

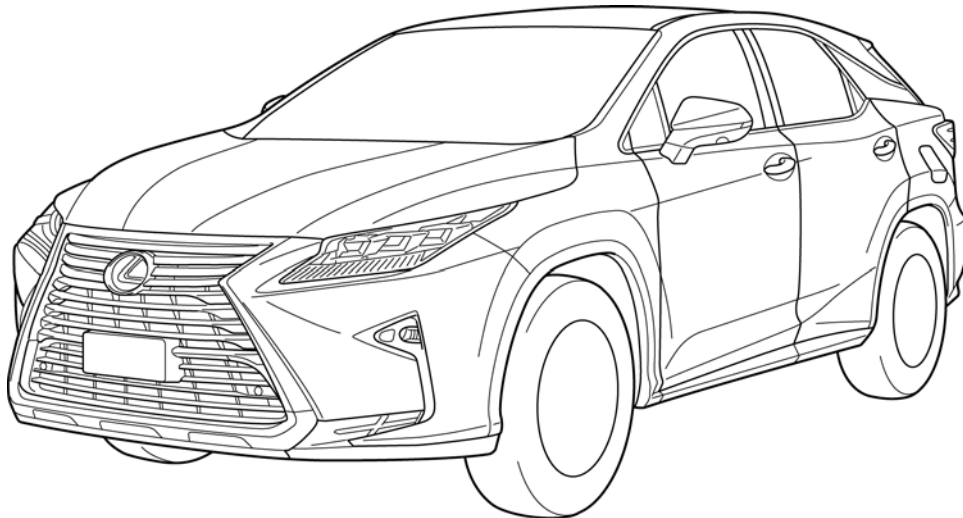


RX450h/450hL

Gasoline-Electric

Lexus Hybrid Drive

HYBRID VEHICLE DISMANTLING MANUAL



GYL20/GYL25/GYL26 Series

Foreword

This guide was developed to educate and assist dismantlers in the safe handling of Lexus RX450h/450hL gasoline-electric hybrid vehicles. RX450h/450hL dismantling procedures are similar to other non-hybrid 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 RX450h/450hL, as they may not be familiar to dismantlers.

High voltage electricity powers the A/C compressor, front and rear electric motors, generator, and inverter/converter. All other conventional 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 RX450h/450hL to help ensure the high voltage, approximately 288 Volt, Nickel Metal Hydride (NiMH) Hybrid Vehicle (HV) battery pack is kept safe and secure in an accident.

The NiMH HV battery pack 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. In the unlikely event the electrolyte does leak, it can be easily neutralized with a dilute boric acid solution or vinegar.

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 RX450h/450hL identification.
- Major hybrid component locations and descriptions.

By following the information in this guide, dismantlers will be able to handle RX450h/450hL hybrid-electric vehicles as safely as the dismantling of a conventional gasoline engine automobile.

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About the RX450h/450hL

The RX450h/450hL 5-door wagon joins the hybrid model for Lexus Hybrid Drive means that the vehicle contains a gasoline engine and front and rear electric motors for power.

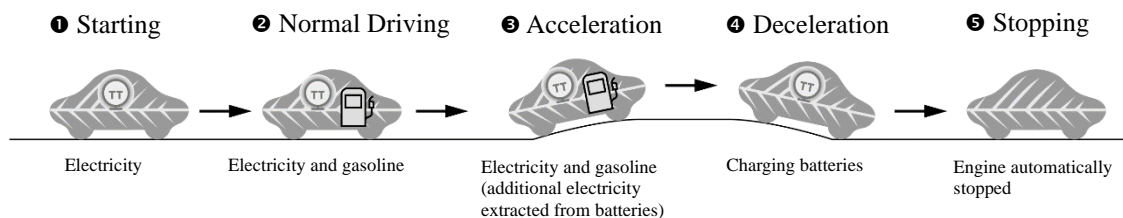
The two hybrid power sources are stored on board the vehicle:

1. Gasoline stored in the fuel tank for the gasoline engine.
2. Electricity stored in a high voltage Hybrid Vehicle (HV) battery pack for the front and rear electric motors.

The result of combining these two power sources is improved fuel economy and reduced emissions. The gasoline engine also powers an electric generator to recharge the battery pack; unlike a pure all electric vehicle, the RX450h/450hL never needs to be recharged from an external electric power source.

Depending on the driving conditions one or both sources are used to power the vehicle. The following illustration demonstrates how the RX450h/450hL operates in various driving modes.

- ❶ During light acceleration at low speeds, the vehicle is powered by the front and rear electric motors. The gasoline engine is shut off.
- ❷ During normal driving, the vehicle is powered mainly by the gasoline engine. The gasoline engine also powers the generator to recharge the battery pack and to drive the motor.
- ❸ During full acceleration, such as climbing a hill, both the gasoline engine and the front and rear electric motors power the vehicle.
- ❹ During deceleration, such as when braking, the vehicle regenerates the kinetic energy from the front and rear wheels to produce electricity that recharges the battery pack.
- ❺ While the vehicle is stopped, the gasoline engine and front and rear electric motors are off, however the vehicle remains on and operational.



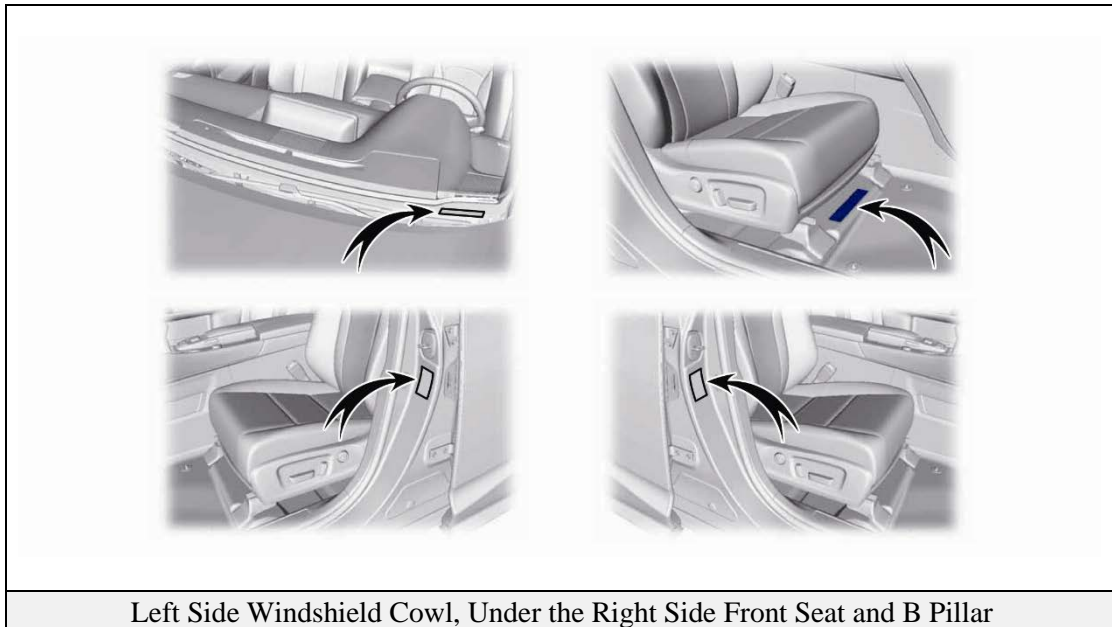
RX450h/450hL Identification

In appearance, the RX450h/450hL is nearly identical to the conventional, non-hybrid Lexus RX350/200t. The RX450h/450hL is a 5-door wagon. Exterior, interior, and engine compartment illustrations are provided to assist in identification.

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

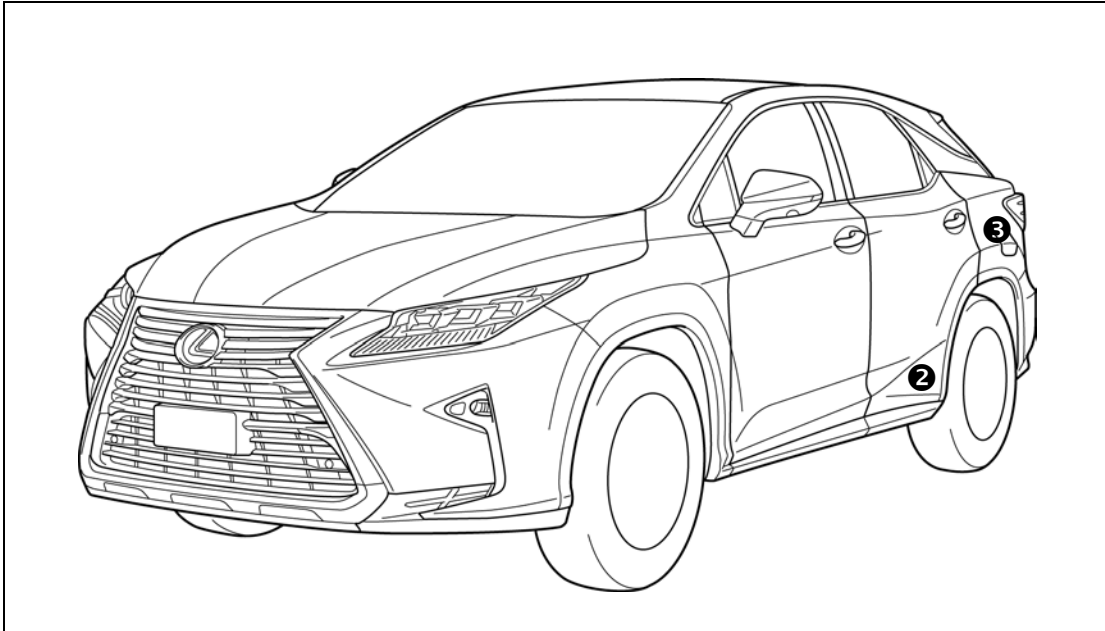
Example VIN: JTJBGMCA2000101 or JTJEGMCA2000101 (for TMK made)
2T2ZFMCAC000101 or 2T2BGMCAC000101 (for TMMC made)

An RX450h/450hL is identified by the first 8 alphanumeric characters **JTJBG**MCA, **JTJEG**MCA, **2T2ZF**MCA or **2T2BG**MCA.

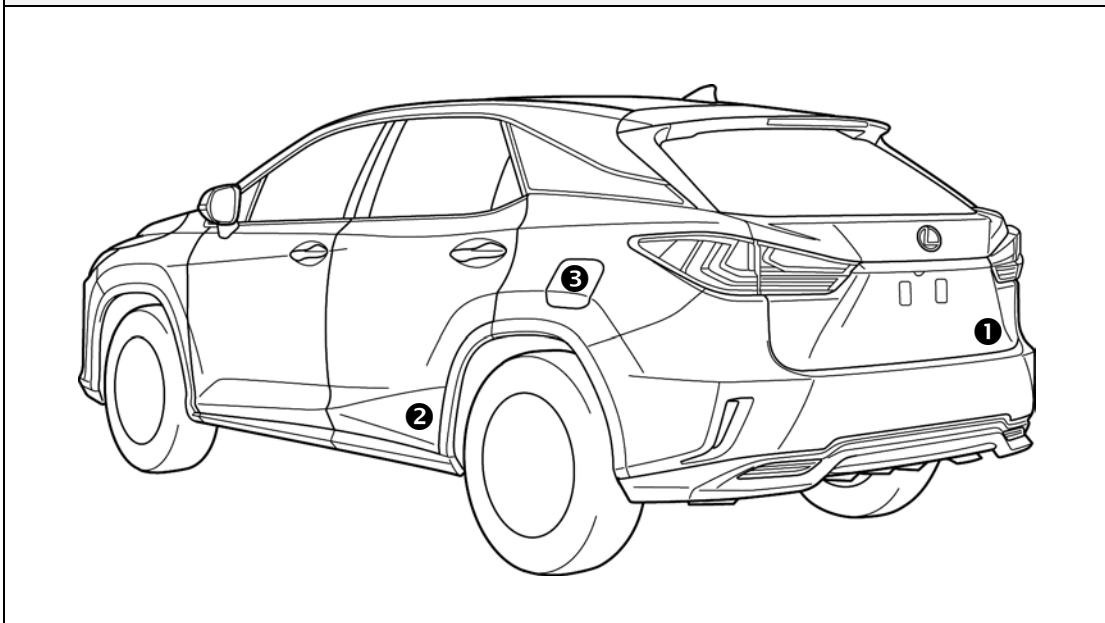


Exterior

- ❶ RX450h/450hL logo on the back door.
- ❷ *HYBRID* logos on the rocker molding.
- ❸ Gasoline fuel filler door located on the left side rear quarter panel.



Exterior Front and Left Side View



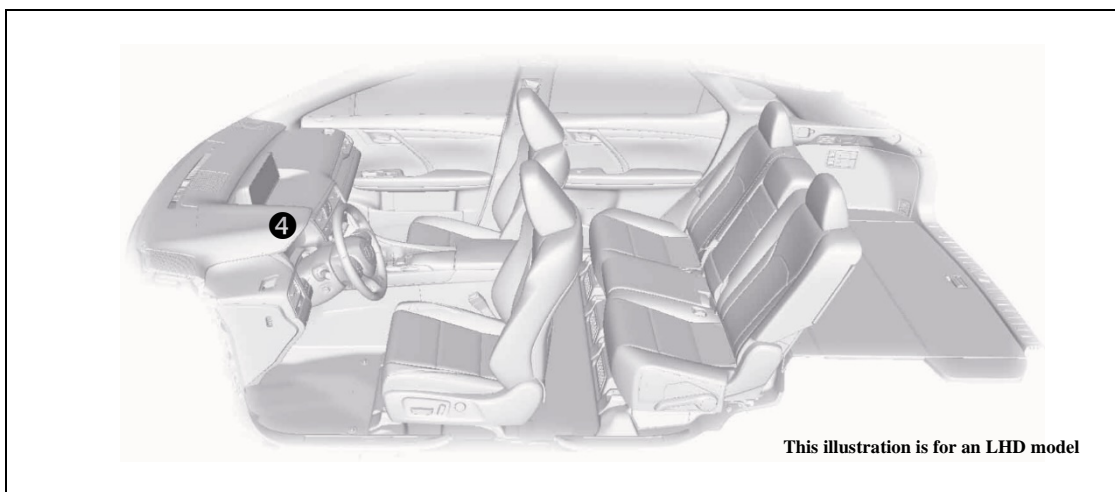
Exterior Rear and Left Side View

Interior

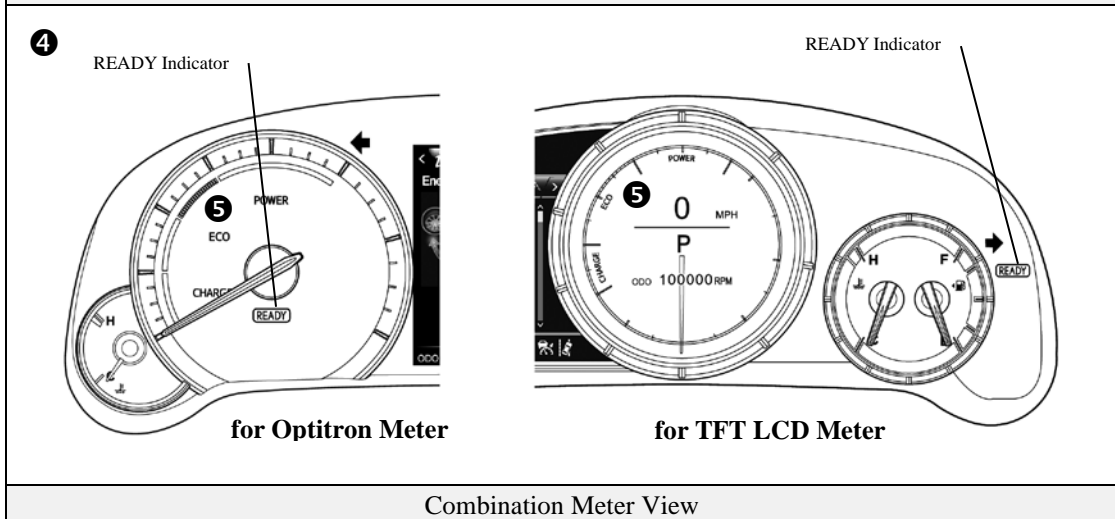
- ④ The instrument cluster (hybrid system indicator, **READY** indicator and warning lights) located in the dash behind the steering wheel, is different than the one on the conventional, non-hybrid RX350/200t.
- ⑤ A switchable gauge in the combination meter showing either a hybrid system indicator or a tachometer depending on driving mode.

