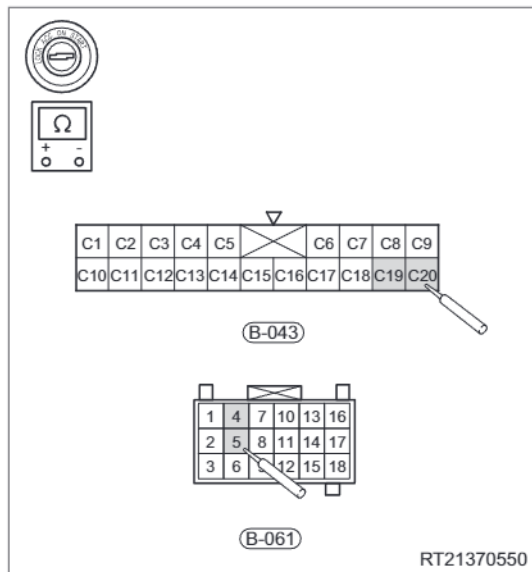
- k. Disconnect the body wire harness connectors B-040 and B-043.
- l. Using a digital multimeter, check for continuity between body wire harness connectors B-040 and B-043 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-040 (5) - B-043 (C20)	Always	Continuity



- m. Disconnect the body wire harness connectors B-043 and B-061.
- n. Using a digital multimeter, check for continuity between body wire harness connectors B-043 and B-061 according to the table below.

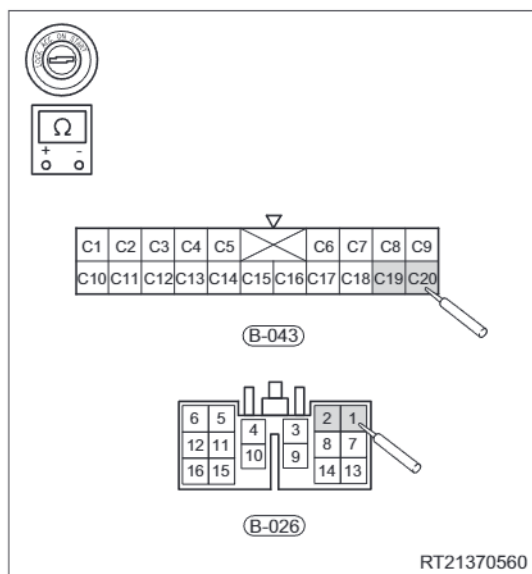
Multimeter Connection Terminal	Condition	Specified Condition
B-043 (C19) - B-061(5)	Always	Continuity
B-043 (C20) - B-061 (4)	Always	Continuity



- o. Disconnect the body wire harness connectors B-043 and B-026.
- p. Using a digital multimeter, check for continuity between body wire harness connectors B-043 and B-026 according to the table below.

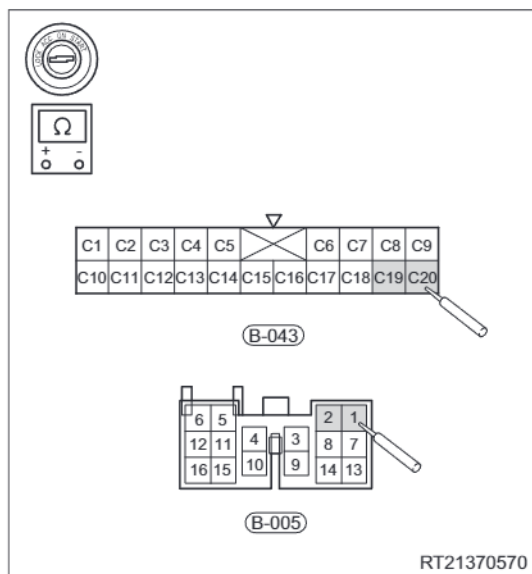
37

Multimeter Connection Terminal	Condition	Specified Condition
B-043 (C19) - B-026 (1)	Always	Continuity
B-043 (C20) - B-026 (2)	Always	Continuity



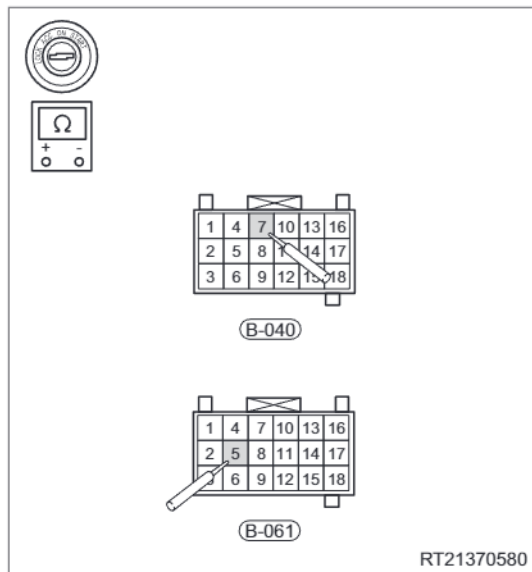
- q. Disconnect the body wire harness connectors B-043 and B-005.
- r. Using a digital multimeter, check for continuity between body wire harness connectors B-043 and B-005 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-043 (C19) - B-005 (1)	Always	Continuity
B-043 (C20) - B-005 (2)	Always	Continuity



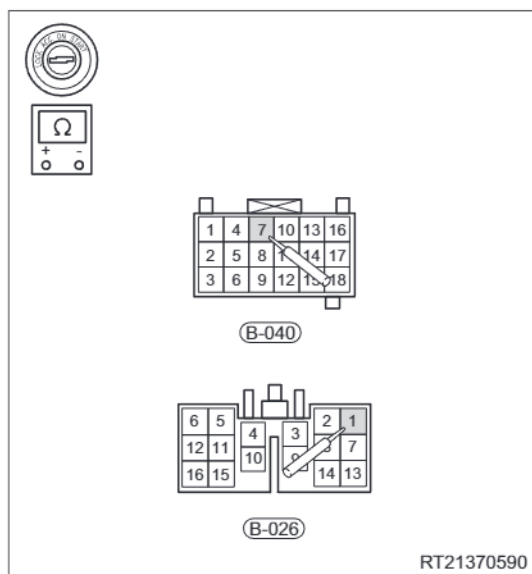
- s. Disconnect the body wire harness connectors B-040 and B-061.
- t. Using a digital multimeter, check for continuity between body wire harness connectors B-040 and B-061 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-040 (7) - B-061 (5)	Always	Continuity



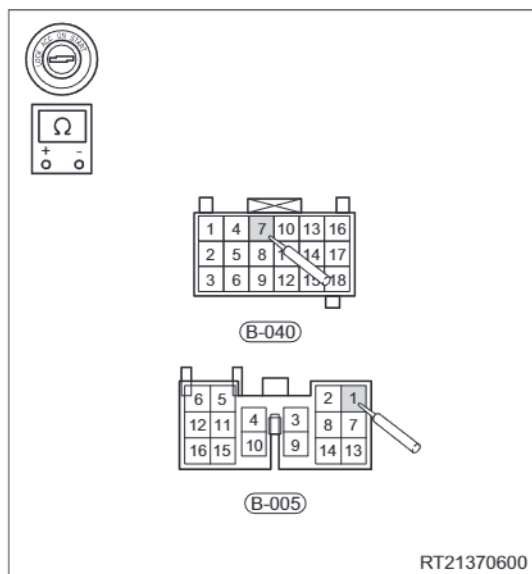
- u. Disconnect the body wire harness connectors B-040 and B-026.
- v. Using a digital multimeter, check for continuity between body wire harness connectors B-040 and B-026 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-040 (7) - B-026 (1)	Always	Continuity



