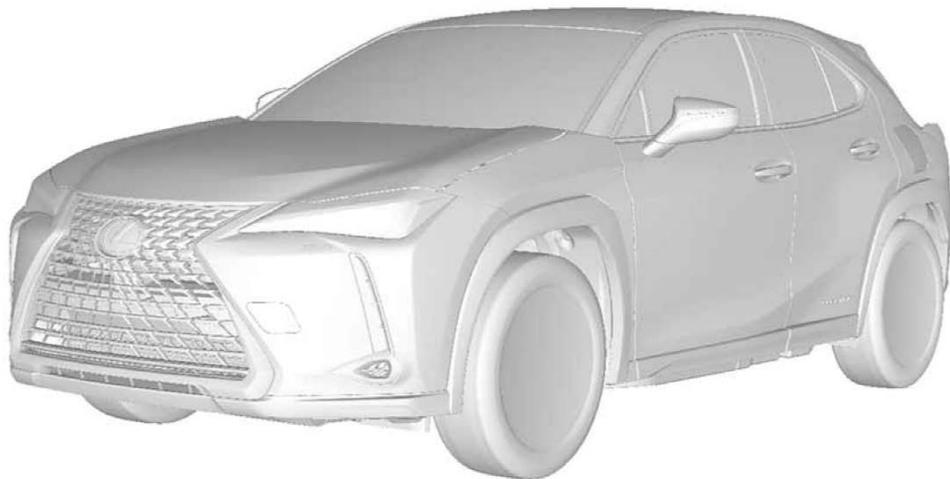




UX300e

***ELECTRIC VEHICLE  
DISMANTLING  
MANUAL***



## Foreword

This guide was developed to educate and assist dismantlers in the safe handling of Lexus UX300e electric vehicles. UX300e dismantling procedures are similar to other non-electric Lexus 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 Lexus UX300e electric vehicle, as they may not be familiar to dismantlers.

High voltage electricity powers the compressor with motor assembly, electric motor, DC/DC converter, electric heater, and inverter with converter assembly. All other conventional automotive electrical devices such as the head lights, radio, and gauges are powered from a separate 12 V auxiliary battery. Numerous safeguards have been designed into the UX300e to help ensure the high voltage, approximately 355.2 V, Lithium-ion (Li-ion) traction battery assembly is kept safe and secure in an accident.

The Li-ion traction 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:

- Lexus UX300e identification.
- Major electric vehicle component locations and descriptions.

By following the information in this guide, dismantlers will be able to handle UX300e electric vehicles as safely as the dismantling of a conventional non-electric automobile.

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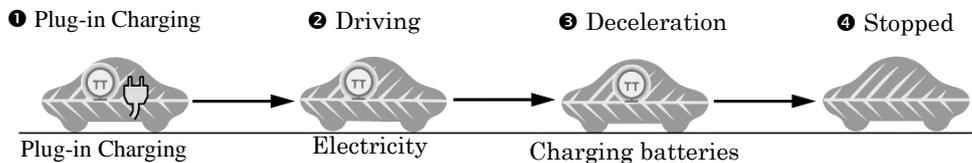


## About the UX300e

The UX300e 5-door hatchback joins the electric vehicle model for Lexus. 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 traction battery assembly for the electric motor.

The following illustration demonstrates how the UX300e operates in various driving modes.

- ❶ A plug-in charge control system has been adopted, which allows electrical power to be supplied to the high-capacity traction battery from external power source such as an electrical socket or charger. The plug-in charge control system supports 2-types of charging, AC charging and DC charging.
- ❷ During driving, the vehicle will drive using electric power.
- ❸ During deceleration, such as when braking, the vehicle regenerates the kinetic energy from the front wheel to produce electricity that recharges the traction battery assembly.
- ❹ While the vehicle is stopped, the electric motor is off, however the vehicle remains on and operational.



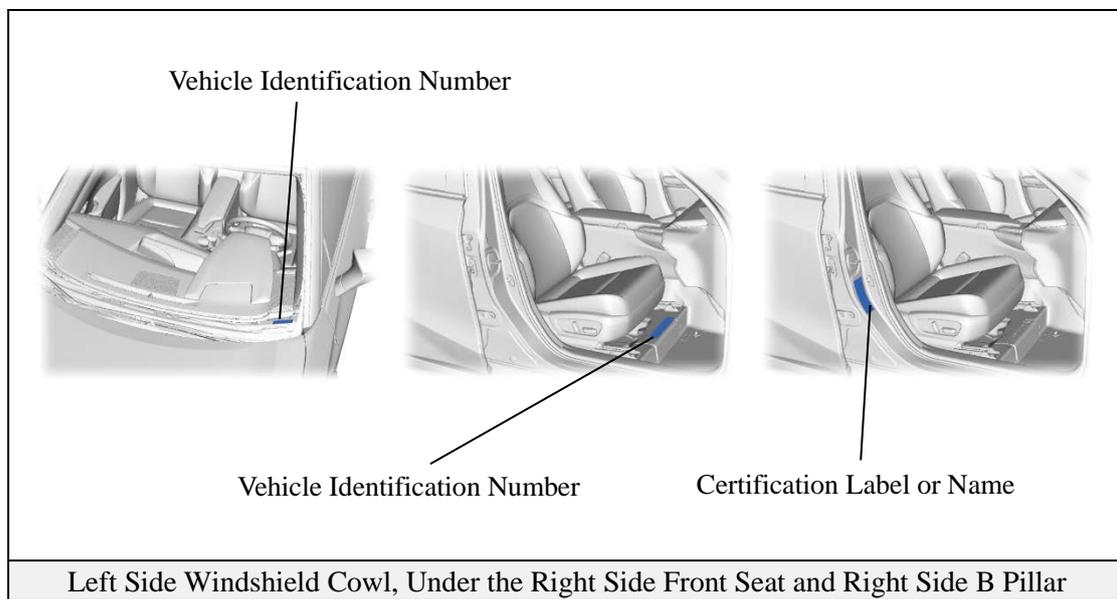
## UX300e Identification

In appearance, the 2020 model year UX300e is nearly identical to the conventional, non-electric Lexus UX. The UX300e is a 5-door hatchback. Exterior, interior, and motor compartment illustrations are provided to assist in identification.

The alphanumeric 15 character Vehicle Identification Number (VIN) is provided on the left side windshield cowl, floor under the right side front seat and right side B pillar.

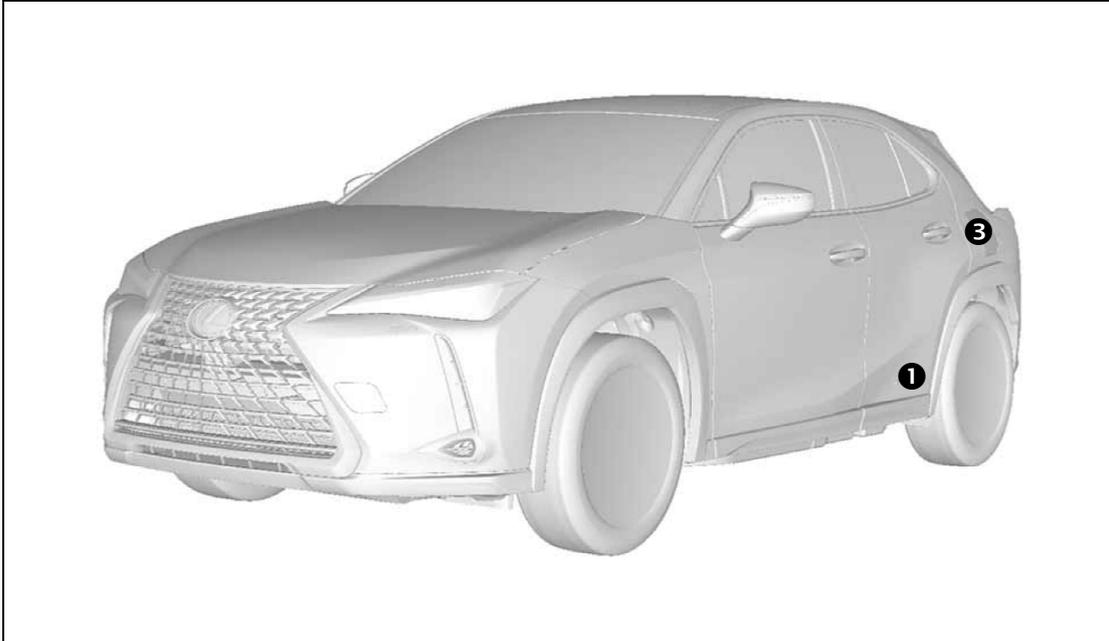
Example VIN: JTHAAAABH 0000000

A UX300e is identified by the 5th alphanumeric character of the VIN.

