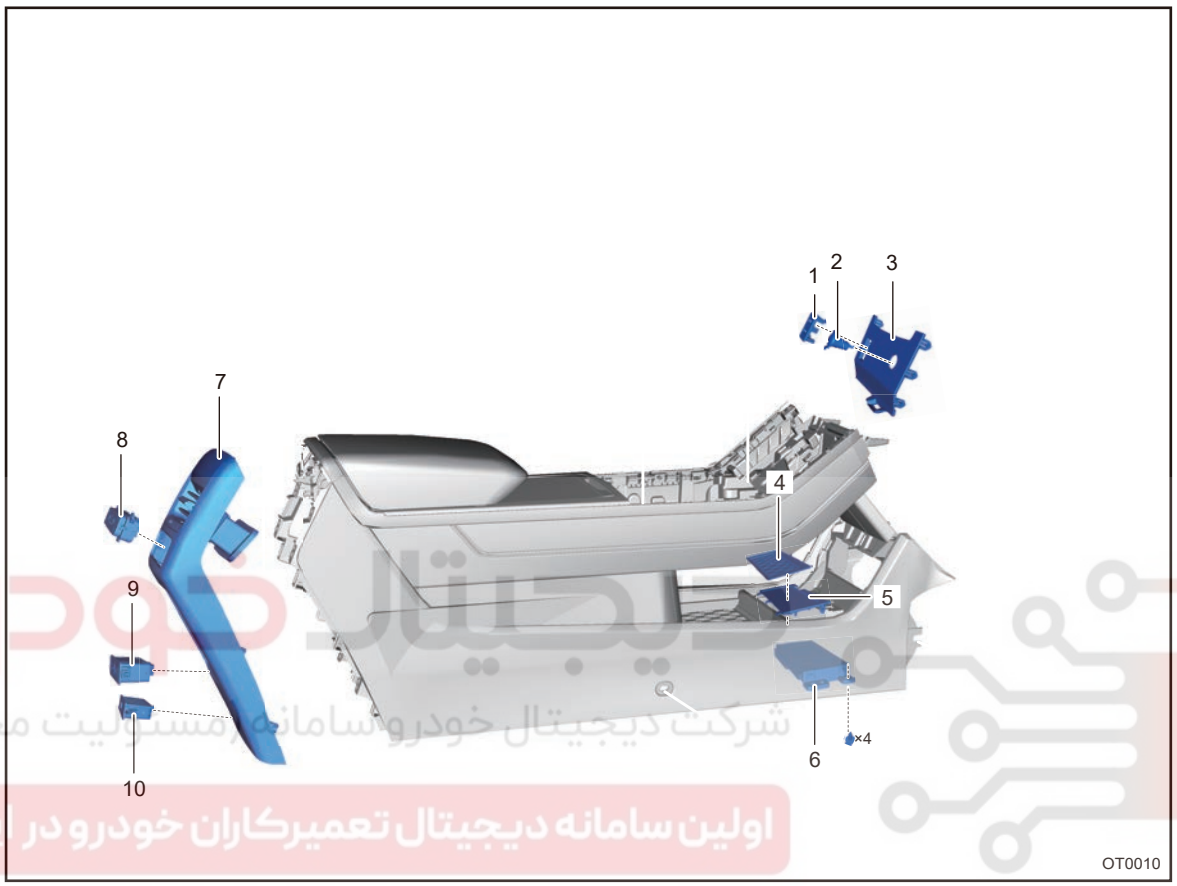
WIRELESS CHARGING AND ACCESSORY POWER SUPPLY

GENERAL INFORMATION

System Overview

Description



1	Multi-function Interface	6	Mobile Phone Wireless Charging Module
2	Backup Power Supply Assembly	7	Auxiliary Fascia Console Rear Panel Assembly
3	USB Panel Assembly	8	Second Row A/C Control Panel
4	Auxiliary Fascia Console Panel Front Storage Box Rubber Pad	9	Second Row Seat Heating Switch Group
5	Auxiliary Fascia Console Panel Front Storage Box	10	USB Charging Module

This vehicle is equipped with a 12 V backup power supply, which is located on the USB panel assembly for easy charging at any time.Wireless charging adopts an electromagnetic induction technology with convenience, versatility, novelty and safety, so that you can have a better experience while driving.