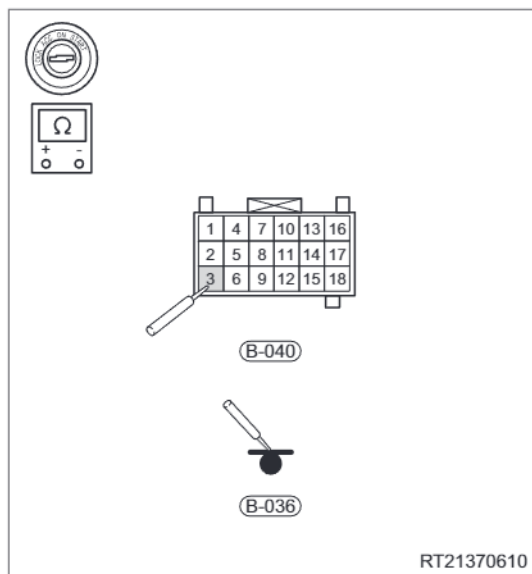
- w. Disconnect the body wire harness connectors B-040 and B-005.
- x. Using a digital multimeter, check for continuity between body wire harness connectors B-040 and B-005 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-040 (7) - B-005 (1)	Always	Continuity



- y. Disconnect the body wire harness connector B-040 and ground B-036.
- z. Using a digital multimeter, check for continuity between body wire harness connector B-040 and B-036 according to the table below.

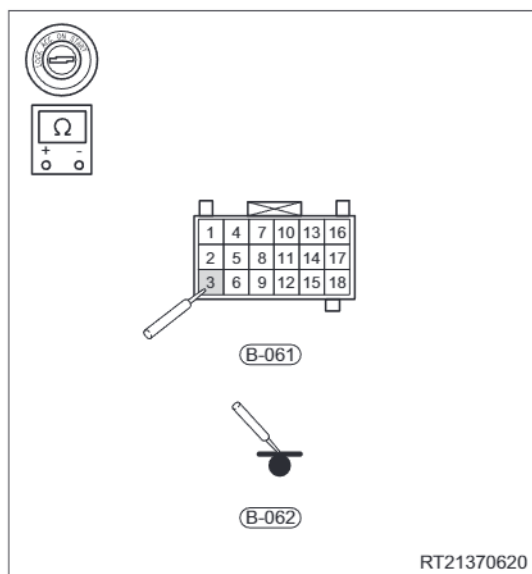
Multimeter Connection Terminal	Condition	Specified Condition
B-040 (3) - B-036	Always	Continuity



- aa. Disconnect the body wire harness connector B-061 and ground B-062.
- ab. Using a digital multimeter, check for continuity between body wire harness connector B-061 and B-062 according to the table below.

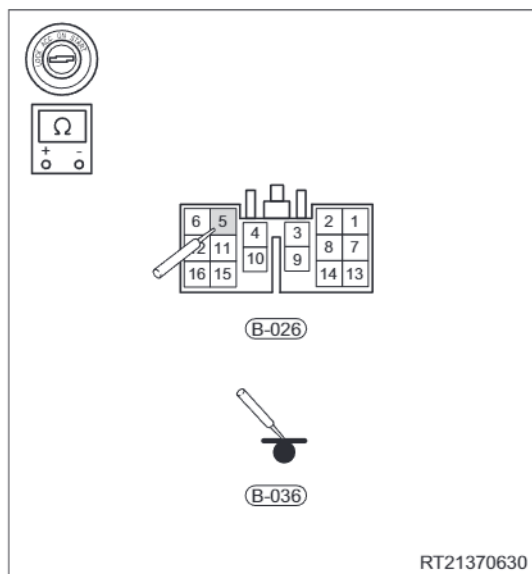
37

Multimeter Connection Terminal	Condition	Specified Condition
B-061 (3) - B-062	Always	Continuity



- ac. Disconnect the body wire harness connector B-026 and ground B-036.
- ad. Using a digital multimeter, check for continuity between body wire harness connector B-026 and B-036 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-026 (5) - B-036	Always	Continuity

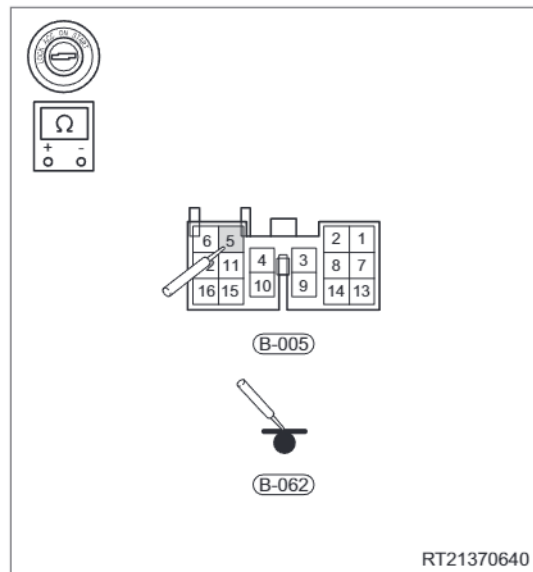


- ae. Disconnect the body wire harness connector B-005 and ground B-062.
- af. Using a digital multimeter, check for continuity between body wire harness connector B-005 and B-062 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
B-005 (5) - B-062	Always	Continuity

NG

Repair or replace body wire harness and connector



OK

4

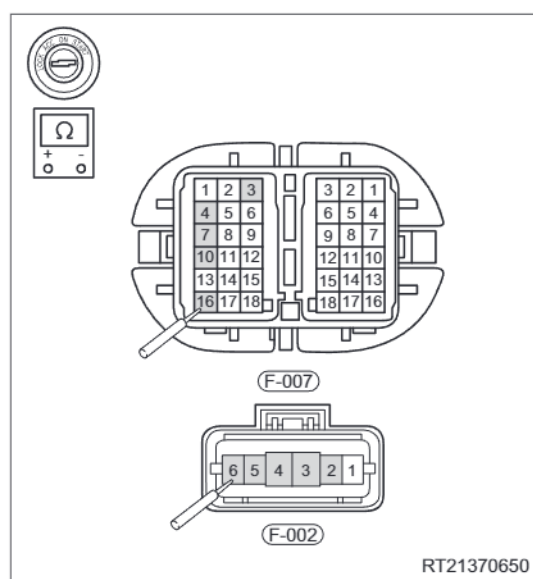
Check front left door wire harness and connector

- a. Turn ignition switch to LOCK.
- b. Disconnect the negative battery cable.
- c. Disconnect the front left door wire harness connectors F-007 and F-002.
- d. Using a digital multimeter, check for continuity between front left door wire harness connectors F-007 and F-002 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
F-007 (4) - F-002 (2)	Always	Continuity
F-007 (7) - F-002 (3)	Always	Continuity
F-007 (10) - F-002 (4)	Always	Continuity
F-007 (3) - F-002 (5)	Always	Continuity
F-007 (16) - F-002 (6)	Always	Continuity