Notice:

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



Interior View

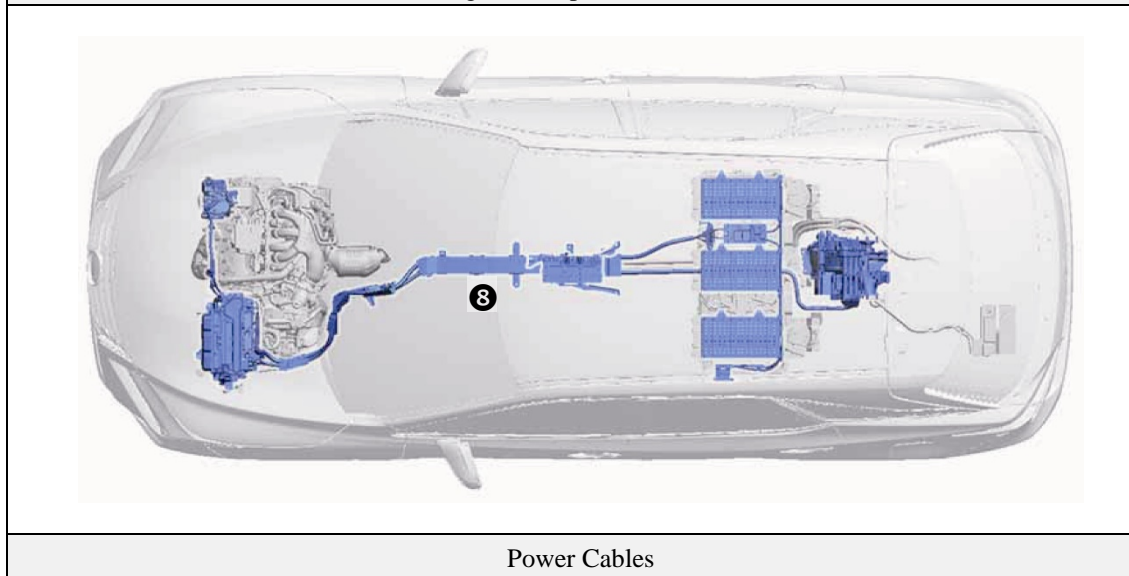


Engine Compartment

- ⑥ 3.5-liter aluminum alloy gasoline engine.
- ⑦ Logo on the engine cover.
- ⑧ Orange colored high voltage power cables.



Engine Compartment View



Power Cables

Hybrid Component Locations & Descriptions

Component		Description
12 Volt Auxiliary Battery ❶		When the power switch is on (ACC) or on (IG), the auxiliary battery supplies power to the electrical equipment and ECUs.
Hybrid Vehicle (HV) Battery Pack ❷		<ul style="list-style-type: none"> • Supplies electrical power to MG1, MG2 and MGR*1 and the compressor with motor assembly in accordance with the driving conditions of the vehicle. • Charged by MG1 and MG2 in accordance with the State Of Charge (SOC) of the HV battery and the driving conditions of the vehicle. • Has a nominal (approximate) voltage of DC 288 V (actual voltage will vary depending on various conditions such as temperature, charge or discharge).
Power Cables ❸		Connects the HV battery to the inverter with converter assembly, the inverter with converter assembly to MG1, MG2 and MGR*1, and the inverter with converter assembly to the compressor with motor assembly.
Inverter/ Converter ❹	DC-DC Converter ❺ for 12 Volt Auxiliary Battery	Drops the HV battery voltage of DC 288 V into approximately DC 14 V in order to supply electricity to body electrical components, as well as to recharge the auxiliary battery.
	Motor Generator ECU	Controls the inverter and boost converter in accordance with signals received from the hybrid Vehicle Control ECU assembly, thus operating MG1, MG2, or MGR*1 as either a generator or motor.
	Boost Converter	Boosts the voltage of the HV battery from DC 288V to a maximum of DC 650 V and vice versa (drops DC 650 V to DC 288 V).
	Inverter	A device that converts high-voltage DC (HV battery) into AC (MG1, MG2 and MGR*1) and vice versa (converts AC into DC).
Gasoline Engine ❻		The 2GR-FXS engine is a high-expansion ratio Atkinson cycle engine which is compatible with the hybrid system and which generates drive force for driving and energy for electricity generation.
Electric Motor	Front Motor ❼	<ul style="list-style-type: none"> • Driven by electrical power from MG1 and/or the HV battery, and generates motive force for the front wheels. • Generates electricity to recharge the HV battery (regenerative braking) during braking or when the accelerator pedal is not depressed.
	Rear Motor*1 ❽	<ul style="list-style-type: none"> • Driven by electrical power from MG1 and/or the HV battery, it generates motive force for the rear wheels. • During braking, or when the accelerator pedal is not depressed, it generates electricity to recharge the HV battery (Regenerative braking).

Component	Description
Electric Generator ⑨	<ul style="list-style-type: none"> • Driven by the engine and generates high-voltage electricity in order to operate MG2 and MGR*1 and/or to charge the HV battery. Also, MG1 functions as a starter to start the engine. • Operated to allow the gear ratio of the power split planetary gear unit to optimally suit the driving conditions of the vehicle.
A/C Compressor (with inverter) ⑩	Driven at a speed calculated by the air conditioning amplifier assembly, receives drive requests from the hybrid vehicle control ECU assembly and takes in, compresses and discharges refrigerant.
Fuel Tank and Fuel Line ⑪	The fuel tank provides gasoline via a fuel line to the engine. The fuel line is routed along the left side and center tunnel under the floor pan.

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

*1: for AWD models

Specifications

Gasoline Engine: 193 kW, 3.5-liter Aluminum Alloy Engine

Electric Motors

Front: 123 kW, Permanent Magnet Motor

Rear: 50 kW, Permanent Magnet Motor (for AWD models)

Transmission: Automatic Only

HV Battery: 288 Volt Sealed NiMH-Battery

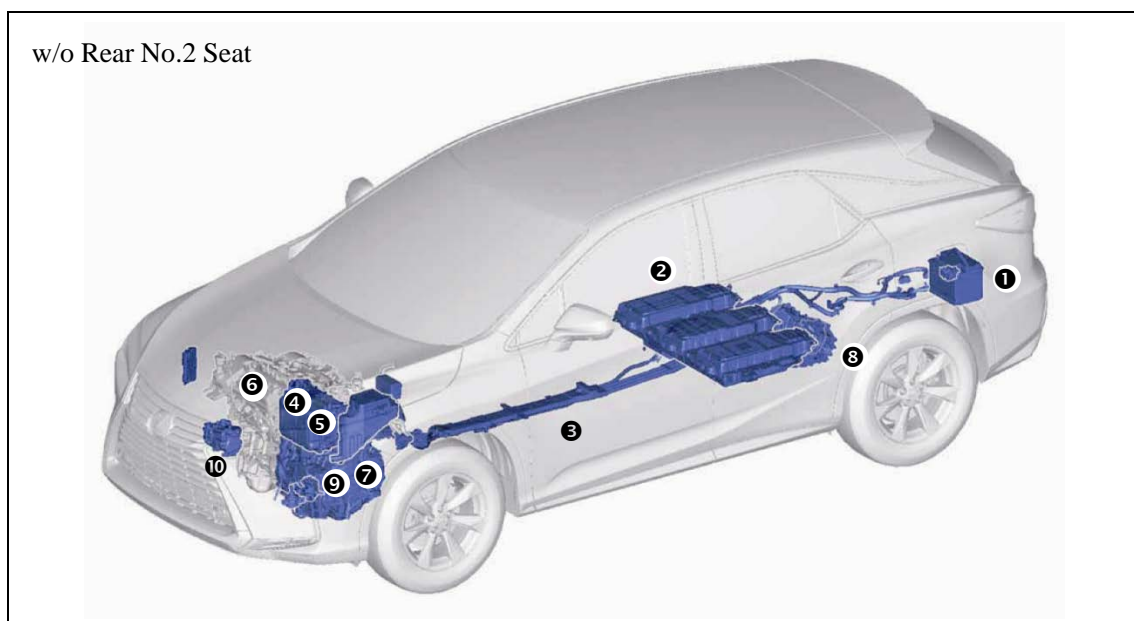
Curb Weight: 2,100 to 2,280 kg / 4,630 to 5,026 lbs

Fuel Tank: 65 liters / 17.2 Us. gals / 14.3 Imp. gals / 57.2 Imp. qts

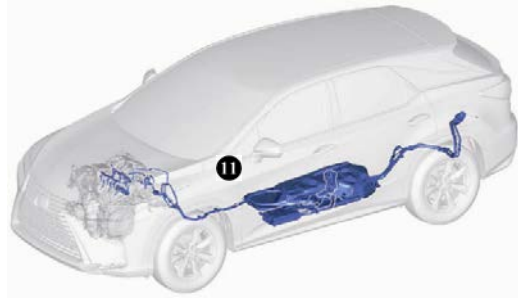
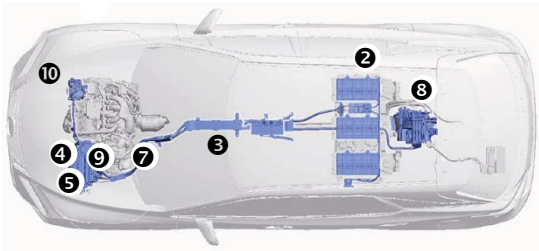
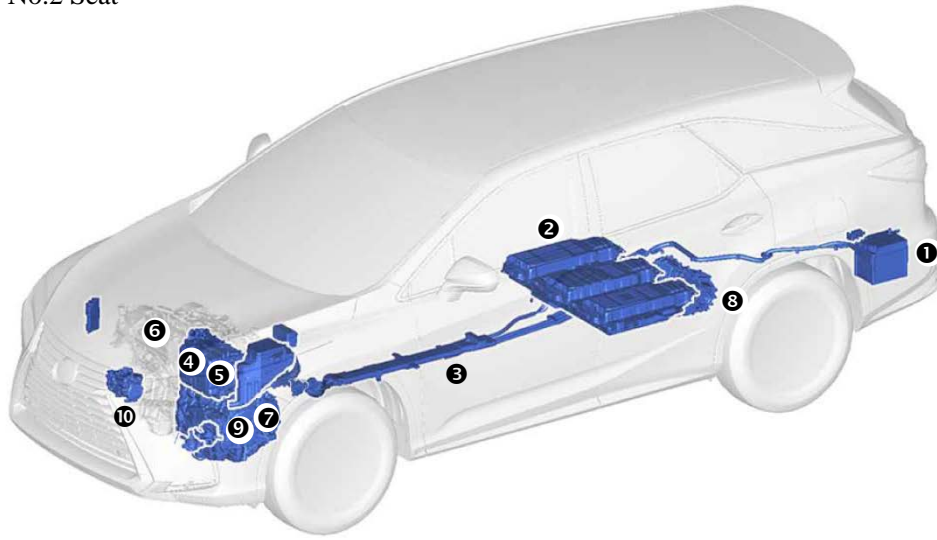
Frame Material: Steel Unibody

Body Material: Steel Panels

Seating Capacity: 5 / 6 / 7 passenger



w/ Rear No.2 Seat



Lexus Hybrid Drive Operation

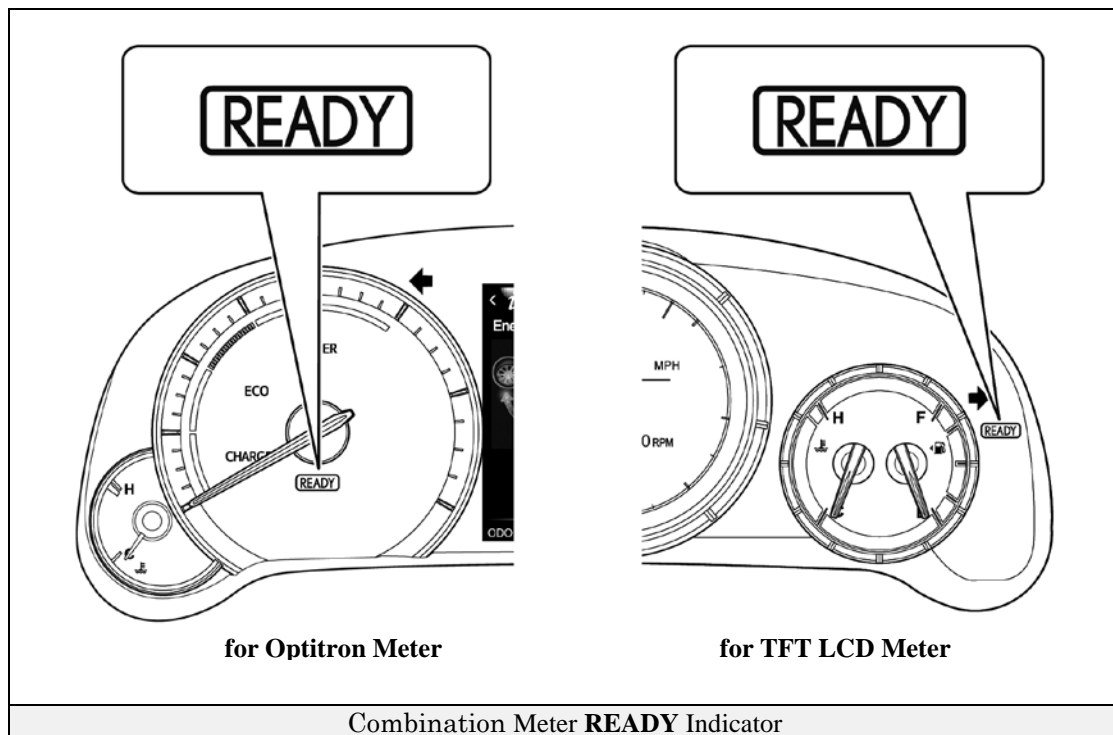
Once the **READY** indicator is illuminated in the combination meter, the vehicle may be driven. However, the gasoline engine does not idle like a typical automobile and will start and stop automatically. It is important to recognize and understand the **READY** indicator provided in the instrument cluster. When illuminated, it informs the driver that the vehicle is on and operational even though the gasoline engine may be off and the engine compartment is silent.