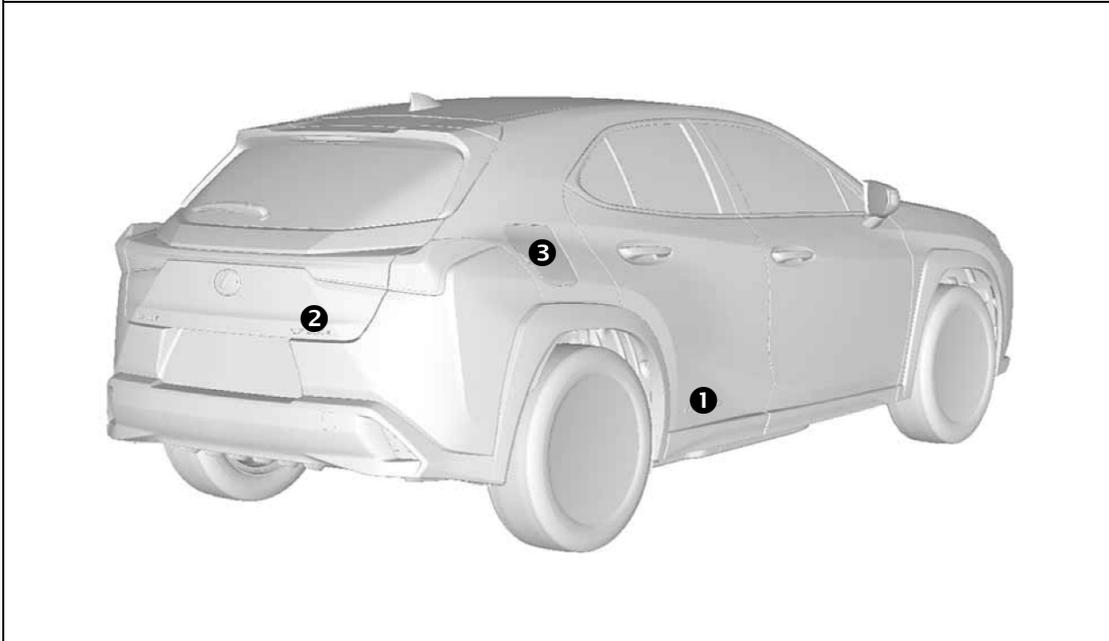


Exterior

- ❶ **ELECTRIC** logos on the each rear door.
- ❷ **UX300e** logo on the back door.
- ❸ Charge inlet door located on each rear quarter panel.



Exterior Front and Left Side View



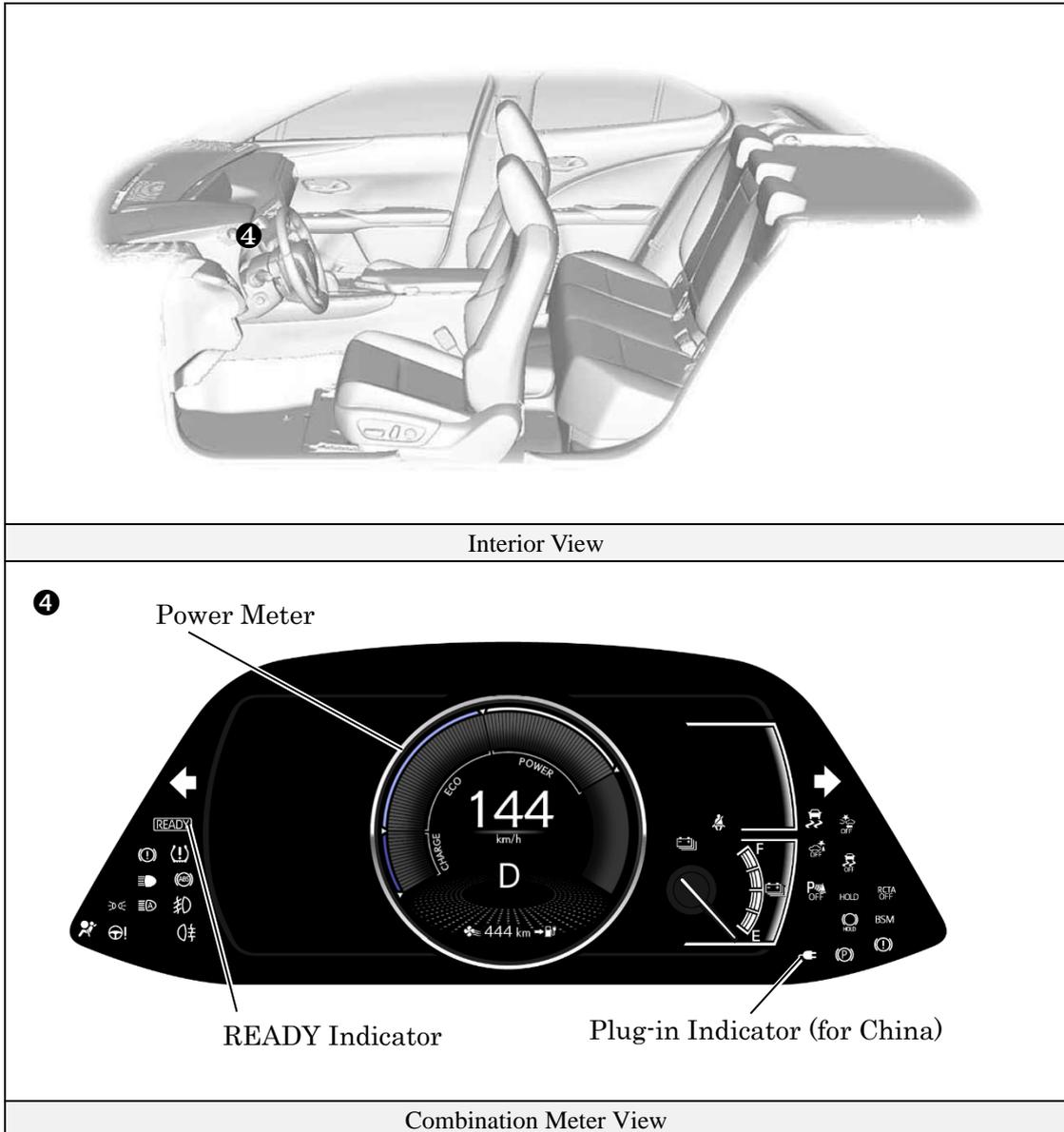
Exterior Rear and Right Side View

## Interior

- 4 The instrument cluster (power meter, 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 UX.

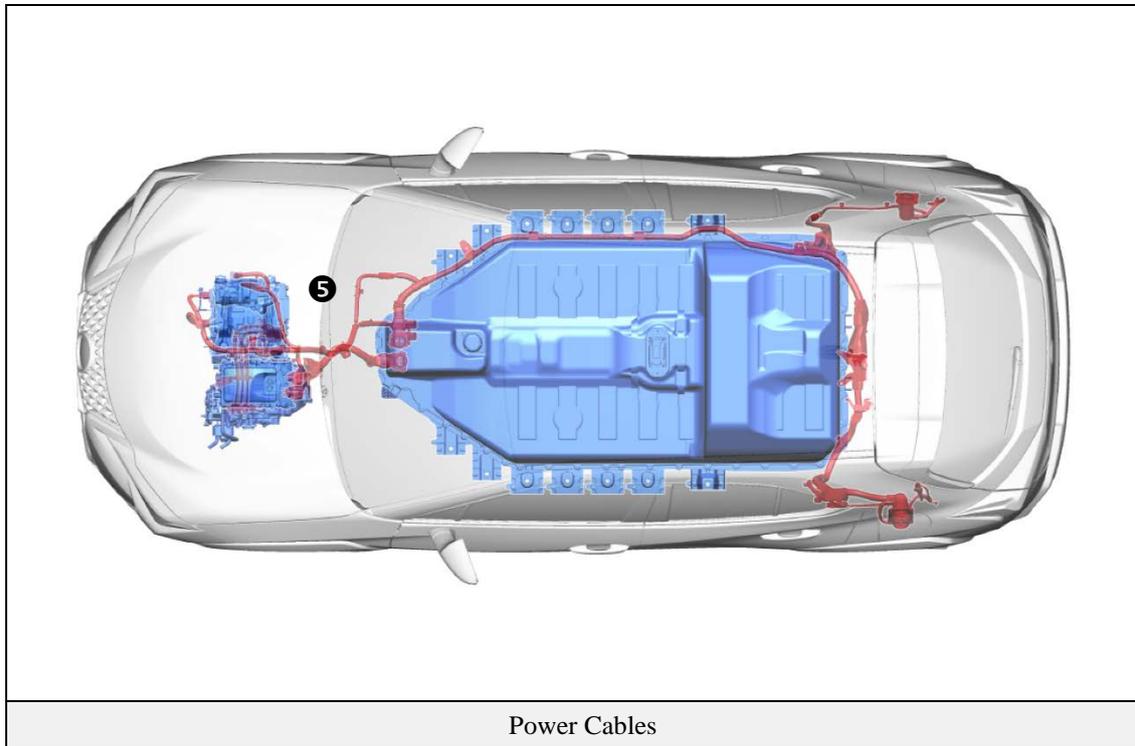
### NOTICE:

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



## Motor Compartment

- ⑤ Orange colored high voltage power cables.