NG

Repair or replace front left door wire harness and connector



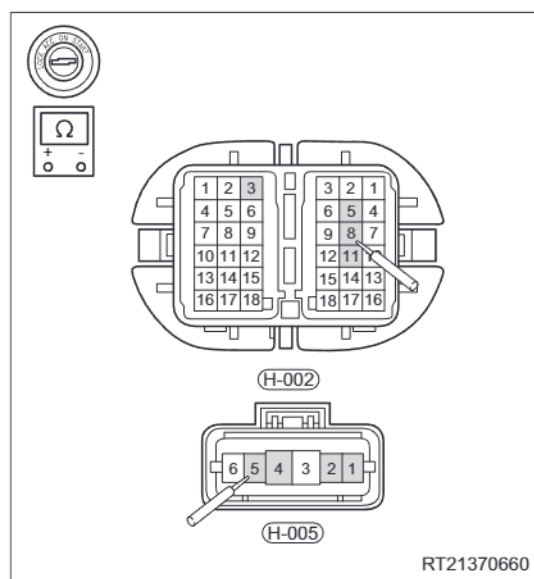
OK

37

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-002 and H-005.
- Using a digital multimeter, check for continuity between front right door wire harness connectors H-002 and H-005 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
H-002 (3) - H-005 (2)	Always	Continuity
H-002 (8) - H-005 (5)	Always	Continuity
H-002 (5) - H-005 (4)	Always	Continuity
H-002 (11) - H-005 (1)	Always	Continuity



NG

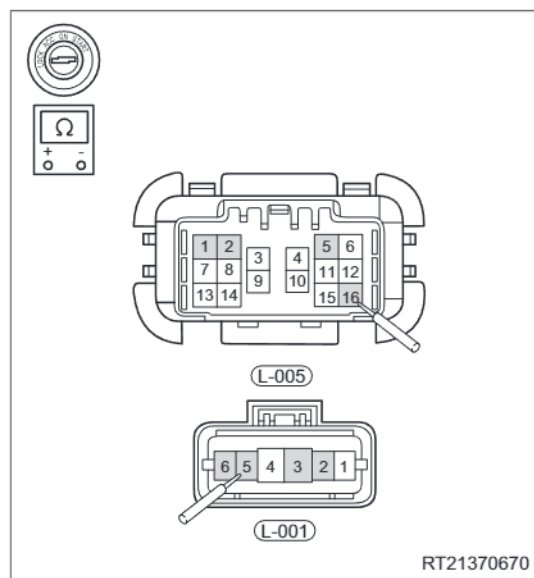
Repair or replace front right door wire harness and connector

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-001 and L-005.
- Using a digital multimeter, check for continuity between rear left door wire harness connectors L-001 and L-005 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
L-001 (2) - L-005 (2)	Always	Continuity
L-001 (3) - L-005 (1)	Always	Continuity
L-001 (5) - L-005 (5)	Always	Continuity
L-001 (6) - L-005 (16)	Always	Continuity



NG

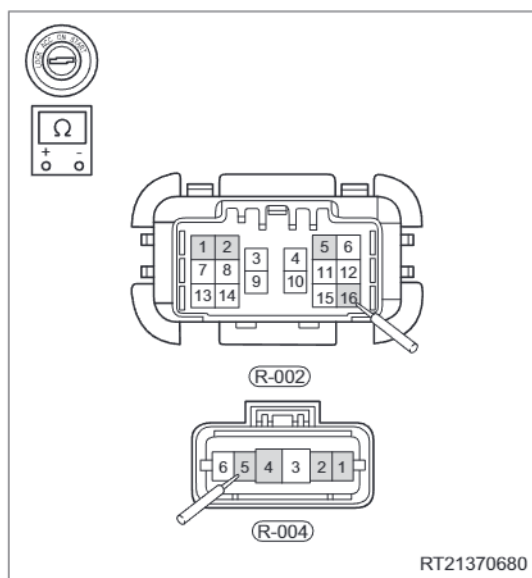
Repair or replace rear left door wire harness and connector

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-002 and R-004.
- Using a digital multimeter, check for continuity between rear right door wire harness connectors R-002 and R-004 according to the table below.

Multimeter Connection Terminal	Condition	Specified Condition
R-002 (1) - R-004 (4)	Always	Continuity
R-002 (2) - R-004 (5)	Always	Continuity
R-002 (5) - R-004 (2)	Always	Continuity
R-002 (16) - R-004 (1)	Always	Continuity



37

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

Result	Precede to
DTC B102471 and B102711 are output	NG
No DTC is output	OK

NG

Replace Body Control Module (BCM)

OK

System is normal

ON-VEHICLE SERVICE

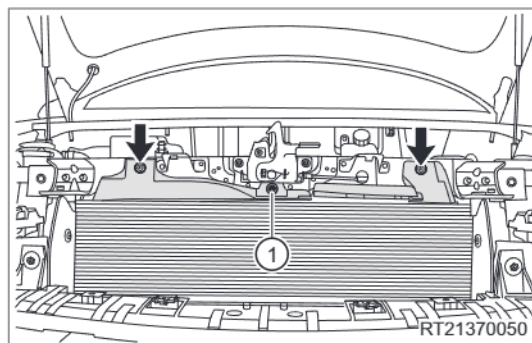
Engine Hood Lock Assembly

Removal

CAUTION

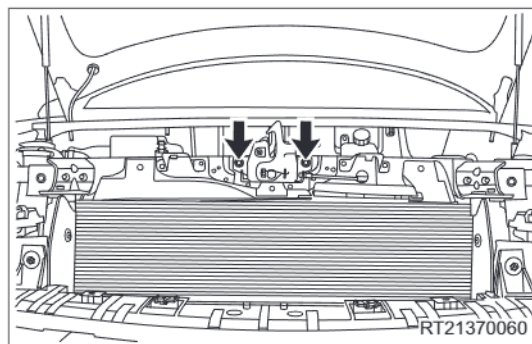
- Be sure to wear safety equipment to prevent accidents when removing engine hood lock assembly.
- Try to prevent body paint surface from being scratched when removing engine hood lock assembly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the radiator grille assembly (See page 48-8).
4. Remove the water tank upper crossmember trim board (See page 48-10).
5. Remove the tank upper crossmember deflector.
 - a. Remove 2 plastic clips (arrow) and the fixing nut (1) from tank upper crossmember deflector. (Tightening torque: 10 ± 1 N·m)
 - b. Remove the tank upper crossmember deflector.

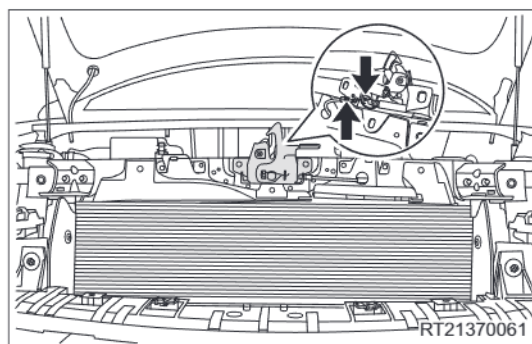


37

6. Remove the engine hood lock assembly.
 - a. Remove 2 fixing nuts (arrow) from engine hood lock assembly. (Tightening torque: 10 ± 1 N·m)



- b. Detach the engine hood cable assembly (arrow) from clamping part, and remove the engine hood lock assembly.



