
DOOR LOCK

55.1	Warnings and Precautions	2047
1	Warnings	2047
2	Precautions	2047
55.2	System Overview	2048
1	System Description	2048
2	System Components Diagram	2049
3	System Schematic Diagram	2050
4	Anti-theft management	2051
4.1	Fortifying mode	2051
4.2	Fortifying failure mode	2051
4.3	Intrusion mode	2052
4.4	Luggage compartment opening management (without PLG)	2053
4.5	Luggage compartment opening management (with PLG)	2053
55.3	System Circuit Diagram	2054
1	Circuit Diagram	2054
55.4	Diagnostic Information and Steps	2056
1	Problem Symptoms Table	2056
2	Diagnostic Help	2056
3	DTC Confirmation Procedure	2057
4	Intermittent DTC Troubleshooting	2057
5	Ground Inspection	2057
6	Diagnosis Procedure	2057
7	Diagnostic Trouble Code (DTC) Chart	2059
8	Relay Stuck Fault	2059
55.5	ON-VEHICLE SERVICE	2072
1	Tools	2072
2	Replacement of Engine Hood Lock Assembly	2072
2.1	Removal	2072
2.2	Inspection	2073
2.3	Installation	2074
3	Replacement of Engine Hood Cable Assembly	2074
3.1	Removal	2074
3.2	Inspection	2076
3.3	Installation	2076
4	Replacement of Front Door Lock Assembly	2077
4.1	Removal	2077
4.2	Inspection	2078
4.3	Installation	2078
5	Replacement of Front Door Key Cylinder Assembly	2079
5.1	Removal	2079
5.2	Installation	2081
6	Replacement of Front Door Lock Striker	2081
6.1	Removal	2081

DOOR LOCK

6.2	Installation	2081
7	Replacement of Rear Left Door Lock Assembly	2082
7.1	Removal	2082
7.2	Installation	2083
8	Replacement of Rear Door Lock Striker	2084
8.1	Removal	2084
8.2	Installation	2085
9	Replacement of Rear Left Outside Handle Assembly	2085
9.1	Removal	2085
9.2	Installation	2086
10	Replacement of Back Door Lock Assembly.....	2087
10.1	Removal	2087
10.2	Installation	2087
11	Replacement of Back Door Lock Striker Assembly	2088
11.1	Removal	2088
11.2	Installation	2088
12	Replacement of Central Control Lock Switch	2089
12.1	Removal	2089
12.2	Inspection	2089
12.3	Installation	2089
13	Replacement of Smart Key Battery.....	2090
13.1	Removal	2090
13.2	Installation	2090

55.1 Warnings and Precautions

1 Warnings

In order to avoid possible property loss, personal injury or death, always follow the instructions below before repair.

- (1) Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood lock assembly.
- (2) Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood cable assembly.
- (3) Be sure to wear necessary safety equipment to prevent accidents, when removing front door lock assembly.
- (4) Be sure to wear necessary safety equipment to prevent accidents, when removing front door key cylinder assembly.
- (5) Be sure to wear necessary safety equipment to prevent accidents, when removing front door lock striker assembly.

2 Precautions

In order to avoid possible property loss, personal injury or death, always follow the instructions below before repair.

- (1) Side door lock is secured to door inner panel with 3 bolts, evenly apply appropriate amount of thread lock adhesive to 5 to 7 teeth of 3 door lock mounting bolts in advance; pay attention to keep child lock locking when assembling rear door lock.
- (2) Align middle lines in up-down and left-right directions on lock striker with line on quarter, which should be ensured at the center of lock mechanism to ensure flexible locking and unlocking.

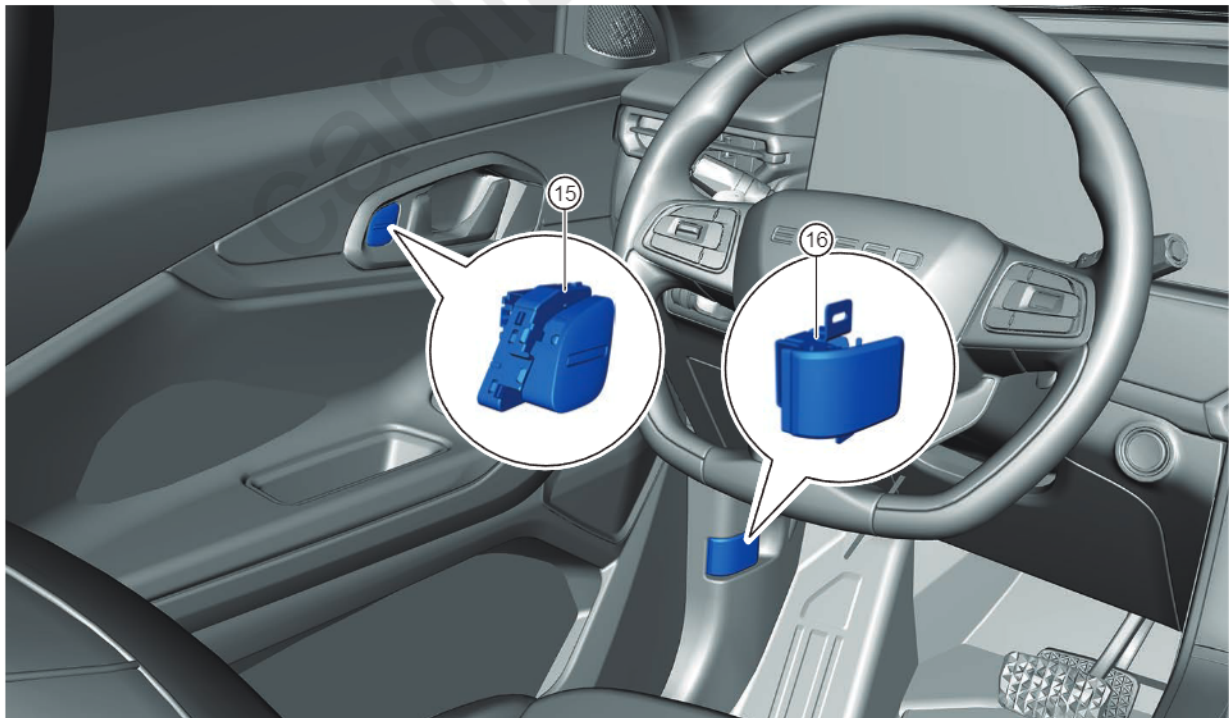
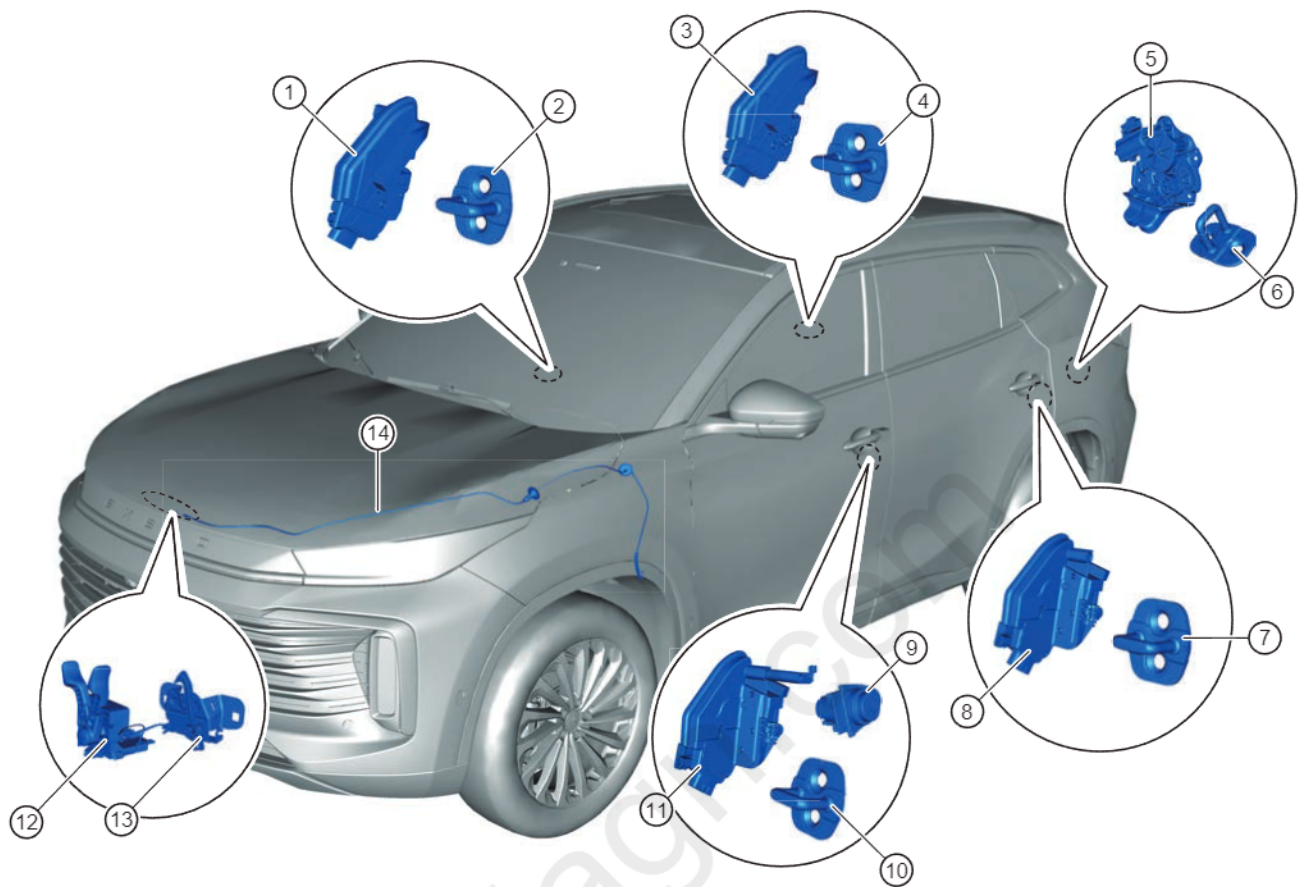
55.2 System Overview

1 System Description

Door lock system is a device mounted on the door and its pillar, which can reliably lock the door and realize the opening and locking functions through its internal mechanism. It is a very important accessory of body. It has safety protection function, which must guarantee reliable locking of door in the normal use, preventing the door accident/unintentional recognition to open. It also guarantee that door needs to open smoothly, to ensure that door can open in normal or when an emergency occurs, so as not to cause casualties and property losses which belongs to safety regulations.

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2 System Components Diagram

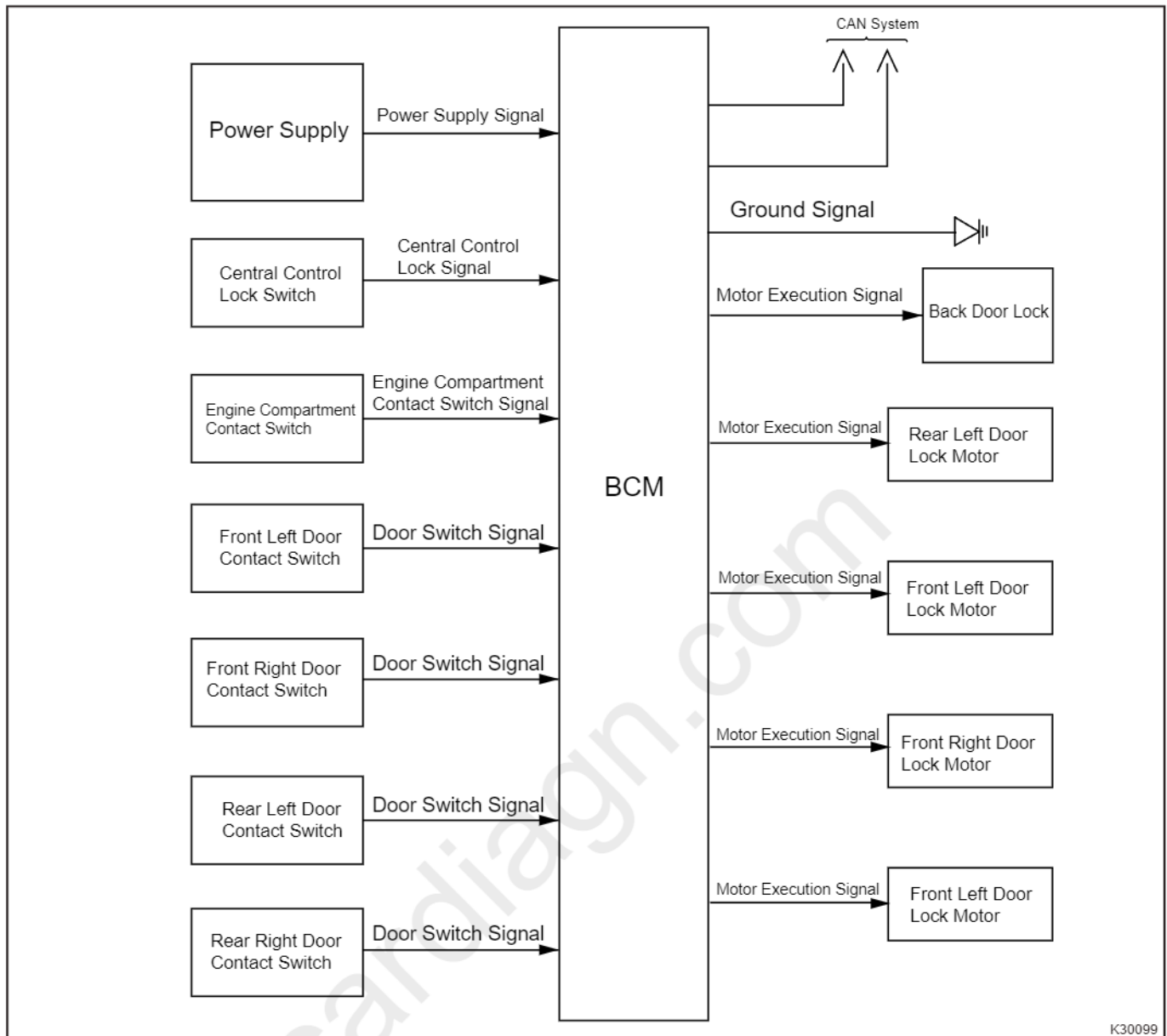


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1	Front Right Door Lock Assembly	9	Front Left Door Key Cylinder Assembly
2	Front Door Lock Striker Assembly	10	Front Door Lock Striker Assembly
3	Rear Right Door Lock Assembly	11	Front Left Door Lock Assembly
4	Rear Door Lock Striker Assembly	12	Engine Hood Secondary Lock Opening Mechanism Assembly
5	Self-engage Back Door Lock Assembly	13	Engine Hood Lock Assembly
6	Self-engage Back Door Lock Striker Assembly	14	Cable Assembly - Connecting Main Lock
7	Rear Door Lock Striker Assembly	15	Central Control Lock Switch
8	Rear Left Door Lock Assembly	16	Engine Hood Lock Cable Release Handle Assembly