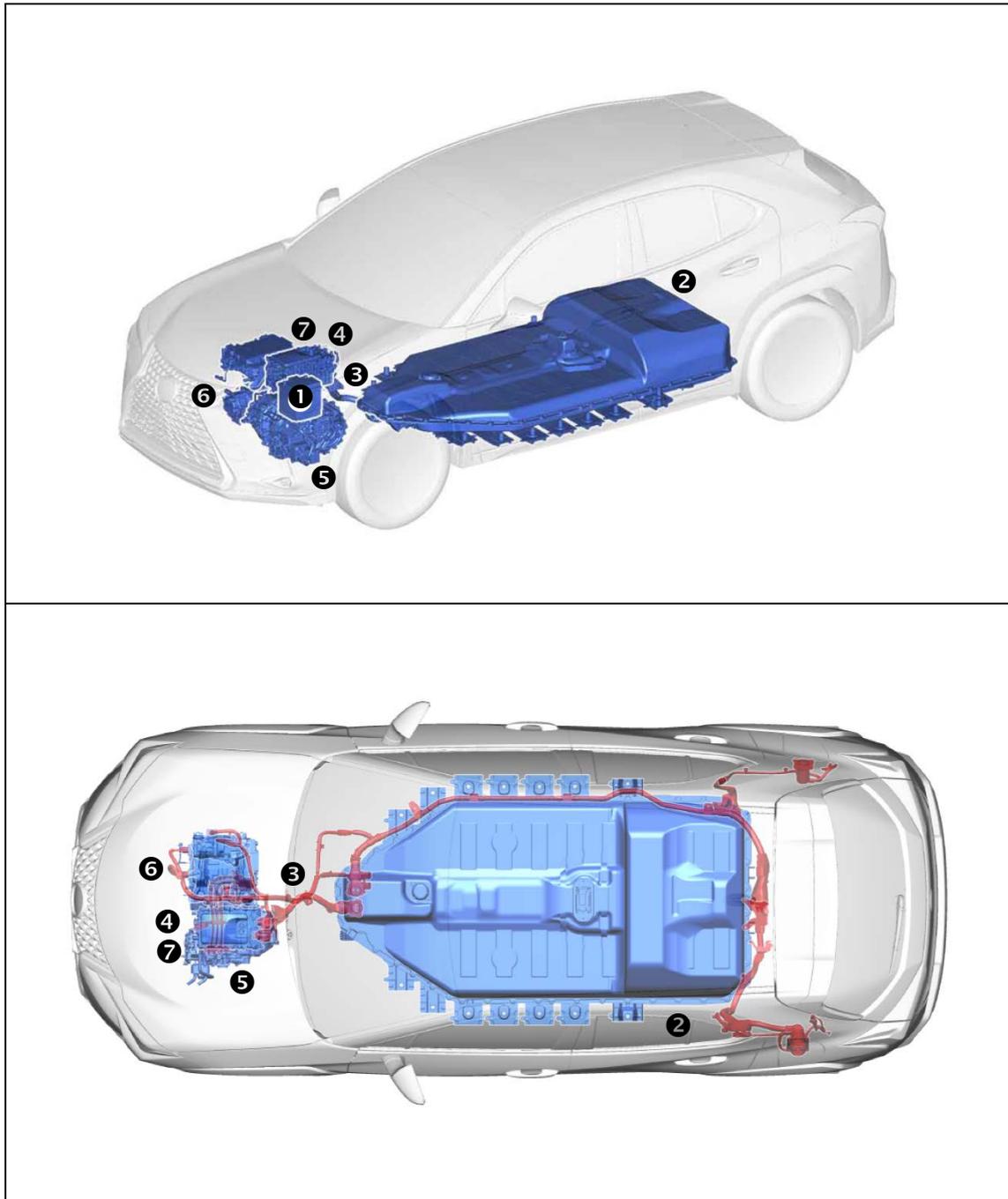
## Electric Vehicle Component Locations & Descriptions

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.
Traction Battery Assembly ❷	Undercarriage	Supplies electrical power to inverter with converter assembly in accordance with the driving conditions of the vehicle. Recharged by electric motor in accordance with the SOC and the driving conditions of the vehicle. Accumulates power from the external power source supplied by plug-in charging.
Power Cables ❸	Undercarriage and Motor Compartment	The power cables (HV floor under wire, HV air conditioning wire, HV battery charger wire, AC charger inlet cable, DC charger inlet cable, motor cable) are set of high-voltage, high-amperage cables that connect the traction battery assembly with the inverter with converter assembly, the inverter with converter assembly with the electric motor, and the inverter with converter assembly with the compressor with motor assembly.
Inverter with Converter Assembly ❹	Motor Compartment	Converts the direct current from the traction battery assembly into alternating current for electric motor, and vice versa (from AC to DC).
DC/DC Converter for 12 Volt Auxiliary Battery ❺	Inverter with Converter Assembly	Steps down the traction battery nominal voltage of DC 355.2 V to approximately DC 14 V in order to supply electricity to the electrical components, as well as to recharge the auxiliary battery.
Electric Motor ❻	Motor Compartment	Drives by electrical power from the traction battery assembly, generates motive force for the drive wheels. Generates high-voltage electricity to recharge the traction battery, during braking, or when the accelerator pedal is released.
Compressor with Motor Assembly ❼	Motor Compartment	Transmits and receives data between the switches and sensors.

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

## Specifications

Electric Motors:	201 hp (150 kW), AC Permanent Magnet Motor
Transmission:	Automatic Only
Traction Battery Assembly:	355.2 Volt Sealed Li-ion Battery
Curb Weight:	3,935-3,968 lbs/1,785-1,800 kg
Frame Material:	Steel Unibody
Body Material:	Steel Panels
Seating Capacity:	5 passenger

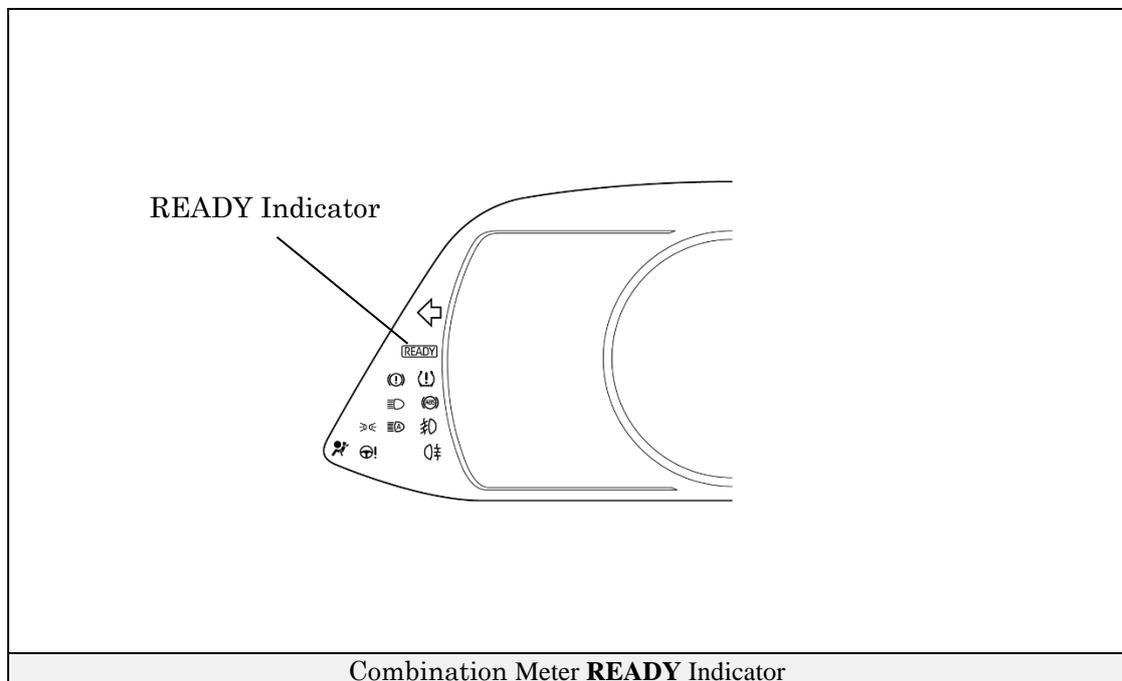


## Electric Vehicle Operation

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 UX300e, 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.



## Traction Battery Assembly and Auxiliary Battery

The UX300e features a high voltage traction battery assembly that contains sealed Lithium-ion (Li-ion) battery cells.

### Traction Battery Assembly

- The traction battery assembly is enclosed in a case and is rigidly mounted under the floor. The case is isolated from high voltage.
- The traction battery assembly consists of 288 low voltage (3.7 Volt) Li-ion battery cells connected in series-parallel to produce approximately 355.2 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.