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

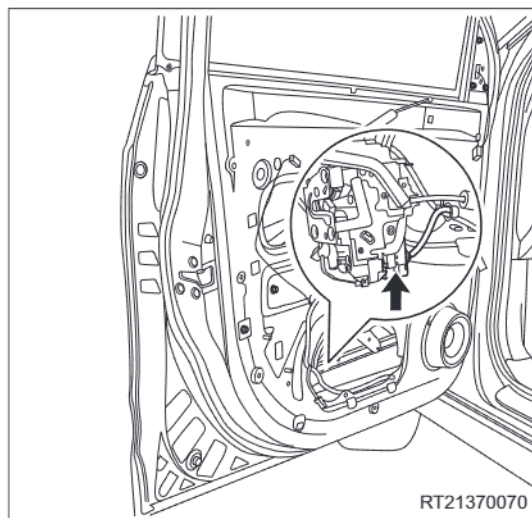
HINT:

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

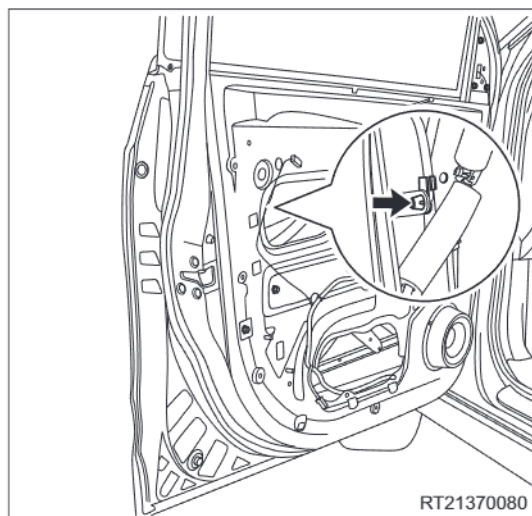
CAUTION

- Be sure to wear 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.

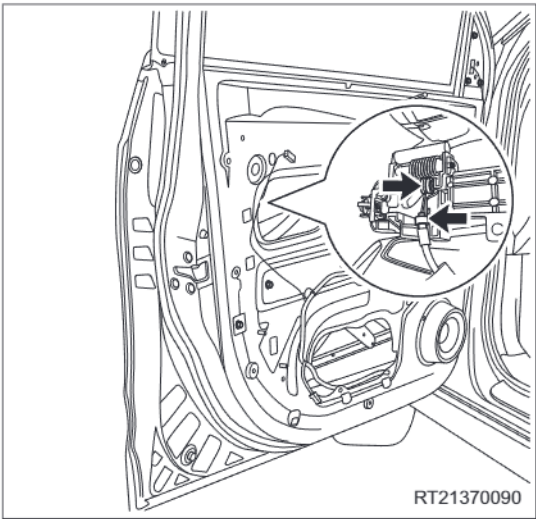
1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front left door protector assembly ([See page 47-36](#)).
4. Remove the front left door assist grip mounting bracket assembly ([See page 47-41](#)).
5. Remove the front left door protective film assembly ([See page 47-41](#)).
6. Remove the front left door glass rear guide rail assembly ([See page 43-51](#)).
7. Remove the front left door lock assembly.
 - a. Disconnect the connector (arrow) from front door lock assembly.



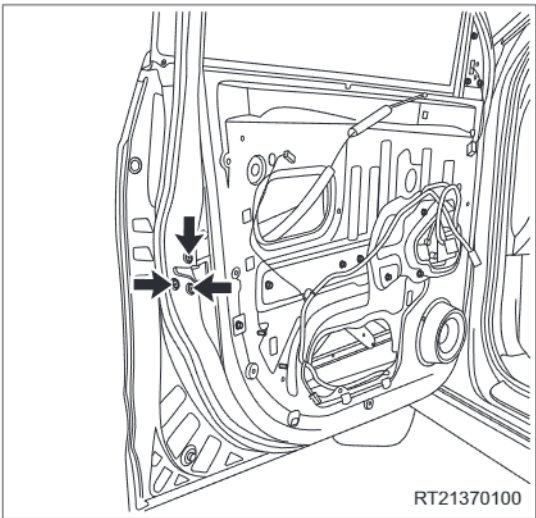
- b. Detach the clip (arrow) connecting front door lock assembly and front door key cylinder lever.



- c. Detach the cable (arrow) connecting front door lock assembly and front door assist grip base.



- d. Remove 3 fixing screws (arrow) from front door lock assembly, and remove the front door lock assembly. (Tightening torque: 5.8 ± 0.7 N·m)



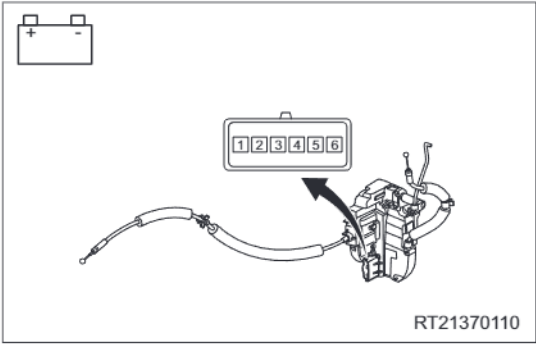
37

Inspection

1. Check front door lock assembly (fastener assembly).
- a. Apply battery voltage to terminals of front door lock assembly (fastener assembly) connector and check if front door lock assembly works properly 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 clip and cable on the lever in place when installing front door lock assembly.
- Check if front door lock operates properly after installing front door lock assembly.

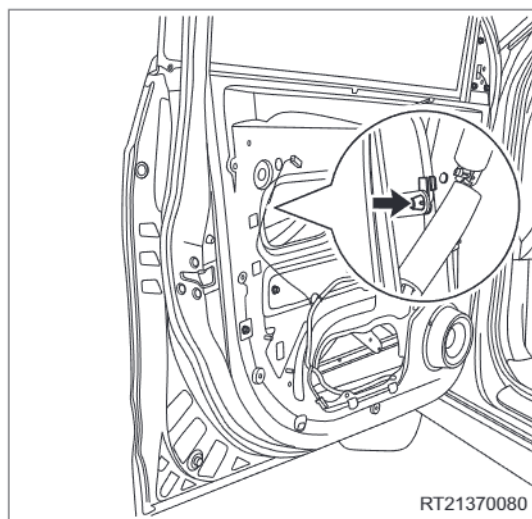
Front Door Key Cylinder

Removal

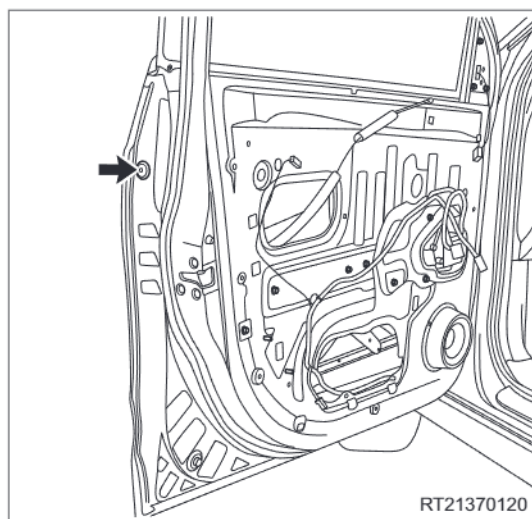
CAUTION

- Be sure to wear safety equipment to prevent accidents when removing front door key cylinder.
- Try to prevent interior and body paint from being scratched when removing front door key cylinder.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front left door protector assembly (See page 47-23).
4. Remove the front left door assist grip mounting bracket assembly (See page 47-29).
5. Remove the front left door protective film assembly (See page 47-30).
6. Remove the front left door key cylinder protective cover.
 - a. Disconnect the clip (arrow) between front door lock assembly and front door lock key cylinder lever.



- b. Using a screwdriver wrapped with protective tape, remove the trim plug (arrow) of front door key cylinder protective cover.