Vehicle Operation

- With the RX450h/450hL, the gasoline engine may stop and start at any time while the **READY** indicator is on.
- Never assume that the vehicle is shut off just because the engine is off. Always look for the **READY** indicator status. The vehicle is shut off when the **READY** indicator is off.

The vehicle may be powered by:

1. The front and rear electric motors only.
2. A combination of both the front and rear electric motors and the gasoline engine.



Hybrid Vehicle (HV) Battery Pack and Auxiliary Battery

The RX450h/450hL features a high voltage Hybrid Vehicle (HV) battery pack that contains sealed Nickel Metal Hydride (NiMH) battery modules.

HV Battery Pack

- The HV battery pack is enclosed in a metal case and is rigidly mounted to the cabin area floor pan cross member under the second row seats. The metal case is isolated from high voltage and concealed by fabric covers in the cabin area.
- The HV battery pack consists of 30 low voltage (9.6 Volt) NiMH battery modules connected in series to produce approximately 288 Volts. Each NiMH battery module is non-spillable and sealed in a metal case.
- The electrolyte used in the NiMH battery module is an alkaline mixture of potassium and sodium hydroxide. The electrolyte is absorbed into the battery cell plates and will not normally leak, even in a collision.

HV Battery Pack	
Battery pack voltage	288 V
Number of NiMH battery modules in the pack	30
NiMH battery module voltage	9.6 V

Components Powered by the HV Battery Pack





- Front Electric Motor
- Rear Electric Motor (for AWD models)
- Power Cables
- A/C Compressor
- Electric Generator
- Inverter/Converter
 - DC-DC Converter for 12 Volt Auxiliary Battery

HV Battery Pack Recycling

- The HV battery pack is recyclable. Contact either your Lexus Distributor as mentioned on HV battery Caution Label or the nearest Lexus dealer.

Auxiliary Battery

- The RX450h/450hL also 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 auxiliary battery is grounded to the metal chassis of the vehicle.
- The auxiliary battery is located in the luggage compartment area. It is concealed by a fabric cover on the left side in the luggage compartment.

	
<p>12 Volt Auxiliary Battery Mounted in Luggage Compartment Area (w/o Rear No.2 Seat)</p>	<p>12 Volt Auxiliary Battery Mounted in Luggage Compartment Area (w/ Rear No.2 Seat)</p>
	
<p>288 Volt HV Battery Pack</p>	<p>HV Battery Pack Mounted in Cabin Area</p>

High Voltage Safety

The HV battery pack powers the high voltage electrical system with DC electricity. Positive and negative orange colored high voltage power cables are routed from the battery pack, under the vehicle floor pan, to the inverter/converter. The inverter/converter contains a circuit that boosts the HV battery voltage from 288 to 650 Volts DC. The inverter/converter creates 3-phase AC to power the motors. Power cables are routed from the inverter/converter to each high voltage motors (front and rear electric motors, electric generator, 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

- A high voltage fuse ❶* provides short circuit protection in the HV battery pack.
- Positive and negative high voltage power cables ❷* connected to the HV battery pack are controlled by 12 Volt normally open relays ❸*. When the vehicle is shut off, the relays stop electricity flow from leaving the HV battery pack.



WARNING:

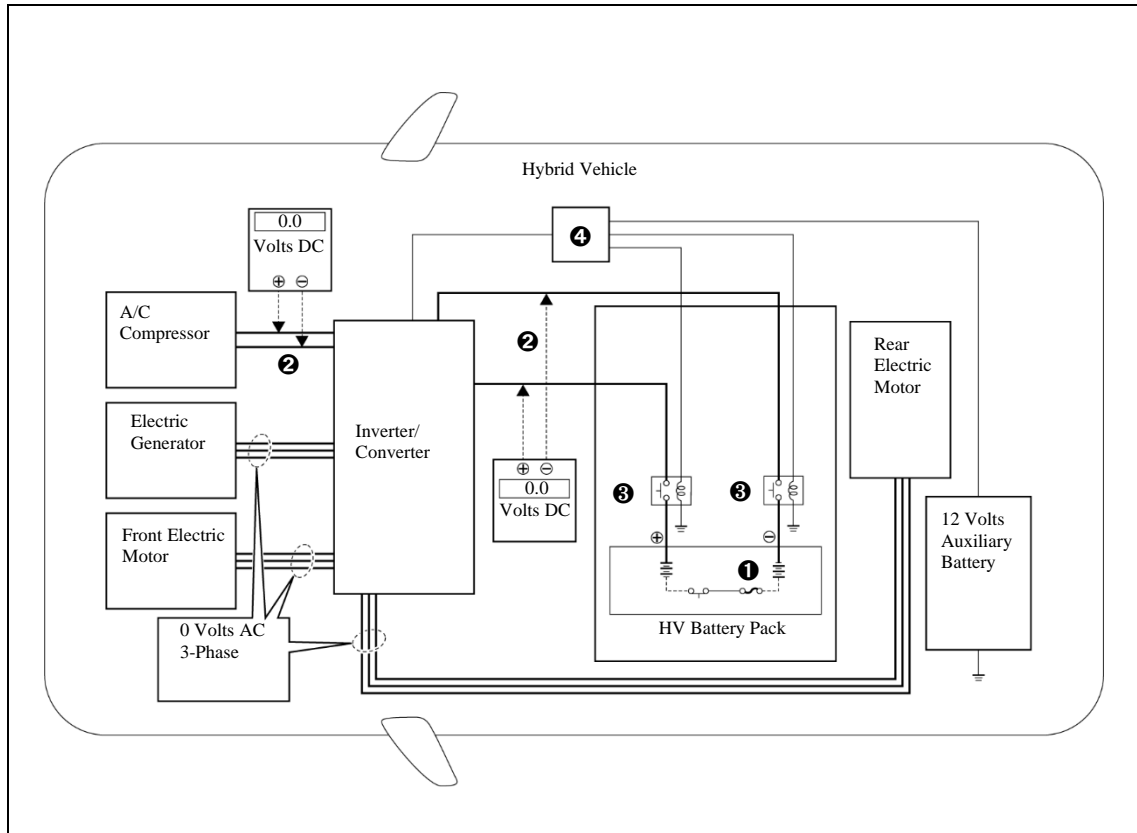
- ***The high voltage system may remain powered for up to 10 minutes after the vehicle is shut off or disabled. To prevent serious injury or death from severe burns or electric shock, avoid touching, cutting, or opening any orange high voltage power cable or high voltage component.***

- Both positive and negative power cables ❹* 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 ❺* continuously monitors for high voltage leakage to the metal chassis while the vehicle is running. If a malfunction is detected, the hybrid vehicle computer ❻* will illuminate the master warning light  in the instrument cluster and a message indicating that the hybrid system is malfunctioning will be displayed on the multi-information display.
- The HV battery pack relays will automatically open to stop electricity flow in a collision sufficient to activate the SRS.

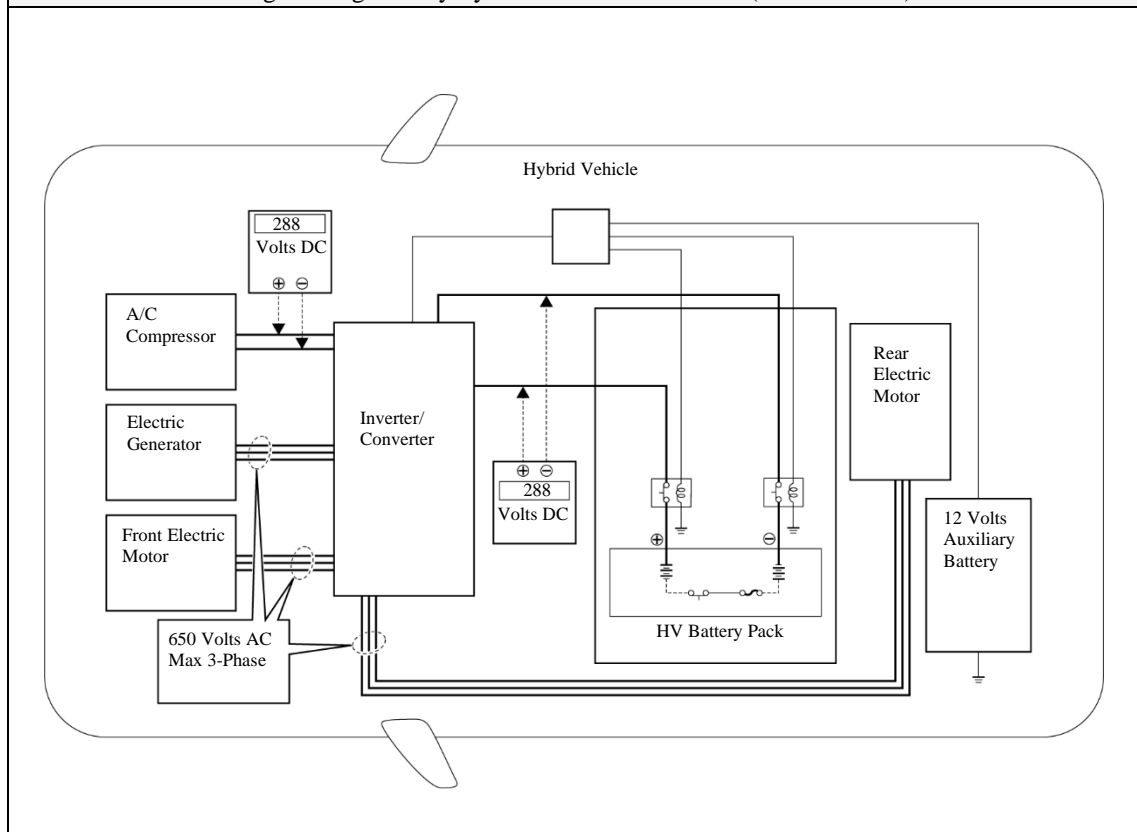
*Numbers apply to the illustration on the following page.

Service Plug Grip

- The high voltage circuit is cut by removing the service plug grip (see page16).



High Voltage Safety System – Vehicle Shut Off (READY-OFF)



High Voltage Safety System – Vehicle On and Operational (READY-ON)

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 HV battery 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.
- If the electrolyte comes in contact with your skin, use a saturated boric acid solution or a large amount of water to wash it off. If the electrolyte comes in contact with an article of clothing, take it off immediately.
- If the electrolyte comes in contact with your eyes, call out loudly for help. Do not rub your eyes. Wash them immediately with a large amount of water and seek medical care.
- If the 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 HV battery.

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 RX450h/450hL contains the same common automotive fluids used in other non-hybrid Lexus vehicles, with the exception of the NiMH electrolyte used in the HV battery pack. The NiMH battery electrolyte is a caustic alkaline (pH 13.5) that is damaging to human tissues. The electrolyte, however, is absorbed in the cell plates and will not normally spill or leak out even if a metal battery module is cracked.

A catastrophic crash that would breach both the metal battery pack case and a metal battery module would be a rare occurrence.

A caustic alkaline is at the opposite end of the pH scale from a strong acid. A safe (neutral) substance is approximately in the middle of this scale. Adding a weak acidic mixture, such as a dilute boric acid solution or vinegar, to the caustic alkaline electrolyte will cause the electrolyte to be neutralized. This is similar but opposite to the use of baking soda to neutralize a lead-acid battery electrolyte spill.

A Lexus Product Safety Data Sheets (PSDS) is attached to this document.

- Handle NiMH electrolyte spills using the following Personal Protective Equipment (PPE):
 - Splash shield or safety goggles. A fold down face shield is not acceptable for acid or electrolyte spills.
 - Rubber, latex or nitrile gloves.
 - Apron suitable for alkaline.
 - Rubber boots.
- Neutralize NiMH electrolyte.
 - Use a boric acid solution or vinegar.
 - Boric acid solution - 800 grams boric acid to 20 liters water or 5.5 ounces boric acid to 1 gallon of water.

Dismantling the vehicle

The following 6 pages contain general instructions for use when working on an RX450h/450hL. Read these instructions before proceeding to the HV battery removal instructions on page 23.



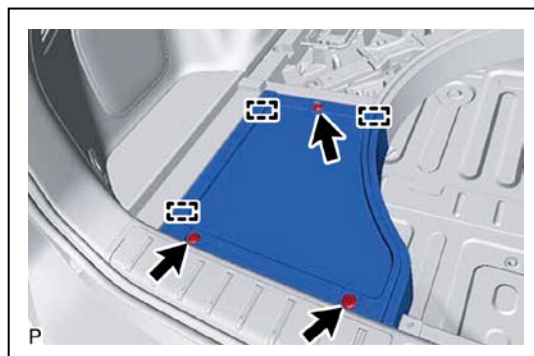
WARNING:

- **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.**

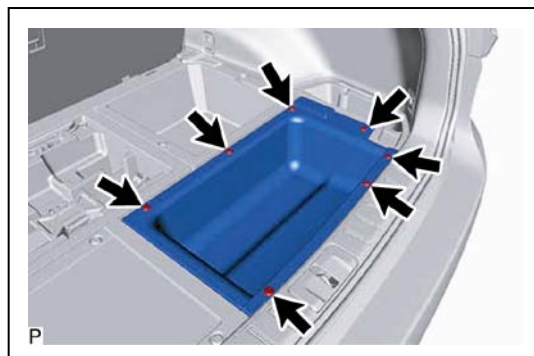
1. Shut off the ignition (**READY** indicator is off). (w/o Rear No. 2 Seat)

Then disconnect the cable from the auxiliary battery negative (-) terminal.

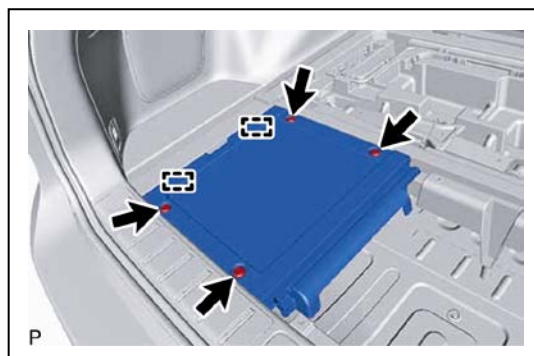
- (1) Remove the deck board assembly.
- (2) for Compact Spare Tire:
 - a) Remove the spare wheel cover.
- (3) w/ Spare Tire:
 - a) Remove the 3 clips.
 - b) Disengage the 3 guides to remove the rear deck floor box.



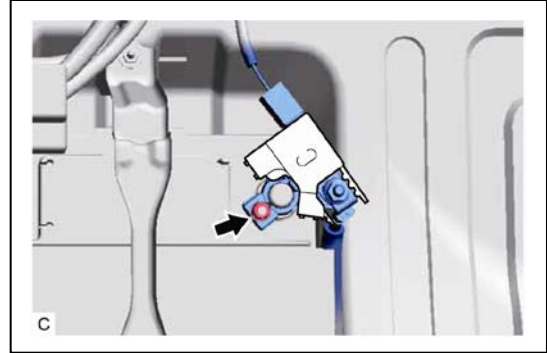
- (4) w/o Spare Tire:
 - a) Remove the 7 clips and rear floor carpet.