Traction Battery Assembly	
Battery assembly voltage	355.2 V
Number of Li-ion battery cells in the battery	288
Li-ion battery cell voltage	3.7 V
Li-ion battery cell dimensions Length x Width x Height	5.83 x 1.04 x 4.09 in. (148 x 26.5 x 104 mm)
Li-ion battery assembly weight	915 lbs (415kg)

### Components Powered by the Traction Battery Assembly

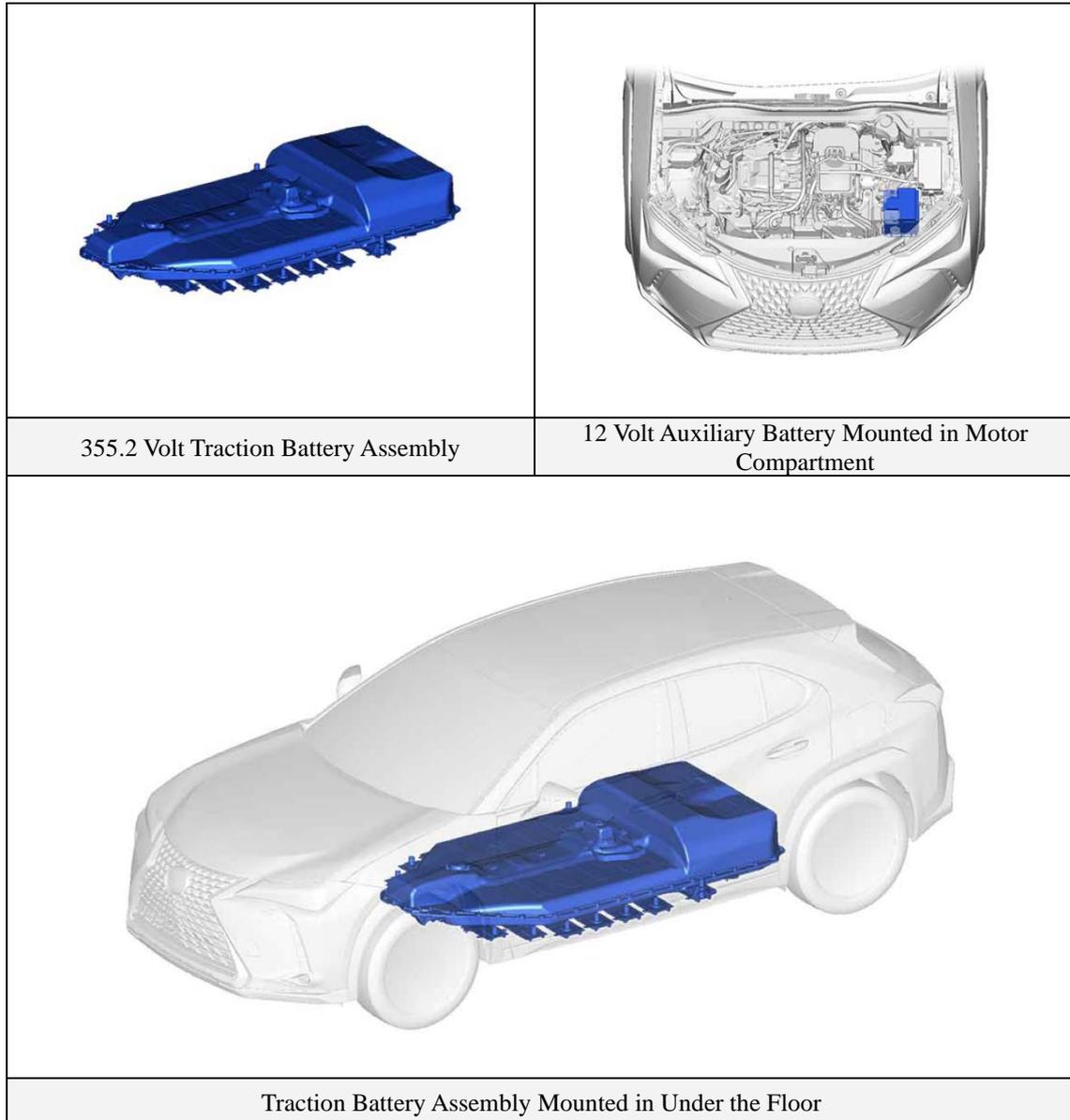
- Electric Motor
- Inverter with Converter Assembly
  - DC-DC Converter for 12 Volt Auxiliary Battery
- Power Cables
- Compressor with Motor Assembly

### Traction Battery Assembly Recovery

- Contact either your Lexus Distributor or the nearest Lexus dealer.

### Auxiliary Battery

- The UX300e contains a sealed lead-acid 12 Volts battery. This 12 Volts 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 traction battery assembly powers the high voltage electrical system with DC electricity. Positive and negative orange colored high voltage power cables are routed from the traction battery assembly, under the vehicle floor pan, to the drive unit (inverter and motor) and DC/DC converter. The inverter contains a circuit that boosts and inverts the 355.2 Volts DC from the traction battery assembly to 500 Volts AC to power the motor. The inverter with converter assembly creates 3-phase AC to power the motor. Power cables are routed from the inverter with converter assembly to each high voltage motor (electric motor, electric heater, and compressor with motor assembly). The following systems are intended to help keep occupants in the vehicle and emergency responders safe from high voltage electricity:

### High Voltage Safety System

- Positive and negative high voltage power cables ❶\* connected to the traction battery assembly are controlled by 12 Volt normally open relays (system main relays ❷\*). When the vehicle is shut off, the relays stop electrical flow from leaving the traction battery assembly.



#### **WARNING:**

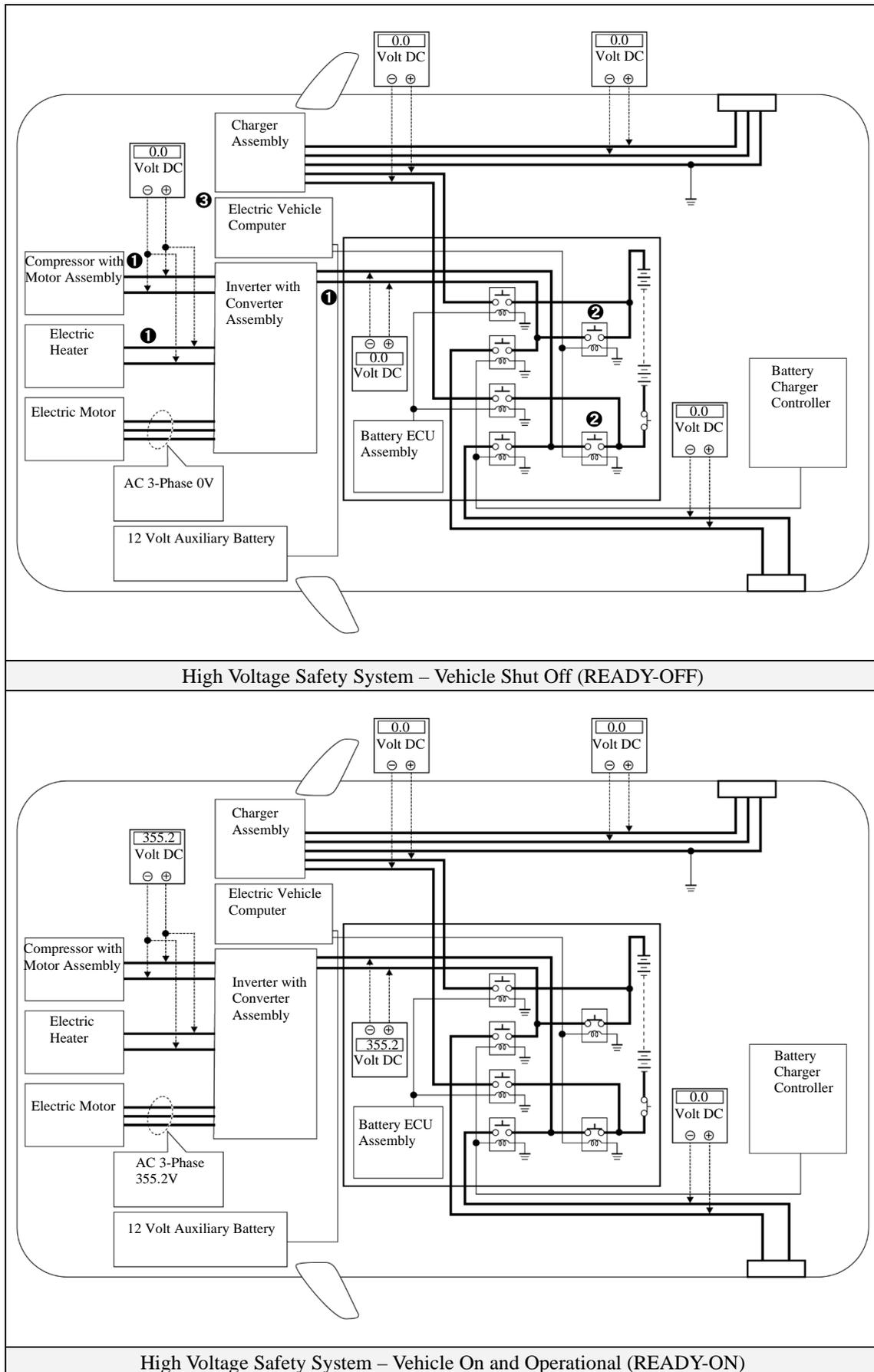
- ***The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off or disabled. To prevent serious injury or death from severe burns or electric shock, avoid touching, cutting, or opening any orange high voltage power cable or high voltage component.***

- Both positive and negative power cables ❶\* 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 ❸\* continuously monitors for high voltage leakage to the metal chassis while the vehicle is running. If a malfunction is detected, the electric vehicle computer ❸\* will illuminate the master warning light  in the instrument cluster and indicate “EV System Malfunction” on the multi-information display.
- The traction 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.

## Service Plug Grip

- The high voltage circuit is cut by removing the service plug grip (see page 15).