3 System Schematic Diagram

Battery provides 12 V power supply to BCM, and BCM controls motor operation. After working, the feedback signal is sent to BCM, and then BCM sends the door closing and opening signals to the instrument cluster via CAN system. At this time, the instrument cluster will display if door lock is closed.



4 Anti-theft management

4.1 Fortifying mode

- IGN = OFF (it is not in IGN ON or ACC position).
- Four doors & two covers are closed.
- BCM receives remote control lock command.
- BCM feedbacks when fortifying mode is entered.
- Turn signal light flashes once (turn on for 500 ms) and sends the corresponding LHTurnsignalSts and RHTurnsignalSts.
- Anti-theft indicator flashes at a frequency of 100 ms on, 1900 ms off.
- Actuate the anti-theft horn for 50 ms and high and low pitched horns for 15 ms.

4.2 Fortifying failure mode

- Trigger conditions.
- IGN = OFF.
- Any of four doors & two covers is opened.

- BCM receives remote control lock command.
- BCM light feedbacks when fortifying failure mode is entered.
- Turn signal light flashes two times (flashing for 500 ms, interval time is 1s) and sends the corresponding LHTurnsignalSts and RHTurnsignalSts signals.
- When entering fortifying failure mode: If four doors are closed and any of the two covers is opened, BCM will perform central control lock command once; If two covers are closed and any of the doors is opened, BCM will perform central control lock command and then perform unlock command (the interval time is 500 ms).

4.3 Intrusion mode

- Trigger conditions: BCM will enter to alarm status after the following conditions are met when the vehicle is in fortifying mode.
- Doors or engine hood is opened.
- Key is turned to IGN ON.
- Luggage compartment is opened forcibly.
- After entering to intrusion mode, BCM feedback the conditions within one alarm cycle (30 s).
- Anti-theft horn (high and low pitched horns sound at frequency of 500 ms on and 500 ms off) operates for 28 ± 2 s, and pauses for 5 s.
- Left and right turn signal lights flash for 28s at frequency of 75 times/min (400 ms on, 400 ms off) and pause for 5 s, and send the corresponding LHTurnsignalSts and RHTurnsignalSts;
- Anti-theft indicator continuously flashes at frequency of 100 ms on, 200 ms off, 100 ms on, 600 ms off.
- Four doors & two covers and IGN ON illegal activation action are alarm trigger sources.
- In the same alarm source, a single trigger source can trigger 3 alarm cycles at most.
- In multiple alarm trigger sources, BCM can trigger 8 alarm cycles at most (after 8 alarm cycles, the sound and light alarm will stop).
- If the intrusion ends, BCM will stop alarming after the current alarm cycle. If the same alarm source is triggered again after the alarm is over, BCM will perform the remaining alarm cycles.
- If the four doors & two covers are closed at the end of the alarm, BCM will enter fortifying mode.
- Fortifying deactivation mode.
- Activation conditions: Vehicle is in alarm mode; BCM receives RF unlock command or BCM detects IMMOCodeWarningLightSts=0 for 1 s continuously after the key is switched to IGN ON for 2 seconds.
- When the alarm is released: vehicle exits anti-theft function mode; anti-theft horn (high and low pitched horns (if equipped)) stops working, and the turn signal light stops flashing.
- After alarm is released, if key is not in IGN ON, anti-theft indicator light still flashes at a frequency of 100 ms on, 200 ms off, 100 ms on and 600 ms off; if the key is in IGN ON, anti-theft indicator light stops flashing.
- Pre-rearming mode.
- Trigger conditions.
- Vehicle is in fortifying mode.
- BCM receives remote control unlock command.
- BCM feedbacks when fortifying mode is released:
- Anti-theft indicator turns off immediately.
- Turn signal light flashes 2 times at frequency of 500 ms on and 500 ms off, and sends the corresponding LHTurnsignalSts and RHTurnsignalSts.
- Within 30 ± 2 s after fortifying mode is released.
- If any of four doors & two covers are open, BCM exits anti-theft mode.
- If all doors, engine hood and luggage compartment are always closed, BCM will lock automatically and enter the fortifying state after 30 s, and anti-theft indicator will flash at the frequency of 100 ms on and 1900 ms off.
- Luggage compartment opening mode.
- Trigger conditions.
- Vehicle is in fortifying mode.
- BCM receives the remote control luggage compartment open command for more than 1.5 s.

- BCM feedbacks when luggage compartment opening mode is triggered.
- Turn signal light illuminates and sends the corresponding LHTurnsignalSts and RHTurnsignalSts.
- Luggage compartment is open and no alarm is triggered.
- Then close the luggage compartment, vehicle returns to the fortifying state, and if there is no legal key, the luggage compartment switch cannot open luggage compartment.
- After using remote control to open the luggage compartment: After BCM receives remote control lock command, vehicle will immediately lock and return to fortifying state, but the turn signal light prompts fortifying failure.
- After using remote control to open the luggage compartment and close it again: After BCM receives remote control lock command, vehicle will immediately lock and return to fortifying state, but the turn signal light prompts fortifying successfully. If there is no registered key after the luggage compartment closed, the switch will not open the luggage compartment.

4.4 Luggage compartment opening management (without PLG)

- When the central control lock is in unlock state.
- When the luggage compartment opening switch is activated, the luggage compartment opens.
- When the central control lock is in lock state.
- Luggage compartment is opened.
- IGN OFF.
- BCM receives RF luggage compartment command for more than 1.5 s.
- Turn signal light illuminates and sends the corresponding LHTurnsignalSts and RHTurnsignalSts.
- Luggage compartment is opened.
- After luggage compartment is opened by remote control, close it manually, if there is no registered key (PKE), the luggage compartment will not open by the luggage compartment button.

Caution

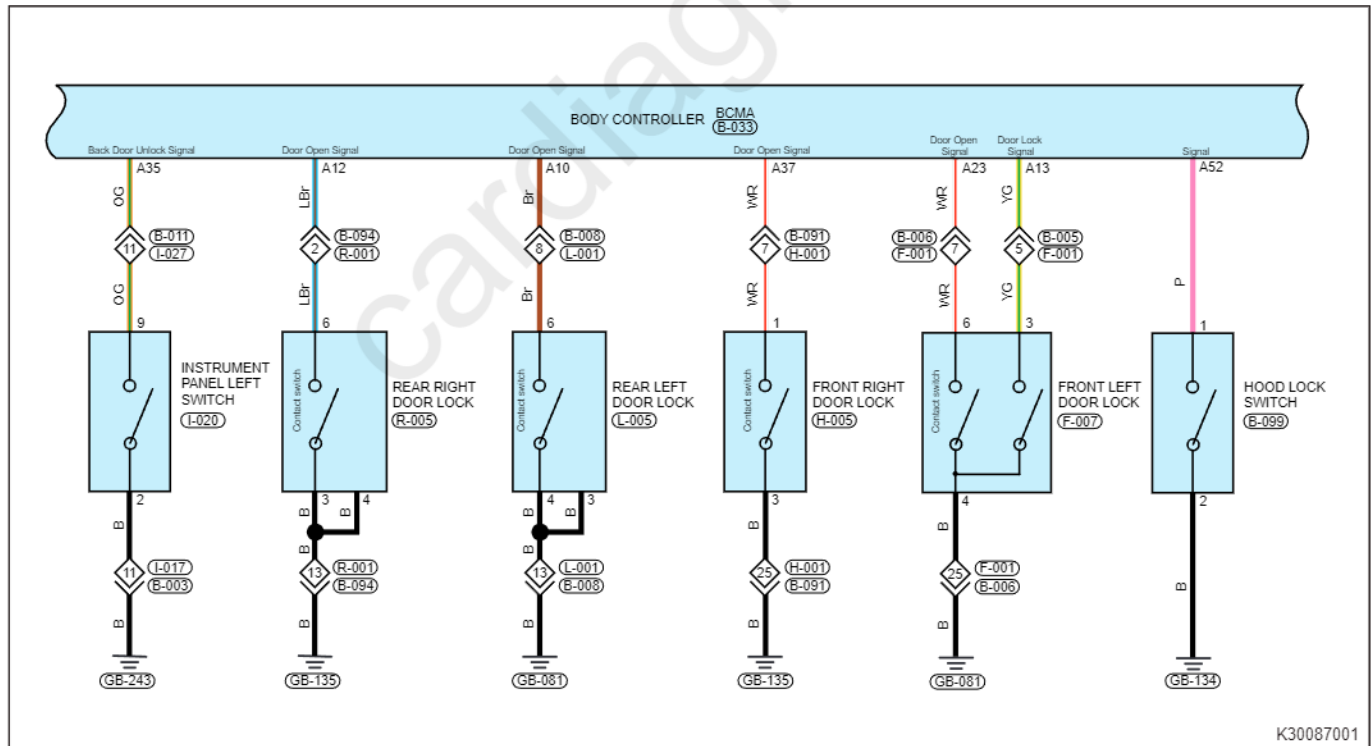
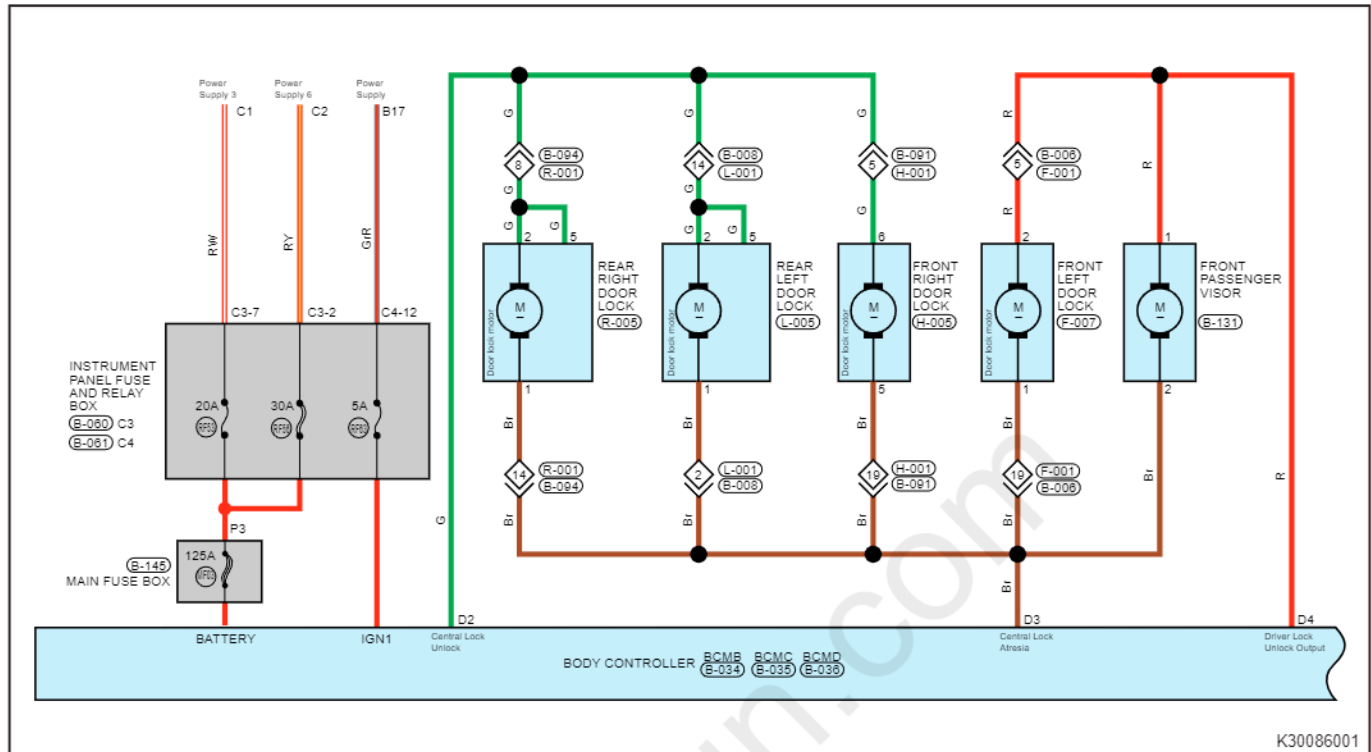
- When luggage compartment is opened, the luggage compartment light turns on.
- When luggage compartment is opened, the actuate time of motor is 200 ms.
- When the vehicle speed reaches 10km/h, the luggage compartment will not be opened (please note that the ignition remains in IGN while testing - BSM is 15 nodes).

