



iQ EV

Electric Vehicle

*ELECTRIC VEHICLE
DISMANTLING
MANUAL*



Foreword

This guide was developed to educate and assist dismantlers in the safe handling of Scion/Toyota iQ EV electric vehicles. iQ EV dismantling procedures are similar to other non-electric Scion/Toyota vehicles with the exception of the high voltage electrical system. It is important to recognize and understand the high voltage electrical system features and specifications of the Scion/Toyota iQ EV electric vehicle, as they may not be familiar to dismantlers.

High voltage electricity powers the electric motor, DC/DC converter, battery coolant heater, air conditioning (A/C) compressor, cabin coolant heater and inverter. All other automotive electrical devices such as the head lights, radio, and gauges are powered from a separate 12 Volt auxiliary battery. Numerous safeguards have been designed into the iQ EV to help ensure the high voltage, approximately 277.5 Volt, Lithium-ion (Li-ion) Electric Vehicle (EV) battery assembly is kept safe and secure in an accident.

The Li-ion EV battery assembly contains sealed batteries that are similar to rechargeable batteries used in some battery operated power tools and other consumer products. The electrolyte is absorbed in the cell plates and will not normally leak out even if the battery is cracked.

High voltage cables, identifiable by orange insulation and connectors, are isolated from the metal chassis of the vehicle.

Additional topics contained in the guide include:

- Scion/Toyota iQ EV identification.
- Major electric vehicle component locations and descriptions.

By following the information in this guide, dismantlers will be able to handle iQ EV electric vehicles as safely as the dismantling of a conventional non-electric automobile.

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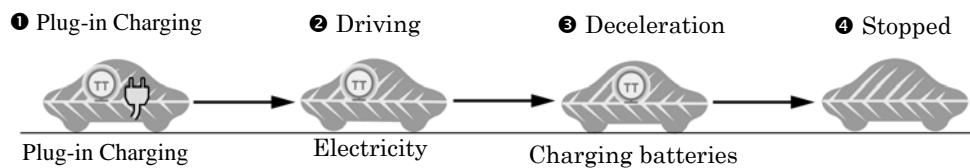
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About the iQ EV

The iQ EV 3-door hatchback is the first electric vehicle for Scion/Toyota. Electric Vehicle means that the vehicle contains only an electric motor and does not have a gasoline engine for power. Electricity is stored in a high voltage Electric Vehicle (EV) battery assembly for the electric motor.

The following illustration demonstrates how the iQ EV operates in various driving modes.

- 1 Fully charging the EV battery assembly utilizing the charge cable assembly, when the SOC (State of Charge) warning light has come on, will take approximately 7 (for U.S.A.) or 4 (for General) hours. When the EV battery assembly is charged at charging stations utilizing charge cable assembly, it will take approximately 3 hours.
- 2 During driving, when the Li-ion battery is sufficiently charged, the vehicle will drive using electric power only.
- 3 During deceleration, such as when braking, the vehicle regenerates kinetic energy from the front wheels to produce electricity that recharges the EV battery assembly.
- 4 While the vehicle is stopped, the electric motor is off, however the vehicle remains on and operational.



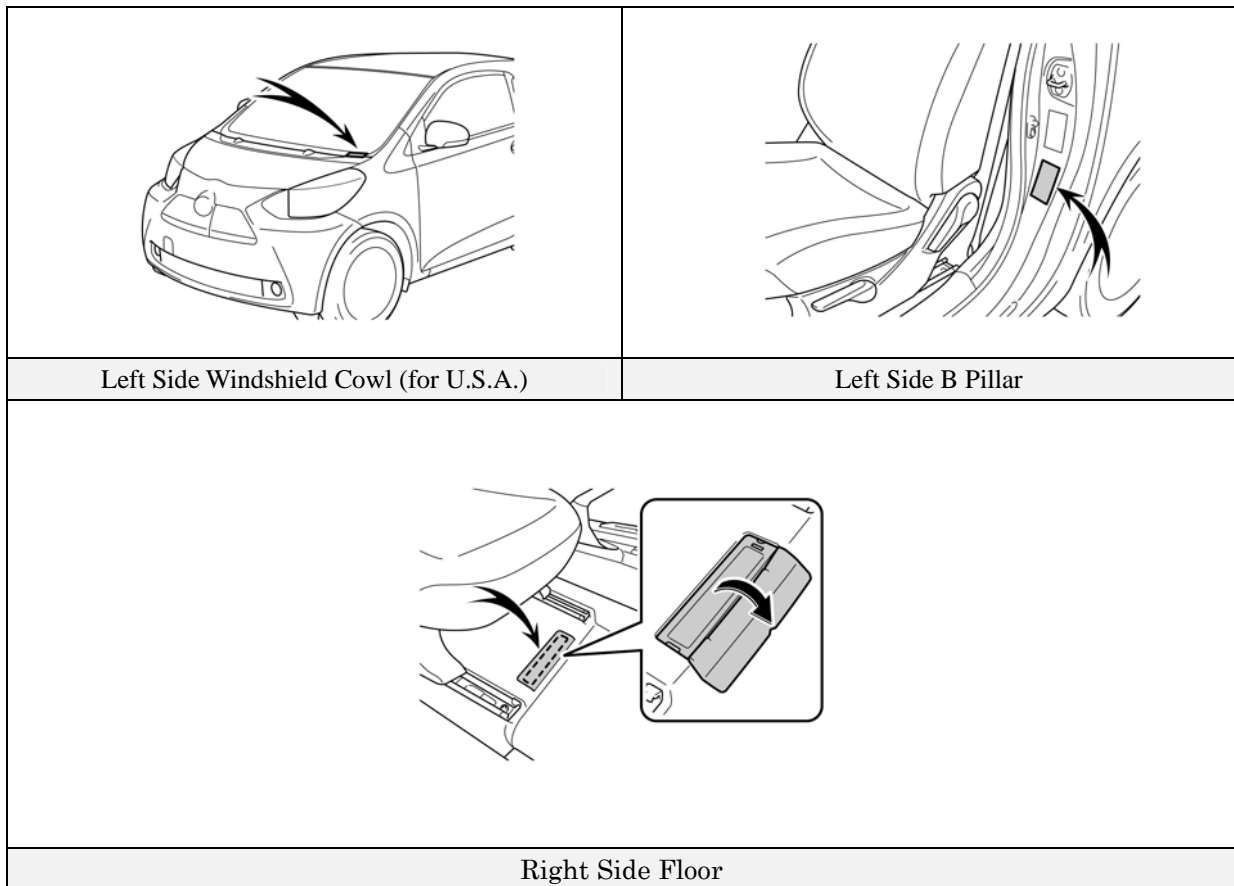
iQ EV Identification

In appearance, the 2012 model iQ EV is nearly identical to the conventional, non-electric Scion/Toyota iQ. The iQ EV is a 3-door hatchback. Exterior, interior, and motor compartment illustrations are provided to assist in identification.

The alphanumeric 17 character Vehicle Identification Number (VIN) is provided in the front windshield cowl (for U.S.A.), under the right side front seat and on the left side B pillar.

Example VIN: JTNJVXB00C2020211 (for U.S.A.)
JTNJVSB00C2020211 (for General)

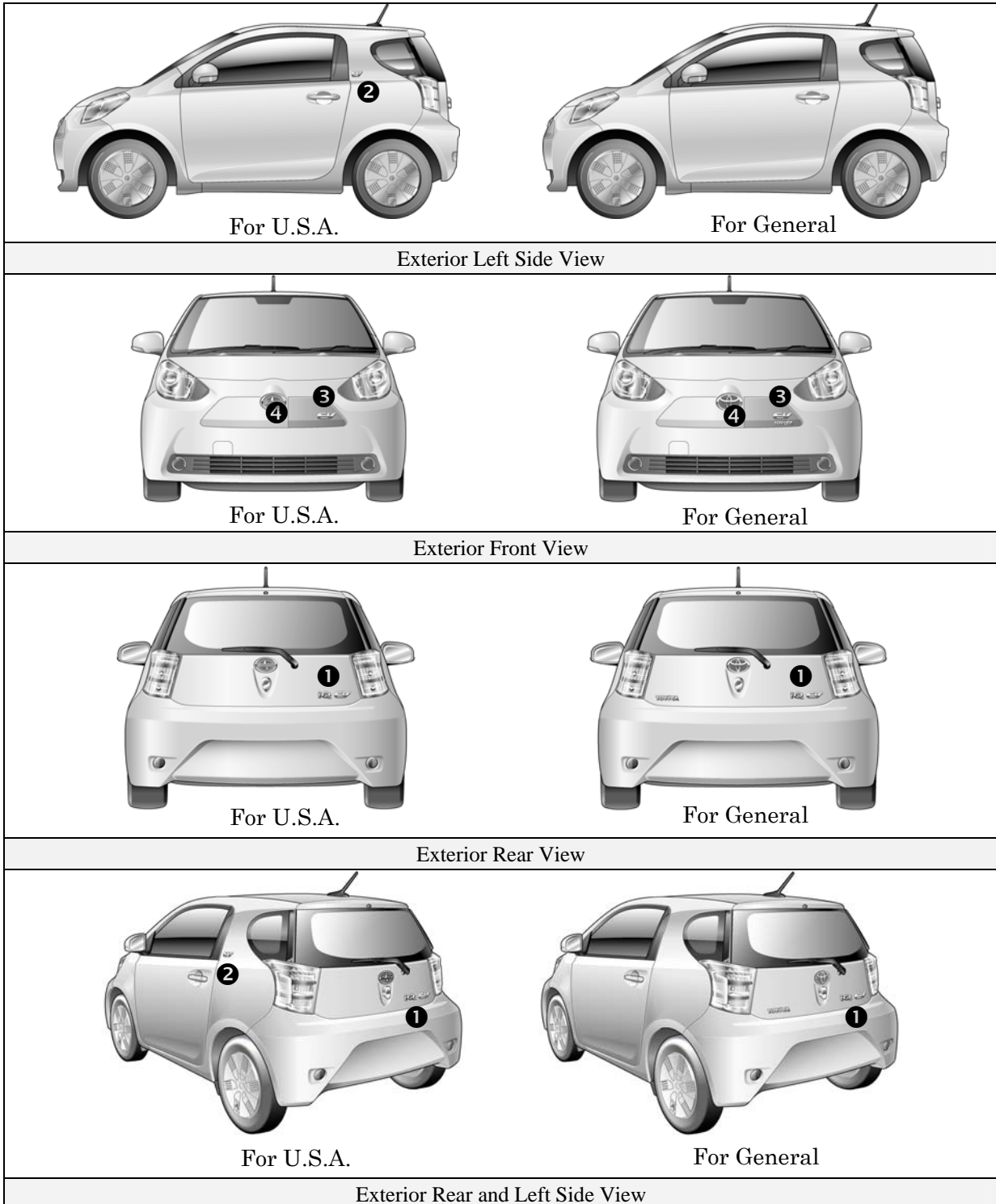
An iQ EV is identified by the first 8 alphanumeric characters **JTNJVXB0** or **JTNJVSB0**.



iQ EV Identification (Continued)

Exterior

- ❶ iQ and EV logos on the back door.
- ❷ EV logos on the B pillars. (for U.S.A.)
- ❸ EV logo on the recharge inlet door.
- ❹ Recharge inlet door located on the driver side front upper grille.