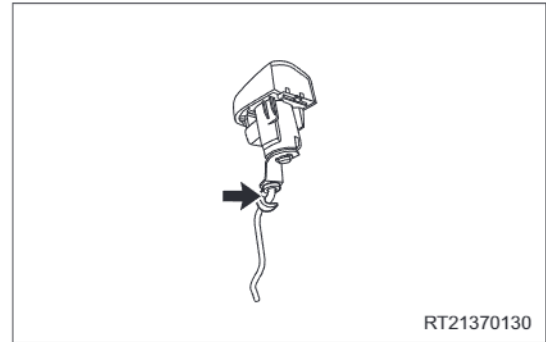


- c. Remove the fixing screw from front door key cylinder protective cover, and remove the front left door key cylinder protective cover.
(Tightening torque: 5 ± 1 N·m)

HINT:

It is not necessary to remove the fixing screw from front left door key cylinder protective cover, because the fixing screw is integrated with the front door key cylinder protective cover.

7. Remove the front left door key cylinder.
 - a. Detach the clip (arrow) from front door key cylinder lever.



- b. Using a screwdriver wrapped with protective tape, disengage the claws (arrow) to separate the front door key cylinder protective cover from front door key cylinder.



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Installation

Installation is in the reverse order of removal.

CAUTION

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

Front Door Lock Striker Assembly

Removal

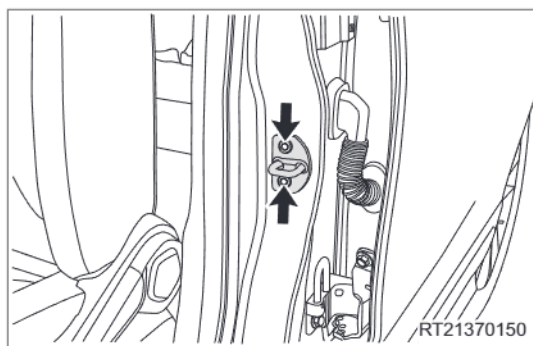
HINT:

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

CAUTION

- Be sure to wear 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 crews (arrow) from front left door lock striker assembly.
(Tightening torque: 10 ± 1 N·m)
 - b. Remove the front left door lock striker assembly.



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Installation

Installation is in the reverse order of removal.

CAUTION

- Try to prevent body paint surface from being scratched when installing front door lock striker assembly.

Rear Door Lock Assembly

Removal

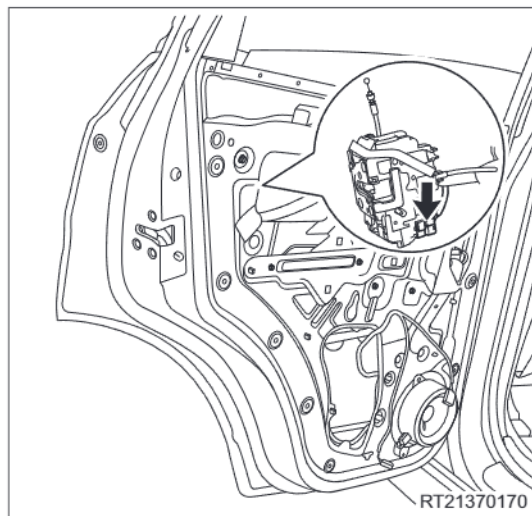
HINT:

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

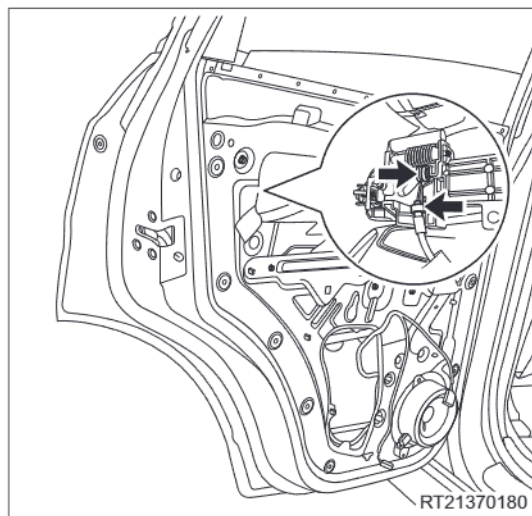
CAUTION

- Be sure to wear 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.

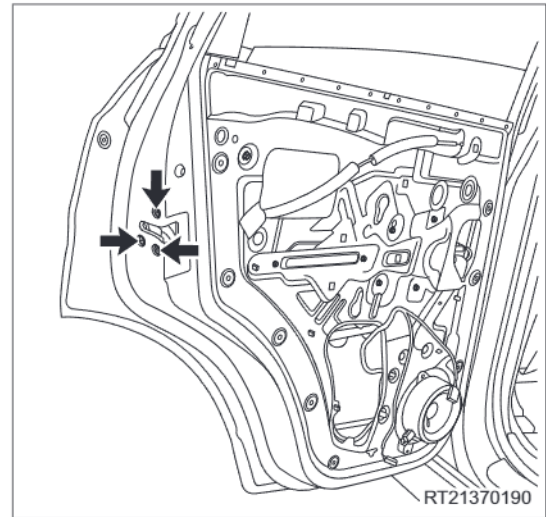
1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the rear left door protector assembly ([See page 47-36](#)).
4. Remove the rear left door assist grip mounting bracket assembly ([See page 47-41](#)).
5. Remove the rear left door protective film assembly ([See page 47-41](#)).
6. Remove the rear left door lock assembly.
 - a. Disconnect the connector (arrow) from rear door lock assembly.



- b. Detach the cable (arrow) connecting rear door lock assembly and rear door assist grip base.



- c. Remove 3 fixing screws (arrow) from rear door lock assembly, and remove the rear door lock assembly.
(Tightening torque: $5.8 \pm 0.7 \text{ N}\cdot\text{m}$)



Inspection

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

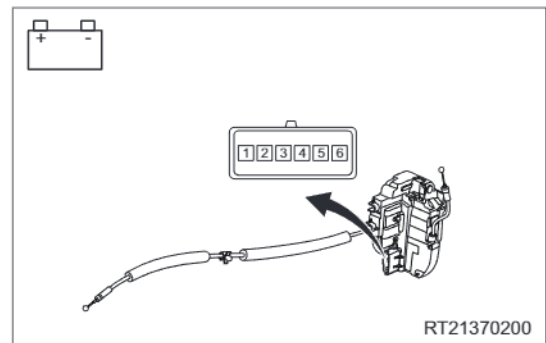
Rear Left Door Lock Assembly

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 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

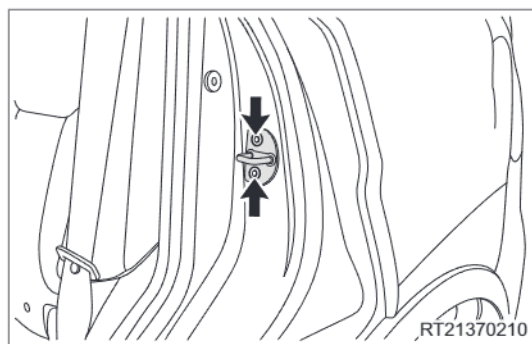
HINT:

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

CAUTION

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

1. Remove the rear left door lock striker assembly.
 - a. Remove 2 fixing screws (arrow) from rear left door lock striker assembly.
(Tightening torque: 10 ± 1 N·m)
 - b. Remove the rear left door lock striker assembly.



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Installation

Installation is in the reverse order of removal.

CAUTION

- Try to prevent body paint surface from being scratched when installing rear door lock striker assembly.