Wireless Charging Usage Description

1. Turn ENGINE START STOP switch to ON mode and place mobile phone in the wireless charging sensing area, then the wireless charging starts to operate, and the audio head unit displays a normal charging symbol; After charging is completed, audio head unit will display a charging completed symbol.

2. Wireless charging may not work properly in the following conditions:
   - The back of mobile phone is more than 8 mm away from wireless charging sensing area, and mobile phone cannot be charged.
   - There is thick metal on back of mobile phone (such as 1 yuan coin, metal housing of mobile phone), mobile phone cannot be charged, and audio head unit displays a mark with exclamation mark.
   - Wireless charging operation frequency is close to keyless entry working frequency, which is easy to interfere with each other; When door is open/closed, the vehicle will recognize whether the key is left in vehicle, the keyless entry starts to work. At this time, it's necessary to shield charging function for 30 seconds; Wait for 30 seconds, the wireless charging function resumes.

CAUTION
If your mobile phone does not support the wireless charging function, it is recommended that you do not use the wireless charging paster. The quality of wireless charging paster in the market is uneven and easy to be damaged if used frequently (function failure, poor interface contact, identification failure in metal foreign objects, etc.).

3. Phone forgetting reminder function: When ENGINE START STOP switch is switched to OFF mode and driver side door is opened, if mobile phone is placed in the wireless charging sensing area, the system will sound an alarm for 20 seconds and alarm stops if the phone is removed within 20 seconds.

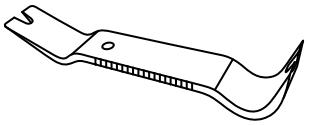
HINT
• Phone forgetting reminder function only supports the mobile phone with wireless charging function. • Phone forgetting reminder function needs to be set in the audio system.

4. For Wireless Charging System (CWC) function settings and status display item suggestions and signals, refer to signal list

Level 1 Menu	Level 2 Menu	Selection Item	Note
Vehicle settings	Mobile phone wireless charging function	ON	IHU is set to ON by default, CWC will keep the wireless charging function ON until "OFF" signal is sent from IHU. With wireless charging function ON, CWC starts the wireless charging operation after mobile phone is detected in charging position and ACC signal is received.
		OFF	
	Phone forgetting reminder function	ON	Phone forgetting reminder function will keep ON until "OFF" signal is sent from IHU. With forgetting reminder function ON, an alarm signal will be sent to DVD when forgetting reminder condition is detected, and no alarm is sent when forgetting reminder is off.
		OFF	
Display status		In charging	Three display statuses (no icon will be displayed on head unit when vehicle is not charged).
		Charging completed	
		Charging fault	
Forgetting reminder		Sending alarm signal	With mobile phone on CWC, CWC starts to count the time and sends alarm signal to IHU after ACC off signal and driver side door open signal are received by CWC, then head unit alarms. CWC stops sending alarm signal after 20s or if mobile phone is removed within 20s, then head unit stops alarming.
		Stopping alarm signal	

Tool

General Tool

Tool Name	Tool Drawing
Interior Crow Plate	 RCH002506

Fasteners Torque List

Torque Specifications

Item	Tightening Torque
Wireless Charging Module Fixing Bolt	1.5 ± 0.5 N·m

DIAGNOSIS & TESTING

Diagnostic Help

1. Connect diagnostic tester X-431 3G (the latest software) to Data Link Connector (DLC), and make it communicate with vehicle electronic module through data network.
2. Confirm that malfunction is current, and carry out diagnostic test and repair procedures.
3. If Diagnostic Trouble Code (DTC) cannot be cleared, it indicates that there is a current malfunction.
4. Only use a digital multimeter to measure voltage of electronic system.
5. Refer to any Technical Bulletin that may apply to this malfunction.
6. Visually check related wire harness and connector.
7. Check and clean all CD system grounds related to the latest DTCs.
8. If numerous trouble codes are set, refer to circuit diagram and look for any common ground circuit or power supply circuit applied to DTC.

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.
- Monitor diagnostic tester (the latest software) data that is related to this circuit.
- Wiggle related wire harnesses and connectors and observe if signal is interrupt in related circuit.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for data that has changed or DTC to reset during wiggling test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect airbag components and mounting areas for damage, foreign matter, etc. that will cause incorrect signals.
- Check and clean all wire harness connectors and ground parts related to DTC.
- 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.