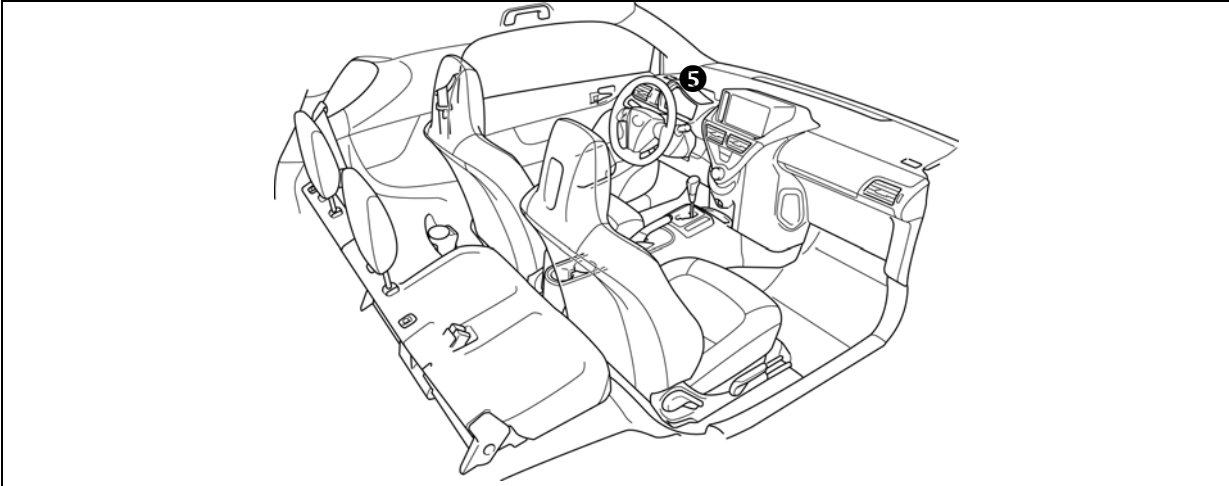


iQ EV Identification (Continued)

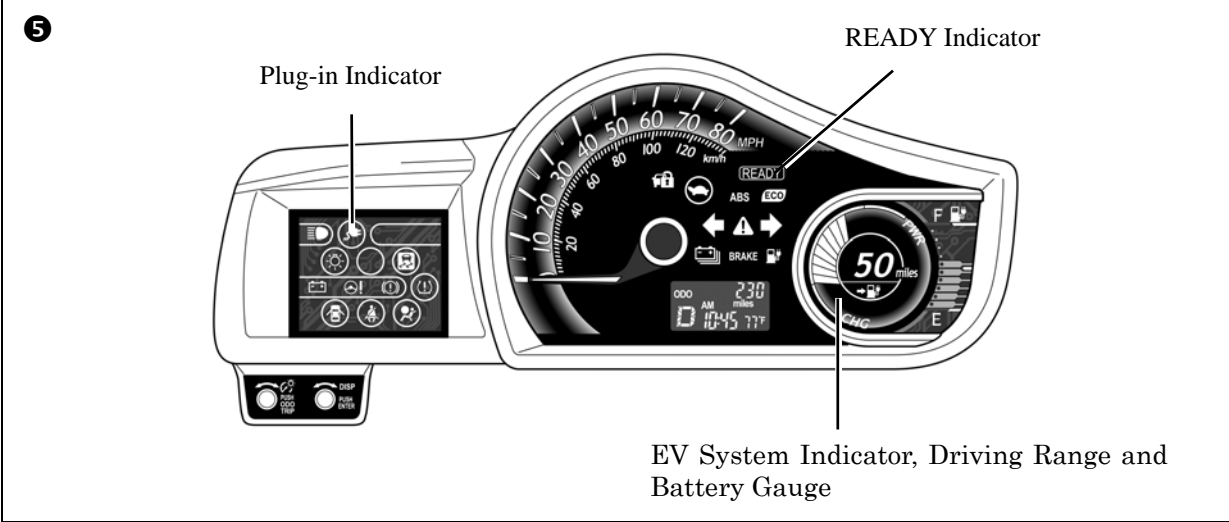
Interior

- 5 The instrument cluster (power meter, driving range & battery gauge, **READY** indicator, plug-in indicator and warning lights) located in the dash behind the steering wheel, is different than the one on the conventional, non-electric iQ.

Hint:
If the vehicle is shut off, the instrument cluster gauges will be “blacked out”, not illuminated.



Interior View

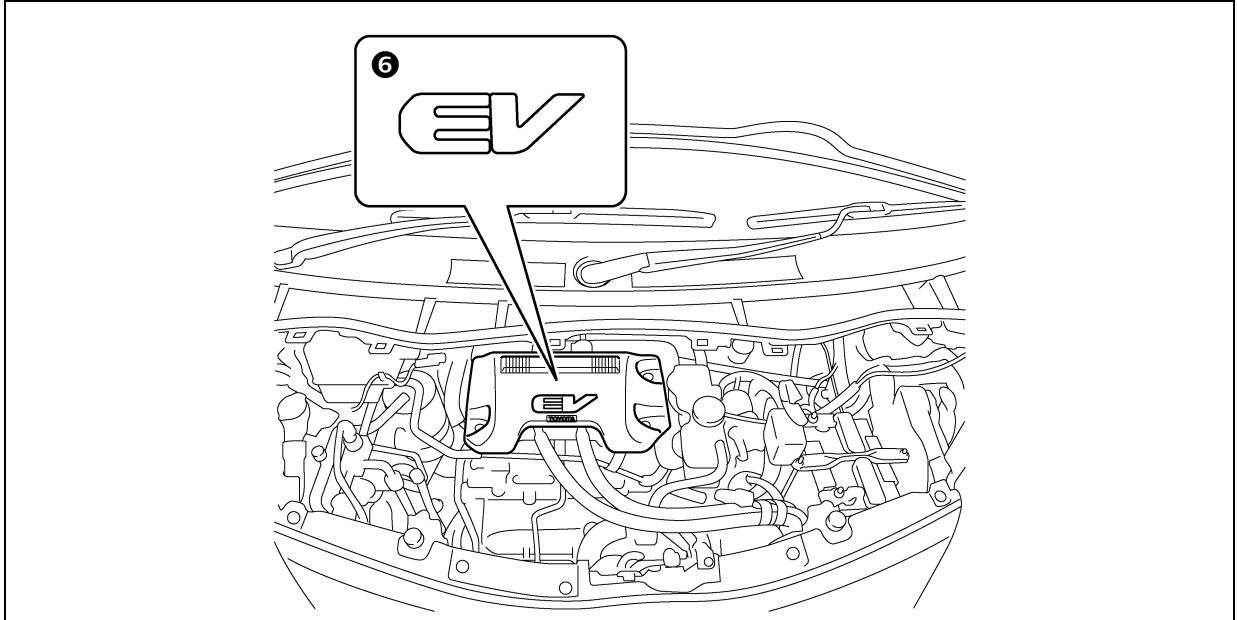


Instrument Cluster View

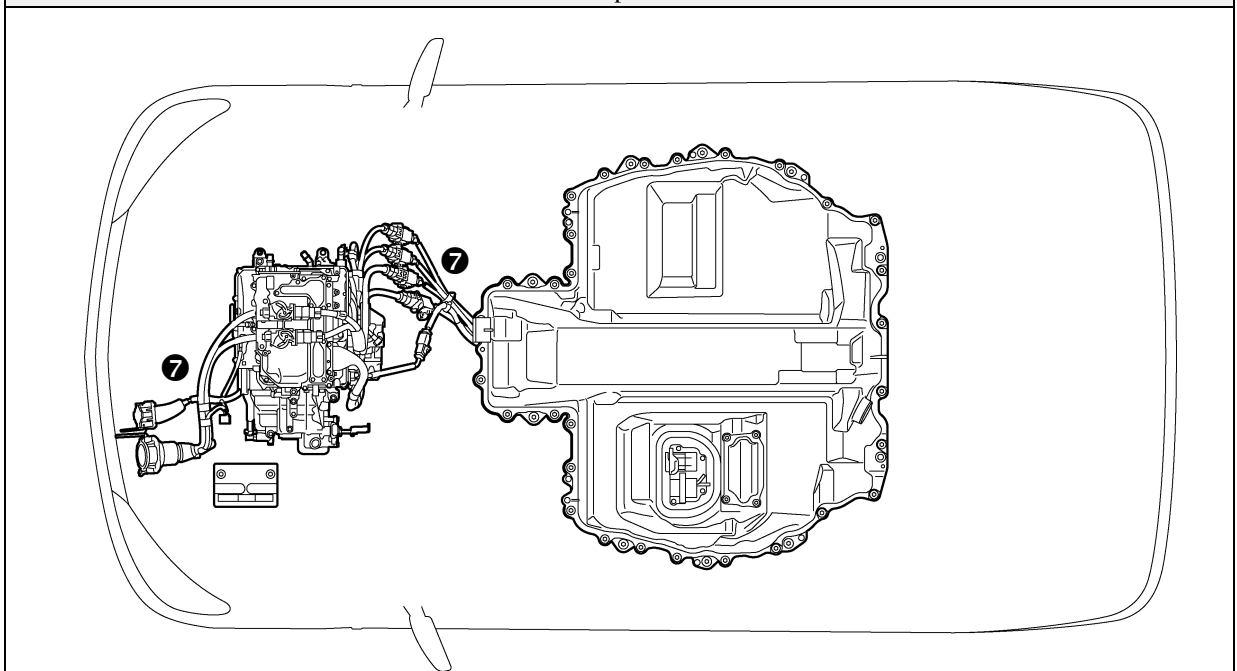
iQ EV Identification (Continued)

Motor Compartment

- ⑥ Logo on the plastic cover.
- ⑦ Orange colored high voltage power cables.