## **Precaution to be observed when dismantling the vehicle**

- To prevent electric shock, wear insulated gloves when working on wire harnesses and components of the high voltage system.  
Before using insulated gloves, be sure to check them for cracks, tears and other types of damage.
- When servicing the vehicle, do not carry metal objects like mechanical pencils or rulers that can be dropped accidentally and cause a short circuit.
- To reduce the risk of electric shock, make sure to remove the service plug grip to cut off the high voltage circuit before servicing the vehicle.
- To reduce the risk of electric shock, make sure to wait at least 10 minutes after removing the service plug grip to fully discharge the high voltage capacitor inside the inverter with converter assembly.
- Do not touch any high voltage wire harnesses, connectors or parts with bare hands.
- Do not touch the terminals of the service plug grip.
- Make sure to insulate the high-voltage connectors and terminals of the traction battery assembly with insulating tape after removing them.
- After removing the service plug grip, put it in your pocket to prevent other technicians from accidentally reconnecting it while you are working on the high-voltage system.
- Before touching a bare high-voltage terminal, wear insulated gloves and use a tester to make sure that the terminal voltage is 0 V.
- Electrolyte leaks may cause acute poisoning if a high concentration of the vapor from the electrolyte is inhaled. In case of inhalation, move the affected person to a place with ample fresh air and let them lie quietly. Seek medical care.
- If the electrolyte comes in contact with your skin, wash the area thoroughly with soap and plenty of water, and seek medical care. If the electrolyte comes in contact with an article of clothing, take it off immediately. Prolonged contact with the electrolyte may cause skin irritation.
- If the electrolyte comes in contact with your eyes, call out loudly for help. Do not rub your eyes. Immediately flush them with a large amount of water for at least 15 minutes and seek medical care.
- If electrolyte is swallowed, seek medical care immediately. Do not induce vomiting, unless instructed by the doctor.
- If the vehicle catches on fire, use an ABC fire extinguisher to extinguish the fire.  
Trying to extinguish a fire using only a small amount of water can be more dangerous than effective. Use a substantial amount of water or wait for firefighters.
- Do not allow any foreign matter or water to enter the traction battery assembly.

### Necessary Items

- Protective clothing such as insulated gloves (electrically insulated), rubber gloves, helmet, safety goggles, safety shoes and SCBA or protective mask.
- Insulating tape such as electrical tape that has a suitable electrical insulation rating and insulation tool set.
- An electrical tester that is capable of measuring DC 750 Volts or more.

## Spills

The UX300e contains some of the same common automotive fluids used in other non-electric Lexus vehicles, with the exception of the Li-ion electrolyte used in the traction 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.
- Butyl rubber or suitable organic solvent gloves.
- Apron or protective clothing suitable for organic solvents.
- Rubber overboots or boots suitable for organic solvents.
- Full face respirator suitable for organic solvents or SCBA.

## Dismantling the vehicle

The following 5 pages contain general instructions for use when working on a UX300e.

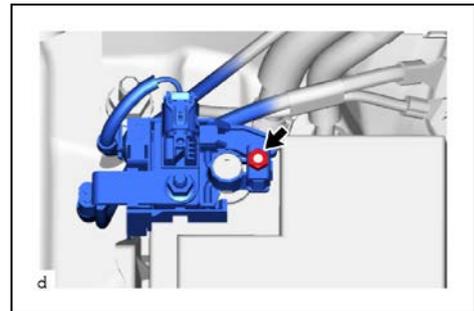
Read these instructions before proceeding to the traction battery assembly removal instructions on page 20.



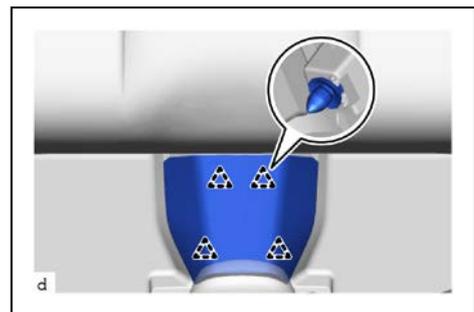
### **WARNING:**

- ***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.***

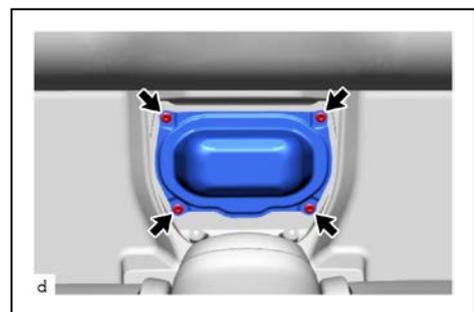
1. Shut off the ignition (**READY** indicator is off).
2. Disconnect cable from negative auxiliary battery terminal.
  - (1) Loosen the nut and disconnect the cable from the negative (-) auxiliary battery terminal.



3. Remove battery service hole cover.
  - (1) Disengage the 4 clips and remove the battery service hole cover.

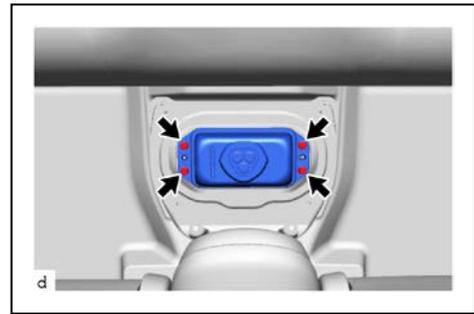


4. Remove battery service hole cover sub-assembly.
  - (1) Remove the 4 bolts and battery service hole cover sub-assembly.



5. Remove No. 2 traction battery cover.

- (1) Remove the 4 bolts and No. 2 traction battery cover.



6. Remove service plug grip.

**CAUTION:**

- **Wear insulated gloves.**
- **Do not inspect or service the high voltage system with the service plug grip installed.**
- **To reduce the risk of electric shock, make sure to remove the service plug grip to cut off the high voltage circuit before servicing the vehicle.**



- To reduce the risk of electric shock, make sure to wait at least 10 minutes after removing the service plug grip to fully discharge the high voltage capacitor inside the inverter with converter assembly.
- Keep the removed service plug grip in your pocket to prevent other technicians from accidentally installing it while you are servicing the vehicle.



**NOTICE:**

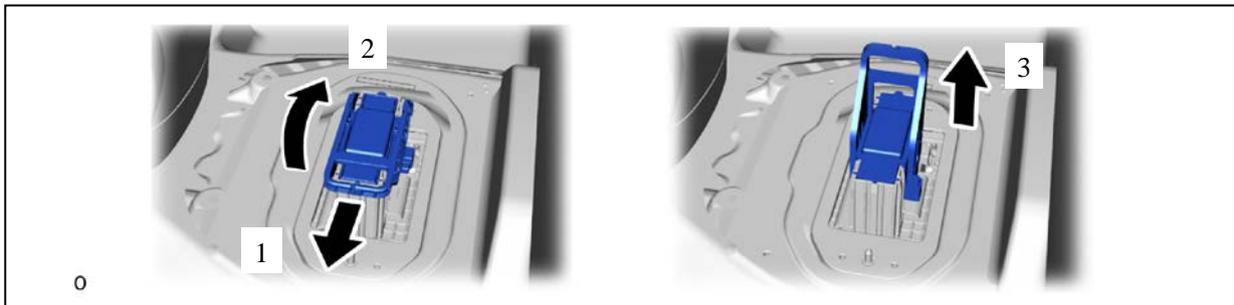
- After removing the service plug grip, turning the power switch on (READY) may cause a malfunction. Do not turn the power switch on (READY) unless instructed by the repair manual.
- Do not touch the terminals of the service plug grip.
- If the service plug grip has been struck or dropped, replace it.

*a	Without waiting for 10 minutes
----	--------------------------------

**HINT:**

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

- (1) While wearing insulated gloves, rotate the handle of the service plug grip and remove the service plug grip as indicated by the arrows, in the order shown in the illustration.

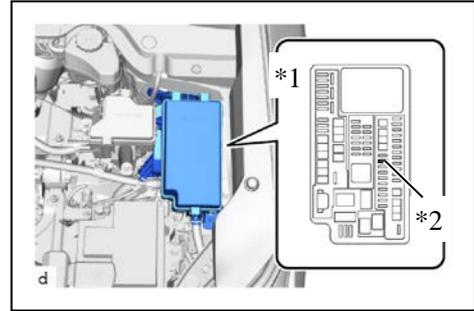


7. Make other staff aware that a high-voltage system is being dismantled by using the following sign: CAUTION: HIGH-VOLTAGE. DO NOT TOUCH (see page 19).

8. If the service plug grip cannot be removed due to damage to the vehicle, remove the **IG2-MAIN** fuse (10 A).

**CAUTION:**

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

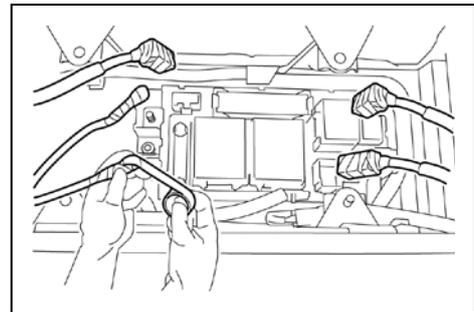


*1	No. 1 Motor Compartment Relay Block
*2	IG2-MAIN Fuse

9. 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.

10. Check the traction battery assembly and nearby area for leakage.

If you find any liquid, it may be strong alkaline electrolyte. Wear rubber gloves and goggles and neutralize the liquid using a saturated boric acid solution or vinegar. Then wipe up the liquid using waste rags etc.