- b) Remove the 4 clips.
Disengage the 2 guides to remove the rear deck floor box.

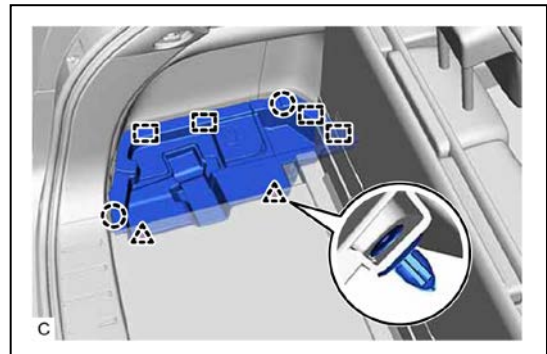


- (5) Loosen the nut, and disconnect the cable from the negative (-) auxiliary battery terminal.

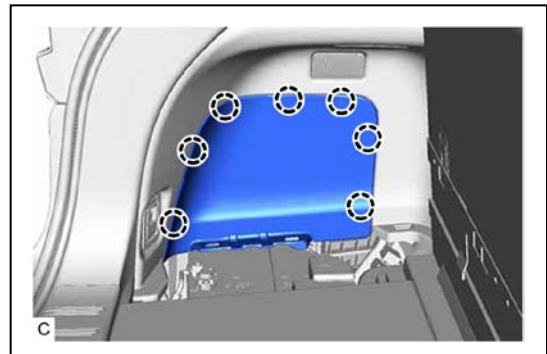


2. Shut off the ignition (**READY** indicator is off). (w/ Rear No. 2 Seat)
Then disconnect the cable from the auxiliary battery negative (-) terminal.

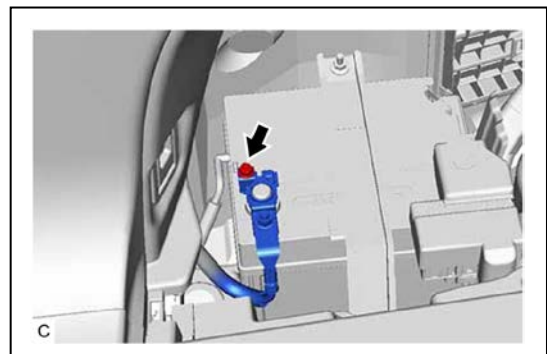
- (1) Remove the rear No. 4 floor board.
(2) Disengage the 2 claws, 2 clips and 4 guides to remove the deck side trim box LH.



- (3) Disengage the 7 claws and remove the rear deck trim cover.

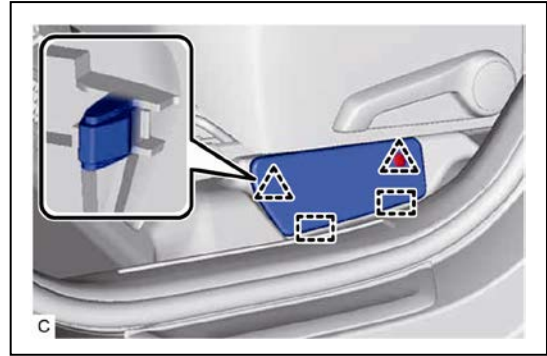


- (4) Loosen the nut, and disconnect the cable from the negative (-) auxiliary battery terminal.



3. Remove the battery service hole cover. (w/o Rear No. 2 Seat)

- (1) Remove the clip.
- (2) Disengage the clip and 2 guides to remove the battery service hole cover.



4. Remove the door scuff plate cover. (w/ Rear No. 2 Seat)

- (1) Disengage the 7 clips and claw to remove the rear door scuff ornament LH.



- (2) Remove the clip.
- (3) Disengage the 3 guides to remove the door scuff plate cover.



5. Remove the service plug grip.

Caution:

- **Wear insulated gloves.**
- **Do not inspect or perform service on the high voltage system with the service plug grip installed.**



- To prevent electric shock, make sure to remove the service plug grip to cut off the high voltage circuit before servicing the vehicle.
- To prevent electric shock, make sure to wait at least 10 minutes after removing the service plug 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.



- Place a "HIGH VOLTAGE WORK IN PROGRESS. DO NOT TOUCH." sign, in order to prevent other technicians from accidentally reconnecting the power while work is in progress.

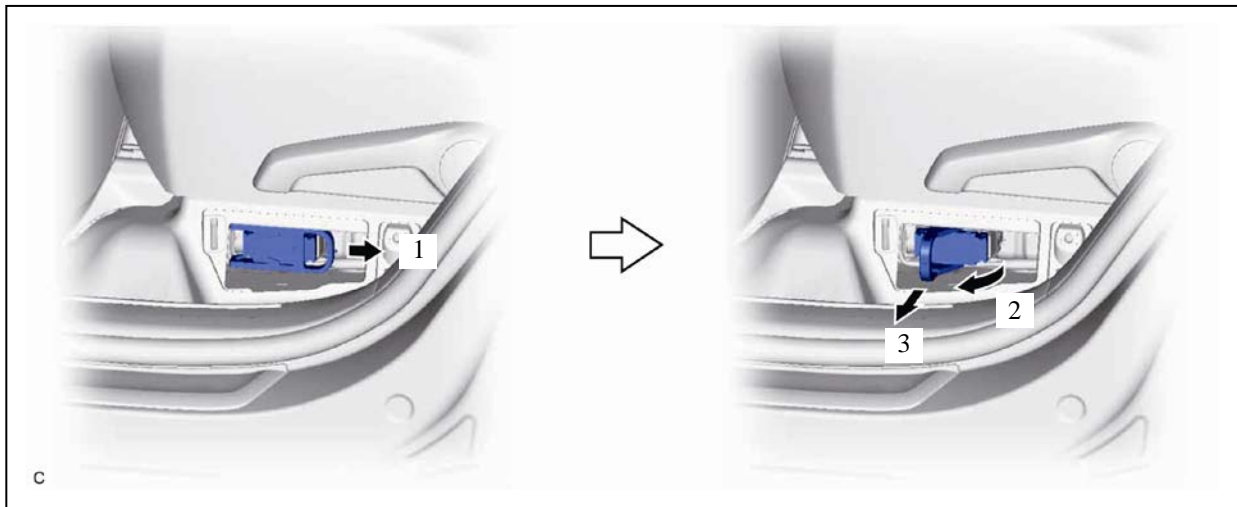
Notice:

- 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.

Hint:

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

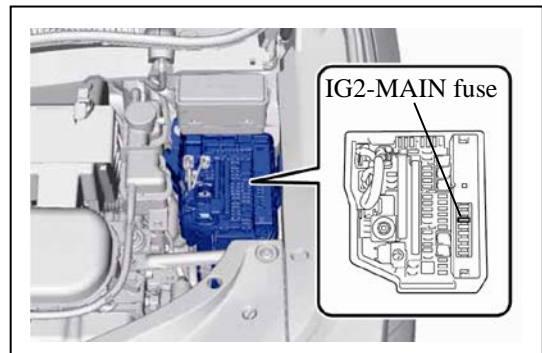
- (1) While wearing insulated gloves, move the handle of the service plug grip and remove the service plug grip as indicated by the arrows, in the order shown in the illustration.



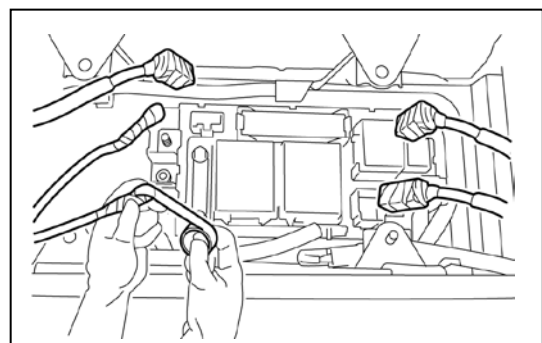
6. Carry the removed service plug grip in your pocket to prevent other staff from accidentally reinstalling it while you are dismantling the vehicle.
7. Make other staff aware that a high-voltage system is being dismantled by using the following sign: CAUTION: HIGH-VOLTAGE. DO NOT TOUCH (see page 22).
8. If the service plug grip cannot be removed due to damage to the vehicle, remove the IG2-MAIN fuse (20 A).

Caution:

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



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 HV battery 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 HV battery, remove parts by following procedures which are similar to conventional Lexus vehicles. For the removal of the HV battery, 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.

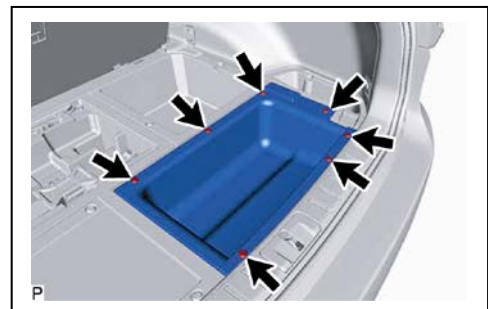
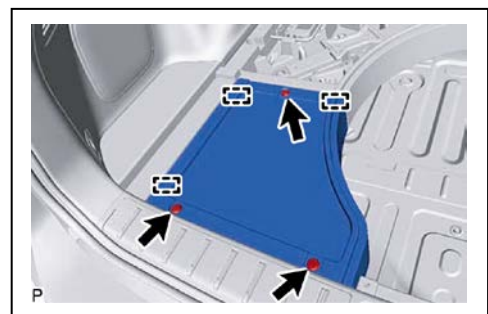
Removal of HV battery



WARNING:

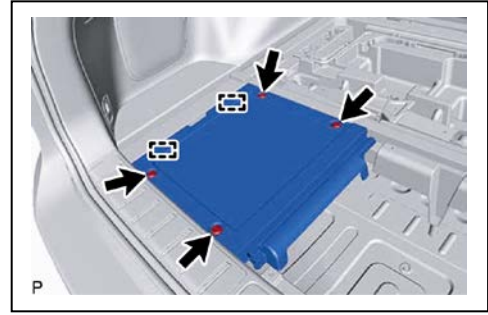
- *Be sure to wear insulated gloves when handling high-voltage parts.*
- *Even if the vehicle is shut off and the relays are off, be sure to remove the service plug grip before performing any further work.*
- *Power remains in the high voltage electrical system for 10 minutes even after the HV battery 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 IGINITION (**READY** indicator is off)
2. REMOVE DECK BOARD ASSEMBLY (w/o Rear No. 2 Seat)
 - (1) Remove the deck board assembly.
3. REMOVE SPARE WHEEL COVER (w/o Rear No. 2 Seat for Compact Spare Tire)
 - (1) Remove the spare wheel cover.
4. REMOVE REAR DECK FLOOR BOX (w/o Rear No. 2 Seat, w/ Spare Tire)
 - (1) Remove the 3 clips.
 - (2) Disengage the 3 guides to remove the rear deck floor box.
5. REMOVE REAR FLOOR CARPET (w/o Rear No. 2 Seat, w/o Spare Tire)
 - (1) Remove the 7 clips and rear floor carpet.



6. REMOVE REAR DECK FLOOR BOX (w/o Rear No. 2 Seat, w/o Spare Tire)

- (1) Remove the 4 clips.
- (2) Disengage the 2 guides to remove the rear deck floor box.

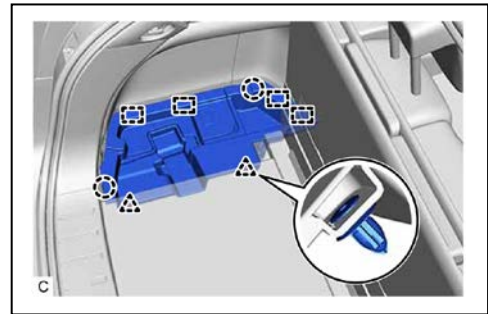


7. REMOVE REAR NO. 4 FLOOR BOARD (w/ Rear No. 2 Seat)

- (1) Remove the rear No. 4 floor board.

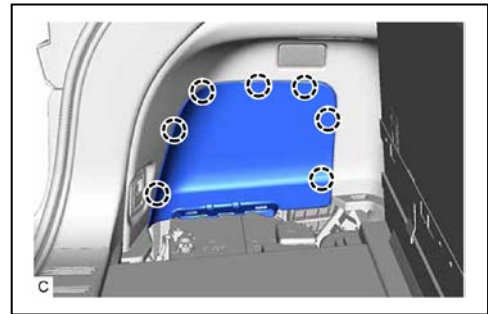
8. REMOVE DECK SIDE TRIM BOX LH (w/ Rear No. 2 Seat)

- (1) Disengage the 2 claws, 2 clips and 4 guides to remove the deck side trim box LH.



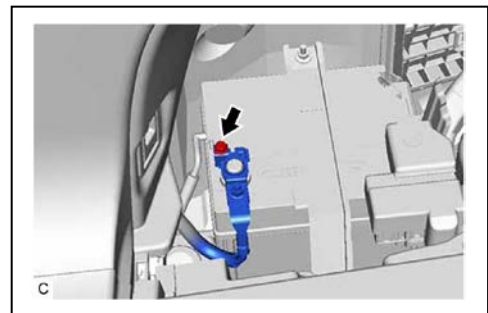
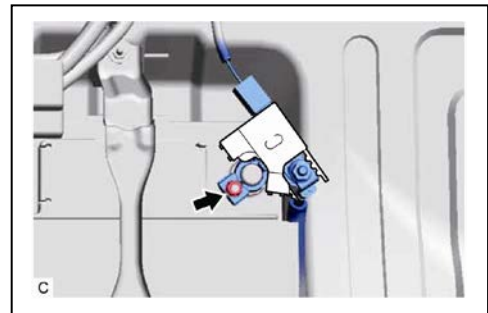
9. REMOVE REAR DECK TRIM COVER (w/ Rear No. 2 Seat)

- (1) Disengage the 7 claws and remove the rear deck trim cover.



10. DISCONNECT CABLE FROM NEGATIVE AUXILIARY BATTERY TERMINAL

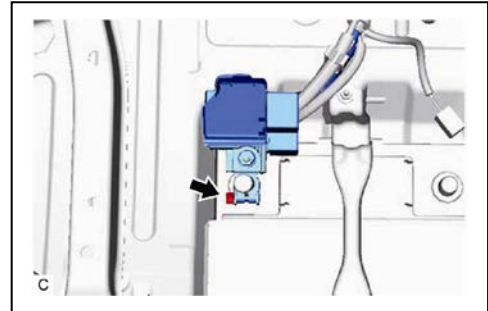
- (1) w/o Rear No. 2 Seat:
 - a) Loosen the nut, and disconnect the cable from the negative (-) auxiliary battery terminal.
- (2) w/ Rear No. 2 Seat:
 - a) Loosen the nut, and disconnect the cable from the negative (-) auxiliary battery terminal.