Motor Compartment View



Power Cables

Electric Vehicle Component Locations & Descriptions

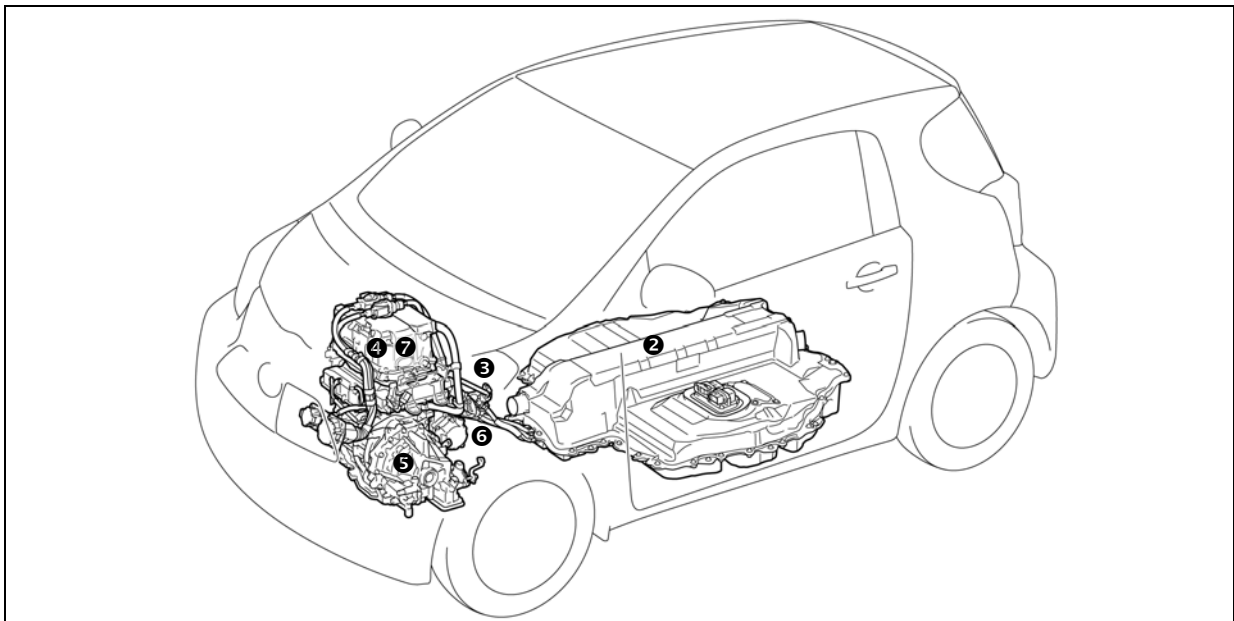
Component*	Location	Description
12 Volt Auxiliary Battery ❶	Driver Side of Motor Compartment	A lead-acid battery that supplies power to the low voltage devices.
Electric Vehicle (EV) Battery Assembly ❷	Undercarriage	277.5 Volt Lithium-ion (Li-ion) battery assembly consisting of 150 low voltage (3.7 Volt) cells connected in a series-parallel circuit.
Power Cables ❸	Undercarriage and Motor Compartment	Orange colored power cables carry high voltage Alternating Current (AC) between the charge inlet (for normal charging) and charger assembly, and high voltage Direct Current (DC) between the EV battery assembly, inverter/converter, A/C compressor, and charge inlet (for optional quick charging). These cables also carry 3-phase Alternating Current (AC) between the inverter/converter and electric motor.
Inverter / Converter ❹	Motor Compartment	Inverts the high voltage DC electricity from the EV battery assembly to 3-phase AC electricity to drive the electric motor. The inverter/converter also converts AC electricity from the electric motor (regenerative braking) to DC that recharges the EV battery assembly.
DC/DC Converter for 12 Volt Auxiliary Battery ❺	Inverter / Converter	Converts 277.5 Volts from the EV battery assembly to 12 Volts for low voltage vehicle power.
Electric Motor ❻	Motor Compartment	3-phase high voltage AC permanent magnet electric motor contained in the transaxle and drives the front wheels.
A/C Compressor (with Inverter) ❼	Motor Compartment	3-phase high voltage AC electrically driven motor compressor.

*Numbers in the component column apply to the illustrations on the following page.

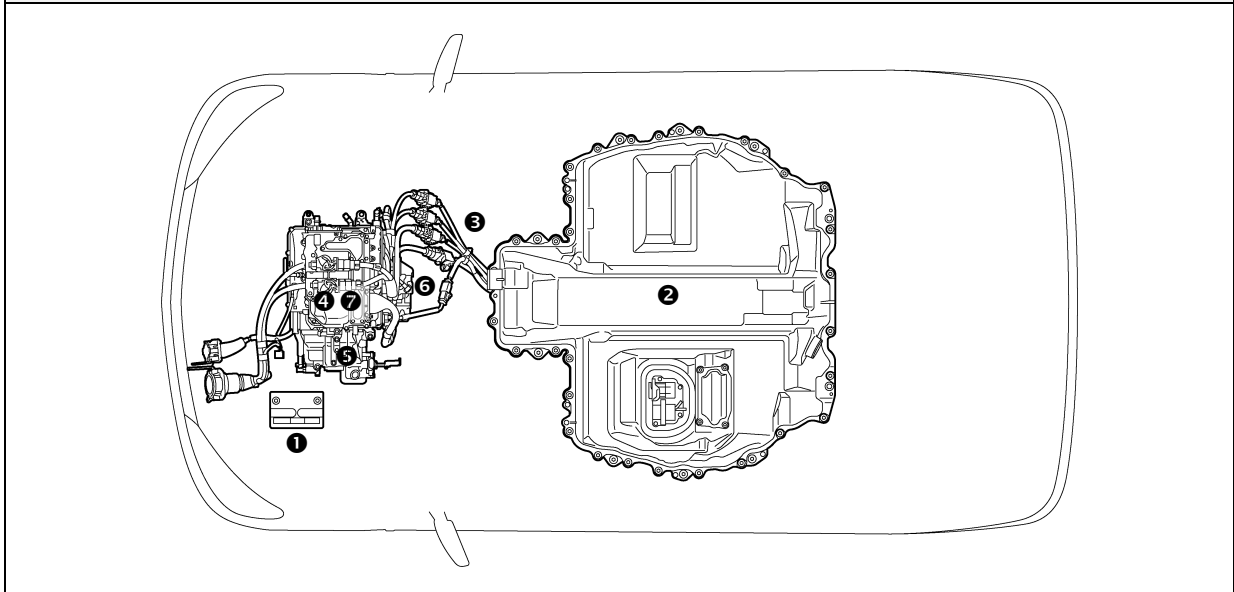
Electric Vehicle Component Locations & Descriptions (Continued)

Specifications

Electric Motor:	63 hp (47 kW), AC Permanent Magnet Motor
Transaxle:	Automatic Only
EV Battery Assembly:	277.5 Volt Sealed Li-ion Battery
Curb Weight:	2,425 lbs/1,100 kg (for U.S.A.) 2,381 lbs/1,080 kg (for General)
Frame Material:	Steel Unibody
Body Material:	Steel Panels
Seating Capacity:	4 passengers



Electric Vehicle Components



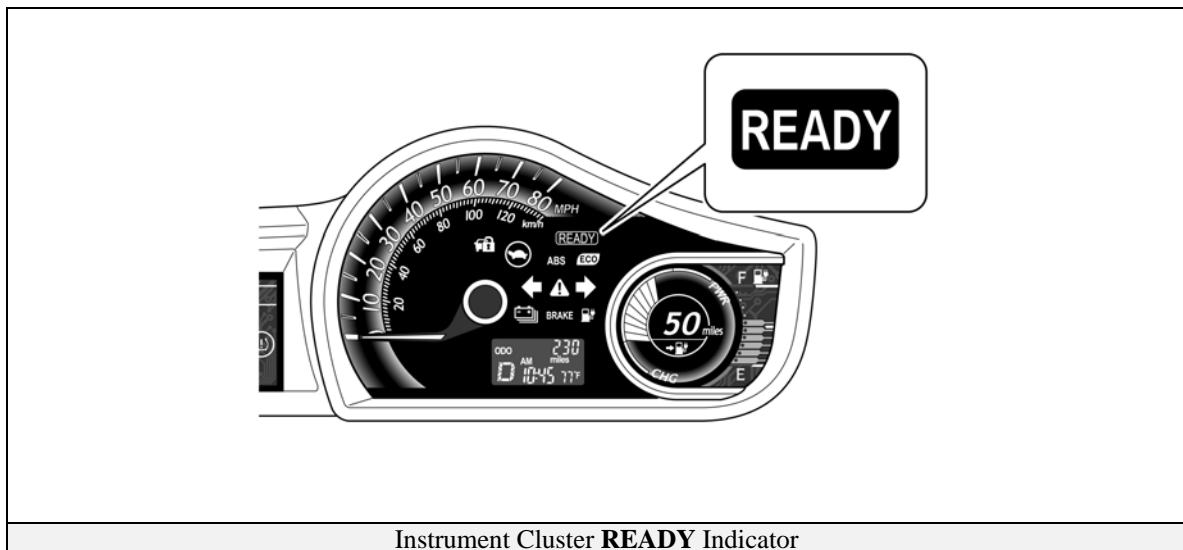
Components (Top View) and High Voltage Power Cables

Electric Vehicle Operation

Once the **READY** indicator is illuminated in the instrument cluster, the vehicle may be driven. However, as there is no gasoline engine, no sound will be produced from the vehicle. It is important to recognize and understand the **READY** indicator provided in the instrument cluster. When lit, it informs the driver that the vehicle is on and operational even though the motor compartment is silent.

Vehicle Operation

- With the iQ EV, the system is operational while the **READY** indicator is on.
- Never assume that the vehicle is shut off just because the motor compartment is silent. Always look for the **READY** indicator status. The vehicle is shut off when the **READY** indicator is off.



Electric Vehicle (EV) Battery Assembly and Auxiliary Battery

The iQ EV features a high voltage Electric Vehicle (EV) battery assembly that contains sealed Lithium-ion (Li-ion) battery cells.

EV Battery Assembly

- The EV battery assembly is enclosed in a case and is rigidly mounted under the floor. The case is isolated from high voltage.
- The EV battery assembly consists of 150 low voltage (3.7 Volt) Li-ion battery cells connected in series-parallel to produce approximately 277.5 Volts. Each Li-ion battery cell is non-spillable and sealed in a case.
- The electrolyte used in the Li-ion battery cells is a flammable organic electrolyte. The electrolyte is absorbed into the battery cell separator and will not normally leak, even in a collision.