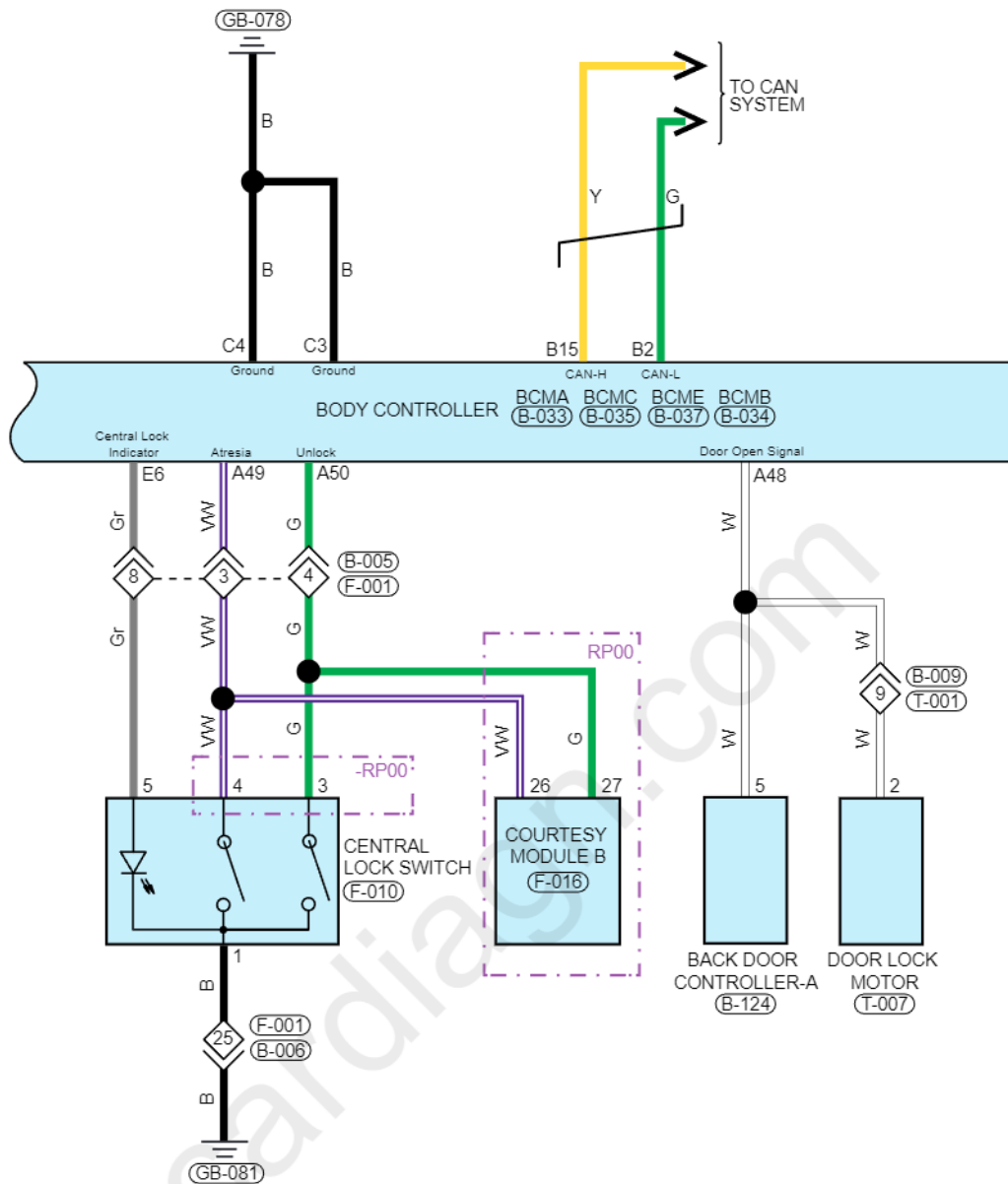
4.5 Luggage compartment opening management (with PLG)

- When vehicle is in fortifying deactivation mode.
- When the luggage compartment switch is activated, the luggage compartment opens/closes; turn signal light flashes twice, 200ms ON - 200ms OFF.
- During process of opening/closing back door, press remote control briefly to stop the current action of back door.
- Global fortifying.
- When GlobaSW is pressed and following conditions are met, BCM performs vehicle fortifying.
- IGN OFF.
- Four doors and engine hood are closed.
- Back door is locked within 10 s.
- When the vehicle is in fortifying mode.
- Luggage compartment is open/closed.
- IGN OFF/ACC position.
- BCM receives remote control luggage compartment command for more than 1.5 s.
- Turn signal light flashes twice, 200ms ON - 200ms OFF.
- During back door opening/closing process, short press wireless controller, back door stops the current operation.
- After back door is closed, the vehicle returns to fortifying state.

55.3 System Circuit Diagram

1 Circuit Diagram





55.4 Diagnostic Information and Steps

1 Problem Symptoms Table

Hint:

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

Power Door Lock Control System:

Symptom	Suspected Area
All door lock/unlock functions do not operate	Body control module (BCM) fuse
	Power door unlock/lock switch button
	Wire harness or connector
	Body Control Module (BCM)
Only driver side door lock/unlock function does not operate	Front left door lock assembly
	Wire harness or connector
Only passenger side door lock/unlock function does not operate	Front right door lock assembly
	Wire harness or connector
Only rear left door lock/unlock function does not operate	Rear left door lock assembly
	Wire harness or connector
Only rear right door lock/unlock function does not operate	Rear right door lock assembly
	Wire harness or connector
Only back door open/close function does not operate	Back door lock assembly
	Wire harness or connector

Wireless Door Lock Control System:

Symptom	Suspected Area
Only wireless control function does not operate	Wireless key battery
	Anti-theft matching
	Wire harness or connector
	Body Control Module (BCM)

2 Diagnostic Help

- Connect diagnostic tester (the latest software) to diagnostic interface, and make it communicate with vehicle electronic module through data network.
- Confirm that malfunction is current, and carry out diagnostic test and repair procedures.
- If DTC cannot be deleted, malfunction is current.
- Only use a digital multimeter to measure voltage of electronic system.
- Refer to any Technical Bulletin that may apply to this malfunction.
- Visually check the related wire harness.
- Check and clean all system grounds related to the latest DTCs.
- If numerous trouble codes are set, refer to circuit diagram and look for any common ground circuit or power supply circuit applied to DTC.

3 DTC Confirmation Procedure

■ **Confirm that battery voltage is not less than 12 V before performing following procedures.**

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Turn ENGINE START STOP switch to ON.
- Use the diagnostic tester to record and clear DTCs stored in the system.
- Turn ENGINE START STOP switch to OFF and wait for a few seconds.
- Turn ENGINE START STOP switch to ON and check the DTCs in system again.
- If DTC is detected, it indicates current malfunction.
- If no DTC is detected, malfunction indicated by the DTC is intermittent.

4 Intermittent DTC Troubleshooting

■ **If malfunction is intermittent, perform the followings:**

- Check if connector is loose.
- Check if wire harness is worn, pierced, pinched or partially broken.
- Wiggle related wire harness and connector and observe if signal in related circuit is interrupted.
- If possible, try to duplicate the conditions under which DTC was reset.
- 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 instrument cluster, 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 ground parts related to DTC.
- Remove instrument cluster from malfunctioning vehicle, then install it to a new vehicle and perform a test. If this DTC cannot be cleared, instrument cluster is malfunctioning. If DTC can be cleared, reinstall instrument cluster to 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 DTC.
- Refer to any Technical Bulletin that may apply to this malfunction.

5 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 case will seriously affect normal operation of circuit. Check the ground points as follows:

- Remove ground bolt or nut.
- Check all contact surfaces for tarnish, dirt and rust, etc.
- Clean as necessary to ensure that contact is in good condition.
- Reinstall ground bolt or nut securely.
- Check if any additional accessories interfere with ground circuit.
- If several wire harnesses are crimped into one ground terminal, check for proper crimp condition. Make sure that all wire harnesses are clean and securely fastened while providing a proper ground path.

6 Diagnosis Procedure

Hint:

Use following procedures to troubleshoot the door lock system.

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

Next

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

Check if battery voltage is normal.

Standard Condition

Standard voltage: Not less than 12 V.

Result

NG

Replace the battery.

OK

3	Customer problem analysis
---	----------------------------------

Result

Result	Go to
No DTC	A
DTC is output	B

A

Perform troubleshooting procedure without DTCs according to malfunction symptom

B

4	Troubleshoot according to DTCs troubleshooting procedure
---	---

Result

Result	Go to
Problem is not resolved	A
Problem is resolved	B

A

Return to procedure 1 and troubleshoot the process again

B

5	According to door lock system malfunction repair completion inspection and delivery, confirm that malfunction is resolved.
---	---

Result

Result	Go to
Delivery inspection is failed	A
Delivery inspection is qualified	B

A

Return to procedure 1 and troubleshoot the process again

B**6****Finished****7 Diagnostic Trouble Code (DTC) Chart****■ BCM Door Lock**

DTC	DTC Definition	Detection Condition	Possible Cause	Maintenance Advice
B1018-71	Driver Unlock Built-in Relay Stuck Fault	When the output is OFF and ignition switch is OFF, output voltage is more than 7 V, (error is within 10% and duration is more than 100 MS, software will detect once every 10 MS, and it will be determined after at least 3 consecutive detections, detection starts after being powered on for 2 seconds, regardless of the key position, the detection can be performed as long as load working conditions are met and load is output.) It is stored as the current DTC.	Relay problem	- Relay - Check BCM
B1013-71	Central Control Lock Built-in Relay Stuck Fault			
B1014-71	Central Control Unlock Built-in Relay Stuck Fault			
B1024-71	Luggage Compartment Unlock Relay Stuck	/		

8 Relay Stuck Fault

DTC	DTC Definition
B1018 - 71	Driver Unlock Built-in Relay Stuck Fault

■ **Malfunction reason:**

- Front left door lock assembly.
- Wire harness or connector.

Hint:

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

1 Check front left door lock motor

- (a) Turn ENGINE START STOP switch to OFF.
 (b) Disconnect the door lock motor connector.
 (c) Apply voltage no less than 12 V to door lock motor, and check if door lock operates.

NG

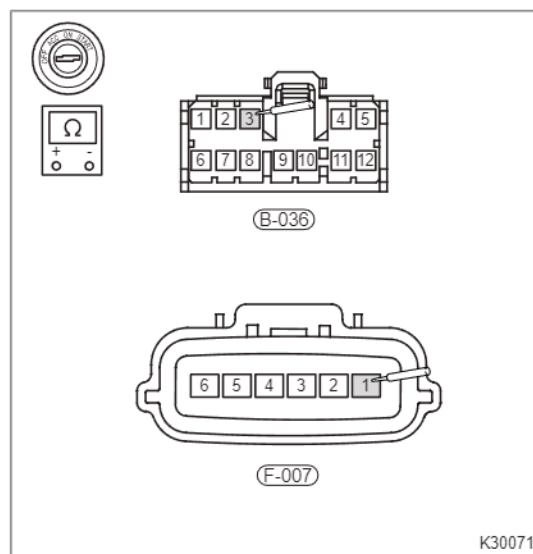
Replace front left door lock motor

OK

2 Check front left door lock motor and wire harness connector

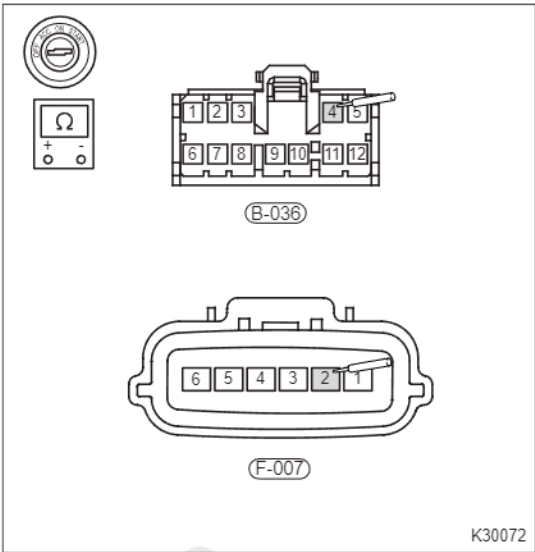
- (a) Turn ENGINE START STOP switch to OFF.
 (b) Disconnect the negative battery cable.
 (c) Using ohm band of multimeter, check for continuity between connector B-036 (3) and front left door lock motor connector F-007 (1).