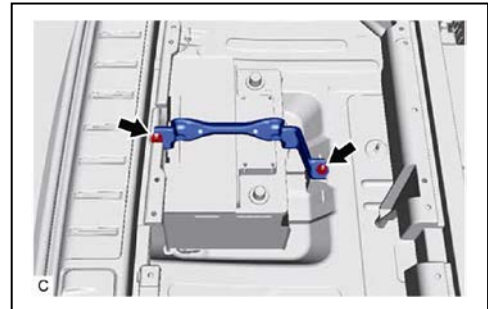
11. REMOVE AUXILIARY BATTERY

(1) w/o Rear No. 2 Seat:

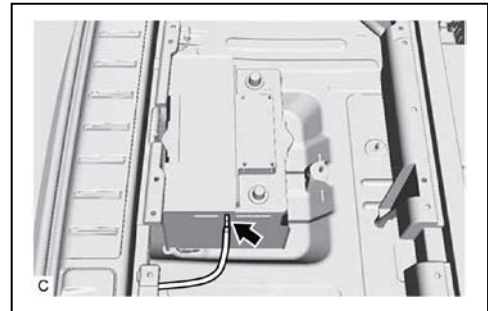
- a) Open the battery terminal cap.
- b) Loosen the nut and disconnect the cable from the positive (+) auxiliary battery terminal.



- c) Remove the 2 nuts and battery clamp sub-assembly.

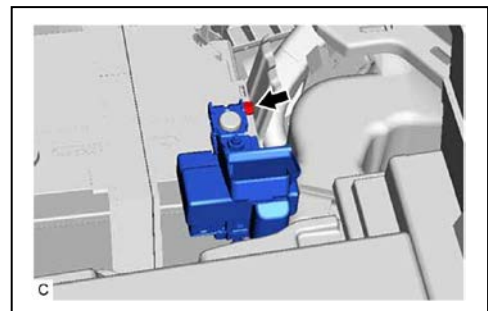
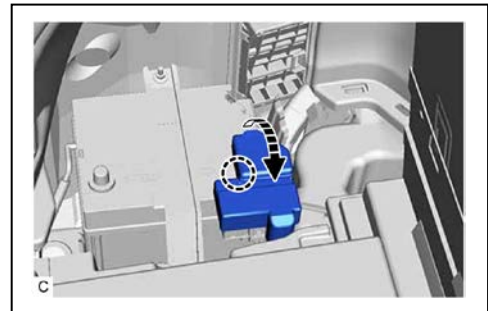


- d) Disconnect the battery hose from the auxiliary battery.
- e) Remove the auxiliary battery.

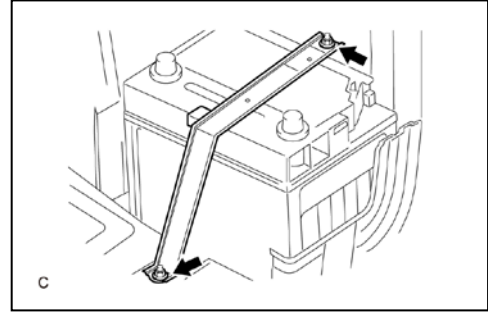


(2) w/ Rear No. 2 Seat:

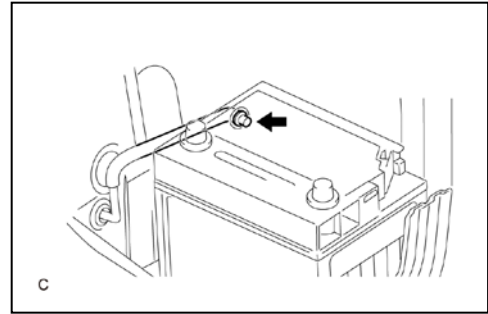
- a) Open the battery terminal cap.
- b) Loosen the nut and disconnect the cable from the positive (+) auxiliary battery terminal.



- c) Remove the 2 nuts and battery clamp sub-assembly.



- d) Disconnect the battery hose from the auxiliary battery.

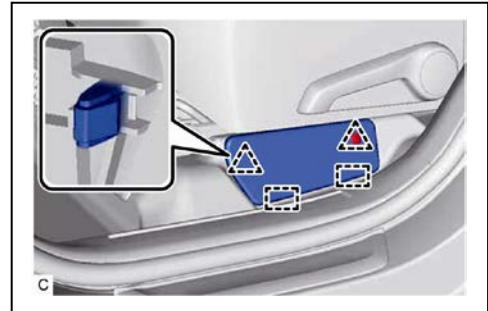


- e) Remove the auxiliary battery.

12. REMOVE BATTERY SERVICE HOLE COVER

(w/o Rear No. 2 Seat)

- (1) Remove the clip.
- (2) Disengage the clip and 2 guides to remove the battery service hole cover.



13. REMOVE REAR DOOR SCUFF ORNAMENT LH

(w/ Rear No. 2 Seat)

- (1) Disengage the 7 clips and claw to remove the rear door scuff ornament LH.



14. REMOVE DOOR SCUFF PLATE COVER (w/ Rear No. 2 Seat)

- (1) Remove the clip.
- (2) Disengage the 3 guides to remove the door scuff plate cover.



15. REMOVE SERVICE PLUG GRIP

Caution:

- Wear insulated gloves.
- Do not inspect or perform service on the high voltage system with the service plug grip installed.



- To prevent electric shock, make sure to remove the service plug grip to cut off the high voltage circuit before servicing the vehicle.
- To prevent electric shock, make sure to wait at least 10 minutes after removing the service plug 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.



- Place a "HIGH VOLTAGE WORK IN PROGRESS. DO NOT TOUCH." sign, in order to prevent other technicians from accidentally reconnecting the power while work is in progress.

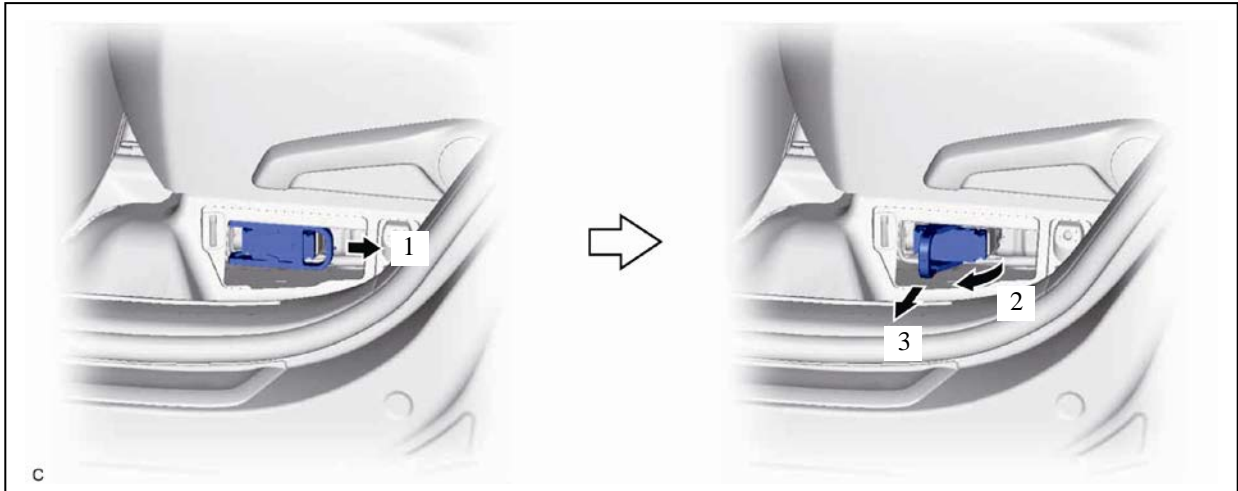
Notice:

- 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.

Hint:

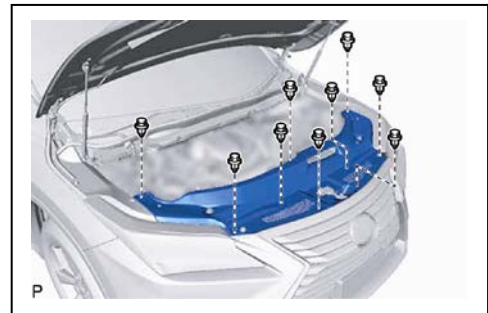
Waiting for at least 10 minutes is required to discharge the high voltage capacitor inside the inverter with converter assembly.

- (1) While wearing insulated gloves, move 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.



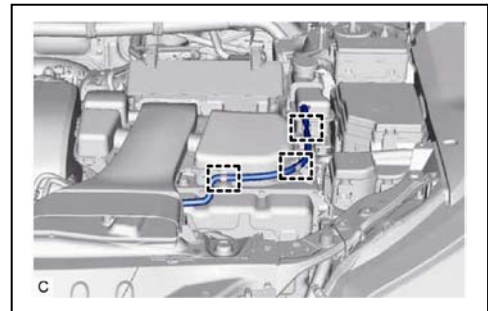
16. REMOVE COOL AIR INTAKE DUCT SEAL

- (1) Remove the 9 clips and cool air intake duct seal.

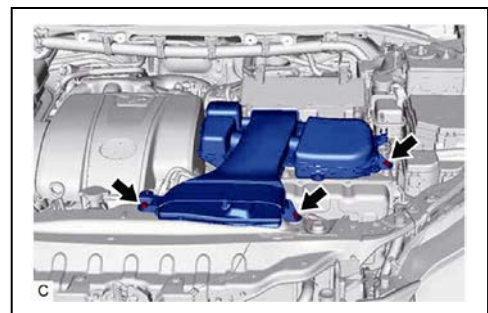


17. REMOVE INLET AIR CLEANER ASSEMBLY

- (1) Disengage the 3 inverter drain hose clamps.

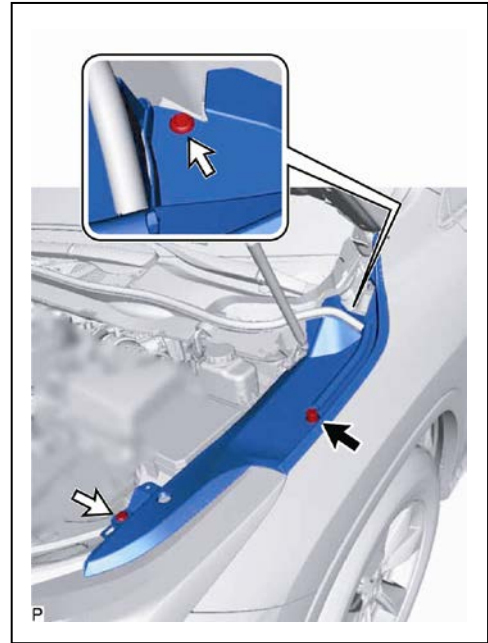


- (2) Remove the 3 bolts and inlet air cleaner assembly from the air cleaner assembly with air cleaner hose.



18. REMOVE FRONT FENDER REINFORCEMENT SUB-ASSEMBLY TOP LH

- (1) Remove the center hood cushion and 2 clips.

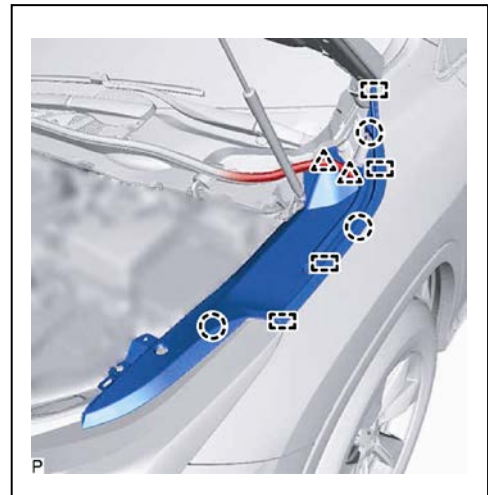


- (1) Disengage the 2 clips to disconnect the cowl top ventilator louver sub-assembly.
- (2) Disengage the 3 claws and 4 guides to remove the front fender reinforcement sub-assembly top LH.

19. REMOVE FRONT FENDER REINFORCEMENT SUB-ASSEMBLY TOP RH

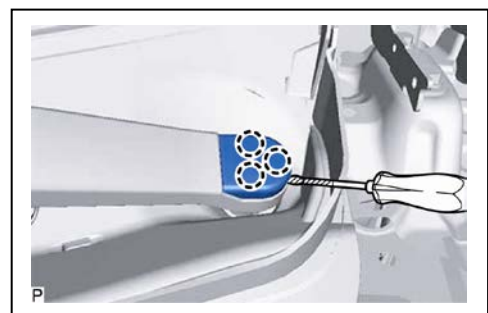
Hint:

Use the same procedure as for the LH side.



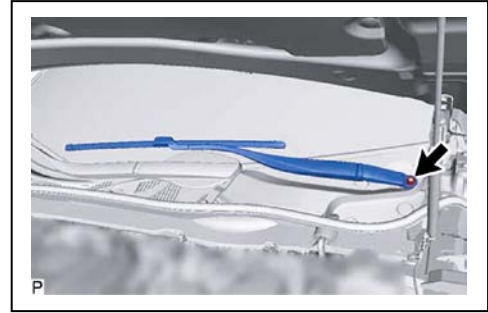
20. REMOVE FRONT WIPER ARM HEAD CAP

- (1) Using a screwdriver, disengage the 3 claws to remove the front wiper arm head cap.



21. REMOVE FRONT WIPER ARM AND BLADE ASSEMBLY LH

- (1) Remove the nut and front wiper arm and blade assembly LH.

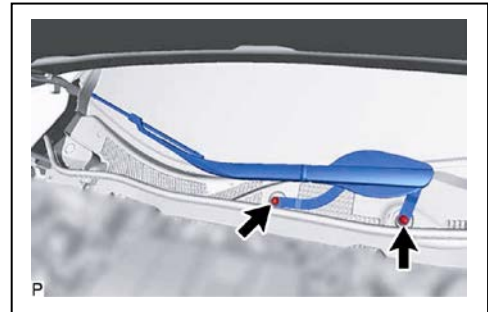


22. REMOVE FRONT WIPER ARM AND BLADE ASSEMBLY RH

- (1) While holding the front wiper arm and blade assembly RH, remove the 2 nuts and front wiper arm and blade assembly RH.

Notice:

As the front wiper arm and blade assembly RH and the surrounding components may be damaged, make sure to hold the front wiper arm and blade assembly RH when removing the 2 nuts.