EV Battery Assembly	
Battery assembly voltage	277.5 V
Number of Li-ion battery cells in the battery	150
Li-ion battery cell voltage	3.7 V
Li-ion battery cell dimensions Length x Width x Height	4.13 x 5.83 x 1.04 in. (105 x 148 x 27 mm)
Li-ion cell weight	1.60 lbs (726 g)
Li-ion battery assembly dimensions Length x Width x Height	48 x 53 x 13 in. (1,226 x 1,355 x 335 mm)
Li-ion battery assembly weight	485 lbs (220 kg)

Components Powered by the EV Battery Assembly

- Electric Motor
- Inverter/Converter
 - DC-DC Converter for 12 Volt Auxiliary Battery
- Power Cables
- A/C Compressor

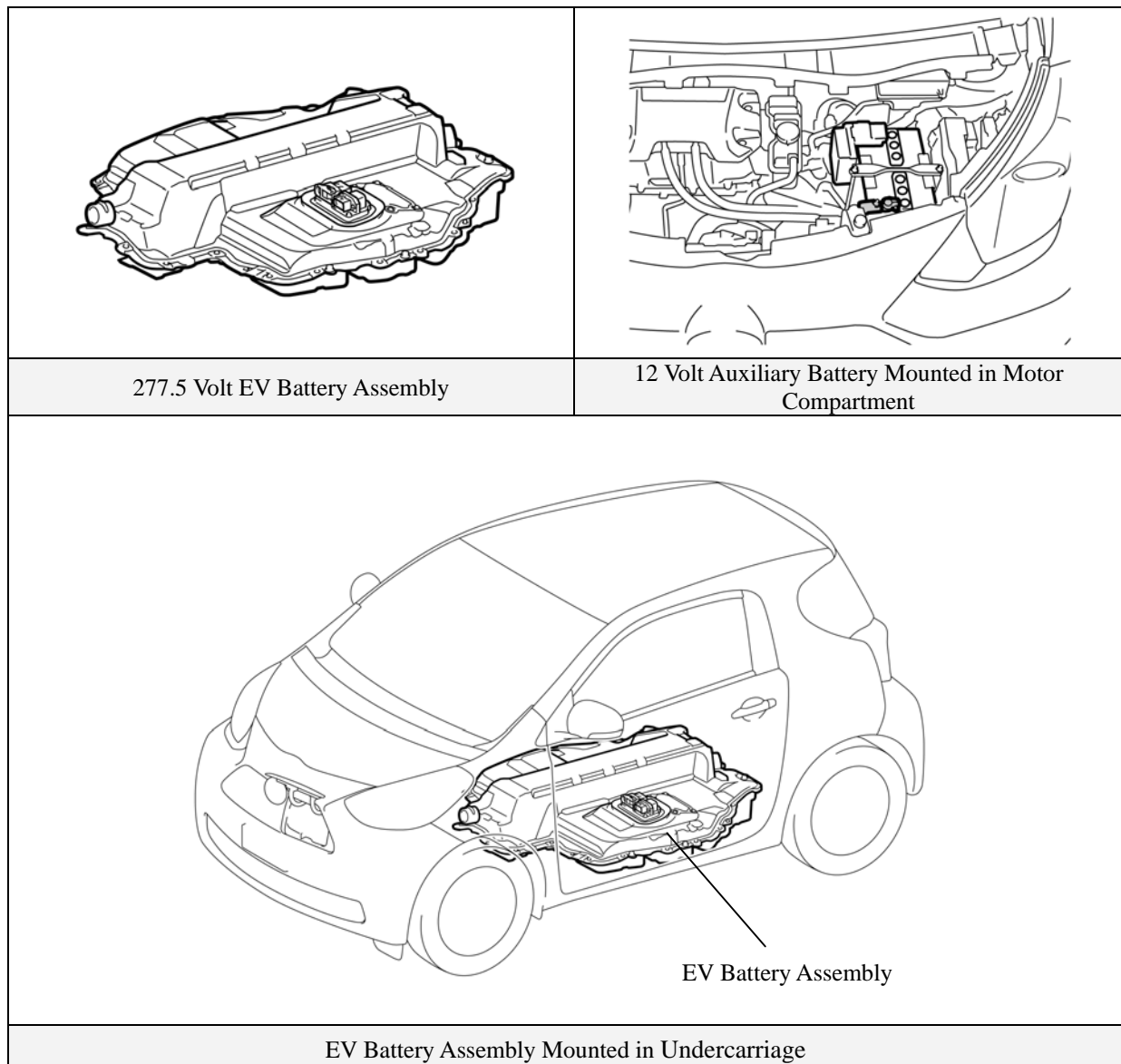
Electric Vehicle (EV) Battery Assembly and Auxiliary Battery (Continued)

EV Battery Assembly Recovery

- Contact either your Scion/Toyota Distributor or the nearest Scion/Toyota dealer.

Auxiliary Battery

- The iQ EV contains a sealed lead-acid 12 Volt battery. This 12 Volt auxiliary battery powers the vehicle electrical system similar to a conventional vehicle. As with other conventional vehicles, the negative terminal of the auxiliary battery is grounded to the metal chassis of the vehicle.
- The auxiliary battery is located in the motor compartment.



High Voltage Safety

The EV battery assembly powers the high voltage electrical system with DC electricity. Positive and negative orange colored high voltage power cables are routed from the EV battery assembly, under the vehicle floor pan, and to the inverter/converter. The inverter/converter creates 3-phase AC to power the motor. Power cables are routed from the inverter/converter to each high voltage motor (electric motor and A/C compressor). The following systems are intended to help keep occupants in the vehicle and emergency responders safe from high voltage electricity:


High Voltage Safety System

- High voltage fuses ❶ provide short circuit protection in the EV battery assembly.
- Positive and negative high voltage power cables ❷ connected to the EV battery assembly are controlled by 12 Volt normally open relays (system main relays ❸). When the vehicle is shut off, the relays stop electrical flow from leaving the EV battery assembly.



WARNING:

- ***The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off or disabled. To prevent serious injury or death from severe burns or electric shock, avoid touching, cutting, or opening any orange high voltage power cable or high voltage component.***

- Both positive and negative power cables ❷ are insulated from the metal body. High voltage electricity flows through these cables and not through the metal vehicle body. The metal vehicle body is safe to touch because it is insulated from the high voltage components.
- A ground fault monitor in the electric vehicle computer ❹ continuously monitors for high voltage leakage to the metal chassis while the vehicle is running. If a malfunction is detected, the electric vehicle computer ❹ will illuminate the master warning light  in the instrument cluster and indicate “CHECK EV SYSTEM” on the multi-information display.
- The EV battery assembly contactors will automatically open to stop electricity flow in a collision sufficient to activate the SRS.

*Numbers apply to the illustration on the following page.

Precaution to be observed when dismantling the vehicle



WARNING:

- *The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off or disabled. To prevent serious injury or death from severe burns or electric shock, avoid touching, cutting, or opening any orange high voltage power cable or high voltage component.*

Necessary Items

- Protective clothing such as insulated gloves (electrically insulated), rubber gloves, safety goggles, and safety shoes.
- Insulating tape such as electrical tape that has a suitable electrical insulation rating.
- Before wearing insulated gloves, make sure that they are not cracked, ruptured, torn, or damaged in any way. Do not wear wet insulated gloves.
- An electrical tester that is capable of measuring DC 750 Volts or more.

Spills

The iQ EV contains some of the same common automotive fluids used in other non-electric Scion/Toyota vehicles, with the exception of the Li-ion electrolyte used in the EV battery assembly. The electrolyte used in the Li-ion battery cells is a flammable organic electrolyte. The electrolyte is absorbed into the battery cell separators, even if the battery cells are crushed or cracked, it is unlikely that liquid electrolyte will leak. Any liquid electrolyte that leaks from a Li-ion battery cell quickly evaporates.



WARNING:

- *The Li-ion battery contains organic electrolyte. Only a small amount may leak from the batteries which may irritate the eyes, nose, throat, and skin.*
- *Contact with the vapor produced by the electrolyte may irritate the nose and throat.*
- *To avoid injury by coming in contact with the electrolyte or vapor, wear personal protective equipment for organic electrolyte including SCBA or protective mask for organic gases.*

- Handle Li-ion electrolyte spills using the following Personal Protective Equipment (PPE):
 - Splash shield or safety goggles. Fold down helmet shields are not acceptable for electrolyte spills.
 - Rubber gloves or gloves suitable for organic solvents.
 - Apron suitable for organic solvents.
 - Rubber boots or boots suitable for organic solvents.
 - Protective mask for organic gases or SCBA.

Dismantling the vehicle

The following 4 pages contain general instructions for use when working on an iQ EV. Read these instructions before proceeding to the EV battery removal instructions on page 20.

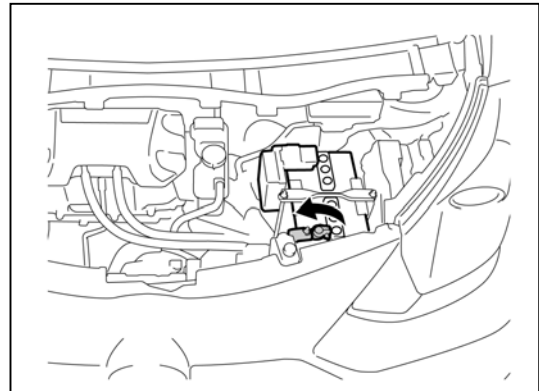


WARNING:

- ***The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off or disabled. To prevent serious injury or death from severe burns or electric shock, avoid touching, cutting, or opening any orange high voltage power cable or any high voltage component.***

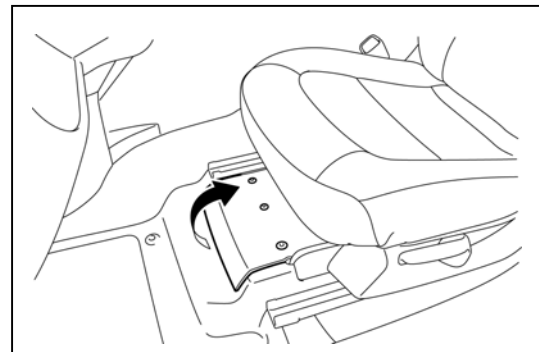
1. Shut off the ignition (READY indicator is off).
Then disconnect the cable from the auxiliary battery negative (-) terminal.

- (1) Open the hood.
- (2) Disconnect the auxiliary battery negative (-) terminal.

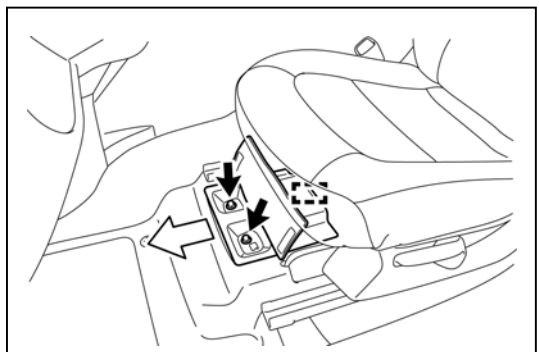


2. Remove the center floor hole cover.

- (1) Move the front seat assembly LH to the rearmost position.
- (2) Turn back the center floor hole cover carpet.



- (3) Remove the 2 bolts from the center floor hole cover.
- (4) Disengage the guide and remove the center floor hole cover from the front floor panel.



3. Remove the service plug grip.

Caution:

- Wear insulating gloves and protective goggles.
- After removing the service plug grip, attach a note to it to prevent other technicians from mistakenly reconnecting it while you are servicing the vehicle.
- All the high voltage wiring connectors are orange.

Notice:

To prevent the EV battery assembly from being damaged by falling objects, temporarily install the front upper floor cover after removing the service plug grip.

- (1) Wear insulating gloves and remove the service plug grip after sliding up the lever of the service plug grip as shown in the illustration.