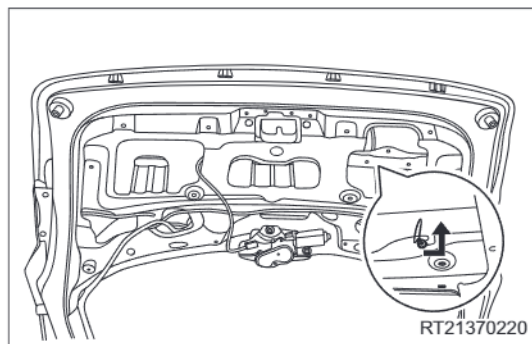
Back Door Lock Assembly

Removal

CAUTION

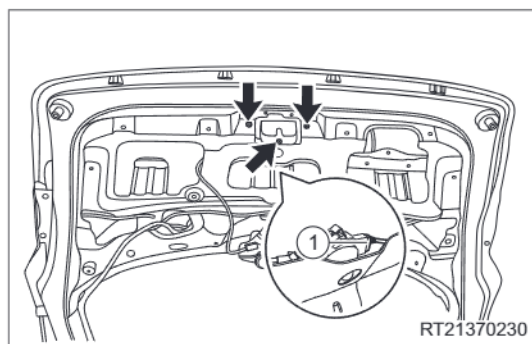
- Be sure to wear safety equipment to prevent accidents when removing back door lock assembly.
- Try to prevent interior and body paint from being scratched when removing back door lock assembly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the back door protector assembly (See page 47-47).
4. Remove the back door lock assembly.
 - a. Disengage the back door lock mechanical opener cable assembly from the slot in the direction of arrow as shown in the illustration.

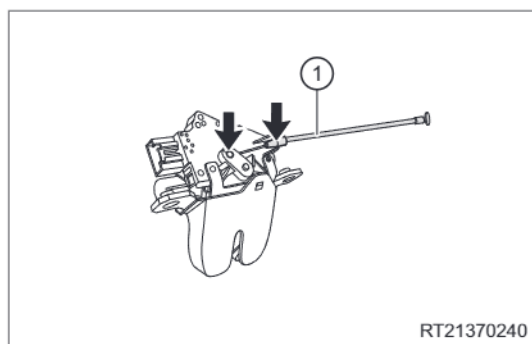


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- b. Disconnect the connector (1) from back door lock assembly.
- c. Remove 3 fixing bolts (arrow) from back door lock assembly, and remove the back door lock assembly. (Tightening torque: $10 \pm 1 \text{ N}\cdot\text{m}$)



5. Remove the back door lock mechanical opener cable assembly.
 - a. Disengage the back door lock mechanical opener cable assembly (arrow) from the slot.
 - b. Remove the back door lock mechanical opener cable assembly (1).



Inspection

1. Check back door lock assembly.
 - a. Using ohm band of digital multimeter, check for continuity between terminals of back door lock assembly according to the table below.

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

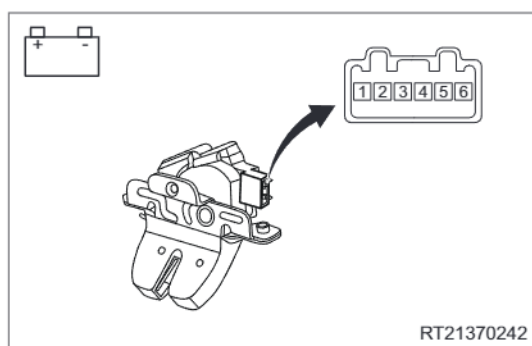
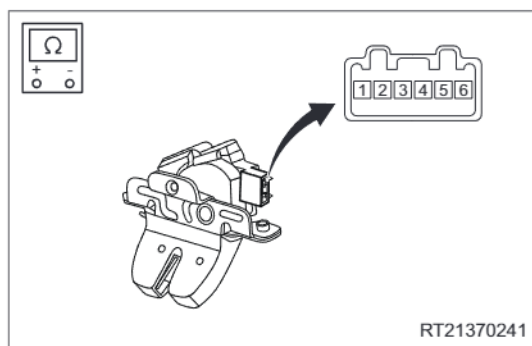
If result is not as specified, replace back door lock assembly.

2. Check back door lock assembly.
 - a. Apply battery voltage to the terminals of back door lock assembly connector and check the operation of back door lock assembly according to the table below.

Rear Right Door Lock Assembly

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	ON

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



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Installation

Installation is in the reverse order of removal.

CAUTION

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

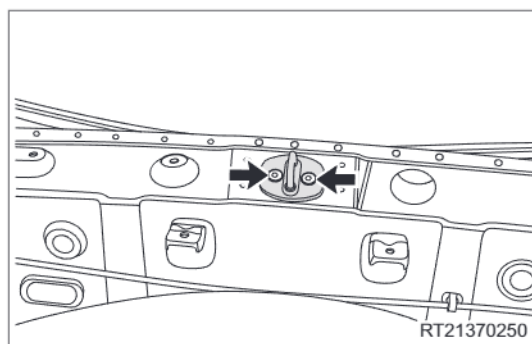
Back Door Lock Striker Assembly

Removal

CAUTION

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

1. Remove the back doorsill pressure plate assembly (See page 49-13).
2. Remove the back door lock striker assembly.
 - a. Remove 2 fixing screws (arrow) from back door lock striker assembly.
(Tightening torque: 10 ± 1 N·m)
 - b. Remove the back lock latch.



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Installation

Installation is in the reverse order of removal.

CAUTION

- Try to prevent body paint surface from being scratched when installing back door lock striker assembly.

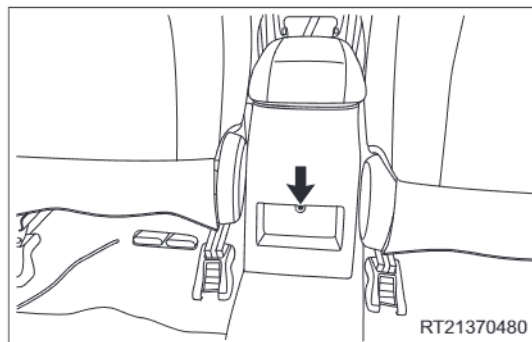
Low Frequency Antenna

Removal

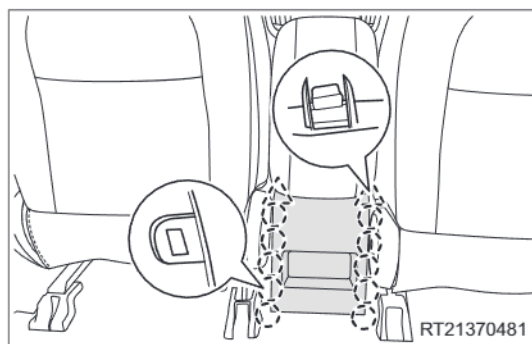
CAUTION

- 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.

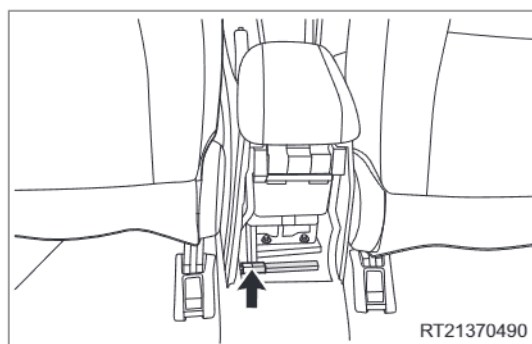
1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the auxiliary fascia console rear cover plate assembly.
 - a. Remove the fixing screw from auxiliary fascia console rear cover plate assembly.
(Tightening torque: $1.5 \pm 0.5 \text{ N}\cdot\text{m}$)



- b. Open the armrest box assembly.
- c. Using a screwdriver wrapped with protective tape, pry up the claws on auxiliary fascia console rear cover plate assembly, and remove the auxiliary fascia console rear cover plate assembly.