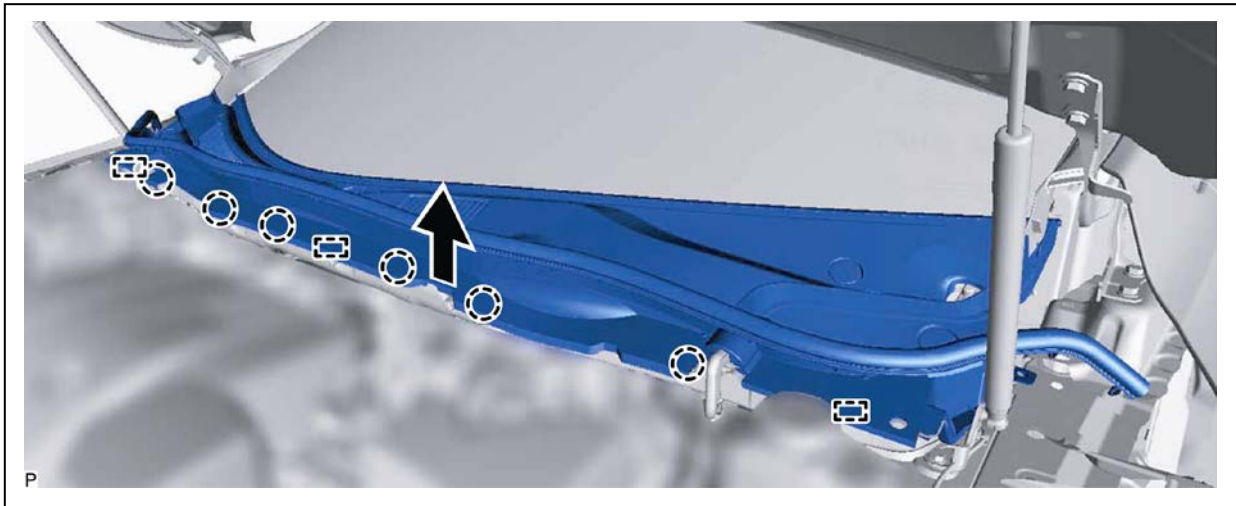
23. REMOVE COWL TOP VENTILATOR LOUVER SUB-ASSEMBLY

- (1) Remove the 2 clips.

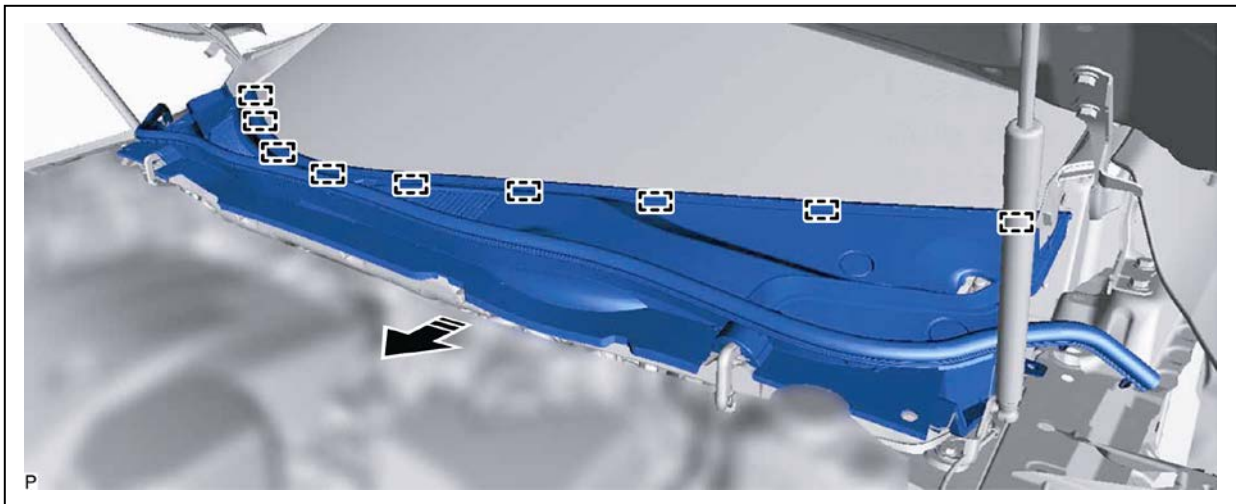


- (2) Disengage the 2 clips to disconnect the windshield outside moulding LH and windshield outside moulding RH.

- (3) Disengage the 6 claws and 3 guides as shown in the illustration.



- (4) Disengage the 9 guides and remove the cowl top ventilator louver sub-assembly as shown in the illustration.

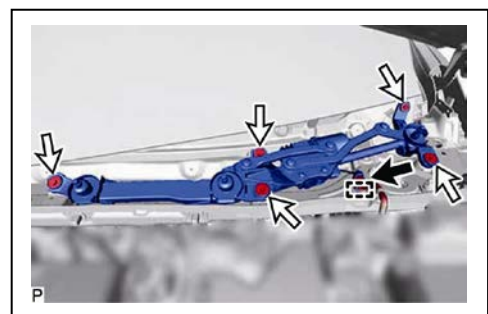


24. REMOVE FRONT WIPER MOTOR AND LINK ASSEMBLY

- (1) Disconnect the connector.
- (2) Disengage the clamp.
- (3) Remove the 5 bolts and front wiper motor and link assembly.

Hint:

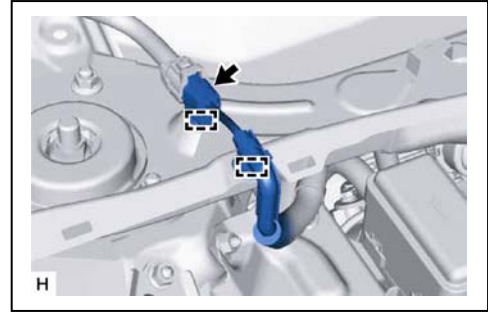
Remove the bolt (A) and front wiper motor and link assembly as a set.



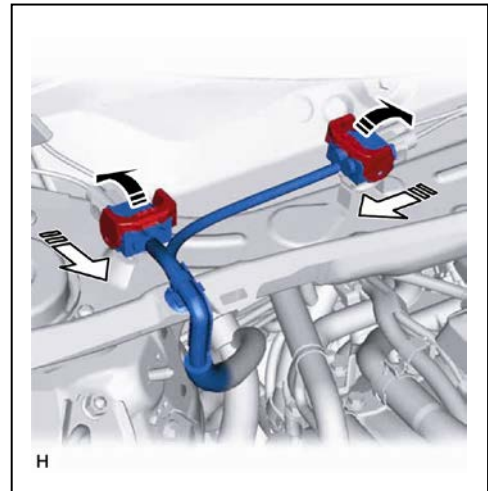
25. REMOVE OUTER COWL TOP PANEL SUB-ASSEMBLY (for LHD)

- (1) w/ Wiper Deicer System:

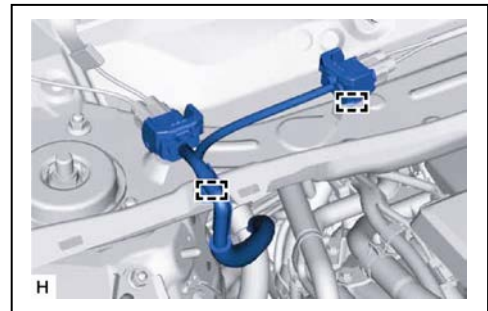
- a) Disconnect the connector.
- b) Disengage the 2 clamps and separate the wire harness from the outer cowl top panel sub-assembly.



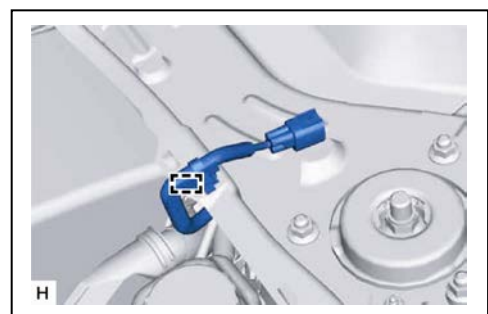
- (2) w/ Heated Windshield Defroster System:
 - a) Release the lock lever and disconnect the connectors.



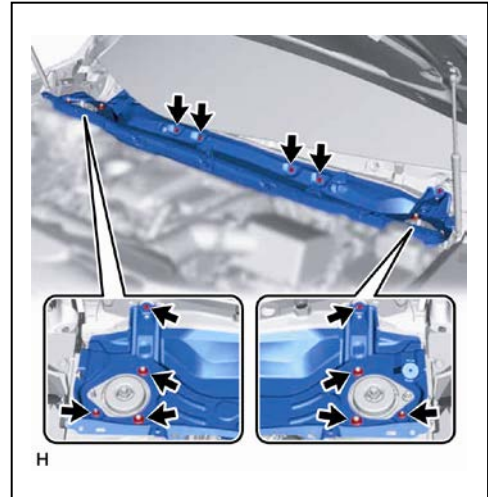
- b) Disengage the 2 clamps and separate the wire harness from the outer cowl top panel sub-assembly.



- (3) Disengage the clamp and separate the wire harness from the outer cowl top panel sub-assembly.

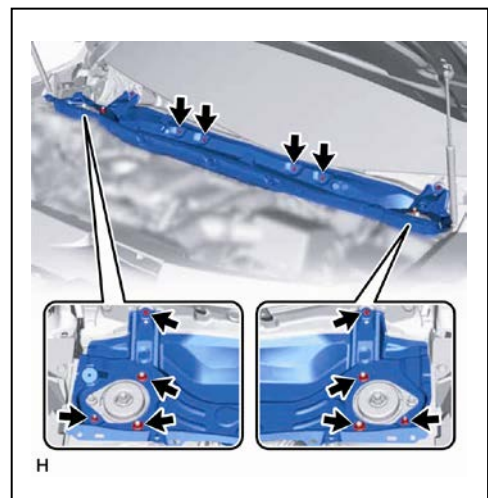
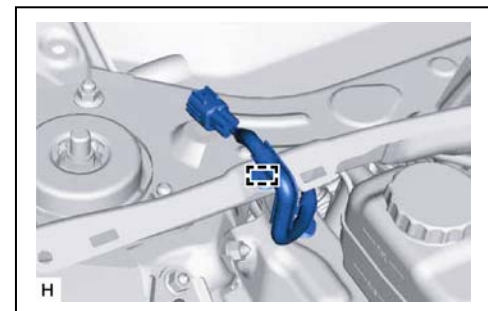
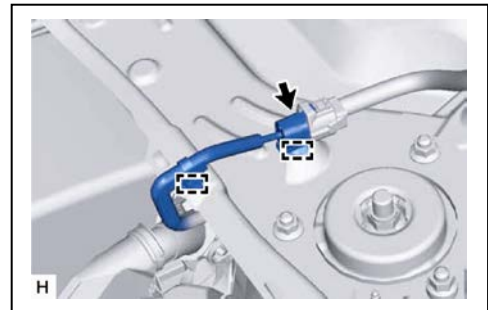


- (4) Remove the 6 bolts, 6 nuts and outer cowl top panel sub-assembly.



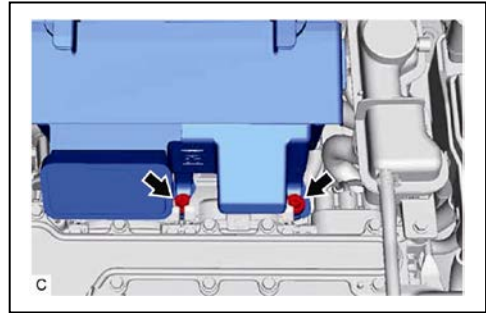
26. REMOVE OUTER COWL TOP PANEL SUB-ASSEMBLY (for RHD)

- (1) w/ Wiper Deicer System:
- a) Disconnect the connector.
 - b) Disengage the 2 clamps and separate the wire harness from the outer cowl top panel sub-assembly.
- (2) Disengage the clamp and separate the wire harness from the outer cowl top panel subassembly.
- (3) Remove the 6 bolts, 6 nuts and outer cowl top panel sub-assembly.

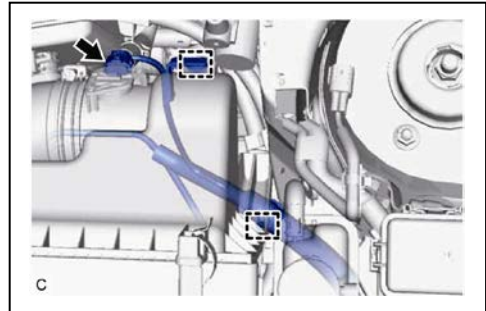


27. REMOVE AIR CLEANER ASSEMBLY WITH AIR CLEANER HOSE

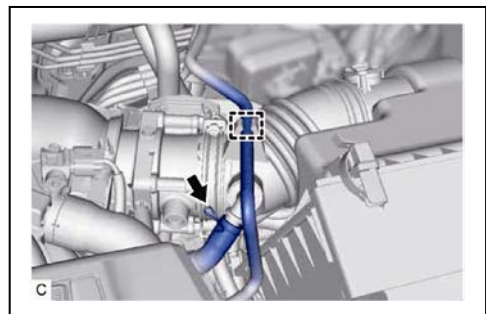
- (1) Remove the 2 bolts from the air cleaner assembly with air cleaner hose.



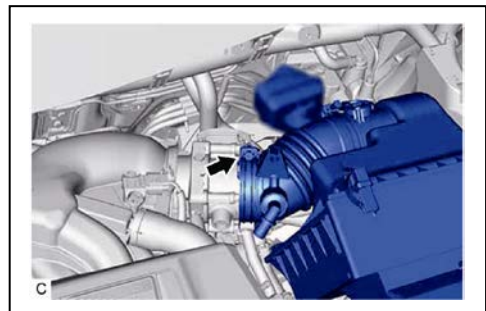
- (2) Disconnect the intake mass air flow meter sub-assembly connector.
- (3) Disengage the wire harness clamp and grommet to separate the air cleaner assembly with air cleaner hose.



- (4) Slide the clip and disconnect the No. 2 ventilation hose from the air cleaner assembly with air cleaner hose.
- (5) Disengage the No. 1 fuel vapor feed hose from the air cleaner assembly with air cleaner hose.

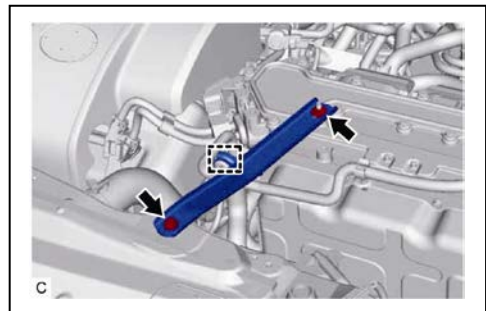


- (6) Loosen the hose clamp and remove the air cleaner assembly with air cleaner hose from the throttle body with motor assembly.



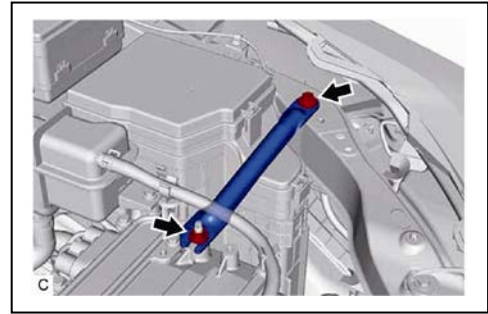
28. REMOVE NO. 3 INVERTER BRACKET

- (1) Disengage the clamp.
- (2) Remove the bolt, nut and No. 3 inverter bracket.



29. REMOVE NO. 6 INVERTER BRACKET

- (1) Remove the bolt, nut and No. 6 inverter bracket.