Caution:

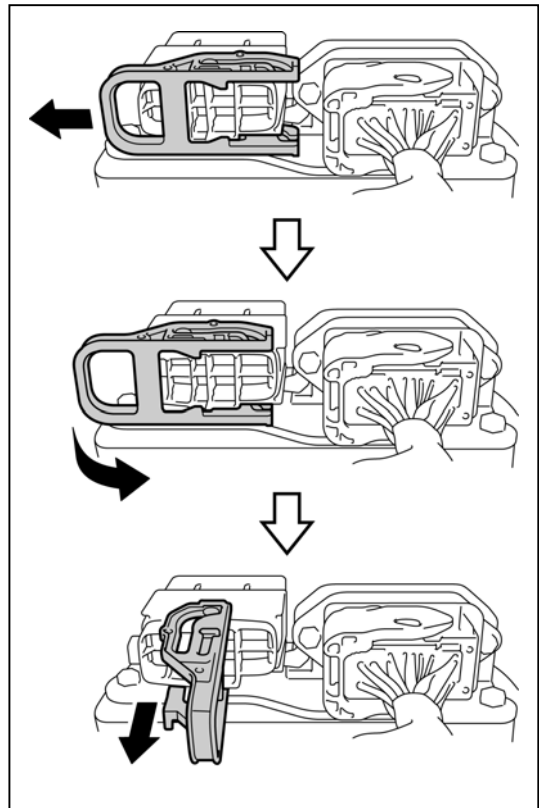
- Keep the removed service plug grip in your pocket to prevent other technicians from accidentally reconnecting it while you are servicing the vehicle.
- After removing the service plug grip, wait for at least 10 minutes before touching any of the high voltage connectors or terminals. After waiting for 10 minutes, check the voltage at the terminals in the inverter with converter assembly. The voltage should be 0 V before beginning work.

Notice:

- Turning the power switch to READY ON with the service plug grip removed can cause a malfunction, so make sure not to turn the power switch to READY ON.
- Connect the auxiliary battery on the same day of installing the service plug grip to allow the battery cell voltage equalization function of the battery smart unit to operate.

Hint:

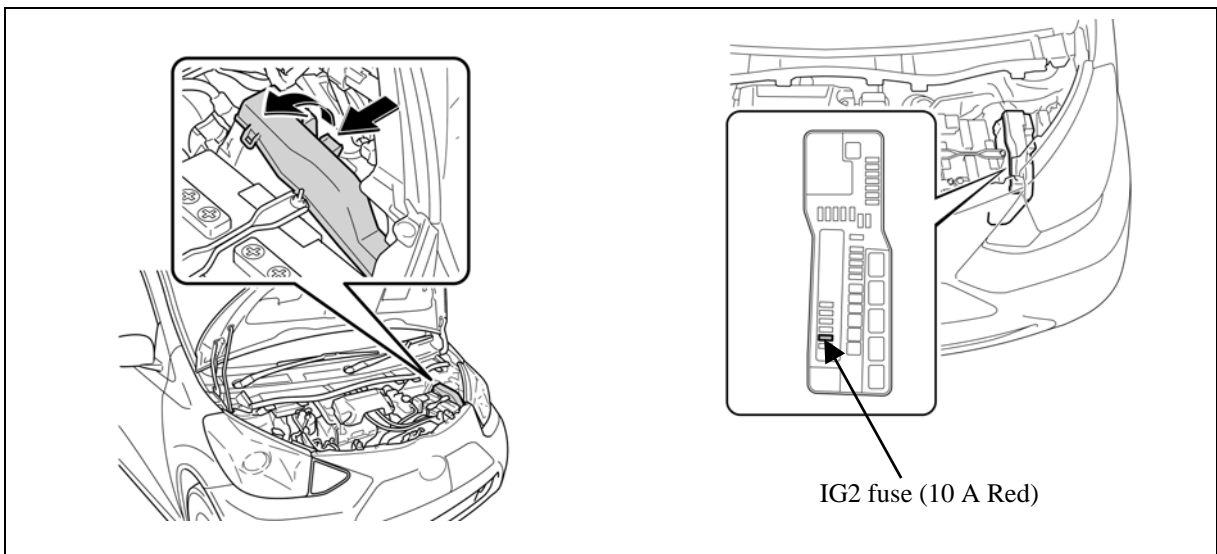
Waiting for at least 10 minutes is required to discharge the high-voltage capacitor inside the inverter with converter assembly and electric vehicle charger assembly.



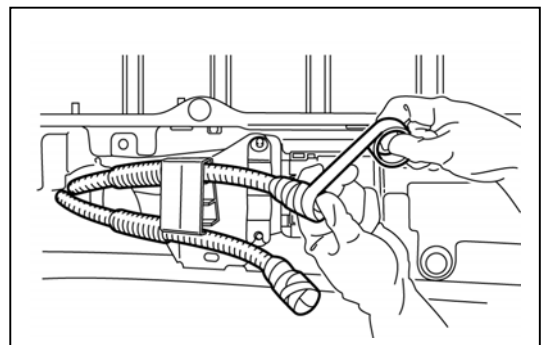
4. Carry the removed service plug grip in your pocket to prevent other staff from accidentally reinstalling it while you are dismantling the vehicle.
5. Make other staff aware that a high-voltage system is being dismantled by using the following sign: CAUTION: HIGH-VOLTAGE. DO NOT TOUCH (see page 19).
6. If the service plug grip cannot be removed due to damage to the vehicle, remove the **IG2** fuse (10 A red colored).

Caution:

This operation shuts off the EV system. Be sure to wear insulated gloves because high voltage is not shut off inside the EV battery. When it is possible to remove the service plug grip, remove it and continue the procedure.



7. After disconnecting or exposing a high-voltage connector or terminal, insulate it immediately using insulating tape. Before disconnecting or touching a bare high-voltage terminal, wear insulated gloves.



8. Check the EV battery assembly and nearby area for leakage. If you find any liquid, it may be Li-ion electrolyte. Handle Li-ion electrolyte spills using the following Personal Protective Equipment (PPE):

- Splash shield or safety goggles. Fold down helmet shields are not acceptable for electrolyte spills.
- Rubber gloves or gloves suitable for organic solvents.
- Apron suitable for organic solvents.
- Rubber boots or boots suitable for organic solvents.
- Protective mask for organic gases or SCBA.

Caution:

- **The Li-ion battery contains organic electrolyte. Only a small amount may leak from the batteries which may irritate the eyes, nose, throat, and skin.**
- **Contact with the vapor produced by the electrolyte may irritate the nose and throat.**
- **To avoid injury by coming in contact with the electrolyte or vapor, wear personal protective equipment for organic electrolyte including SCBA or protective mask for organic gases.**

9. If the electrolyte comes into contact with your eye(s), call out loudly for help. Do not rub your eye(s). Instead, wash the eye(s) with a dilute boric acid solution or a large amount of water and seek medical care.

10. With the exception of the EV battery assembly, remove parts by following procedures which are similar to conventional Scion/Toyota vehicles. For the removal of the EV battery assembly, refer to the following pages.

Person in charge: _____

CAUTION:
HIGH-VOLTAGE.
DO NOT TOUCH.

CAUTION:
HIGH-VOLTAGE.
DO NOT TOUCH.

Person in charge: _____

When performing work on the HV system, fold this sign and
put it on the roof of the vehicle.

Removal of EV Battery Assembly



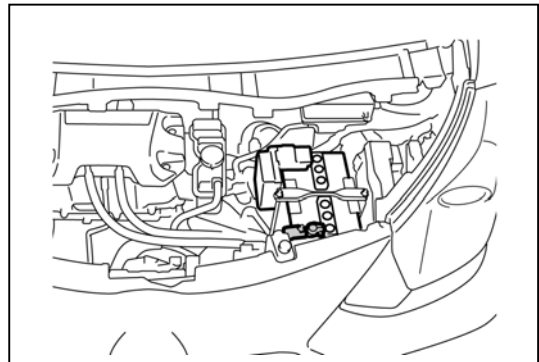
WARNING:

- *Be sure to wear insulated gloves when handling high-voltage parts.*
- *Even if the vehicle is shut off and the relays are off, be sure to remove the service plug grip before performing any further work.*
- *Power remains in the high voltage electrical system for 10 minutes even after the EV battery pack is shut off because the circuit has a condenser that stores power.*
- *Make sure that the tester reading is 0 V before touching any high-voltage terminals which are not insulated.*
- *The SRS may remain powered for up to 90 seconds after the vehicle is shut off or disabled. To prevent serious injury or death from unintentional SRS deployment, avoid cutting the SRS components.*

1. SHUT OFF IGINATION (**READY** indicator is off)

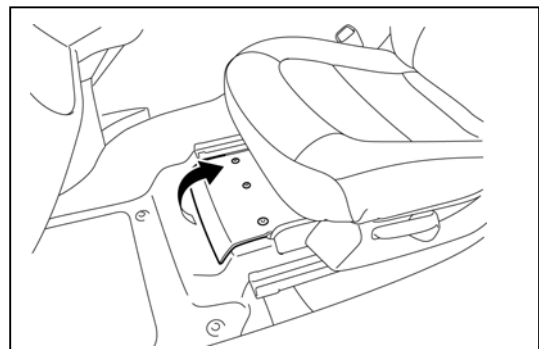
2. REMOVE 12 V AUXILIARY BATTERY

- (1) Open the hood.
- (2) Disconnect the cable from the auxiliary battery negative (-) terminal.
- (3) Disconnect the cable from the auxiliary battery positive (+) terminal.
- (4) Remove the 12 Volt auxiliary battery.

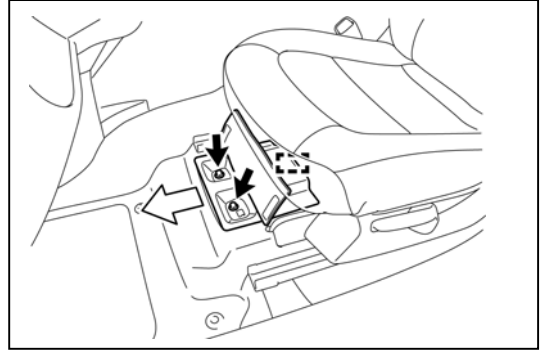


3. REMOVE CENTER FLOOR HOLE COVER

- (1) Move the front seat assembly LH to the rearmost position.
- (2) Turn back the center floor hole cover carpet.



- (3) Remove the 2 bolts from the center floor hole cover.
- (4) Disengage the guide and remove the center floor hole cover from the front floor panel.



4. REMOVE SERVICE PLUG GRIP

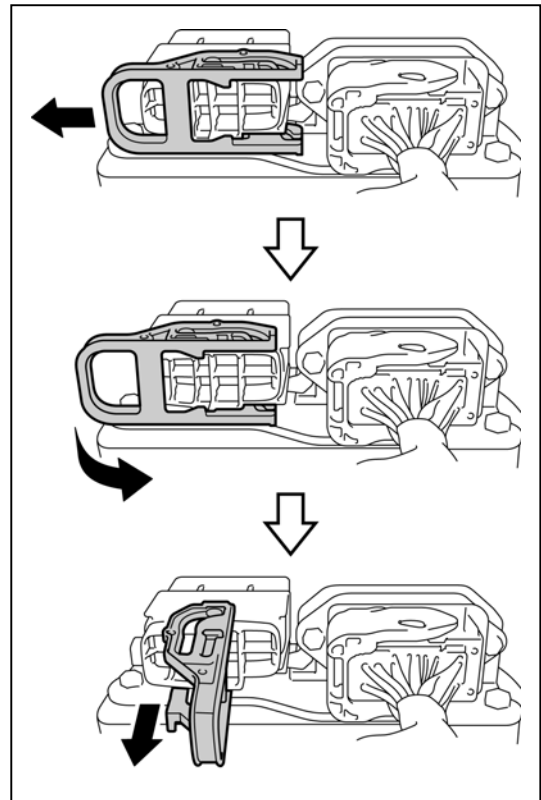
Caution:

- **Wear insulating gloves and protective goggles.**
- **After removing the service plug grip, attach a note to it to prevent other technicians from mistakenly reconnecting it while you are servicing the vehicle.**
- **All the high voltage wiring connectors are orange.**

- (2) Wear insulating gloves and remove the service plug grip after sliding up the lever of the service plug grip as shown in the illustration.