11. If the electrolyte comes into contact with your skin, wash the skin immediately using a saturated boric acid solution or a large amount of water. If the electrolyte adheres to any article of clothing, take the clothing off immediately.
12. 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.
13. With the exception of the traction battery assembly, remove parts by following procedures which are similar to conventional Lexus vehicles. For the removal of the traction 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 Traction 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 traction battery assembly 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 IGNITION (**READY** indicator is off)
2. RECOVER REFRIGERANT FROM REFRIGERATION SYSTEM
  - (1) Turn the power switch on (READY).

(2) Operate the compressor under the conditions shown below:

Item	Condition
Operating time	3 minutes or more
Temperature setting	Max cool
Blower speed	High
Power Switch	On (READY)
A/C switch	On

This causes most of the compressor oil from the various components of the A/C system to collect in the compressor.

**HINT:**

It is not necessary to operate the compressor if the A/C does not operate because of compressor lock, etc.

(3) Turn the power switch off.

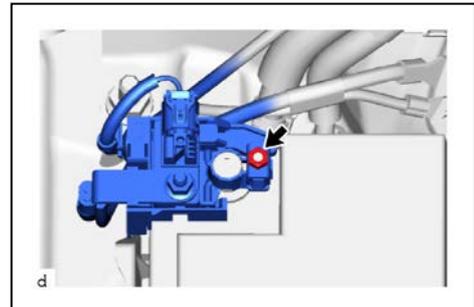
(4) Recover the refrigerant from the A/C system using a refrigerant recovery unit.

**HINT:**

Use the refrigerant recovery unit in accordance with the manufacturer's instruction manual.

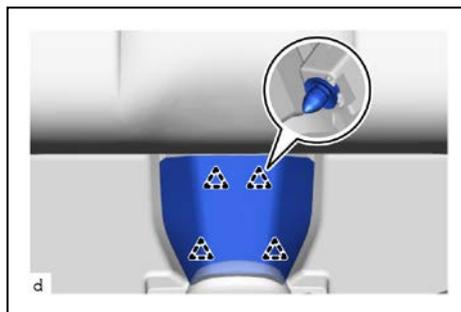
### 3. DISCONNECT CABLE FROM NEGATIVE AUXILIARY BATTERY TERMINAL

(1) Loosen the nut and disconnect the cable from the negative (-) auxiliary battery terminal.



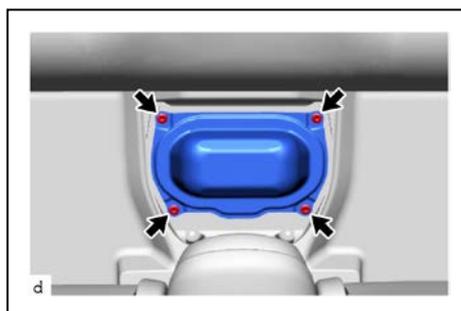
#### 4. REMOVE BATTERY SERVICE HOLE COVER

- (1) Disengage the 4 clips and remove the battery service hole cover.



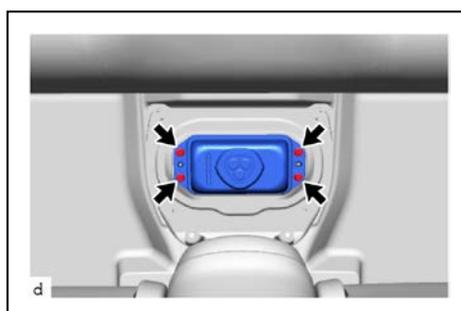
#### 5. REMOVE BATTERY SERVICE HOLE COVER SUB-ASSEMBLY

- (1) Remove the 4 bolts and battery service hole cover sub-assembly.



#### 6. REMOVE NO. 2 TRACTION BATTERY COVER

- (1) Remove the 4 bolts and No. 2 traction battery cover.



## 7. REMOVE SERVICE PLUG GRIP

### CAUTION:

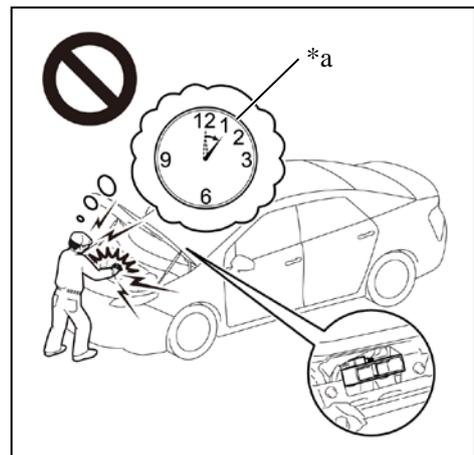
- Wear insulated gloves.
- Do not inspect or service the high voltage system with the service plug grip installed.
- To reduce the risk of electric shock, make sure to remove the service plug grip to cut off the high voltage circuit before servicing the vehicle.



- To reduce the risk of electric shock, make sure to wait at least 10 minutes after removing the service plug grip to fully discharge the high voltage capacitor inside the inverter with converter assembly.

### NOTICE:

- After removing the service plug grip, turning the power switch on (READY) may cause a malfunction. Do not turn the power switch on (READY) unless instructed by the repair manual.
- Do not touch the terminals of the service plug grip.
- If the service plug grip has been struck or dropped, replace it.



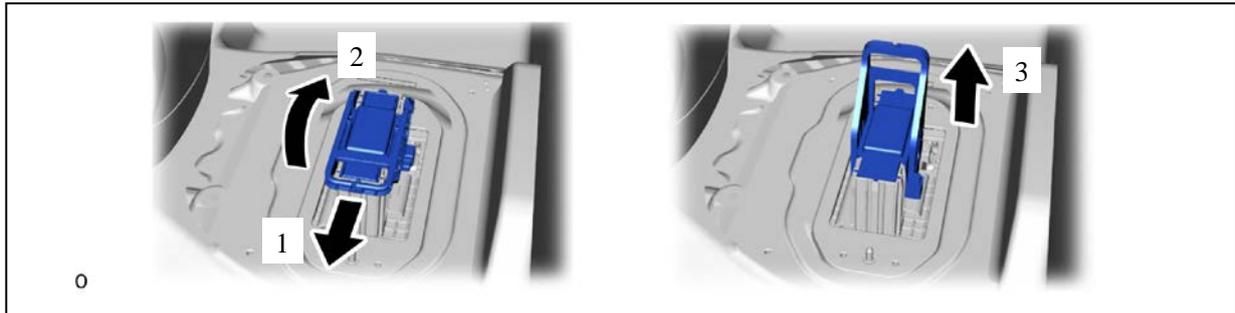
\*a

Without waiting for 10 minutes

### HINT:

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

- (1) While wearing insulated gloves, rotate the handle of the service plug grip and remove the service plug grip as indicated by the arrows, in the order shown in the illustration.



## 8. REMOVE INVERTER TERMINAL COVER

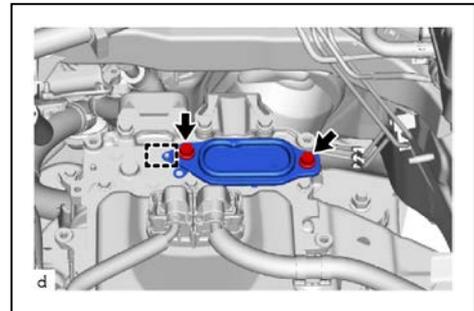
### CAUTION:

**Wear insulated gloves.**

- (1) Remove the 2 bolts.
- (2) Disengage the guide and remove the connector cover assembly.

### NOTICE:

- Do not touch the connector cover assembly waterproof seal.
- Do not allow any foreign matter or water to enter the inverter with converter assembly.



## 9. CHECK TERMINAL VOLTAGE

### CAUTION:

**Wear insulated gloves.**

### NOTICE:

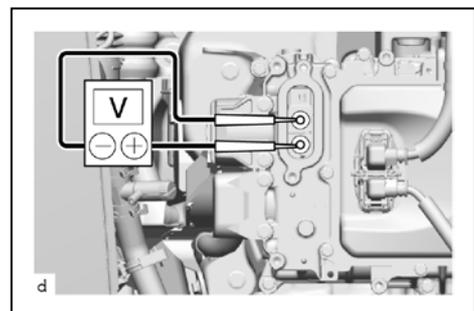
Do not allow any foreign matter or water to enter the inverter with converter assembly.

- (1) Using a voltmeter, measure the voltage between the terminals of the 2 phase connectors.

**Standard Voltage: 0 V**

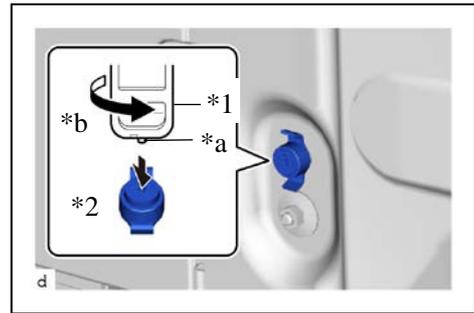
### HINT:

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



## 10. REMOVE BATTERY COVER LOCK STRIKER

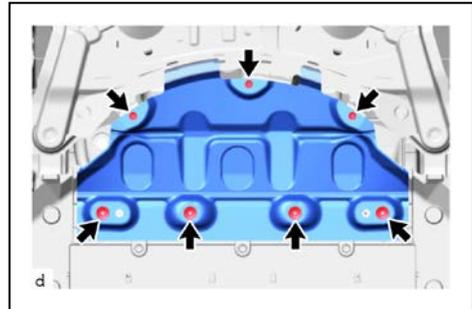
- (1) Using the service plug grip, remove the 2 battery cover lock strikers.