4. Remove the low/medium frequency antenna.
 - a. Disconnect the connector (arrow) from low/medium frequency antenna.
 - b. Using a screwdriver wrapped with protective tape, pry up the clip on low/medium frequency antenna, and remove the low/medium frequency antenna.

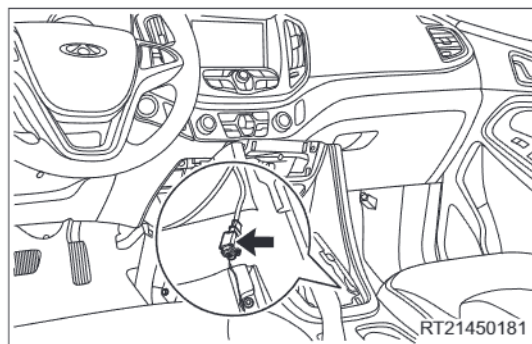


5. Remove the anti-theft coil.

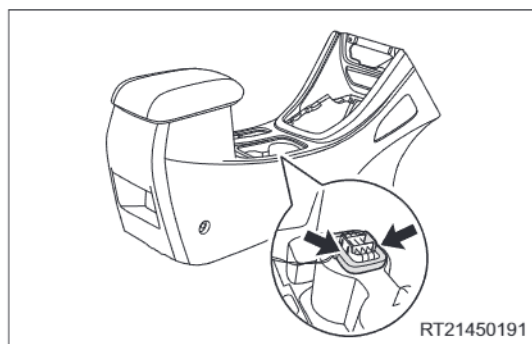
- a. Remove the auxiliary fascia console assembly (See page 45-9).

HINT:

Anti-theft coil connector has been disconnected when removing the auxiliary fascia console assembly.



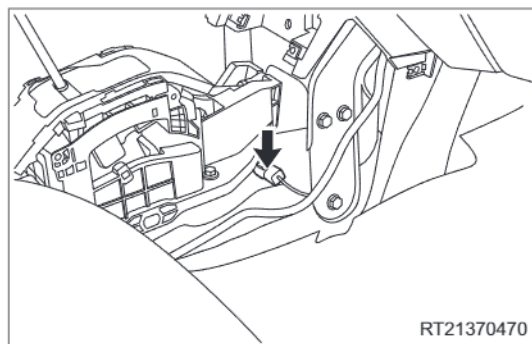
- b. Detach the claws (arrow), and remove the anti-theft coil.



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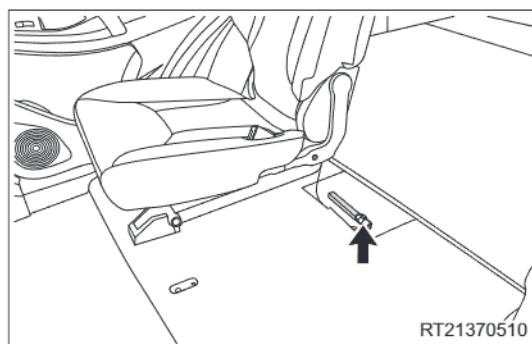
6. Remove the front low frequency antenna.

- Disconnect the connector (arrow) from front low frequency antenna.
- Using a screwdriver wrapped with protective tape, pry up the clip on front low frequency antenna, and remove the front low frequency antenna.



7. Remove the rear low frequency antenna.

- Remove the rear left seat assembly (See page 46-25).
- Disconnect the connector (arrow) from rear low frequency antenna.
- Using a screwdriver wrapped with protective tape, pry up the clip on rear low frequency antenna, and remove the rear low frequency antenna.

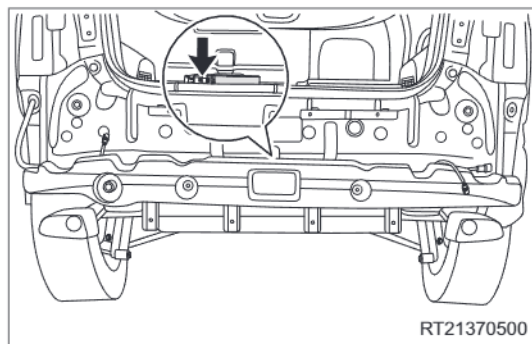


8. Remove the rear bumper assembly (See page 48-11).

9. Remove the back door opener low frequency antenna.



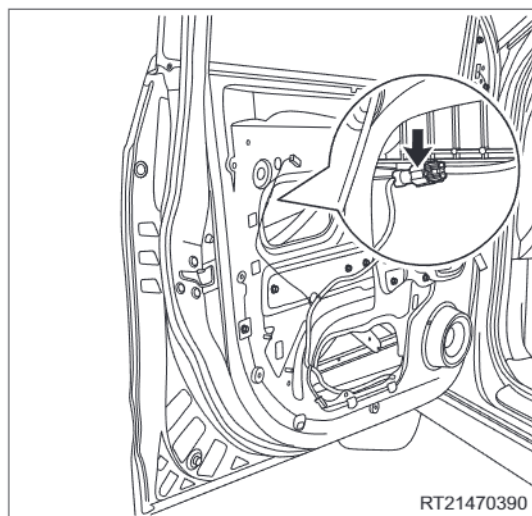
- a. Disconnect the connector (arrow) from back door opener low frequency antenna.
- b. Using a screwdriver wrapped with protective tape, pry up the clip on back door opener low frequency antenna, and remove the back door opener low frequency antenna.



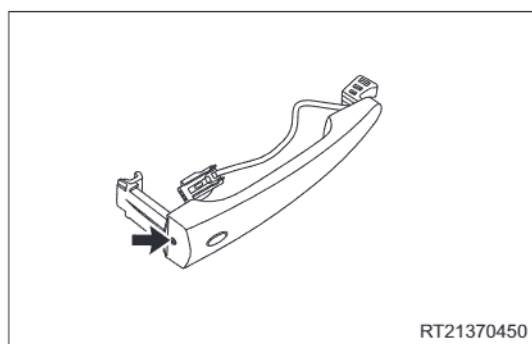
10. Remove the front left door protector assembly (See page 47-23).
11. Remove the front left door assist grip mounting bracket assembly (See page 47-29).
12. Remove the front left door protective film assembly (See page 47-30).
13. Remove the front left door key cylinder protective cover (See page 37-44).
14. Remove the front left door outside handle (See page 47-31).

HINT:

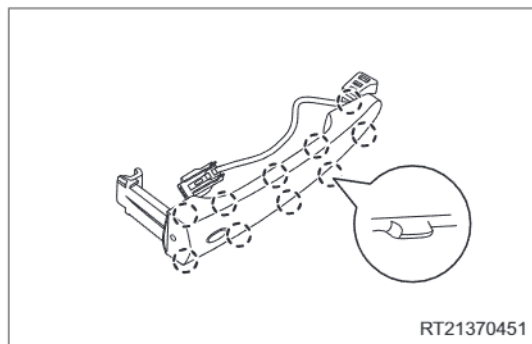
Front door handle sensor connector has been disconnected when removing the front door outside handle.



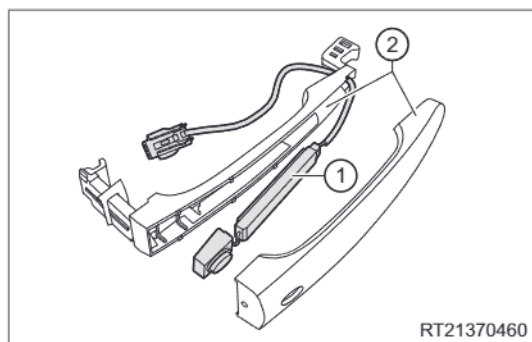
15. Remove the front left door handle sensor (built into low frequency antenna) (take left side as an example).
 - a. Remove the fixing crew (arrow) from front door outside handle.
(Tightening torque: 1.5 N·m)



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



- c. Separate the front door handle sensor (1) and front door outside handle (2).