Caution:

- **Keep the removed service plug grip in your pocket to prevent other technicians from accidentally reconnecting it while you are servicing the vehicle.**
- **After removing the service plug grip, wait for at least 10 minutes before touching any of the high voltage connectors or terminals. After waiting for 10 minutes, check the voltage at the terminals in the inverter with converter assembly. The voltage should be 0 V before beginning work.**



Notice:

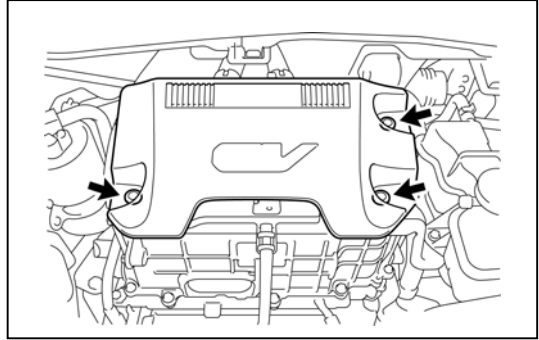
- **Turning the power switch to READY ON with the service plug grip removed can cause a malfunction, so make sure not to turn the power switch to READY ON.**
- **Connect the auxiliary battery on the same day of installing the service plug grip to allow the battery cell voltage equalization function of the battery smart unit to operate.**

Hint:

Waiting for at least 10 minutes is required to discharge the high-voltage capacitor inside the inverter with converter assembly and electric vehicle charger assembly.

5. REMOVE INVERTER COVER ASSEMBLY
RH

- (1) Remove the 3 clips and the inverter cover assembly RH from the inverter with converter assembly.



6. CHECK TERMINAL VOLTAGE (w/ Quick Charging Inlet)

Caution:

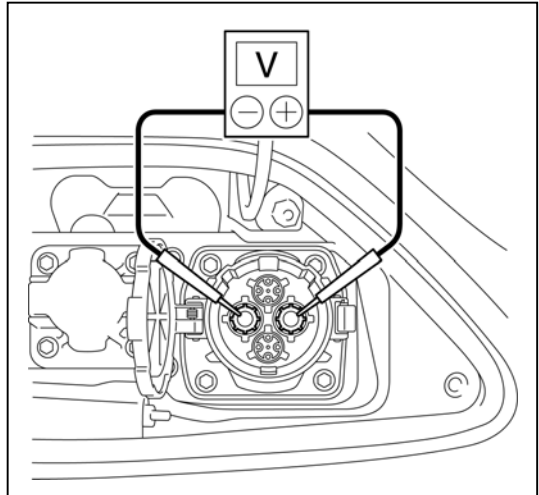
Wear insulated gloves.

- (1) Open the charge lid.
- (2) Open the cap of the DC charger inlet cable.
- (3) Using a voltmeter, measure the voltage of the high voltage inlet terminal.

Standard voltage: 0 V

Hint:

Use measuring range of DC 750 V or more on the voltmeter.

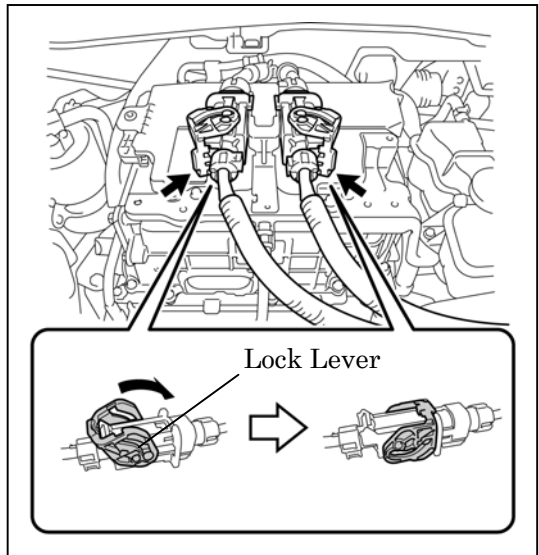


7. DISCONNECT DC CHARGER INLET
CABLE (w/ Quick Charging Inlet)

Caution:

Wear insulated gloves.

- (1) Using a screwdriver, move the 2 lock levers as shown in the illustration and disconnect the 2 DC charger inlet cable connectors from the EV charger wire.

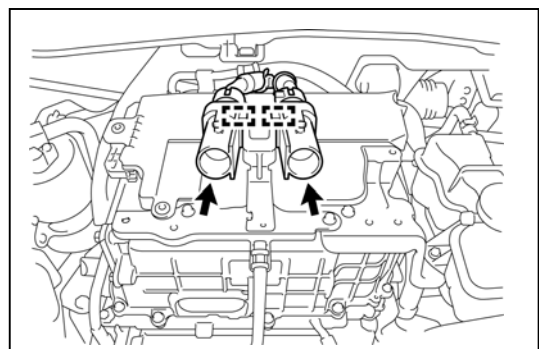


8. DISCONNECT EV CHARGER WIRE (w/
Quick Charging Inlet)

Caution:

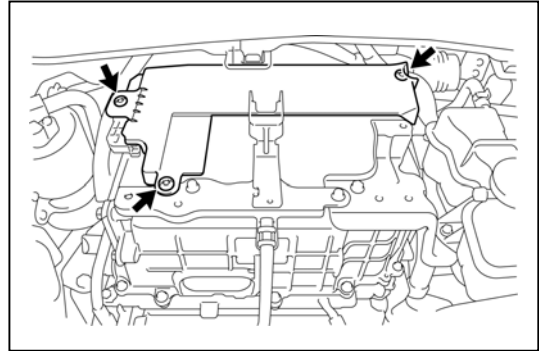
Wear insulated gloves.

- (1) Disengage the 2 clamps and disconnect the EV charger wires from the wiring harness clamp bracket.



9. REMOVE INVERTER SERVICE COVER

- (1) Remove the 3 clips and the inverter service cover from the inverter with converter assembly.



10. REMOVE UPPER INVERTER COVER SUB-ASSEMBLY

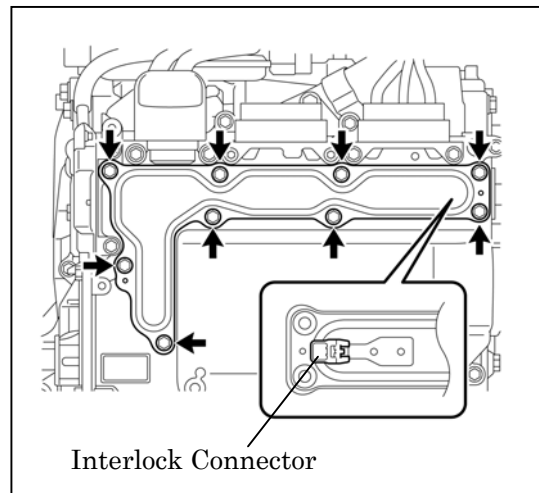
Caution:

Wear insulated gloves.

- (1) Remove the 9 bolts and the upper inverter cover sub-assembly from the inverter with converter assembly.

Notice:

Make sure to pull the upper inverter cover sub-assembly straight up to remove it, because an interlock connector is connected to the bottom of the upper inverter cover sub-assembly.



11. CHECK TERMINAL VOLTAGE (for Inverter)

Caution:

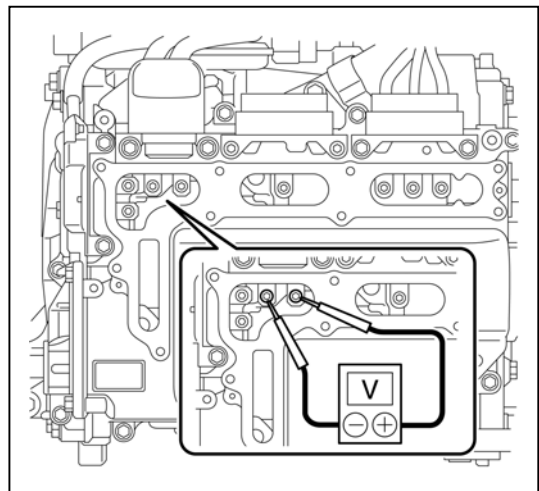
Wear insulated gloves.

- (1) Using a voltmeter, measure the voltage of the high voltage inlet terminal.

Standard voltage: 0 V

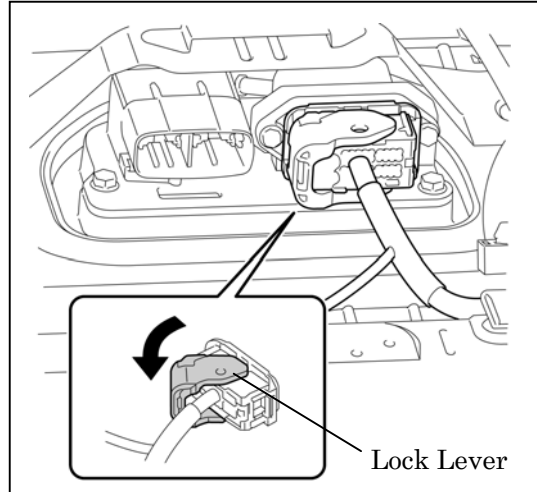
Hint:

Use measuring range of DC 750 V or more on the voltmeter.



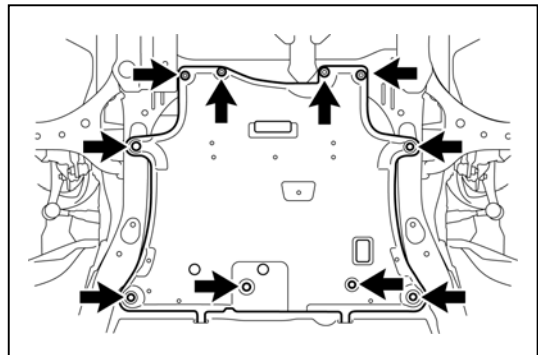
12. DISCONNECT FLOOR WIRE

- (1) Move the lock lever as shown in the illustration, and disconnect the connector of the floor wire from the electric vehicle battery assembly.



13. REMOVE NO. 1 MOTOR UNDER COVER ASSEMBLY

- (1) Remove the 4 bolts, 6 clips and the No. 1 motor under cover assembly.