Multimeter Connection	Condition	Specified Condition
B-036 (3) - F-007 (1)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



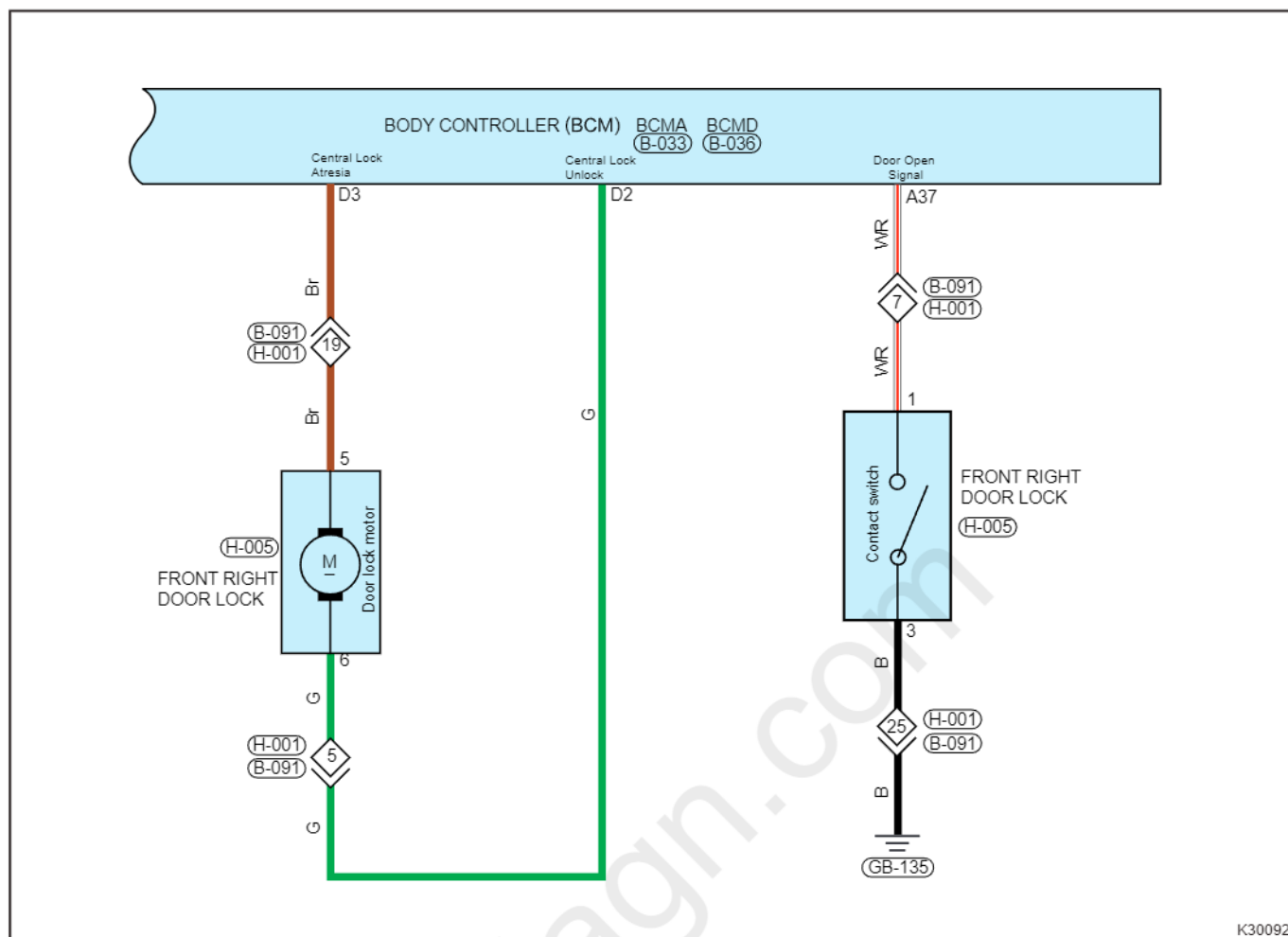
(d) Using ohm band of multimeter, check for continuity between connector B-036 (4) and F-007 (2).

Multimeter Connection	Condition	Specified Condition
B-036 (4) - F-007 (2)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



OK	End
NG	Repair or replace front left door lock related wire harness

DTC	DTC Definition
/	Only Front Passenger Side Door Lock/Unlock Function does not Operate



K30092

■ Malfunction reason:

- Front right door lock assembly.
- Wire harness or connector.

Hint:

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

1 Check front right door lock motor

- Turn ENGINE START STOP switch to OFF.
- Disconnect the door lock motor connector.
- Apply voltage no less than 12 V to door lock motor, and check if door lock operates.

NG

Replace front right door lock motor

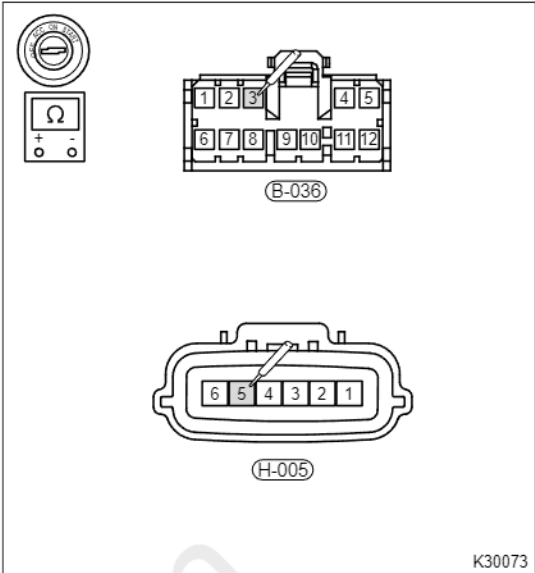
OK

2 Check front right door lock motor and wire harness connector

- Turn ENGINE START STOP switch to OFF.
- Disconnect the negative battery cable.

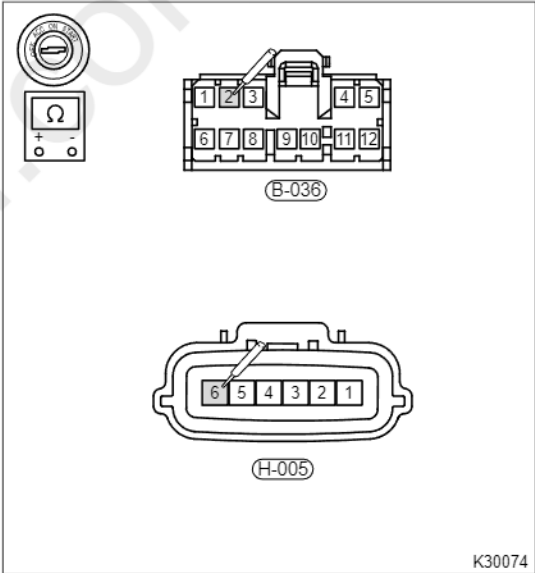
(c) Using ohm band of multimeter, check for continuity between front right door lock connector H-005 (5) and BCM connector B-036 (3).

Multimeter Connection	Condition	Specified Condition
B-036 (3) - H-005 (5)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



(d) Using ohm band of multimeter, check for continuity between front right door lock connector H-005 (6) and BCM connector B-036 (2).

Multimeter Connection	Condition	Specified Condition
B-036 (2) - H-005 (6)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



NG

Repair or replace front right door lock related wire harness

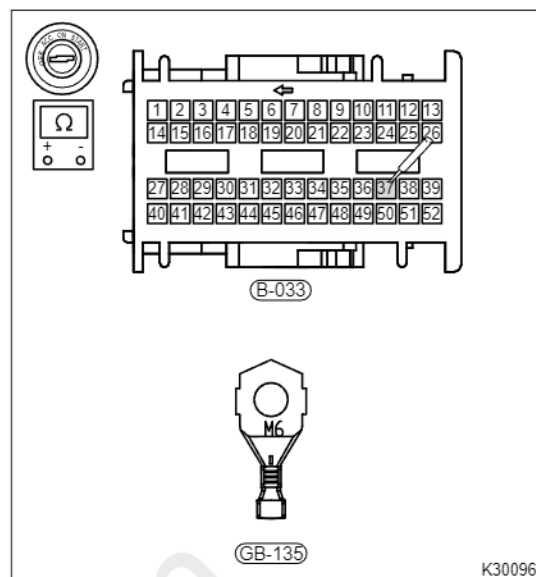
OK

3	Check front right door lock contact switch signal circuit
---	---

- (a) Turn ENGINE START STOP switch to OFF.
- (b) Disconnect the BCM connector B-033.

- (c) Using ohm band of multimeter, check for continuity between B-033 (37) terminal and front right door contact switch ground point GB-135.

Multimeter Connection	Condition	Specified Condition
B-033 (37) - GB-135	Always	$\leq 1 \Omega$



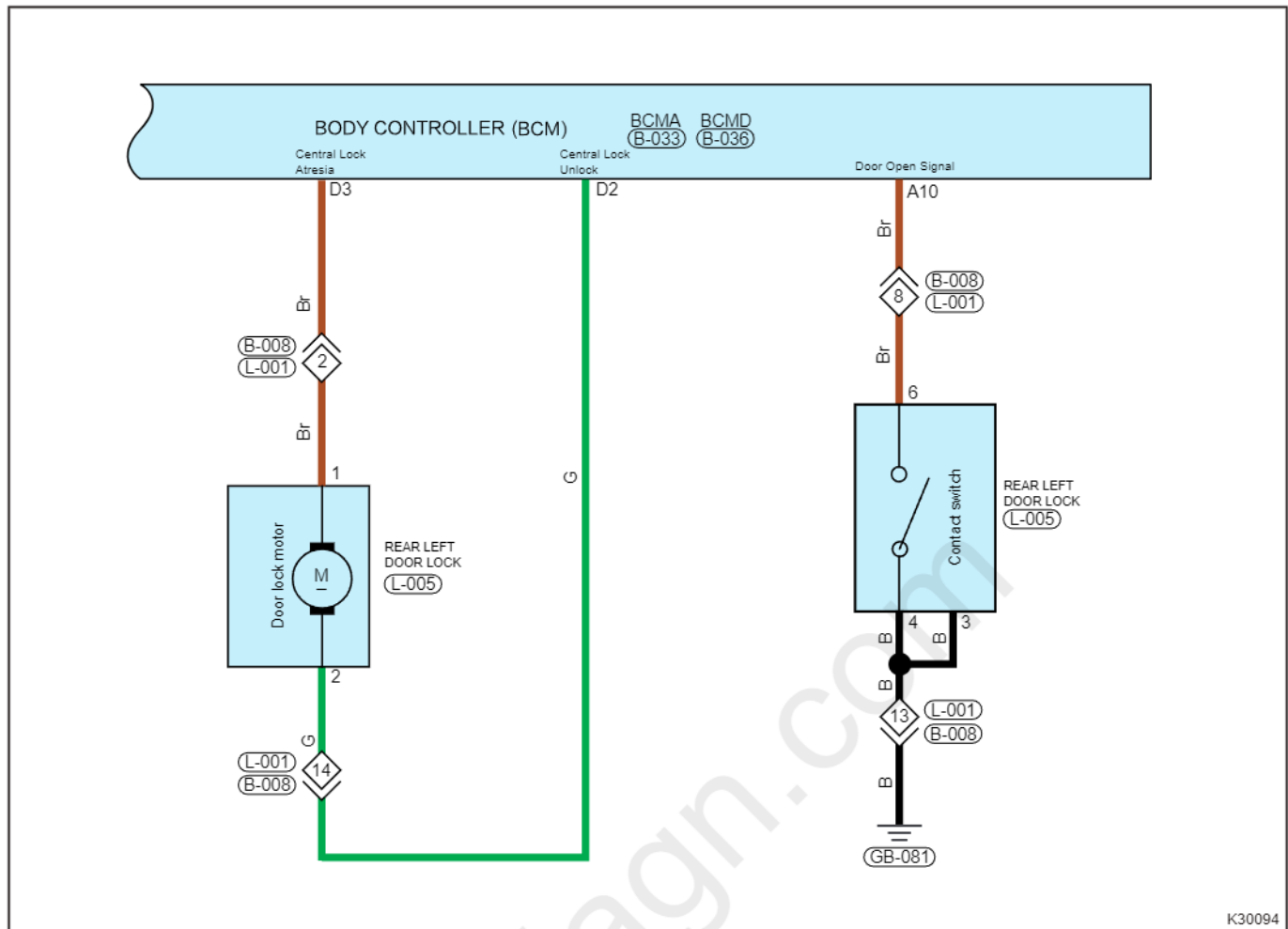
OK

End

NG

Repair or replace front right door lock contact switch ground wire harness

DTC	DTC Definition
/	Only Rear Left Door Lock/Unlock Function does not Operate



K30094

■ Malfunction reason:

- Rear left door lock assembly.
- Wire harness or connector.