30. REMOVE INVERTER TERMINAL COVER

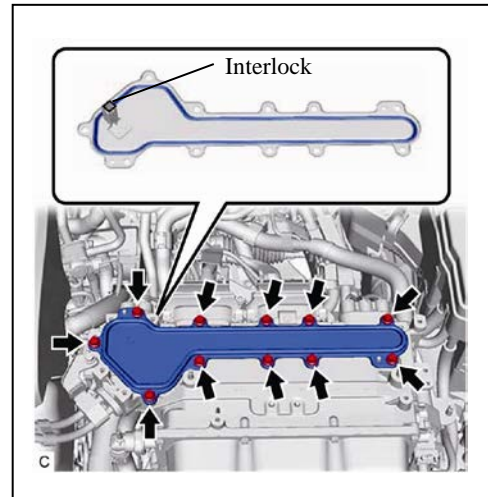
Caution:

Wear insulated gloves.

- (1) Remove the 11 bolts and inverter terminal cover from the inverter with converter assembly.

Notice:

Make sure to pull the inverter terminal cover straight up, as a connector is connected to the bottom of the inverter terminal cover.



31. CHECK TERMINAL VOLTAGE

Caution:

Wear insulated gloves.

Notice:

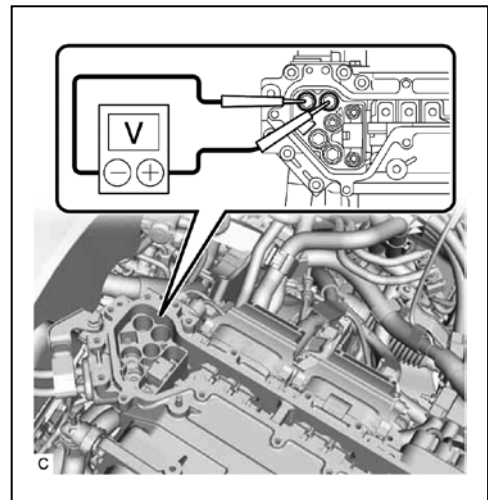
Do not allow any foreign matter or water to enter the inverter with converter assembly.

- (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 higher on the voltmeter.



32. REMOVE REAR DOOR SCUFF PLATE LH

(1) w/o Rear No. 2 Seat:

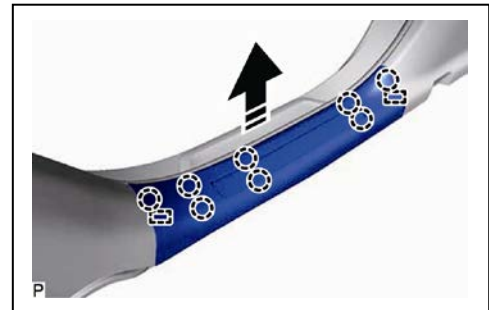
- a) Disengage the claw as shown in the illustration.

Hint:

Use the same procedure for the front side and rear side.

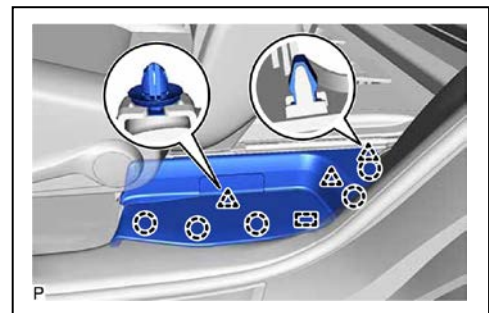


- b) Disengage the 8 claws and 2 guides to remove the rear door scuff plate LH as shown in the illustration.



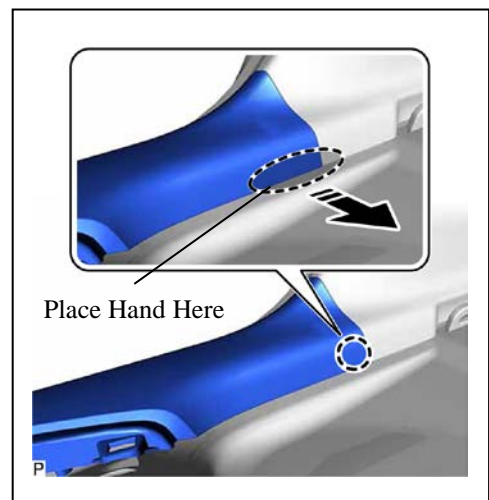
(2) w/ Rear No. 2 Seat:

- a) Disengage the 5 claws, 3 clips and guide to remove the rear door scuff plate LH.

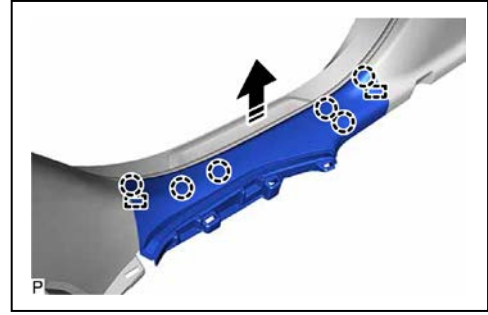


33. REMOVE REAR DOOR INSIDE SCUFF PLATE LH (w/ Rear No. 2 Seat)

(1) Disengage the claw as shown in the illustration.



- (2) Disengage the 6 claws and 2 guides to remove the rear door inside scuff plate LH as shown in the illustration.



34. REMOVE REAR DOOR SCUFF PLATE RH

Hint:

Use the same procedure as for the LH side.

35. REMOVE REAR DOOR INSIDE SCUFF PLATE RH (w/ Rear No. 2 Seat)

Hint:

Use the same procedure as for the LH side.

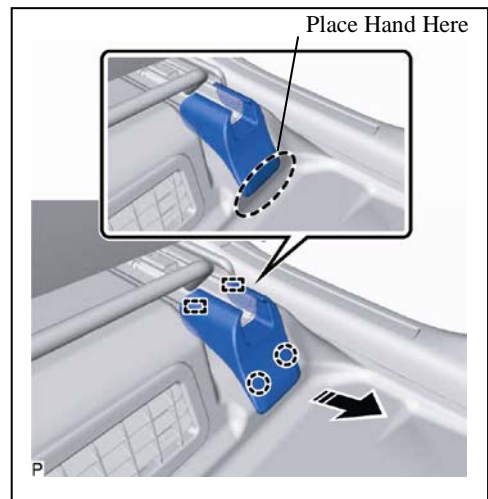
36. REMOVE REAR SEAT HEADREST ASSEMBLY (w/o Rear No. 2 Seat)

- (1) Remove the rear seat headrest assembly.

37. REMOVE REAR SEAT OUTER TRACK

BRACKET COVER LH (w/o Rear No. 2 Seat)

- (1) Disengage the 2 claws and 2 guides to remove the rear seat outer track bracket cover LH as shown in the illustration.



38. REMOVE REAR SEAT INNER TRACK

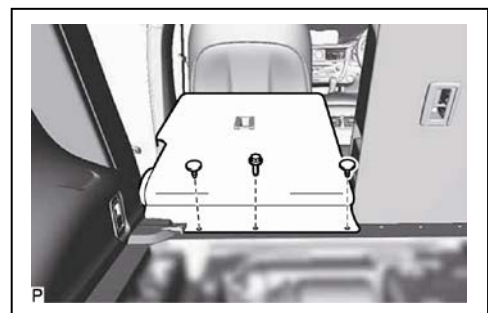
BRACKET COVER LH (w/o Rear No. 2 Seat)

Hint:

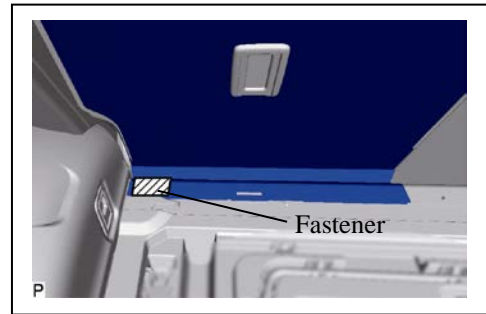
Use the same procedure as for the rear seat outer track bracket cover LH.

39. DISCONNECT REAR SEAT ASSEMBLY LH (w/o Rear No. 2 Seat)

- (1) Using a clip remover, remove the 2 clips.
- (2) Remove the bolt.

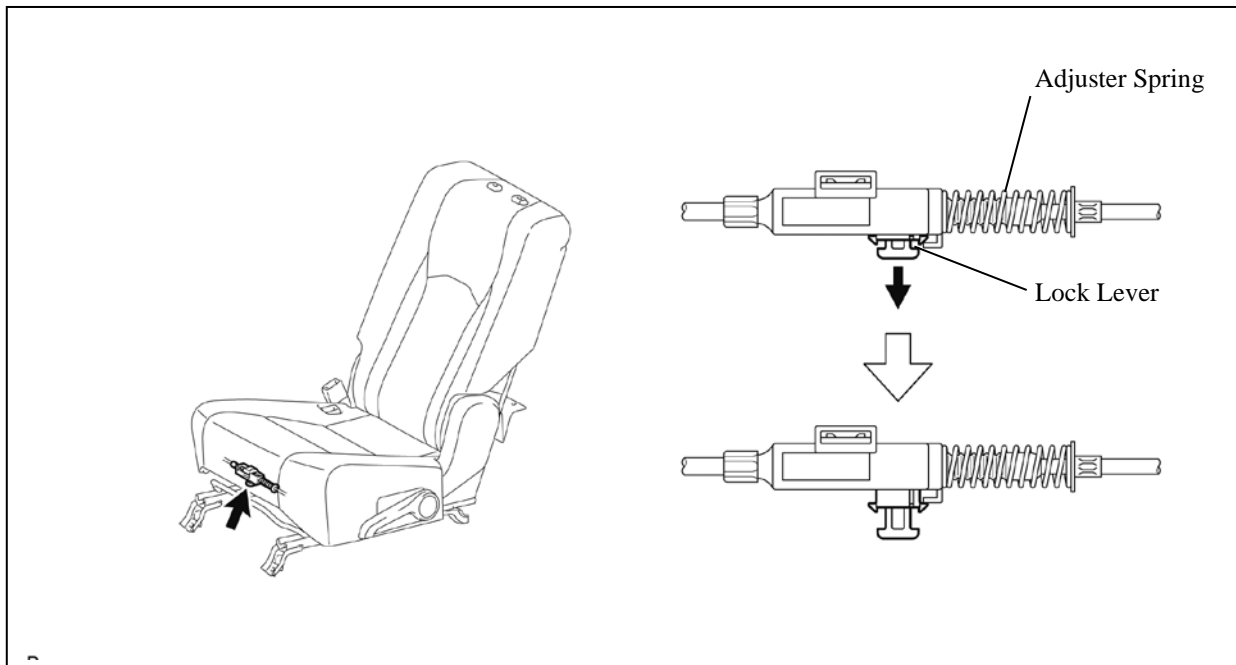


- (3) Disengage the fastener to disconnect the rear seat assembly LH.

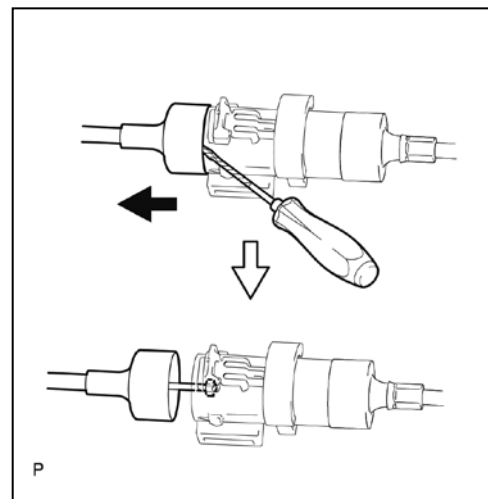


40. DISCONNECT NO. 2 REAR SEAT RECLINING CONTROL CABLE (w/o Rear No. 2 Seat for Manual Seat)

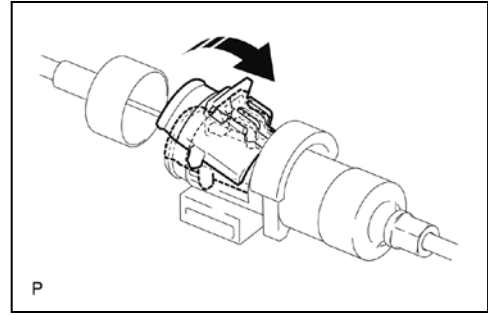
- (1) Lift the seat track adjusting handle and move the rear seat assembly LH to the foremost position.
- (2) Pull out the lock lever to release the adjuster spring as shown in the illustration.



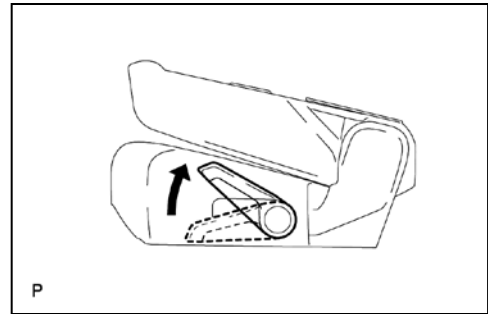
- (3) Using a screwdriver, disconnect the No. 2 rear seat reclining control cable as shown in the illustration.



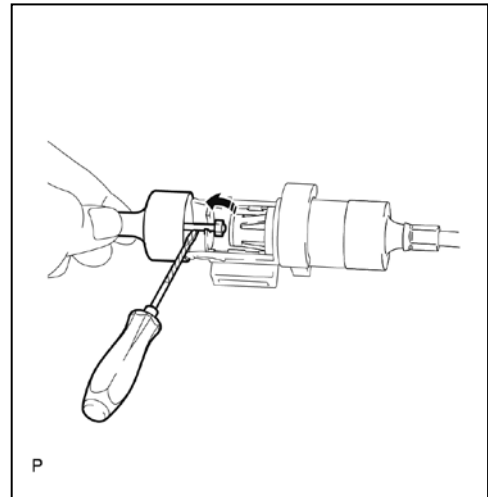
- (4) Remove the joint case cover from the joint case as shown in the illustration.



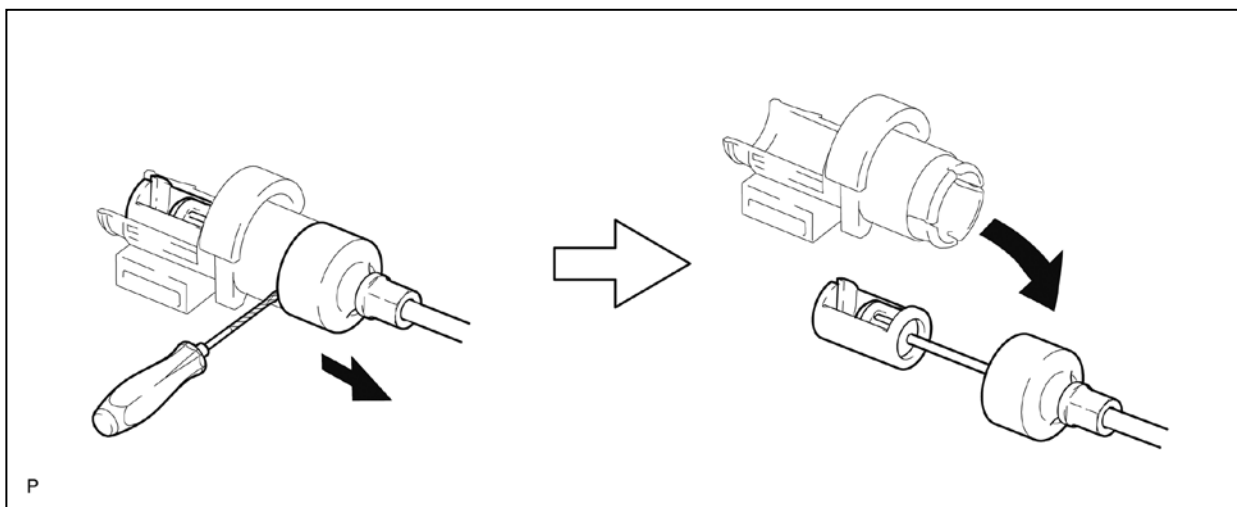
- (5) Lift and hold the No. 1 reclining adjuster release handle LH at the uppermost position as shown in the illustration.