Ground Inspection

Ground points are very important to the proper operation of circuits. Ground points are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) may increase load resistance. This situation may change the way in which a circuit operates. Circuits are very sensitive to proper grounding. A loose or corroded ground can seriously affect the control circuit. Check the ground points as follows:

1. Remove ground bolt or nut.
2. Check all contact surfaces for tarnish, dirt and rust, etc.
3. Clean as necessary to ensure that contact is in good condition.
4. Reinstall ground bolt or nut securely.
5. Check if any additional accessories interfere with ground circuit.
6. 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.

Diagnostic Trouble Code (DTC) Chart

DTC	DTC Definition
B1B32-16	Power Supply Circuit Voltage Below Threshold
B1B33-17	Power Supply Circuit Voltage Above Threshold
B1B30-92	Foreign Matters Exist - Performance or Incorrect Operation
B1B31-98	Component or System Temperature Too High
U0073-88	CAN Bus Off
U0140-87	Lost Communication with BCM
U0214-87	Lost Communication With PEPS
U1300-55	Software Configuration Error

DTC Diagnosis Procedure

DTC	**B1B32-16**	**Power Supply Circuit Voltage Below Threshold**
DTC	**B1B33-17**	**Power Supply Circuit Voltage Above Threshold**

DTC	DTC Definition	Possible Cause
B1B32-16	Power Supply Circuit Voltage Below Threshold	• Disconnection or poor connection between battery and instrument panel after engine starting • Power supply is not stable, and some loads may decrease suddenly • Power supply is not stable, and load fails suddenly • Instrument panel wire harness and connector fault
B1B33-17	Power Supply Circuit Voltage Above Threshold	

DTC Confirmation Procedure
Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Confirm DTCs**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Turn ENGINE START STOP switch to OFF, and disconnect the negative battery cable.

(b) Disconnect the instrument panel wire harness connector.

(c) Check if wire harnesses are worn, pierced, pinched or partially broken.

(d) Check for broken, bent, protruded or corroded terminals.

(e) Check if related connector pins are in good condition.

NG → **Repair or replace wire harness and connector**

OK

2	**Check instrument panel power supply voltage**

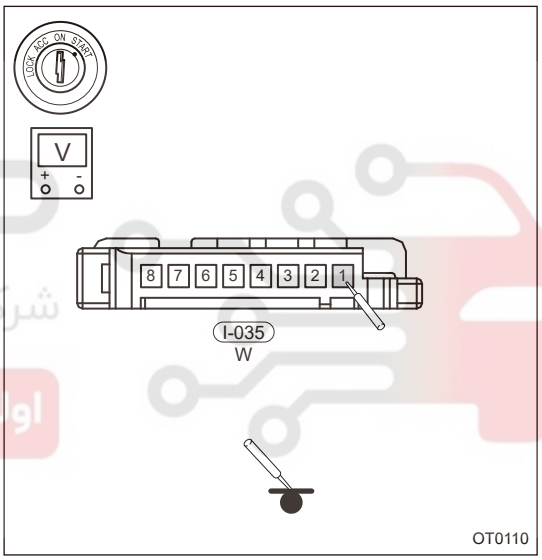
(a) Turn ENGINE START STOP switch to OFF, and disconnect the negative battery cable.

(b) Disconnect the wireless charging module connector I-035.

(c) Connect the negative battery cable, and turn ENGINE START STOP switch to ON.

(d) Using a digital multimeter, check for voltage between the terminal (1) of connector I-035 and ground to check if there is an open in instrument panel power supply circuit according to the table below.

Multimeter Connection	Specified Voltage
I-035 (1) - Ground	Not less than 12 V



NG → **Check if instrument panel fuse RF06 10A is burnt**

OK

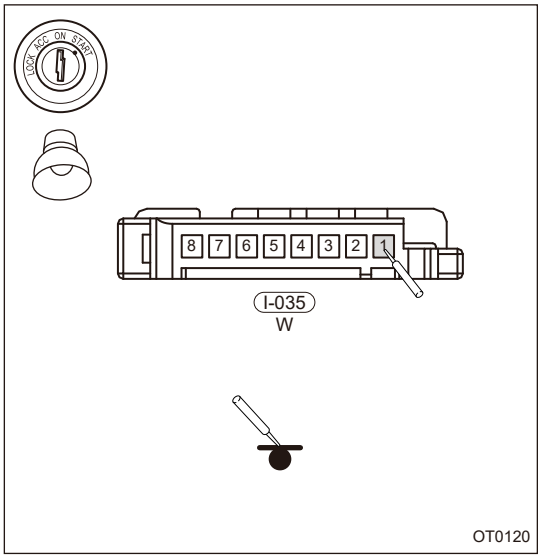
3	**Using a 21 W test lamp, test power supply voltage**

(a) Turn ENGINE START STOP switch to OFF, and disconnect the negative battery cable.