Hint:

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

1 Check rear left door lock motor

- Turn ENGINE START STOP switch to OFF.
- Disconnect the door lock motor connector.
- Apply voltage no less than 12 V to door lock motor, and check if door lock operates.

NG

Replace rear left door lock motor

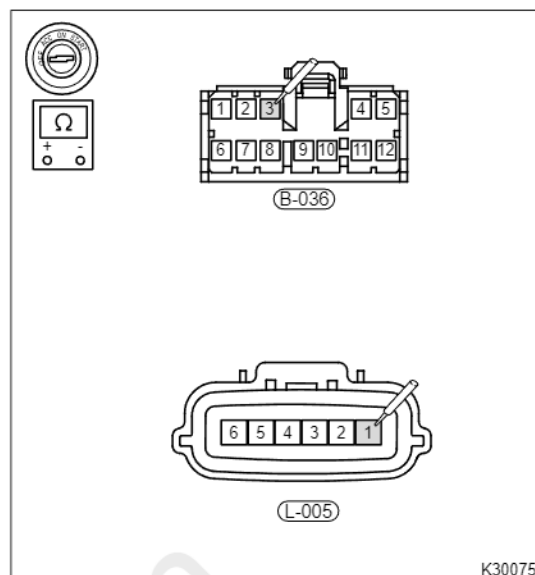
OK

2 Check rear left door lock motor and wire harness connector

- Turn ENGINE START STOP switch to OFF.
- Disconnect the negative battery cable.

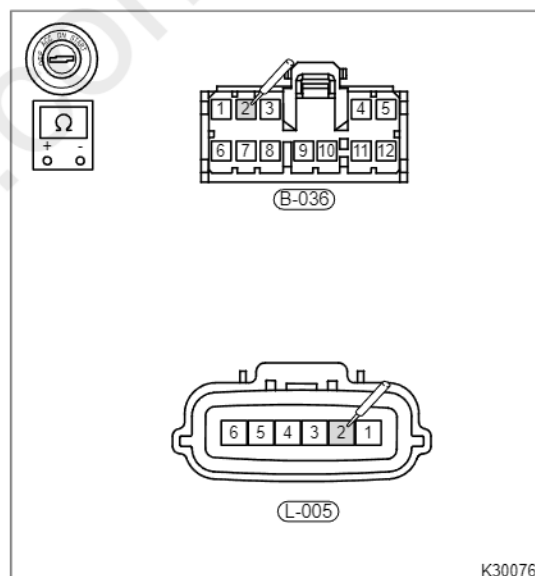
- (c) Using ohm band of multimeter, check for continuity between rear left door lock connector L-005 (1) and BCM connector B-036 (3).

Multimeter Connection	Condition	Specified Condition
B-036 (3) - L-005 (1)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between rear left door lock connector L-005 (2) and BCM connector B-036 (2).

Multimeter Connection	Condition	Specified Condition
B-036 (2) - L-005 (2)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



NG

Repair or replace rear left door lock related wire harness

OK

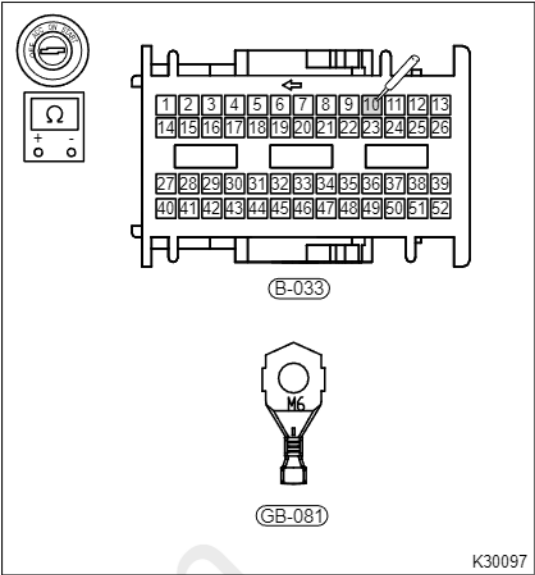
3

Check rear left door lock contact switch signal circuit

- (a) Turn ENGINE START STOP switch to OFF.
(b) Disconnect the BCM connector B-033.

(c) Using ohm band of multimeter, check for continuity between B-033 (10) terminal and rear left door contact switch ground point GB-081.

Multimeter Connection	Condition	Specified Condition
B-033 (10) - GB-081	Always	≤ 1 Ω



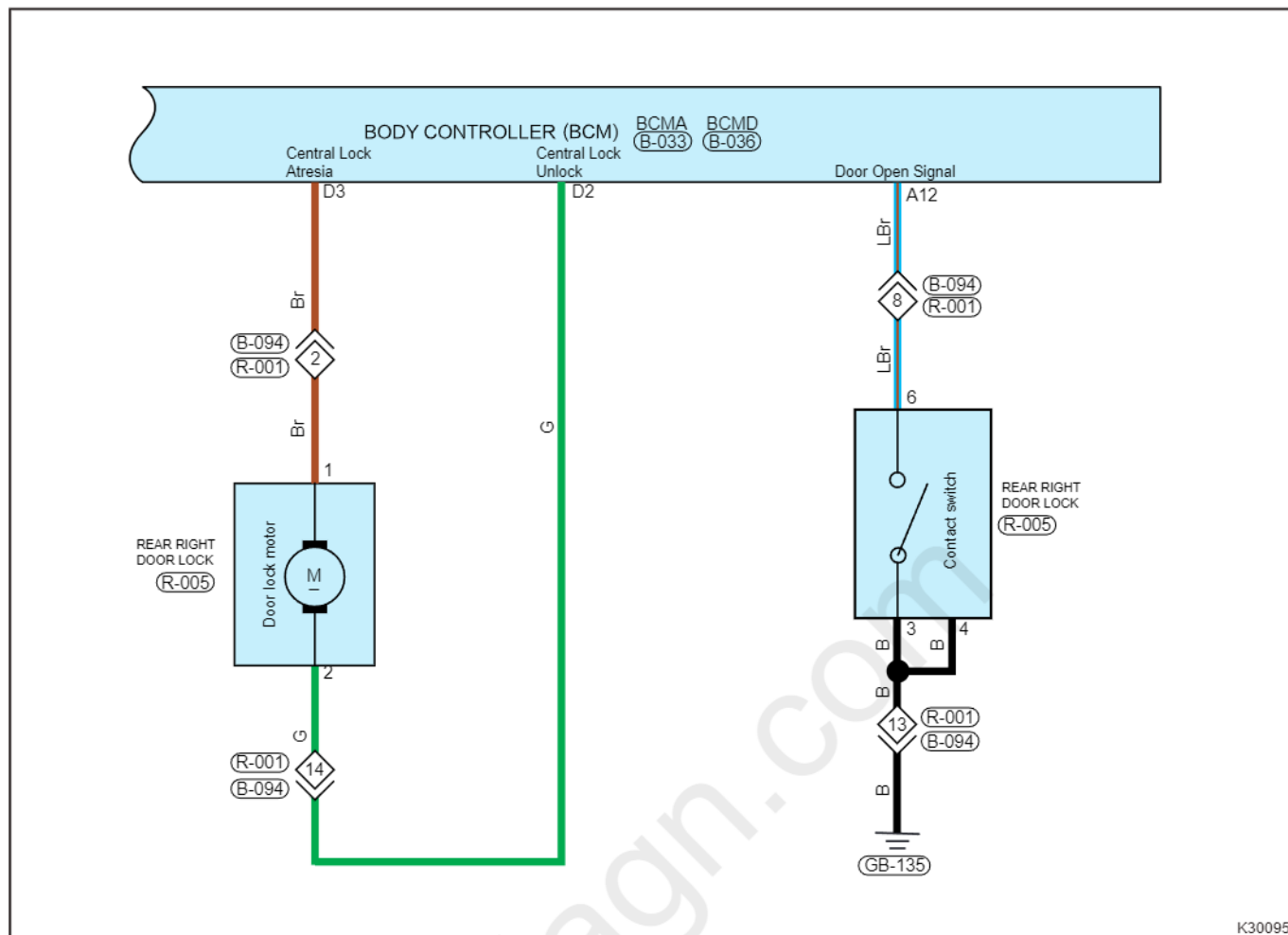
OK

End

NG

Repair or replace rear left door lock contact switch ground wire harness

DTC	DTC Definition
/	Only Rear Right Door Lock/Unlock Function does not Operate



K30095

Malfunction reason:

- Rear right door lock assembly.
- Wire harness or connector.

Hint:

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

1 Check rear right door lock motor

- Turn ENGINE START STOP switch to OFF.
- Disconnect the door lock motor connector.
- Apply voltage no less than 12 V to door lock motor, and check if door lock operates.

NG

Replace rear right door lock motor

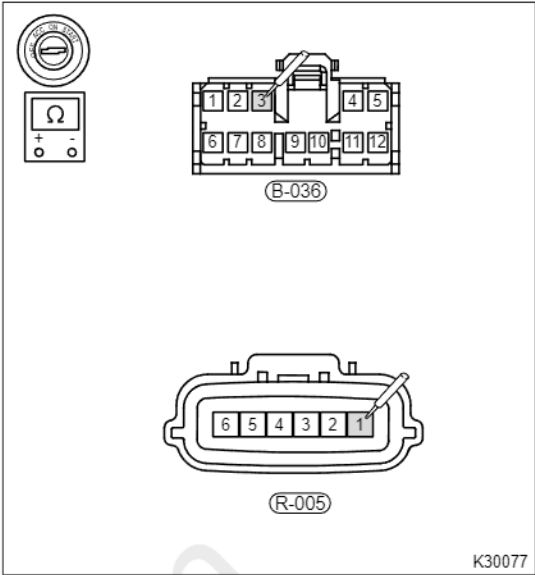
OK

2 Check rear right door lock motor and wire harness connector

- Turn ENGINE START STOP switch to OFF.
- Disconnect the negative battery cable.

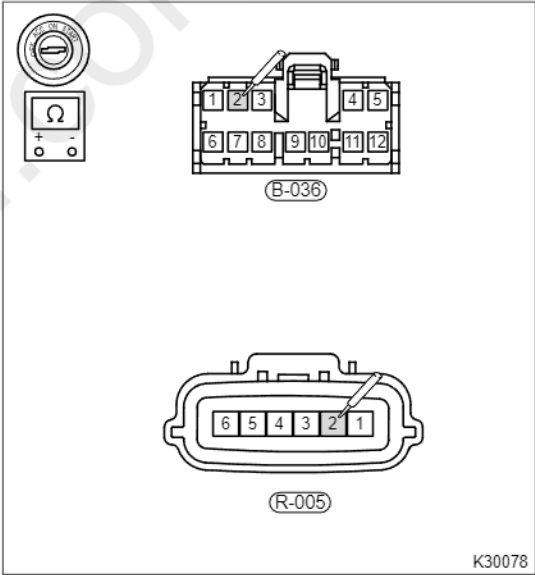
(c) Using ohm band of multimeter, check for continuity between rear right door lock connector R-005 (1) and BCM connector B-036 (3).

Multimeter Connection	Condition	Specified Condition
R-005 (1) - B-036 (3)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



(d) Using ohm band of multimeter, check for continuity between rear right door lock connector R-005 (2) and BCM connector B-036 (2).

Multimeter Connection	Condition	Specified Condition
R-005 (2) - B-036 (2)	ENGINE START STOP switch "OFF"	$\leq 1 \Omega$



NG

Repair or replace rear right door lock related wire harness

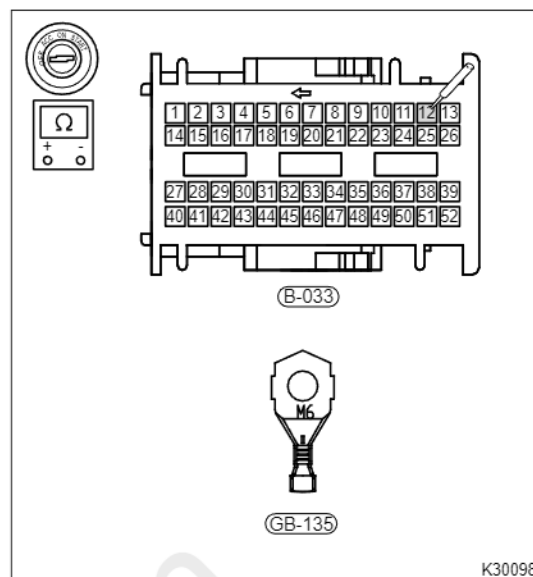
OK

3	Check rear right door lock contact switch signal circuit
---	--

- (a) Turn ENGINE START STOP switch to OFF.
- (b) Disconnect the BCM connector B-033.

- (c) Using ohm band of multimeter, check for continuity between B-033 (12) terminal and rear right door contact switch ground point GB-135.