Installation

Installation is in the reverse order of removal.

CAUTION

- Clip on low frequency antenna and antenna mounting bracket should be fitted properly when installing low frequency antenna.
- Check if functions are normal after installing low frequency antenna.

Wireless Key

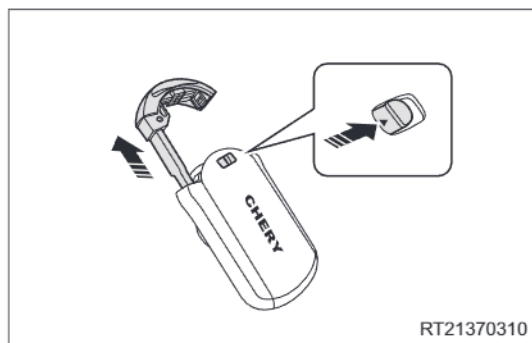
Removal

CAUTION

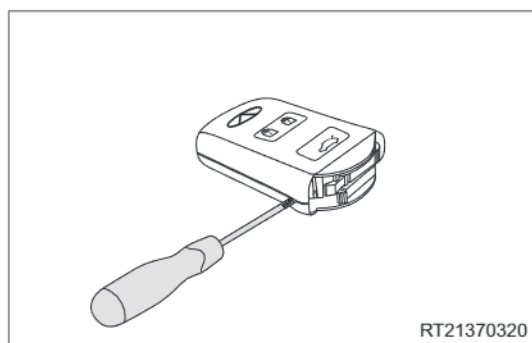
- DO NOT push the terminals with your hands when removing wireless key cover.
- Install battery positive and negative correctly when removing wireless key cover.
- DO NOT pry up the battery forcibly when removing wireless key cover, otherwise the terminals may be damaged.
- DO NOT touch the battery with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

1. Remove the wireless key (w/ passive entry & passive start).

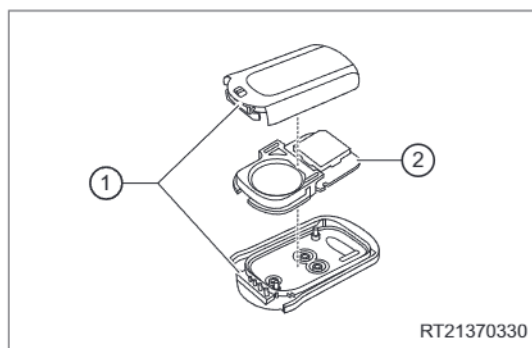
- ##### a. Remove the mechanical key billet in the direction of arrow as shown in the illustration.



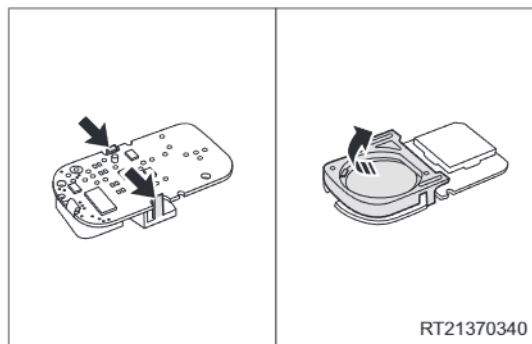
- ##### b. Using a screwdriver wrapped with protective tape, pry out the wireless key cover.



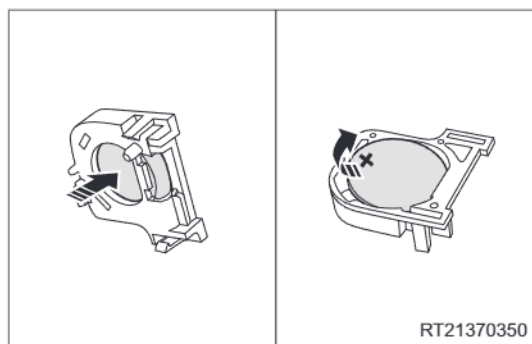
- ##### c. Separate the wireless key cover (1) and chip (2).



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

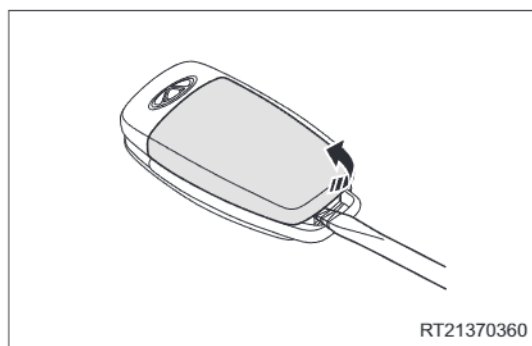


- e. Take out the battery in the direction of arrow as shown in the illustration.

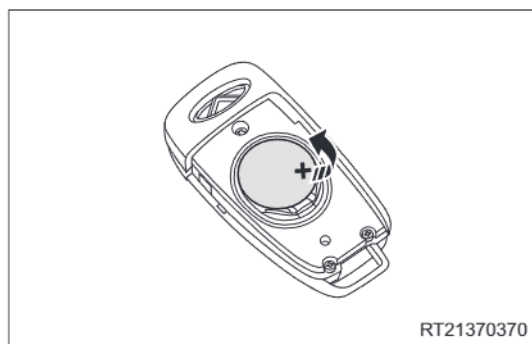


2. Remove the wireless key (w/o passive entry & passive start).

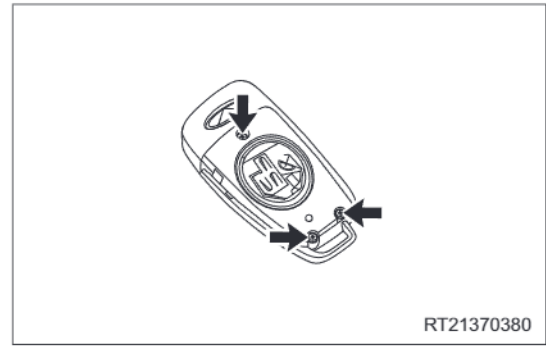
- a. Using a screwdriver wrapped with protective tape, pry out the wireless key cover.



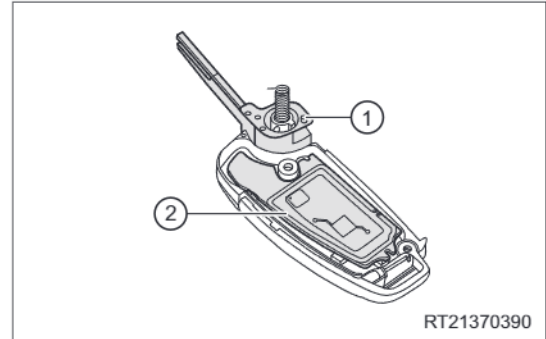
- b. Take out the wireless key battery in the direction of arrow as shown in the illustration.



- c. Remove 3 fixing screws (arrow) from wireless key upper cover.
(Tightening torque: 0.4 ± 0.1 N·m)



- d. Remove the wireless key upper cover.
e. Remove the wireless key billet (1).
f. Remove the wireless key chip (2).



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Installation

Installation is in the reverse order of removal.

CAUTION

- Check that the wireless key operates properly after installing the wireless key.