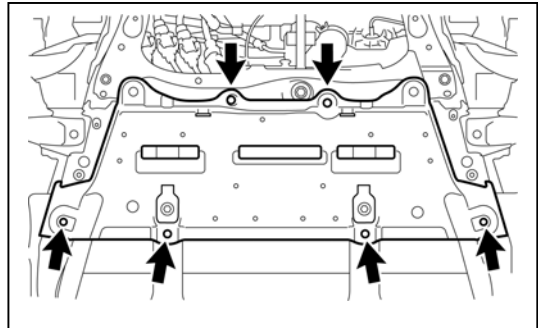


14. REMOVE FRONT FLOOR COVER RH

- (1) Remove the 6 clips and the front floor cover RH.

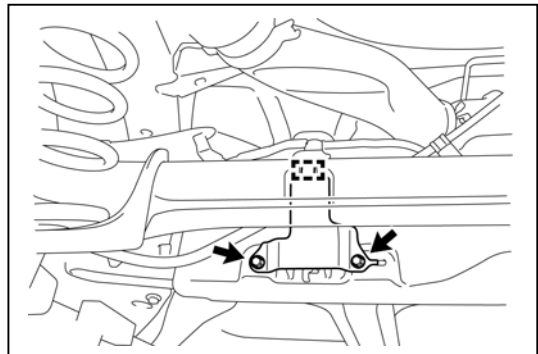
15. REMOVE REAR MOTOR SIDE UNDER COVER ASSEMBLY LH

- (1) Remove the 2 clips and the rear motor side under cover assembly LH.



16. REMOVE NO. 4 FRAME CROSSMEMBER REINFORCEMENT LH

- (1) Remove the 2 bolts from the No. 4 frame crossmember reinforcement LH.
- (2) Disengage the guide and remove the No. 4 frame crossmember reinforcement LH from the electric vehicle battery assembly.



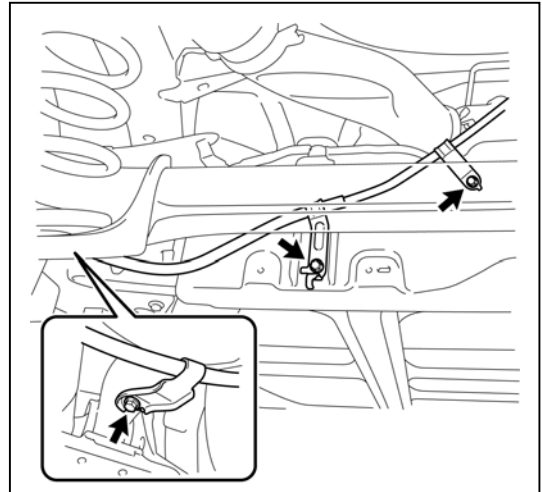
17. REMOVE ANTI SHAKE MEMBER

Hint:

Use the same procedure as for the No. 4 frame crossmember reinforcement LH.

18. DISCONNECT NO. 3 PARKING BRAKE CABLE ASSEMBLY

- (1) Remove the 3 bolts and disconnect the No. 3 parking brake cable assembly from the electric vehicle battery assembly and rear axle beam assembly.



19. DISCONNECT NO. 2 PARKING BRAKE CABLE ASSEMBLY

Hint:

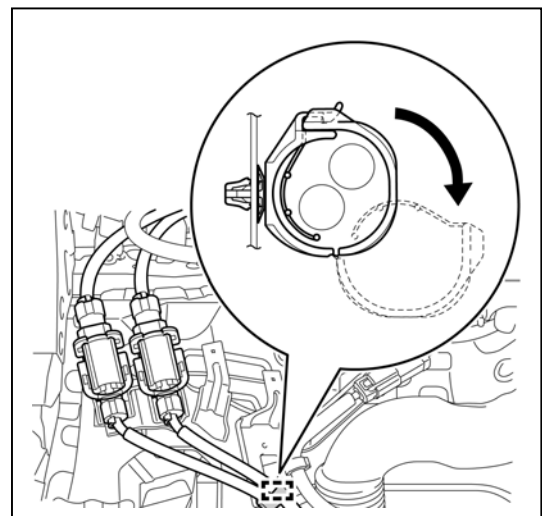
Use the same procedure for the No. 2 side as for the No. 3 side.

20. DISCONNECT WIRE HARNESS CLAMP (w/o Quick Charging Inlet)

Caution:

Wear insulated gloves.

- (1) Separate the 2 wire harnesses of the electric vehicle battery assembly shown in the illustration from the wire harness clamp.

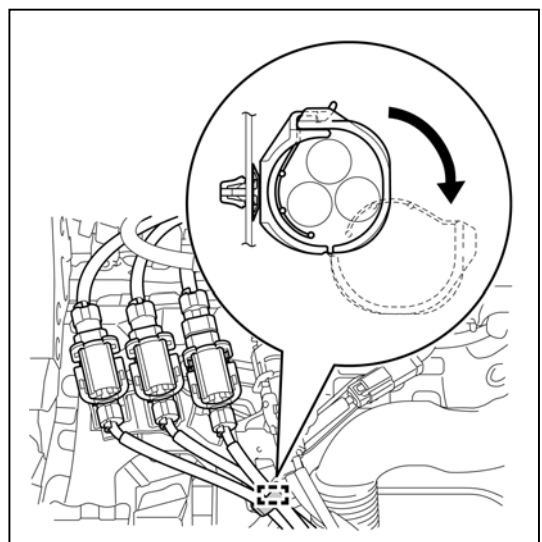


21. DISCONNECT WIRE HARNESS CLAMP (w/ Quick Charging Inlet)

Caution:

Wear insulated gloves.

- (1) Separate the 3 wire harnesses of the electric vehicle battery assembly shown in the illustration from the wire harness clamp.



22. DISCONNECT EV CHARGER WIRE (w/
Quick Charging Inlet)

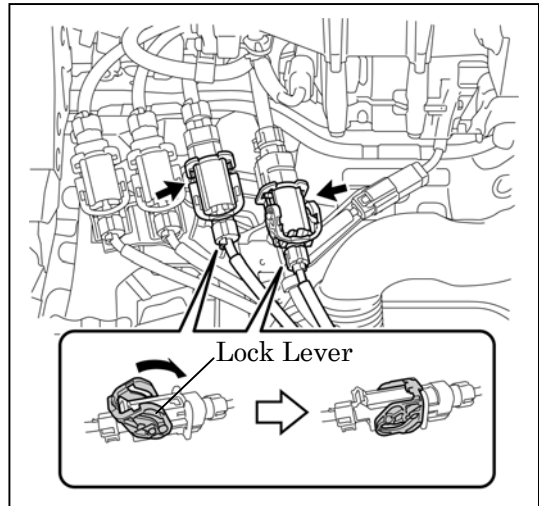
Caution:

Wear insulated gloves.

- (1) Using a screwdriver, move the 2 lock levers as shown in the illustration and disconnect the 2 electric vehicle battery assembly connectors from the EV charger wire.

Notice:

Cover the connectors of the EV charger wire and the electric vehicle battery assembly connector with tape that does not leave adhesive residue to prevent foreign matter or water droplets from entering.



23. DISCONNECT FRAME WIRE

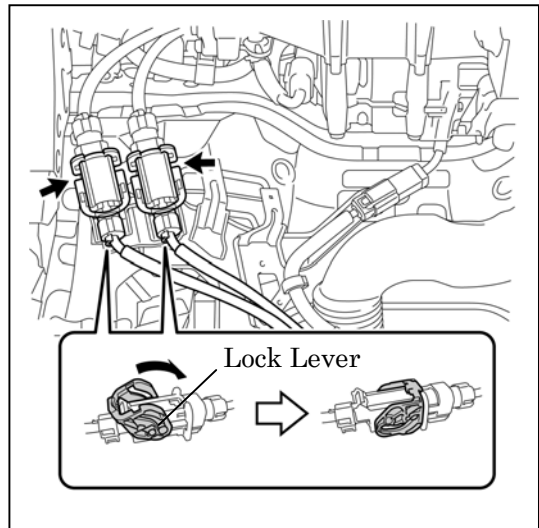
Caution:

Wear insulated gloves.

- (1) Using a screwdriver, move the 2 lock levers as shown in the illustration and disconnect the 2 electric vehicle battery assembly connectors from the frame wire.

Notice:

Cover the connectors of the frame wire and the electric vehicle battery assembly connector with tape that does not leave adhesive residue to prevent foreign matter or water droplets from entering.



24. DISCONNECT NO. 2 FRAME WIRE

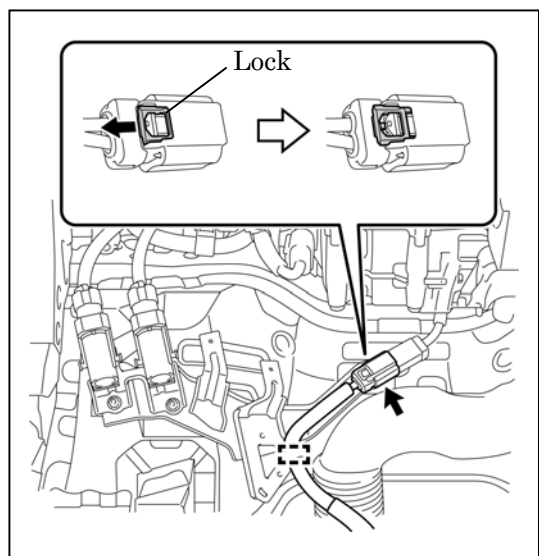
Caution:

Wear insulated gloves.

- (1) Disengage the clamp and disconnect the electric vehicle battery assembly wire from the wiring harness clamp bracket.
- (2) Using a screwdriver, slide the lock as shown in the illustration and disconnect the electric vehicle battery assembly connector from the No. 2 frame wire.

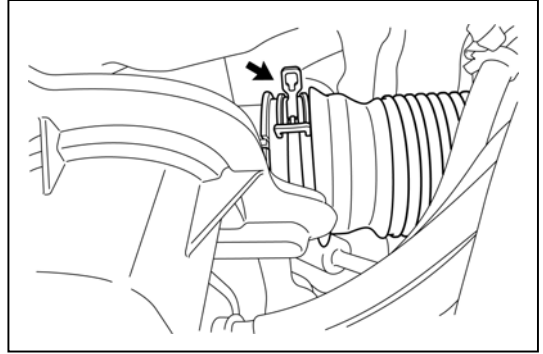
Notice:

Cover the connectors of the frame wire and the electric vehicle battery assembly connector with tape that does not leave adhesive residue to prevent foreign matter or water droplets from entering.

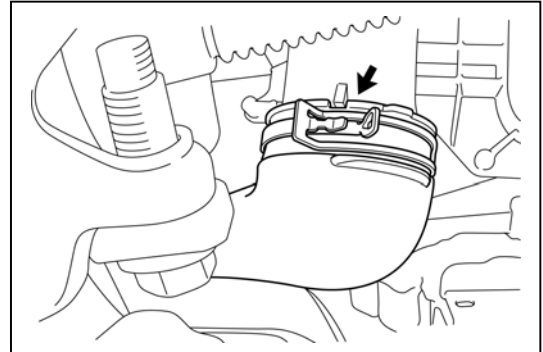


25. REMOVE NO. 3 EV BATTERY INTAKE DUCT

- (1) Loosen the hose clip and disconnect the No. 3 EV battery intake duct from the electric vehicle battery assembly.