(b) Disconnect the wireless charging module connector I-035.

(c) Connect the negative battery cable, and turn ENGINE START STOP switch to ON.

(d) Using a 21 W test lamp, check voltage between the terminals of instrument panel fuse and relay box (17) to check if power supply of instrument panel power supply voltage is normal according to the table below.



Multimeter Connection	Specified Condition
I-035 (1) - Ground	Test light comes on normally

NG → **Check or replace instrument panel wire harness or connector**

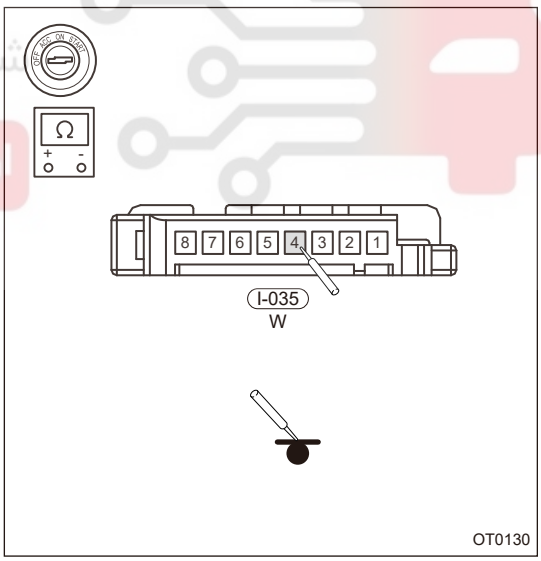
OK →

4	Check ground

(a) Turn ENGINE START STOP switch to OFF, and disconnect the negative battery cable.

(b) Disconnect the wireless charging module connector I-035.

(c) Measure resistance between terminal 4 of connector I-035 and ground and check if it is open.



Multimeter Connection	Condition	Specified Condition
I-035 (4) - Body ground	Always	⩽ 1 Ω

NG → **Check and repair instrument panel ground wire harness and ground point GI-503.**

OK →

5	Reconfirm DTCs

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace wireless charging module**

OK → **System operates normally**

DTC	**B1B30-92**	**Foreign Matters Exist - Performance or Incorrect Operation**
DTC	**B1B31-98**	**Component or System Temperature Too High**

DTC	DTC Definition	Possible Cause
B1B30-92	Foreign Matters Exist - Performance or Incorrect Operation	• Foreign matters exist between mobile phone and wireless charging • Excessive charing time • Wireless charging paster damaged • Charging operation out of standard
B1B31-98	Component or System Temperature Too High	

DTC Confirmation Procedure

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

Hint:

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

1	**Confirm DTCs**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Turn ENGINE START STOP switch to OFF, and disconnect the negative battery cable.

(b) Disconnect the instrument panel wire harness connector I-035.

(c) Check if wire harnesses are worn, pierced, pinched or partially broken.

(d) Check for broken, bent, protruded or corroded terminals.

(e) Check if related connector pins are in good condition.

NG → **Repair or replace wire harness and connector**

OK

2	**Check for foreign matters**

(a) Turn ENGINE START STOP switch to OFF, and disconnect the negative battery cable.

(b) Disconnect the instrument panel wire harness connector I-035.

(c) Check for foreign matters between wireless charging module and mobile phone.

NG → **Remove foreign matters.**

OK

3	**Reconfirm DTCs**

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace wireless charging module**

OK → **System operates normally**

DTC	**U0073-88**	**CAN Bus Off**
DTC	**U0140-87**	**Lost Communication with BCM**
DTC	**U0214-87**	**Lost Communication With PEPS**
DTC	**U1300-55**	**Software Configuration Error**