*1	Service Plug Grip
*2	Battery Cover Lock Striker
*a	Projection
*b	Counterclockwise

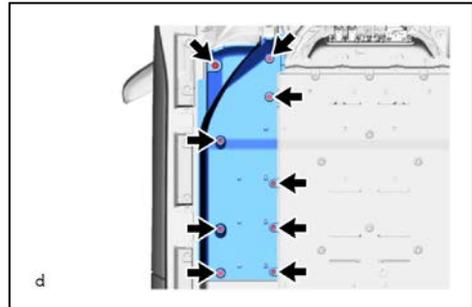
## 11. REMOVE FRONT UNDER COVER

- (1) Remove the 3 bolts, 4 nuts and front under cover.



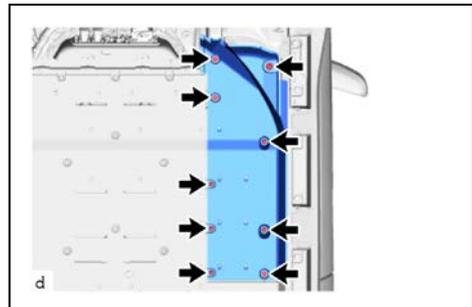
## 12. REMOVE FRONT UNDER COVER RH

- (1) Remove the 3 bolts, 6 clips and front under cover RH.



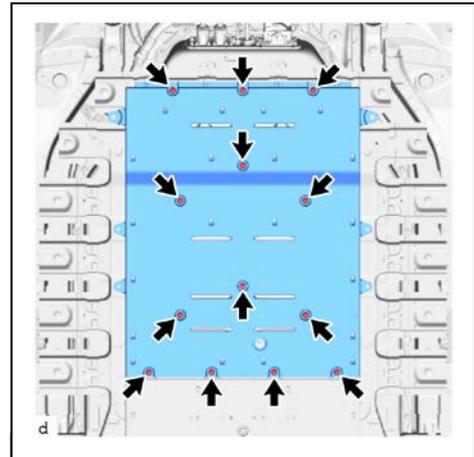
## 13. REMOVE FRONT UNDER COVER LH

- (1) Remove the 3 bolts, 6 clips and front under cover LH.



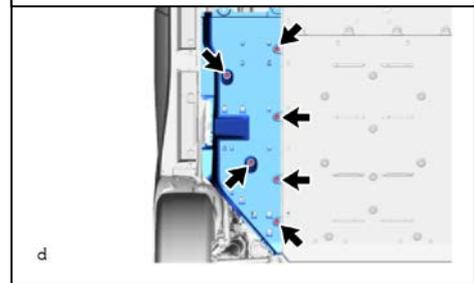
#### 14. REMOVE FRONT UNDER COVER CENTER

- (1) Remove the 13 clips and front under cover center.



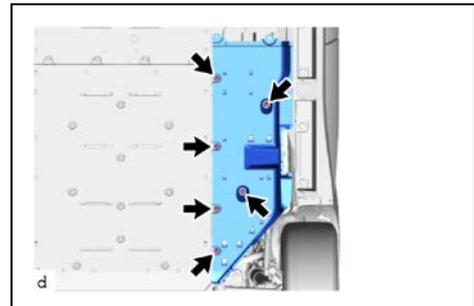
#### 15. REMOVE REAR UNDER COVER RH

- (1) Remove the 6 clips and rear under cover RH.



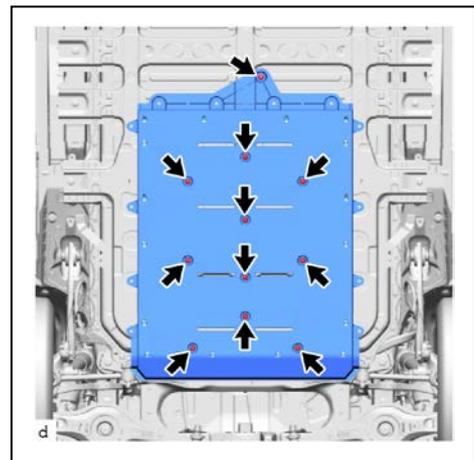
#### 16. REMOVE REAR UNDER COVER LH

- (1) Remove the 6 clips and rear under cover LH.



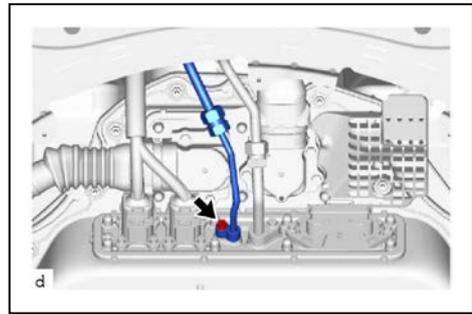
#### 17. REAR UNDER COVER CENTER

- (1) Remove the nut, 10 clips and rear under cover center.



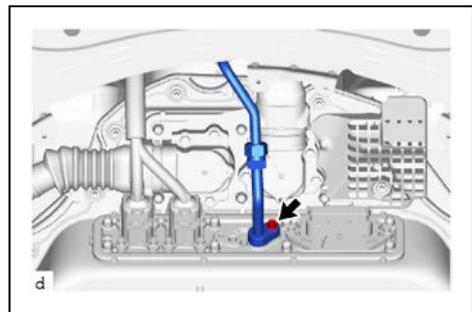
## 18. SEPARATE NO. 1 DISCHARGE HOSE SUB-ASSEMBLY

- (1) Remove the bolt and No. 1 discharge hose sub-assembly.



## 19. SEPARATE NO. 2 DISCHARGE HOSE SUB-ASSEMBLY

- (1) Remove the bolt and No. 2 discharge hose sub-assembly.



## 20. SEPARATE WIRE HARNESS

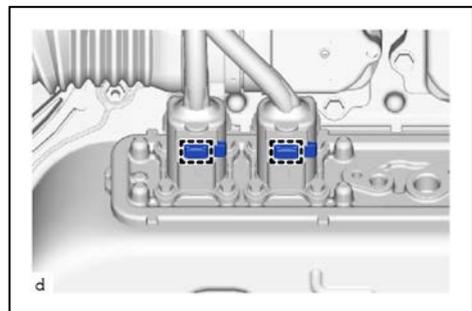
### **CAUTION:**

**Make sure to wear insulating gloves.**

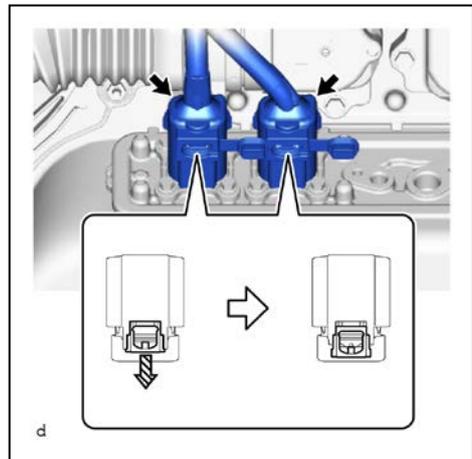
### **NOTICE:**

Insulate the disconnected terminals and connector with insulating tape.

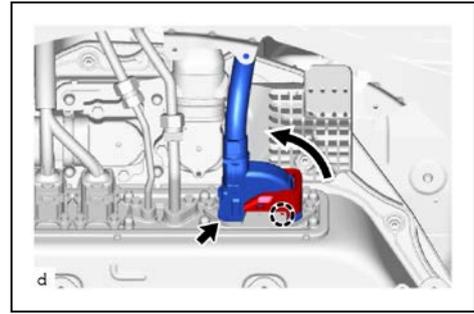
- (1) Disengage the 2 caps.



- (2) Slide the green-colored lock of the connectors as shown in the illustration to release it and disconnect the connector.



- (3) Disengage the claw and lift up the lever to disengage the lock, to disconnect the connector.



## 21. SEPARATE EV FLOOR UNDER WIRE

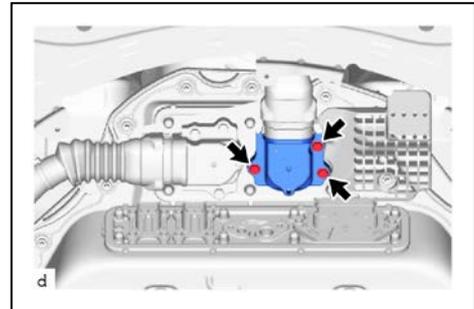
**CAUTION:**

**Make sure to wear insulating gloves.**

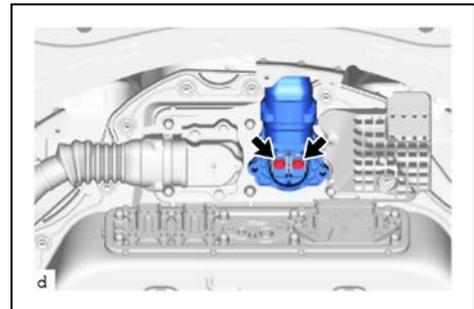
**NOTICE:**

Insulate the disconnected terminals and connector with insulating tape.