Multimeter Connection	Condition	Specified Condition
B-033 (12) - GB-135	Always	$\leq 1 \Omega$



OK

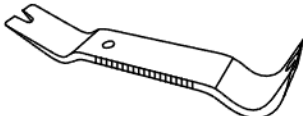
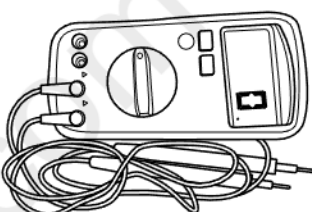
End

NG

Repair or replace rear right door lock contact switch ground wire harness

55.5 ON-VEHICLE SERVICE

1 Tools

Tool Name	Tool Drawing
Interior Crow Plate	 S00020
Digital Multimeter	 S00002

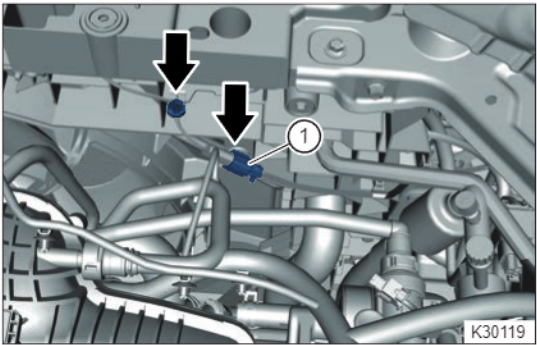
2 Replacement of Engine Hood Lock Assembly

2.1 Removal

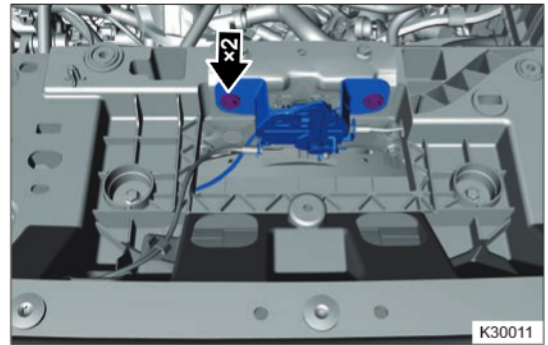
 **Caution**

- 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.

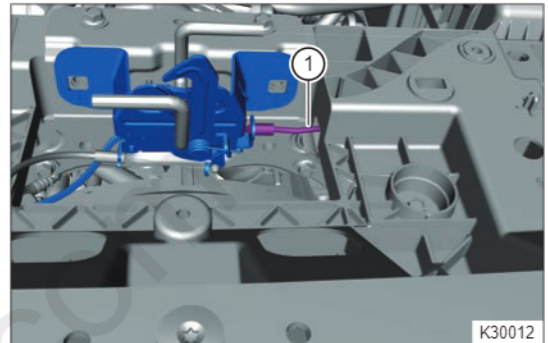
- (1) Remove the engine compartment trim cover assembly.
- (2) Disconnect connector (1) from engine hood lock assembly, and remove 2 fixing clips from engine hood lock.



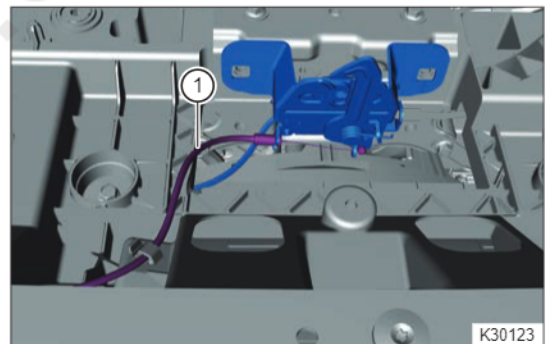
- (3) Remove 2 fixing bolts from engine hood lock assembly.



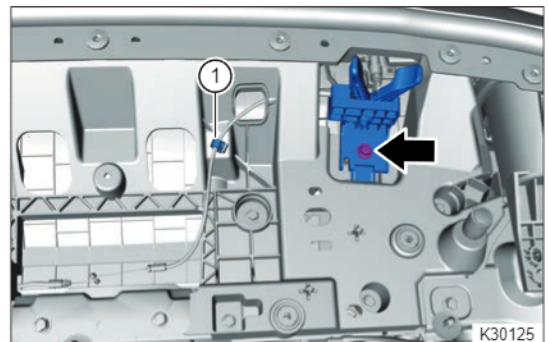
- (4) Release clip, disengage engine hood lock cable assembly (1) from slot.



- (5) Release clip, disengage engine hood secondary lock cable assembly (1) from slot and remove engine hood lock assembly.



- (6) Release clip, disengage engine hood secondary lock cable assembly (1) from slot and remove 1 fixing bolt from engine hood secondary lock opening mechanism assembly.



- (7) Remove the engine hood secondary lock opening mechanism assembly.

2.2 Inspection

- (1) Check if engine hood lock operates properly.
- (2) Check if engine hood secondary lock assembly operates properly.

2.3 Installation

Caution

- **Check if engine hood lock operates properly after installing engine hood lock assembly.**
- **Be sure to install it in place, otherwise, there will be a risk of falling off.**

- (1) Install engine hood secondary lock opening assembly, install and tighten 1 fixing bolt to engine hood secondary lock opening mechanism assembly.
Torque: $10 \pm 1.5 \text{ N}\cdot\text{m}$
- (2) Connect engine hood secondary lock cable to engine hood lock, and secure engine hood secondary lock cable clip.
- (3) Connect engine hood lock cable to engine hood lock and secure clip.
- (4) Install and tighten 2 fixing bolts to engine hood lock assembly (10# socket wrench).
Torque: $10 \pm 1.5 \text{ N}\cdot\text{m}$
- (5) Connect the engine hood lock assembly connector.

3 Replacement of Engine Hood Cable Assembly

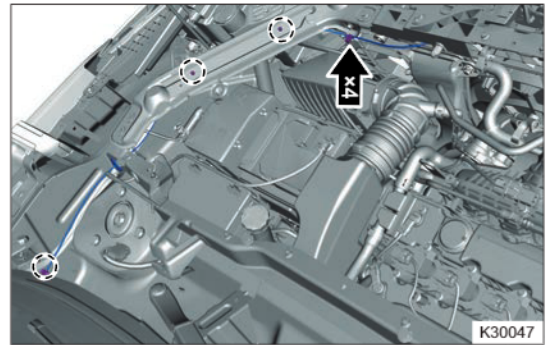
3.1 Removal

Caution

- **Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood cable assembly.**
- **Try to prevent interior and body paint from being scratched, when removing engine hood cable assembly.**

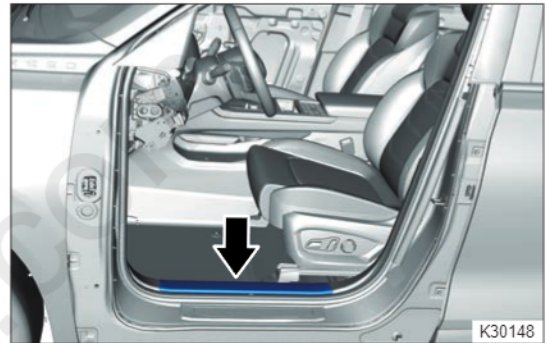
- (1) Turn off all electrical equipment and ENGINE START STOP switch.
- (2) Disconnect the negative battery cable.
- (3) Remove the engine compartment trim cover assembly.
- (4) Remove the wing assembly.
- (5) Remove the front windshield lower support assembly.
- (6) Remove the front wiper motor and connecting rod assembly.
- (7) Remove the engine hood lock assembly.

- (8) Disengage 4 fixing clips from engine hood cable assembly.

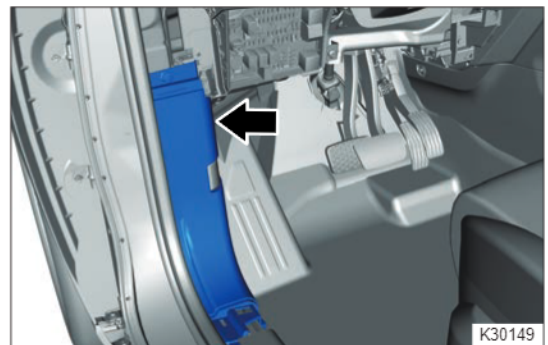


- (9) Remove the instrument panel lower left protector assembly.

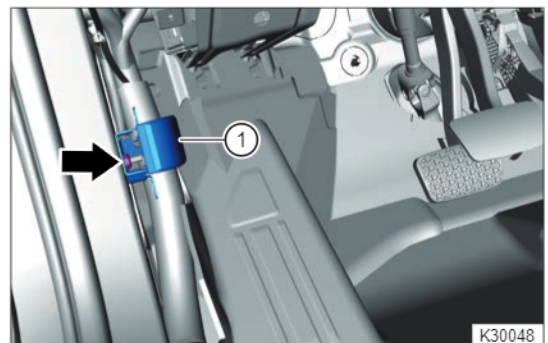
- (10) Remove the front left doorsill pedal body assembly.



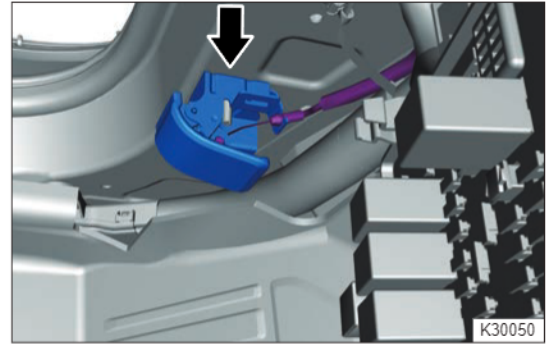
- (11) Remove the left A-pillar lower protector body assembly.



- (12) Remove 1 fixing bolt from engine hood lock cable release handle assembly, and remove engine hood lock cable release handle assembly (1) from cable.



- (13) Disengage engine hood cable and engine hood lock cable release handle assembly.



- (14) Remove the engine hood cable assembly.

3.2 Inspection

- (1) Check if engine hood cable is stuck in back and forth movement.
- (2) Check if fixing clip on engine hood cable is complete.

3.3 Installation

Caution

- Check if engine hood lock operates properly after installing engine hood lock.
- Be careful not to install cable with anti-misoperation mark reversed.
- Be sure to clamp in place, otherwise, there will be a risk of falling off.

- (1) Install the engine hood cable assembly to a proper position.
- (2) Connect engine hood cable and engine hood lock cable release handle assembly.
- (3) Install engine hood lock cable release handle assembly, install and tighten 1 fixing bolt to engine hood lock cable release handle assembly.
Torque: $9 \pm 1 \text{ N}\cdot\text{m}$
- (4) Install 4 fixing clips to engine hood cable assembly.
- (5) Install the left A-pillar lower protector body assembly.
- (6) Install the front left doorsill pedal body assembly.
- (7) Install the instrument panel lower left protector assembly.
- (8) Install fixing clip to engine hood cable assembly.
- (9) Install the engine hood lock assembly.
- (10) Install the front wiper motor and connecting rod assembly.
- (11) Install the front windshield lower support assembly.
- (12) Install the wing assembly.
- (13) Install the engine compartment trim cover assembly.
- (14) Connect the negative battery cable.

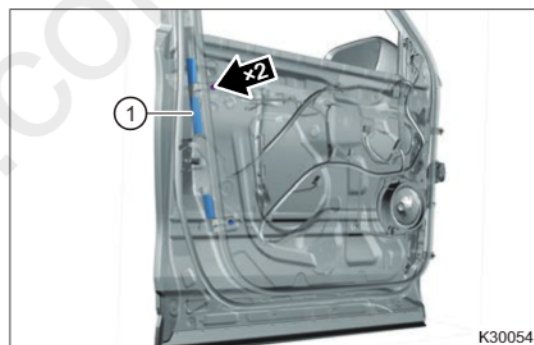
4 Replacement of Front Door Lock Assembly

4.1 Removal

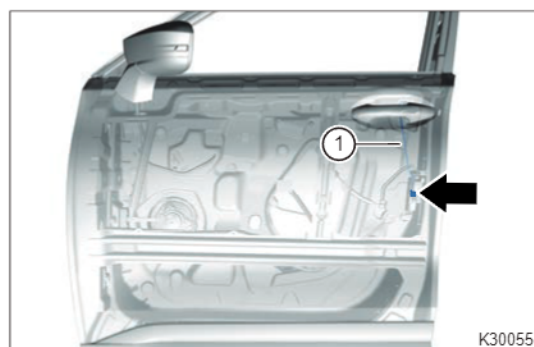
Caution

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

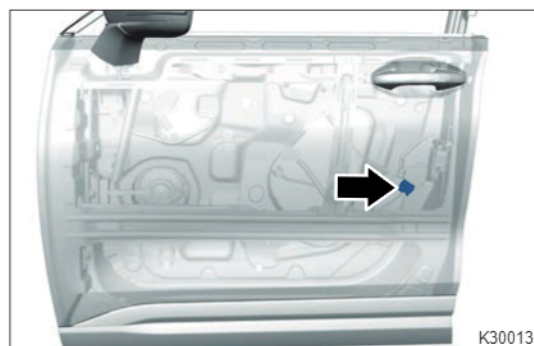
- (1) Turn off all electrical equipment and ENGINE START STOP switch.
- (2) Disconnect the negative battery cable.
- (3) Remove the front left door protector assembly.
- (4) Remove the door control module assembly.
- (5) Remove the front left door protective film assembly.
- (6) Remove 2 fixing bolts from rear left side of front left door glass guide rail, and move away glass guide rail (1).