DTC Confirmation Procedure

Refer to CAN communication system

ON-VEHICLE SERVICE

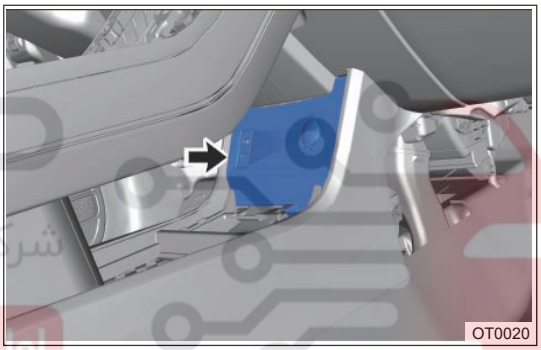
Front Backup Power Supply

Removal

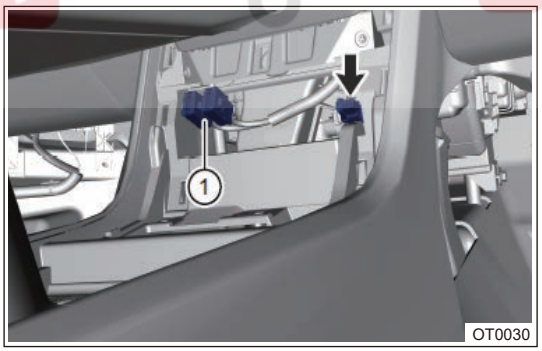
CAUTION

- Be sure to wear safety equipment to prevent accidents, when removing front backup power supply.
- Appropriate force should be applied, when removing front backup power supply. Be careful not to operate roughly.
- Try to prevent USB panel assembly from being scratched, when removing front backup power supply.

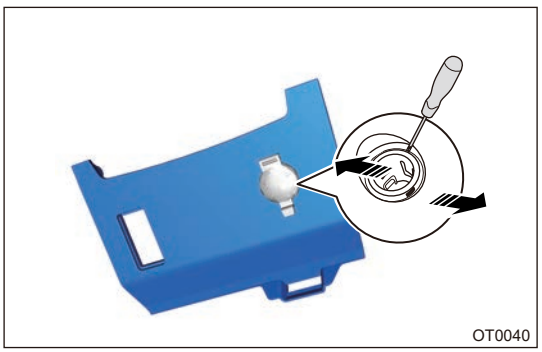
1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the front backup power supply.
   a. Using a screwdriver wrapped with protective tape, pry up clips from USB panel assembly and release the panel.



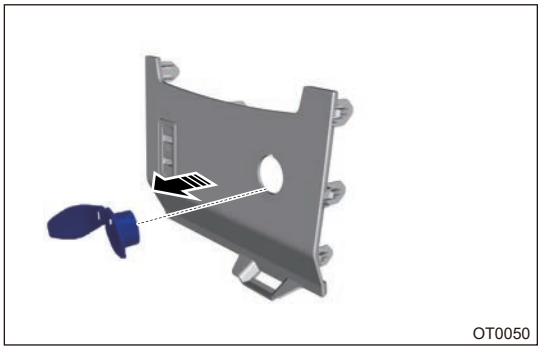
   b. Disconnect the backup power supply connector (-arrow) and 2 USB connectors (1).



   c. Press the clips on backup power supply housing in the direction of arrow and loosen the backup power supply fixing bush by using a screwdriver wrapped with protective tape simultaneously as shown in the illustration.



d. Remove the backup power supply housing.



Installation

Hint:
When installing backup power supply, align the protrusion of backup power supply housing end with the slot in the left luggage compartment protector as shown in the illustration, and install the backup power supply securely.

CAUTION
• Check backup power supply for proper operation after installing backup power supply assembly.

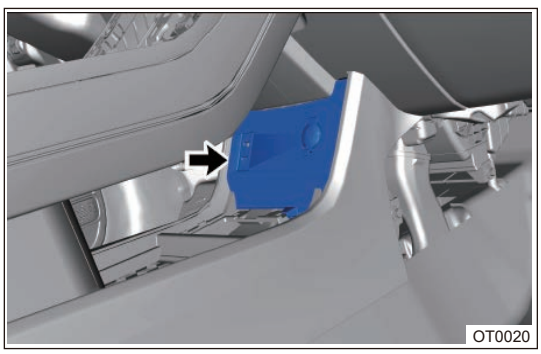
1. Installation is in the reverse order of removal.