- (1) Remove the 3 bolts and EV floor under wire cover.

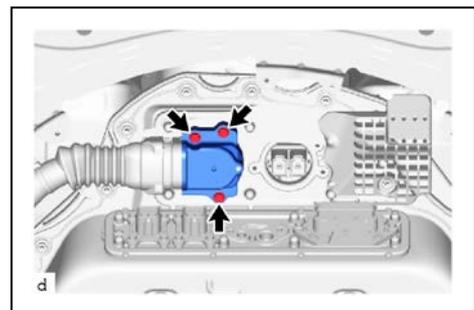


- (2) Remove the 2 bolts and separate EV floor under wire.

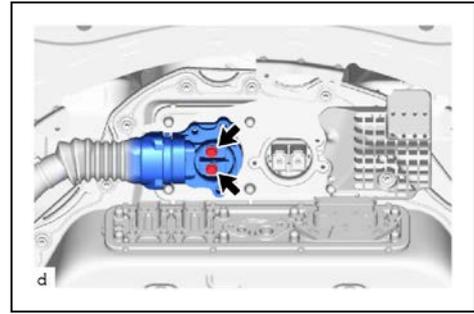


## 22. SEPARATE TRACTION BATTERY CHARGER WIRE

- (1) Remove the 3 bolts and traction battery charger wire cover.

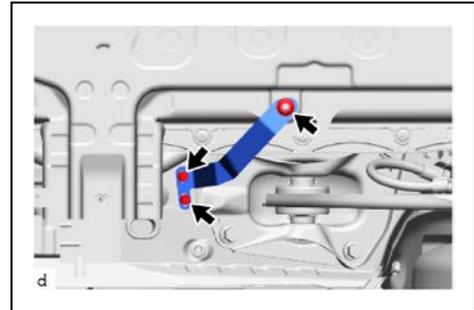


- (2) Remove the 2 bolts and separate traction battery charger wire.



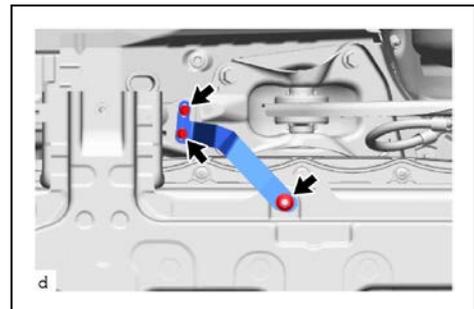
### 23. REMOVE NO. 20 TRACTION BATTERY BRACKET

- (1) Remove the 2 bolts, nut and No. 20 traction battery bracket.



### 24. REMOVE NO. 21 TRACTION BATTERY BRACKET

- (1) Remove the 2 bolts, nut and No. 21 traction battery bracket.



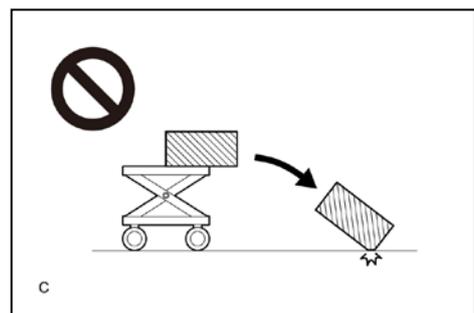
### 25. REMOVE TRACTION BATTERY ASSEMBLY

**CAUTION:**

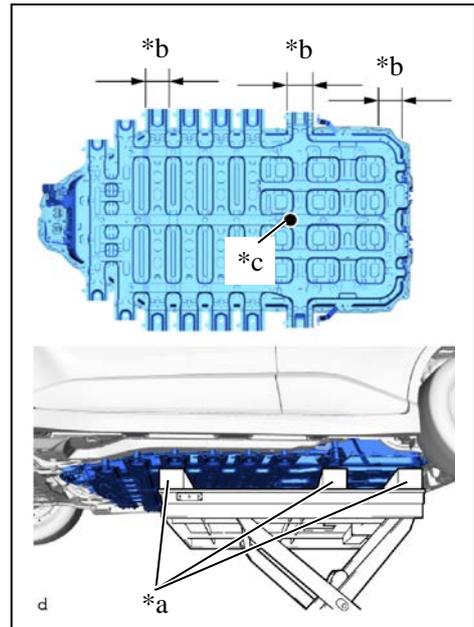
• Because the weight of the traction battery assembly is extremely heavy, make sure to follow the work procedures described in the repair manual.

• If work is not performed according to the procedures described in the repair manual, there is a danger that the components could fall down.

• Do not damage the traction battery assembly with the fork etc.

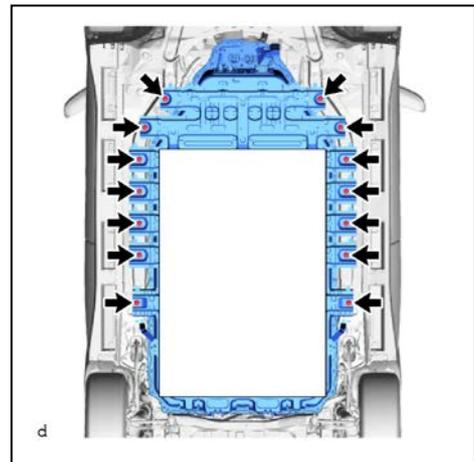


- (1) Using an engine lifter support the traction battery assembly as shown in the illustration.



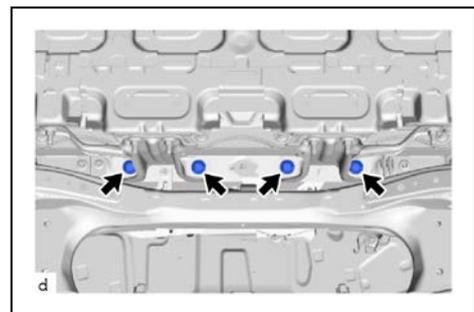
*a	Wooden Block
*b	Supporting Area
*c	Gravity Center

- (2) Remove the 14 bolts.

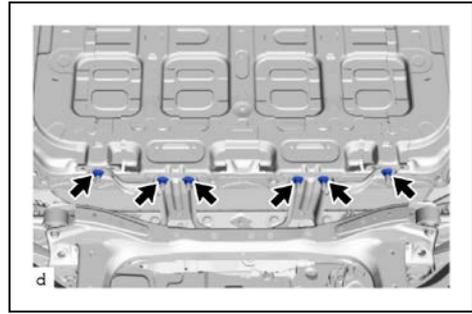


- (3) Remove the 4 bolts.  
 (4) Lower the engine lifter to remove the traction battery assembly.

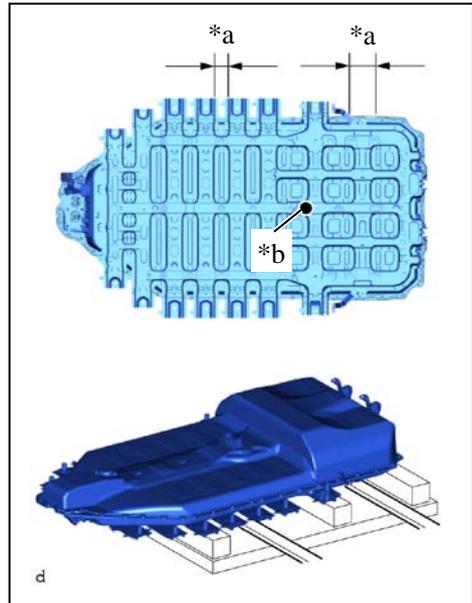
**CAUTION:**  
**Be careful not to drop the traction battery assembly.**



(5) Remove the 6 nuts.



(6) Support the position with the forklift etc, lower the traction battery assembly from the engine lifter.

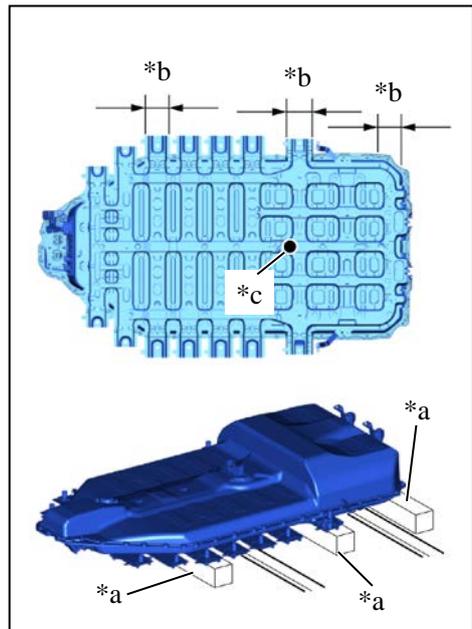


*a	Supporting Area
*b	Gravity Center

(7) Support the position with the wooden block lower the traction battery assembly.

**CAUTION:**

- Store in an area where it will not get wet by rainwater or be in direct sunlight.
- Do not bring the removed battery near an open flame or a heat source.



*a	Wooden Block
*b	Supporting Area
*c	Gravity Center