- (2) Loosen the hose clip and remove the No. 3 EV battery intake duct from the battery cooling blower.



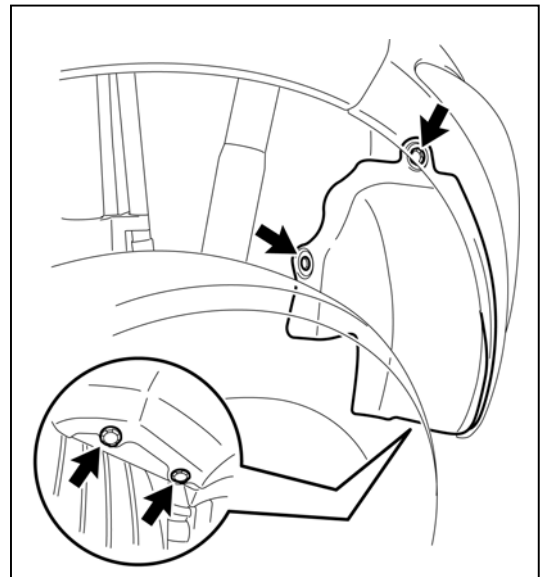
26. REMOVE REAR BUMPER SIDE SEAL LH

- (1) Remove the 4 clips and the rear bumper side seal LH.

27. REMOVE REAR BUMPER SIDE SEAL RH

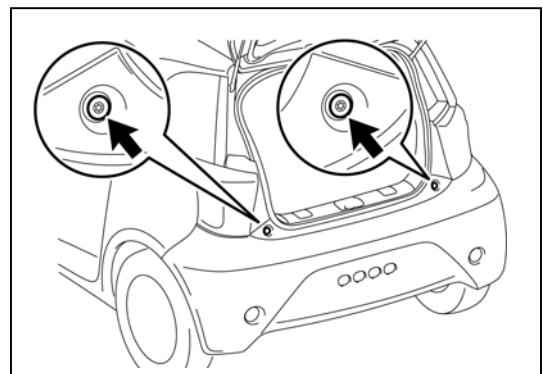
Hint:

Use the same procedure as for the LH side.



28. REMOVE REAR BUMPER COVER

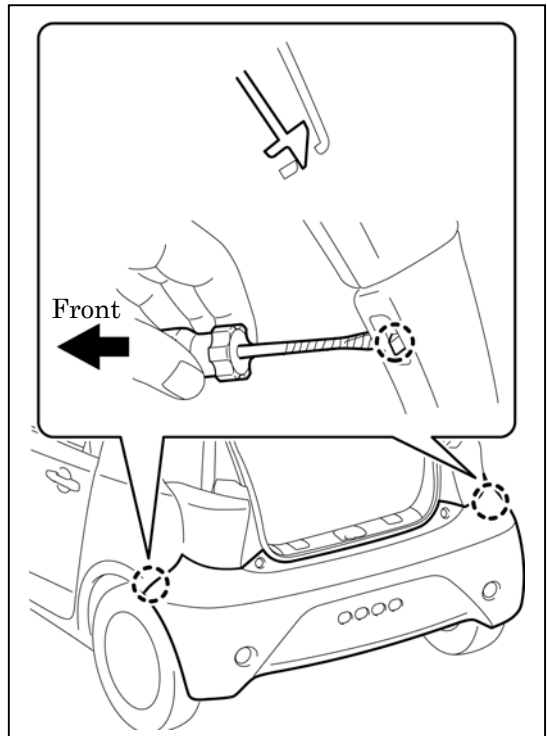
- (1) Using a T30 "TORX" socket wrench, remove the 2 rear bumper cushions.



(2) Remove the 2 clips.

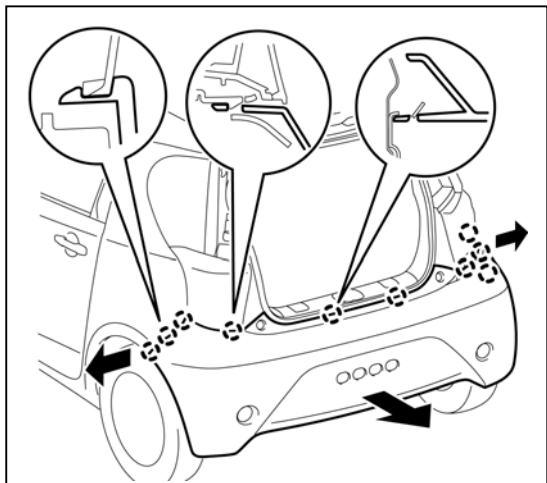


(3) Using a screwdriver with its tip wrapped in protective tape, disengage the 2 claws.



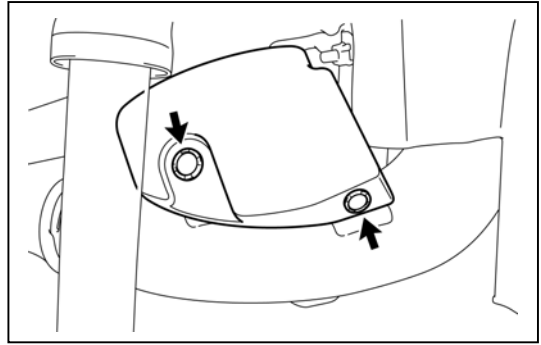
(4) Disengage the 10 claws and remove the rear bumper cover.

(5) Disconnect the 2 license plate light connectors and remove the rear bumper cover.



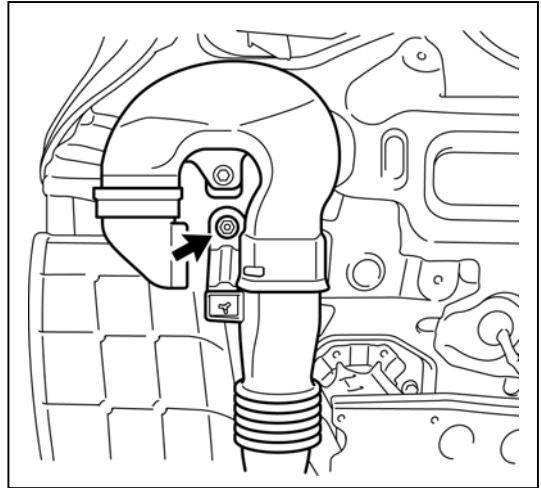
29. REMOVE BATTERY COOLING PLATE

- (1) Remove the 2 clips and the battery cooling plate from the EV battery duct sub-assembly.

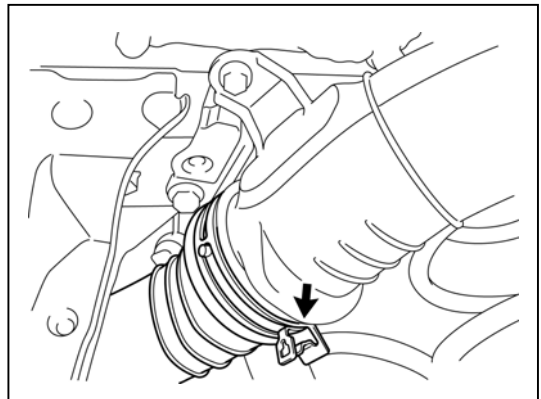


30. REMOVE EV BATTERY DUCT SUB-ASSEMBLY

- (1) Remove the nut and disconnect the EV battery duct sub-assembly from the vehicle.

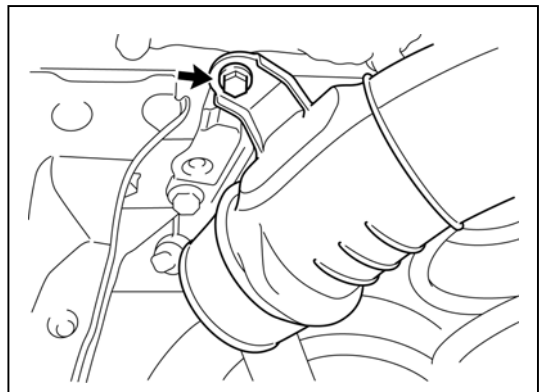


- (2) Loosen the hose clip and remove the EV battery duct sub-assembly from the No. 6 EV battery exhaust duct.

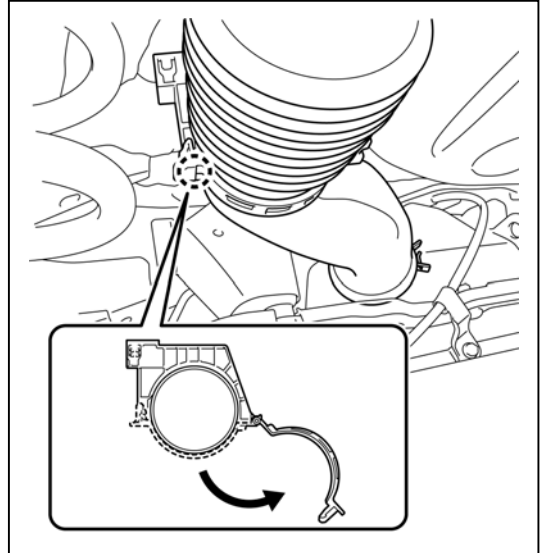


31. REMOVE NO. 6 EV BATTERY EXHAUST DUCT

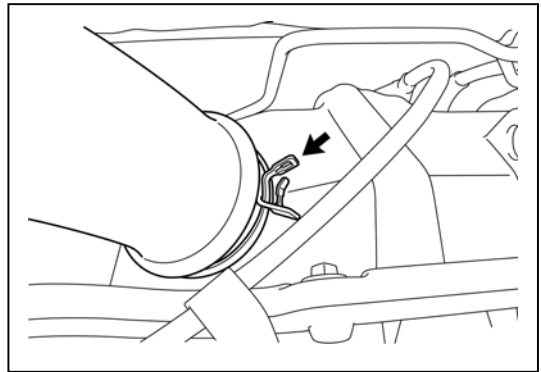
- (1) Remove the bolt and disconnect the No. 6 EV battery exhaust duct from the No. 2 battery cooling bracket.



- (2) Disengage the claw and separate the No. 6 EV battery exhaust duct from the battery cooling clamp.



- (3) Loosen the hose clip and remove the No. 6 EV battery exhaust duct from the electric vehicle battery assembly.



32. REMOVE ELECTRIC VEHICLE BATTERY ASSEMBLY

Caution:

- **Wear insulated gloves.**
- **Because the electric vehicle battery assembly is extremely heavy, make sure to follow the work procedure carefully and maintain proper balance when installing or removing it in order to prevent accidents and injuries.**

- (1) Remove the 4 bolts shown in the illustration from the electric vehicle battery assembly.