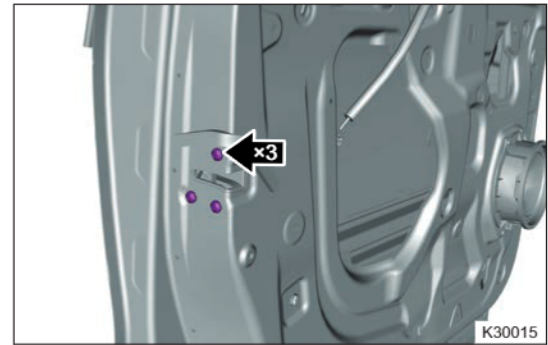
- (7) Remove clip and front left door outside handle rod assembly (1).



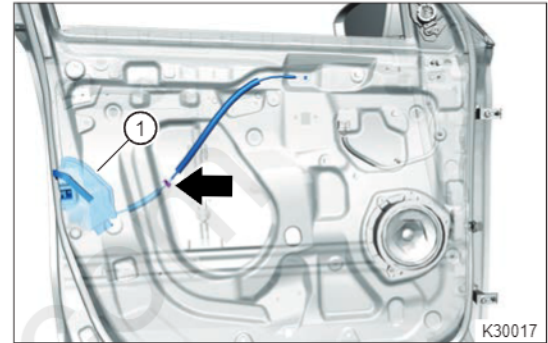
- (8) Disconnect connector from front left door lock assembly.



- (9) Remove 3 fixing bolts from door lock assembly.



- (10) Pry off inside handle cable fixing clip with interior crow plate, and remove front left door lock assembly (1).



4.2 Inspection

- (1) Check if front left door lock is stuck during opening and closing.
- (2) Check if appearance of front left door lock is complete.

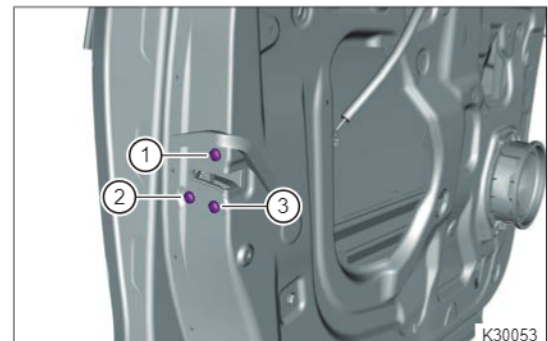
4.3 Installation

⚠ Caution

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

- (1) Check if cable on lock body is stuck in place before installing, evenly apply appropriate amount of thread lock adhesive to 5 to 7 teeth of 3 door lock mounting bolts in advance.
- (2) Put assembled front left door lock module into the installation position through front left door inner panel with one hand, place key cylinder lever well, and take out handle end of cable from inner panel.
- (3) Pretighten bolts to door inner panel in the order of ①, ②, ③ in direction of arrow as shown in illustration with the other hand (screw in 2 to 3 teeth) and be careful not to fully tighten it. Then tighten mounting bolts of door lock with a tool in the order of ①, ②, ③.

Torque: $9.5 \pm 1 \text{ N}\cdot\text{m}$



- (4) Clamp outside push rod into corresponding clip on lock body. When clamping sound is heard, it indicates that it is clamped in place. Continue to press clip to reconfirm if it is clamped in place.
- (5) Clamp key cylinder lever into clip on key cylinder. When clamping sound is heard, it indicates that it is clamped in place. Continue to press clip to reconfirm if it is clamped in place.
- (6) Connect wire harness connector to the corresponding lock body connector (the number of pins inside different connectors of lock body is different, and only the corresponding wire harness connector can be inserted).
- (7) Secure inner cable to fixing part on door panel with a fixing clip.
- (8) Install front left door glass guide rail, then install and tighten 2 fixing bolts.
- (9) Install the front left door protective film assembly.
- (10) Install the front left door inner protector assembly.
- (11) Connect the negative battery cable.

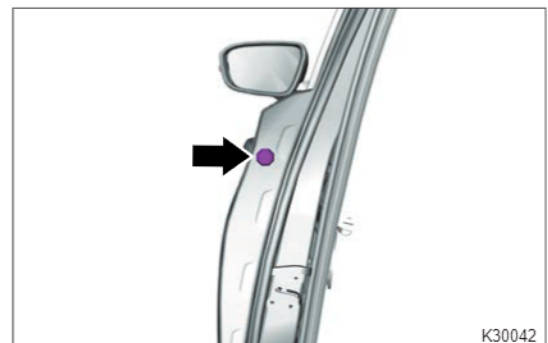
5 Replacement of Front Door Key Cylinder Assembly

5.1 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 ENGINE START STOP switch.
- (2) Disconnect the negative battery cable.
- (3) Remove the front left door protector assembly.
- (4) Remove the door control module assembly.
- (5) Remove the front left door protective film assembly.
- (6) Remove the front door outside handle protective cover block cover.

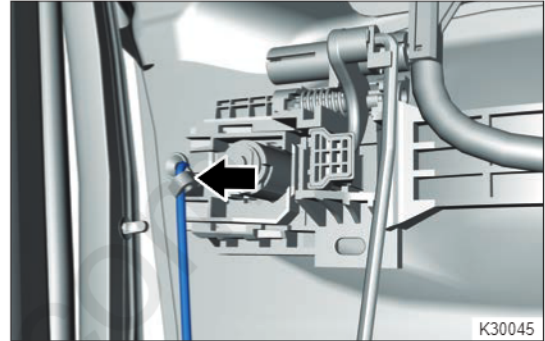


K30042

- (7) Loosen 1 fixing screw from front door outside handle.



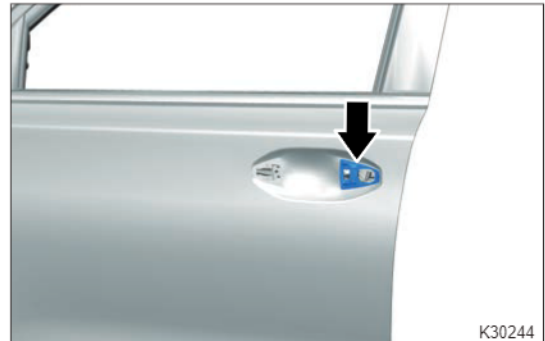
- (8) Disengage the key cylinder lever.



- (9) Slide and pull the front door outside handle in direction of arrow to remove it.



- (10) Remove the outside handle gasket.



- (11) Remove the key cylinder assembly.

5.2 Installation

Caution

- Install clip on 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.

- (1) Install key cylinder assembly to a proper position on door.
- (2) Install the outside handle gasket.
- (3) Install the key cylinder lever.
- (4) Install the front door outside handle.
- (5) Install 1 fixing screw to front door outside handle.
Torque: $5 \pm 1 \text{ N}\cdot\text{m}$
- (6) Install the front door outside handle protective cover block cover.
- (7) Install the front left door protective film assembly.
- (8) Install the door control module assembly.
- (9) Install the front left door protector assembly.
- (10) Connect the negative battery cable.

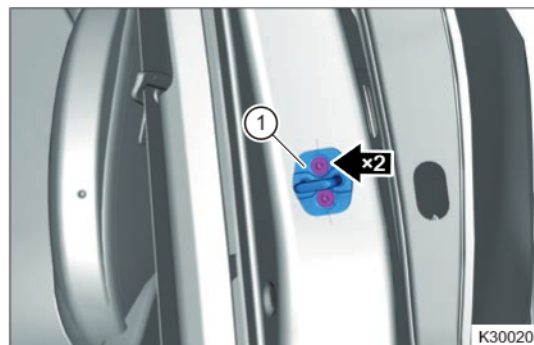
6 Replacement of Front Door Lock Striker

6.1 Removal

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

- (1) Remove 2 fixing screws from front door lock striker assembly, and remove front left door lock striker assembly (1).



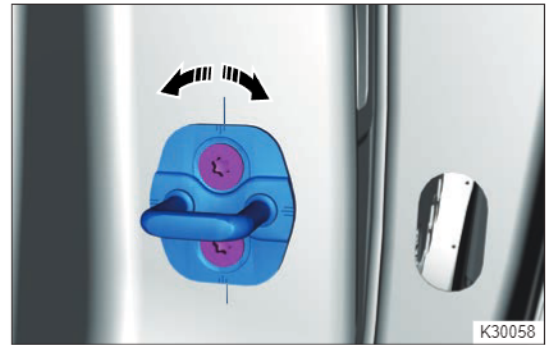
6.2 Installation

Caution

- After installing lock striker to body, make left side of lettering face up and right side face down.

- (1) Install lock striker to quarter with screw, pay attention to align middle line of lock striker with line on quarter, and then pretighten bolt.

Torque: $2.5 \pm 1 \text{ N}\cdot\text{m}$



- (2) After lock striker position is adjusted, ensure that lock cylinder of lock striker is engaged with lock body in the center line of lock mouth, so as to ensure that the door can be normally opened and closed, finally, tighten it.

Torque: $25 \pm 3.75 \text{ N}\cdot\text{m}$

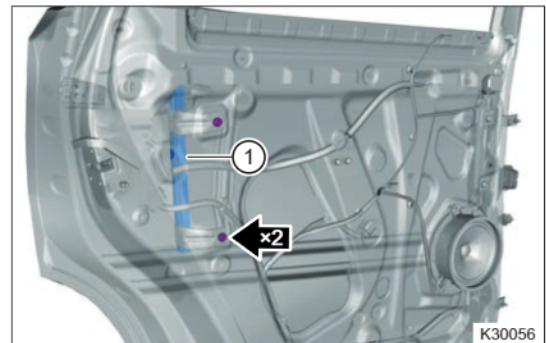
7 Replacement of Rear Left Door Lock Assembly

7.1 Removal

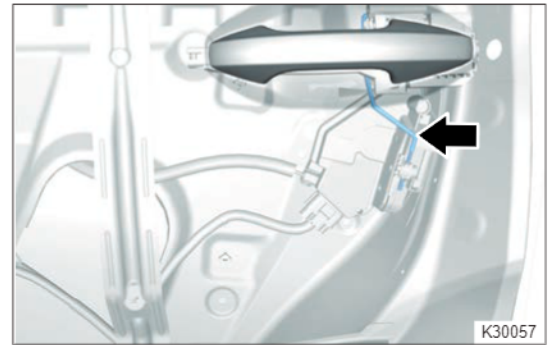
Caution

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

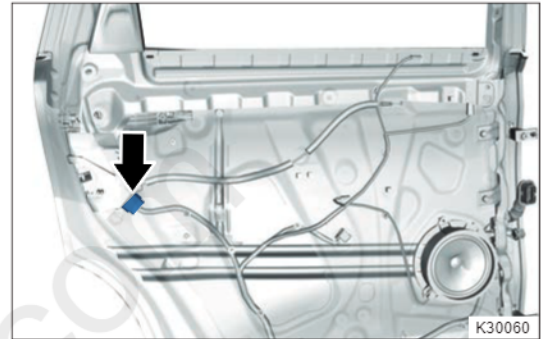
- (1) Turn off all electrical equipment and ENGINE START STOP switch.
- (2) Disconnect the negative battery cable.
- (3) Remove the rear left door protector assembly.
- (4) Remove the rear left door handle metal bracket.
- (5) Remove the rear left door protective film assembly.
- (6) Remove 2 fixing bolts from rear left door rear glass guide rail assembly, and move away glass guide rail assembly (1).



- (7) Remove the rear left door outside handle lever.



- (8) Disconnect connector from rear door lock assembly.



- (9) Remove 3 fixing screws from rear door lock assembly, and remove rear door lock assembly.



7.2 Installation

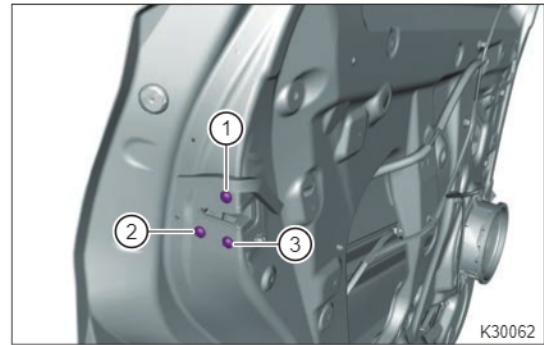
Caution

- Check if connector is installed correctly, when installing rear door lock assembly.
- Install clips and cables in place, when installing rear door lock assembly.
- Check if rear door lock operates properly, after installing rear door lock assembly.
- Pay attention to keep child lock closing when assembling rear door lock.

- (1) Check if cable on lock body is stuck in place before installing, evenly apply appropriate amount of thread lock adhesive to 5 to 7 teeth of 3 door lock mounting bolts in advance.
- (2) Put assembled rear left door lock module into the installation position through rear left door inner panel with one hand, and take out handle end of cable from inner panel.

- (3) Pretighten bolts to door inner panel in the order of ①, ②, ③ in direction of arrow as shown in illustration with the other hand (screw in 2 to 3 teeth) and be careful not to fully tighten it. Then tighten mounting bolts on door lock with a tool in the order of ①, ②, ③.