Multi-function Interface

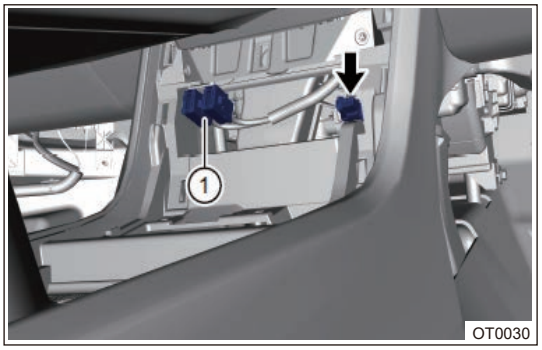
Removal

CAUTION
• Be sure to wear safety equipment to prevent accidents, when removing multi-function interface assembly. • Appropriate force should be applied when removing multi-function interface assembly. Be careful not to operate roughly. • Try to prevent USB panel assembly from being scratched, when removing multi-function interface assembly.

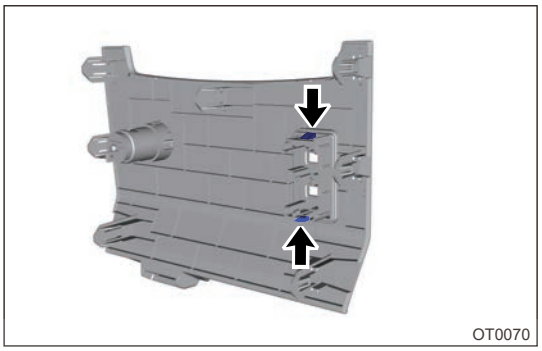
1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the multi-function interface assembly.
   a. Using a screwdriver wrapped with protective tape, pry up clips from USB panel assembly and release the panel.



b. Disconnect the backup power supply connector (-arrow) and 2 USB connectors (1).



c. Press 2 clips (arrow) with hands as shown in illustration and remove multi-function interfaces.



Installation

CAUTION
• Check multi-function interface for proper operation after installing the multi-function interface assembly.

1. Installation is in the reverse order of removal.

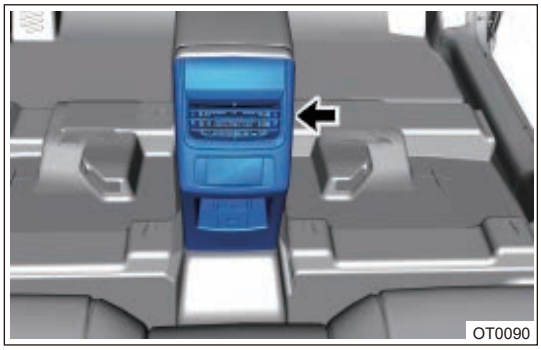
USB Charging Module

Removal

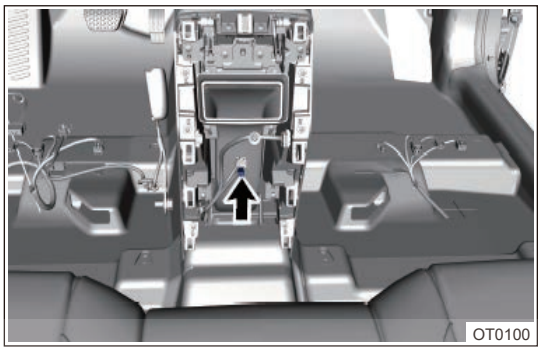
CAUTION
• Be sure to wear safety equipment to prevent accidents, when removing USB charging module. • Appropriate force should be applied, when removing USB charging module assembly. Be careful not to operate roughly. • Try to prevent auxiliary fascia console rear cover assembly from being scratched, when removing USB charging module assembly.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the USB charging module.

a. Using a screwdriver wrapped with protective tape, remove the auxiliary fascia console rear cover assembly.



b. Disconnect the USB charging module connector (arrow).



c. Remove the USB charging module.

Installation

CAUTION
• Check USB charging module for proper operation after installing USB charging module assembly. • When installing USB charging module, assemble it with USB charging module handle facing down and charging symptom at the lower side.

1. Installation is in the reverse order of removal.

Wireless Charging Module

Removal

CAUTION
• Be sure to wear safety equipment to prevent accidents, when removing wireless charging module assembly. • Appropriate force should be applied, when removing wireless charging module assembly. Be careful not to operate roughly. • Try to prevent auxiliary fascia console assembly from being scratched, when removing wireless charging module assembly.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the wireless charging module.

a. Pry off the front storage box cover plate assembly (-arrow) with interior crow plate, and disconnect mobile phone wireless charging module connector.

b. Remove 4 fixing screws (arrow) from wireless charging module.
c. Remove the wireless charging module.

Installation

CAUTION
• Check wireless charging module for proper operation after installing wireless charging module assembly.

1. Installation is in the reverse order of removal.