Torque: 9 ± 1 N·m



- (4) Clamp outside push rod into corresponding clip on lock body. When clamping sound is heard, it indicates that it is clamped in place. Continue to press clip to reconfirm if it is clamped in place.
- (5) Connect wire harness connector to corresponding connector on lock body (the number of pins inside different connectors on lock body is different, and only the corresponding wire harness connector can be inserted).
- (6) Secure inner cable to fixing part on door panel with a fixing clip.
- (7) Install the rear left door glass rear guide rail assembly.
- (8) Install the rear left door protective film assembly.
- (9) Install the rear left door handle metal bracket.
- (10) Install the rear left door protector assembly.
- (11) Connect the negative battery cable.

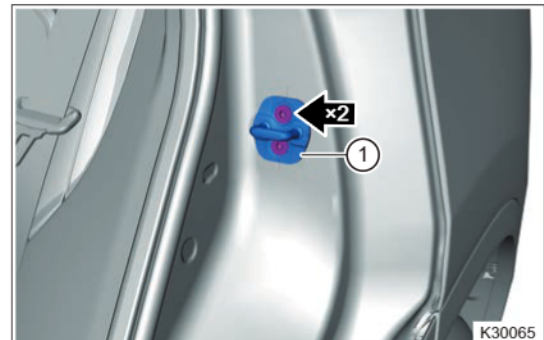
8 Replacement of Rear Door Lock Striker

8.1 Removal

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

- (1) Remove 2 fixing screws from rear door lock striker, and remove rear door lock striker assembly (1).



8.2 Installation

Caution

- After installing lock striker to body, make left side of lettering face up and right side face down.

- (1) Install lock striker to quarter with screw, pay attention to align middle line of lock striker with line on quarter, and then pretighten bolt.

Torque: $2.5 \pm 1 \text{ N}\cdot\text{m}$



- (2) After lock striker position is adjusted on CP7, ensure that lock cylinder of lock striker is engaged with lock body in the center line of lock mouth, so as to ensure that the door can be normally opened and closed, finally, tighten it.

Torque: $23 \pm 2 \text{ N}\cdot\text{m}$

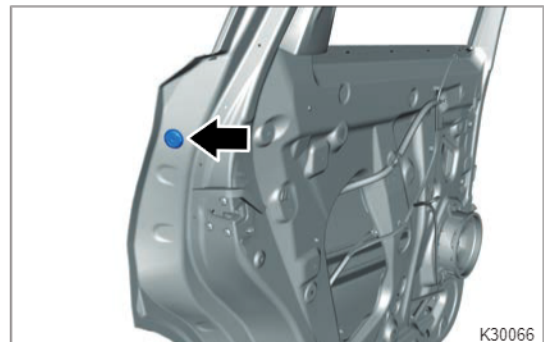
9 Replacement of Rear Left Outside Handle Assembly

9.1 Removal

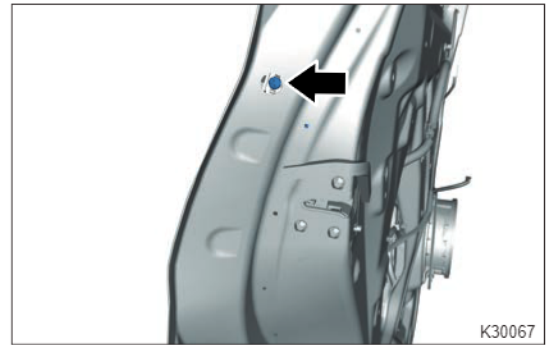
Caution

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

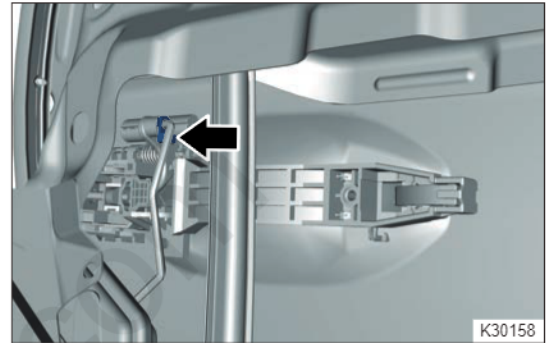
- (1) Turn off all electrical equipment and ENGINE START STOP switch.
- (2) Disconnect the negative battery cable.
- (3) Remove the rear left door protector assembly.
- (4) Remove the rear left door protective film assembly.
- (5) Remove the rear left door outside handle protective cover block cover.



- (6) Loosen 1 fixing screw from rear left door outside handle.



- (7) Disengage the outside handle lever.



- (8) Slide and pull the rear left door outside handle in direction of arrow to remove it.



9.2 Installation

Caution

- Install clip on lever in place when installing rear left door outside handle assembly.
- Check if rear left door key cylinder operates properly after installing rear left door outside handle assembly.

- (1) Install the rear left door outside handle.
- (2) Install outside handle lever to a proper position on door.
- (3) Install 1 fixing screw to rear left door outside handle.
Torque: $5 \pm 1 \text{ N}\cdot\text{m}$
- (4) Install the rear left door outside handle protective cover block cover.
- (5) Install the rear left door protective film assembly.

- (6) Install the rear left door protector assembly.
- (7) Connect the negative battery cable.

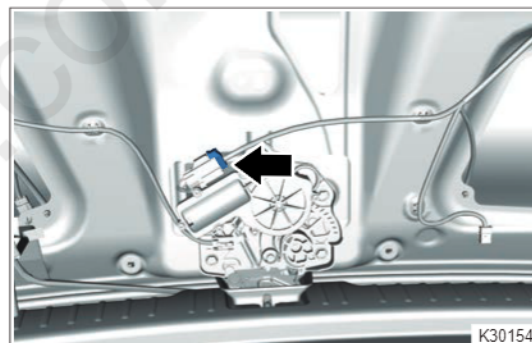
10 Replacement of Back Door Lock Assembly

10.1 Removal

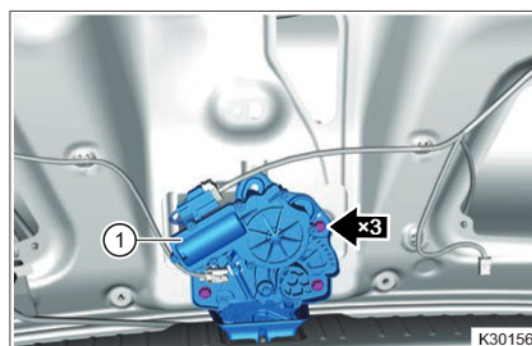
Caution

- **Be sure to wear necessary 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 electrical equipment and ENGINE START STOP switch.
- (2) Disconnect the negative battery cable.
- (3) Remove the back door lower protector assembly.
- (4) Disconnect connector from back door lock assembly.



- (5) Remove 3 fixing bolts from back door lock assembly, and remove back door lock assembly (1).



10.2 Installation

Caution

- **Check if connector is installed correctly, when installing back door lock assembly.**
- **Check if back door lock assembly operates properly, after installing back door lock assembly.**

- (1) Install back door lock assembly to a proper position on body, and install 3 fixing bolts.
Torque: $23 \pm 2 \text{ N}\cdot\text{m}$

- (2) Connect connector to back door lock assembly.
- (3) Install the back door lower protector assembly.
- (4) Connect the negative battery cable.

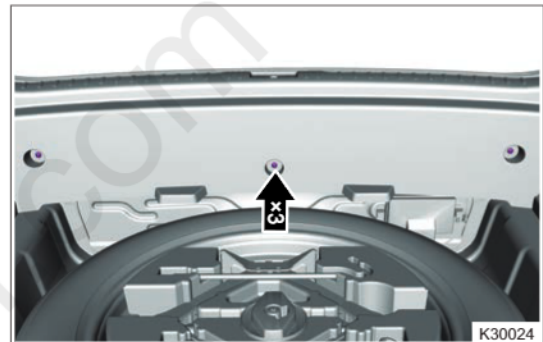
11 Replacement of Back Door Lock Striker Assembly

11.1 Removal

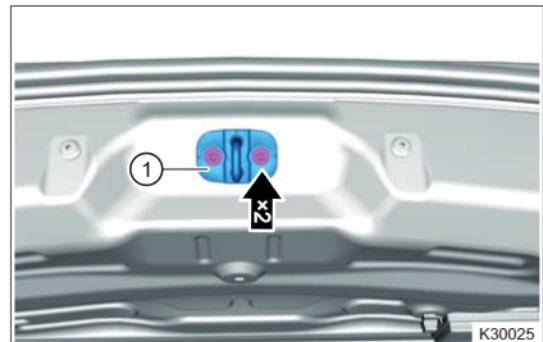
Caution

- **Be sure to wear necessary 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 3 fixing screws from back door protector assembly, and remove back door protector assembly.



- (2) Remove 2 fixing screws from back door lock striker assembly, and remove back door lock striker assembly (1).



11.2 Installation

- (1) Install lock striker to rear panel assembly with bolt (first perform visual aligning with line and pre-install according to pre-tightening torque), close back door to check matching condition between lock and lock body, if back door is difficult to close, adjust lock striker (adjustment amount: ± 2 mm in Y direction, ± 3 mm in Z direction) until matching surface between lock body and lock striker meets the difference and clearance requirements (no obvious door opening noise), and then tighten bolts.

Torque: 23 ± 2 N·m

- (2) Install back door protector assembly, install and tighten 3 fixing screws.

12 Replacement of Central Control Lock Switch

12.1 Removal

Caution

- **Be sure to wear safety equipment to prevent accidents, when removing central control lock switch assembly.**
- **Try to prevent interior from being scratched, when removing central control lock switch assembly.**

(1) Remove the front left door protector assembly.

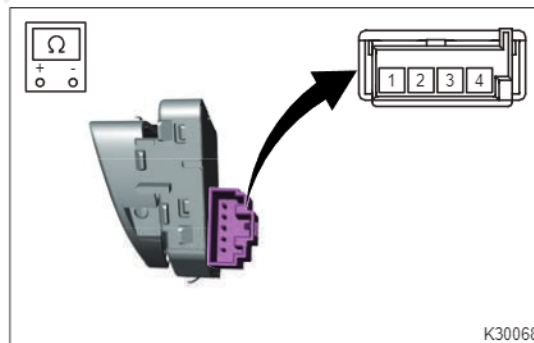
(2) Press and push switch from back.



12.2 Inspection

(1) Using ohm band of digital multimeter, measure central control lock switch terminal.

Multimeter Connection	Switch Condition	Specified Condition
Terminal 1 - Terminal 3	Press to lock	$\leq 1 \Omega$
Terminal 1 - Terminal 4	Press to unlock	$\leq 1 \Omega$



(2) If measurement result is not as specified, replace central control lock switch.

12.3 Installation

(1) Install central control lock switch assembly to a proper position on door, and connect central control lock switch connector.

(2) Install the front left door protector assembly.

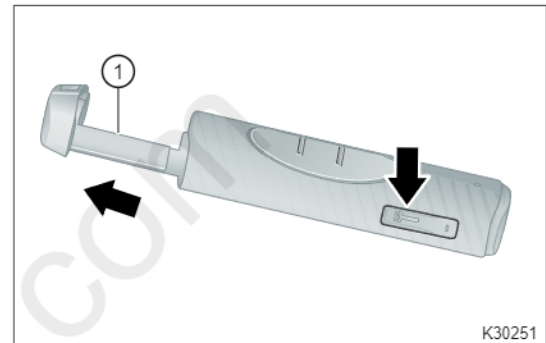
13 Replacement of Smart Key Battery

13.1 Removal

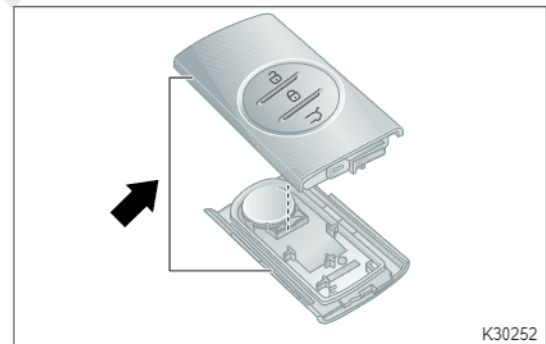
Caution

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

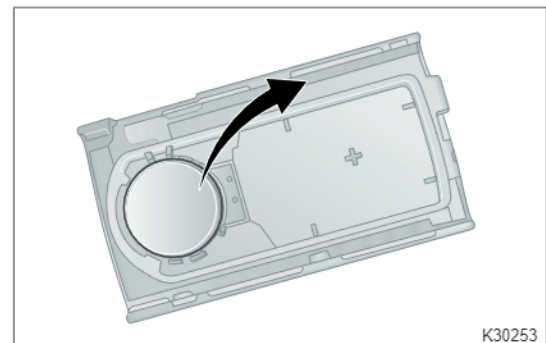
- (1) Press release button (arrow) and remove mechanical key (1).



- (2) Separate smart key cover with a flat tip screwdriver wrapped with protective tape.



- (3) Remove battery from battery holder, and then install new battery with positive (+) facing up.



13.2 Installation

Caution

- **Check** that smart key operates properly, after installing wireless key.

- (1) Install new key to battery holder with positive facing up.
- (2) Assemble the smart key cover.
- (3) Install the mechanical key.

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