- (6) Using a screwdriver, disconnect the No. 2 rear seat reclining control cable as shown in the illustration.



- (7) Using a screwdriver, disconnect the reclining remote control lever sub-assembly RH as shown in the illustration.



41. REMOVE REAR SEAT ASSEMBLY LH (w/o Rear No. 2 Seat)

- (1) for Power Seat:
 - a) Lift the seat track adjusting handle and move the rear seat assembly LH to the foremost position.
- (2) Disconnect the rear seat airbag assembly connector under the rear seat assembly LH.

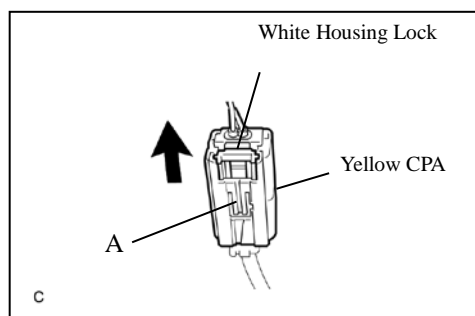
Notice:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

- a) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)
- b) Push down the white housing lock again and disconnect the connector.

Notice:

Do not push down the part (A) shown in the illustration when disconnecting the connector.



- (3) Disconnect the connector.
- (4) Remove the rear center seat inner belt assembly from the rubber band of the rear seat cushion assembly RH as shown in the illustration.
- (5) Lift the seat track adjusting handle and move the rear seat assembly LH to the foremost position.



- (6) Remove the 3 bolts.



- (7) Remove the 2 bolts and rear seat assembly LH.



42. REMOVE REAR SEAT HEADREST ASSEMBLY (w/o Rear No. 2 Seat)

- (1) Remove the rear seat headrest assembly.

43. REMOVE REAR SEAT CENTER HEADREST ASSEMBLY (w/o Rear No. 2 Seat)

- (1) Remove the rear seat center headrest assembly.

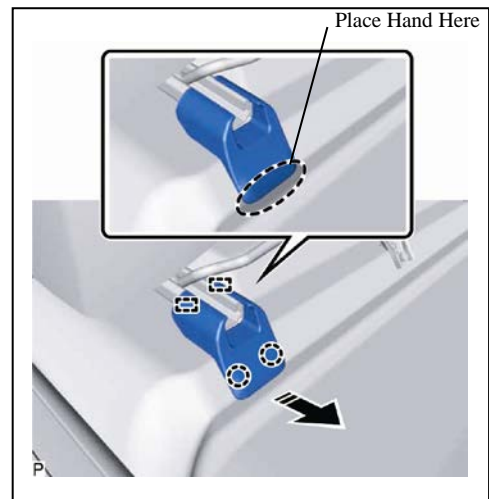
44. REMOVE REAR SEAT OUTER TRACK BRACKET COVER RH (w/o Rear No. 2 Seat)

- (1) Disengage the 2 claws and 2 guides to remove the rear seat outer track bracket cover RH as shown in the illustration.

45. REMOVE REAR SEAT INNER TRACK BRACKET COVER RH (w/o Rear No. 2 Seat)

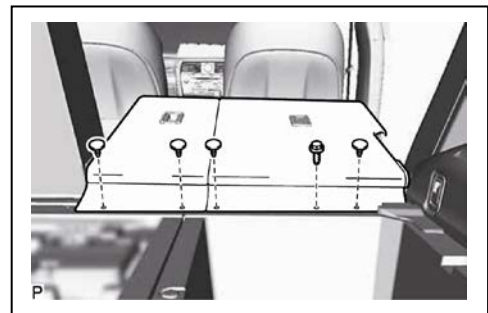
Hint:

Use the same procedure as for the rear seat outer track bracket cover RH.

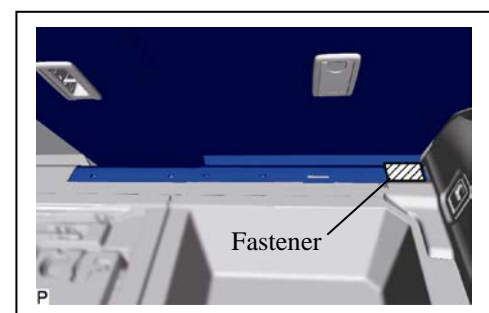


46. DISCONNECT REAR SEAT ASSEMBLY RH (w/o Rear No. 2 Seat)

- (1) Using a clip remover, remove the 4 clips.
(2) Remove the bolt.

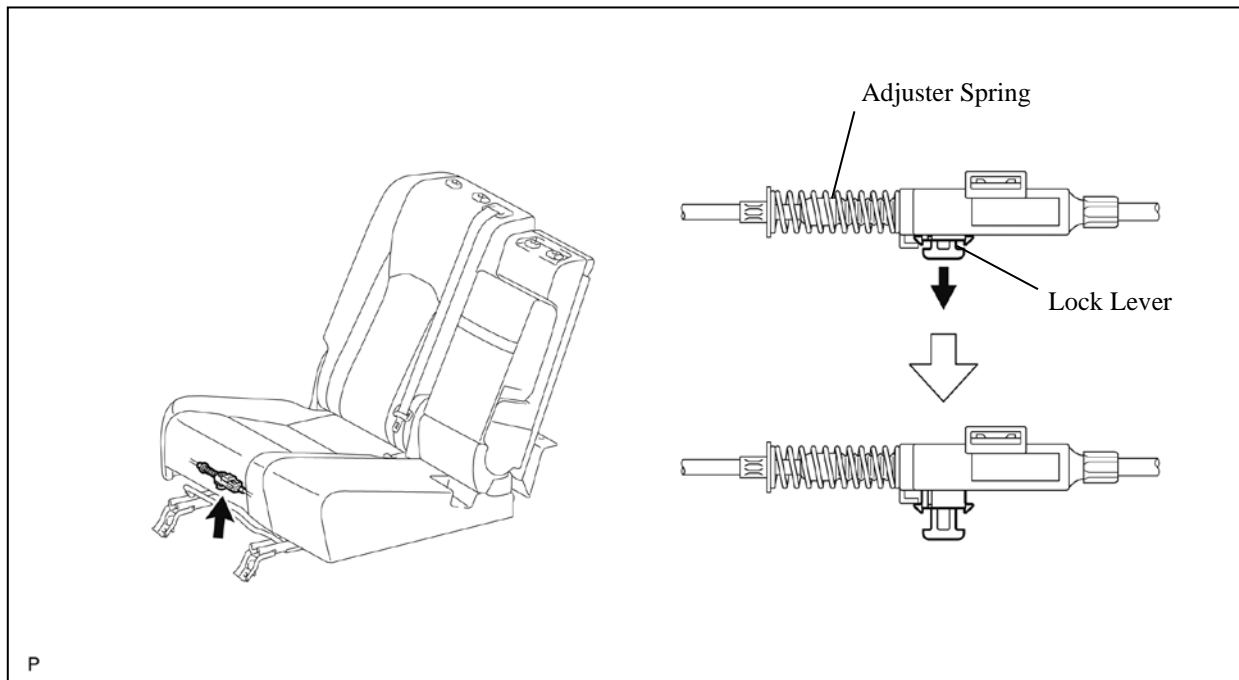


- (3) Disengage the fastener to disconnect the rear seat assembly RH.

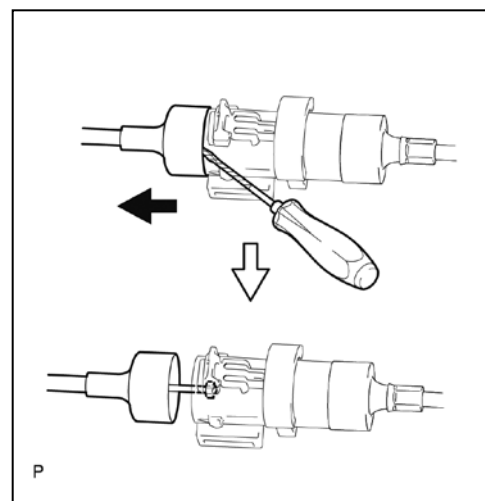


47. DISCONNECT REAR SEAT RECLINING CONTROL CABLE (w/o Rear No. 2 Seat for Manual Seat)

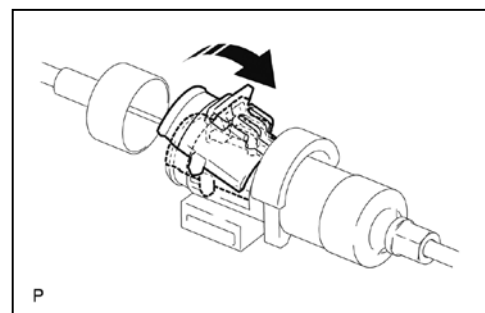
- (1) Lift the seat track adjusting handle and move the rear seat assembly RH to the foremost position.
- (2) Pull out the lock lever to release the adjuster spring as shown in the illustration.



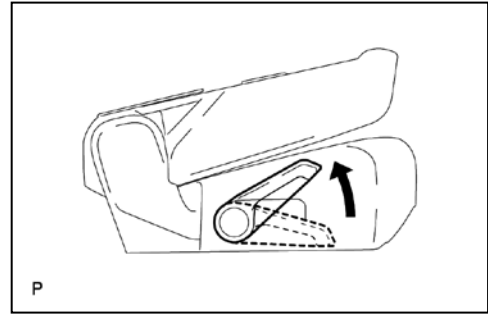
- (3) Using a screwdriver, disconnect the rear seat reclining control cable as shown in the illustration.



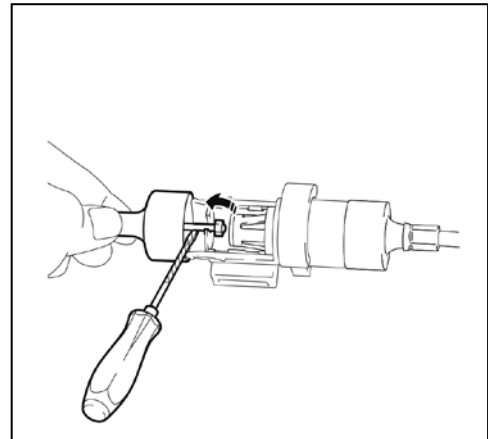
- (4) Remove the joint case cover from the joint case as shown in the illustration.



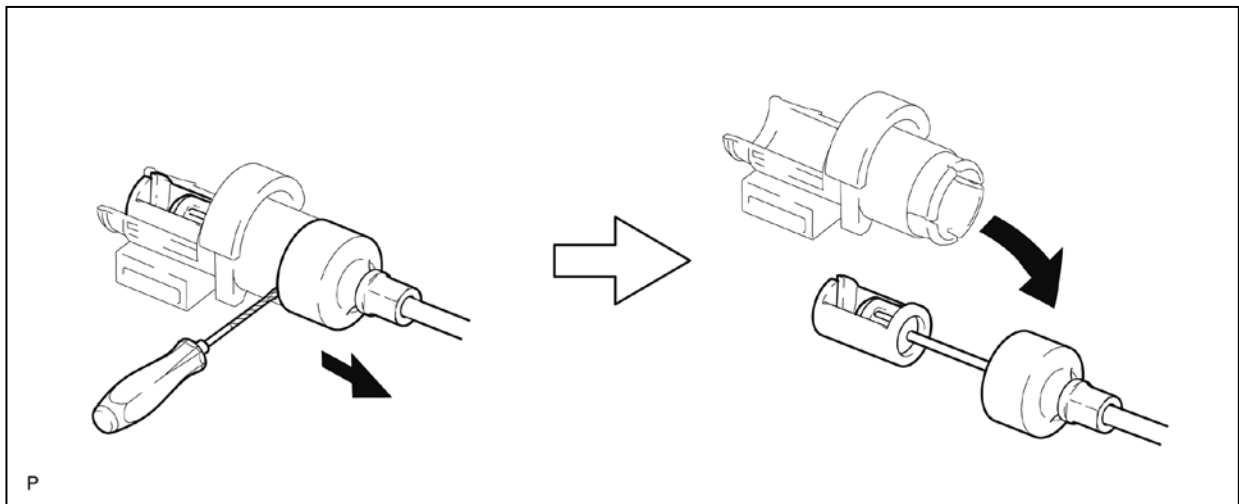
- (5) Lift and hold the No. 1 reclining adjuster release handle RH at the uppermost position as shown in the illustration.



- (6) Using a screwdriver, disconnect the rear seat reclining control cable as shown in the illustration.



- (7) Using a screwdriver, disconnect the reclining remote control lever sub-assembly RH as shown in the illustration.



48. REMOVE REAR SEAT ASSEMBLY RH (w/o Rear No. 2 Seat)

- (1) for Power Seat:
 - a) Lift the seat track adjusting handle and move the rear seat assembly RH to the foremost position.
- (2) Disconnect the rear seat airbag assembly connector under the rear seat assembly RH.

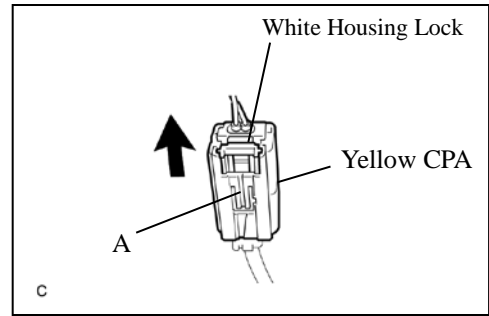
Notice:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

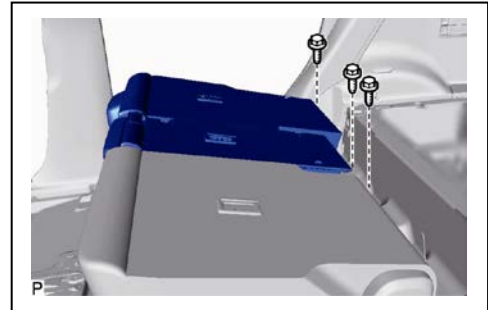
- a) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)
- b) Push down the white housing lock again and disconnect the connector.

Notice:

Do not push down the part (A) shown in the illustration when disconnecting the connector.



- (3) Disconnect the connector.
- (4) Lift the seat track adjusting handle and move the rear seat assembly RH to the foremost position.
- (5) Remove the 3 bolts.



- (6) Remove the 2 bolts and rear seat assembly RH.



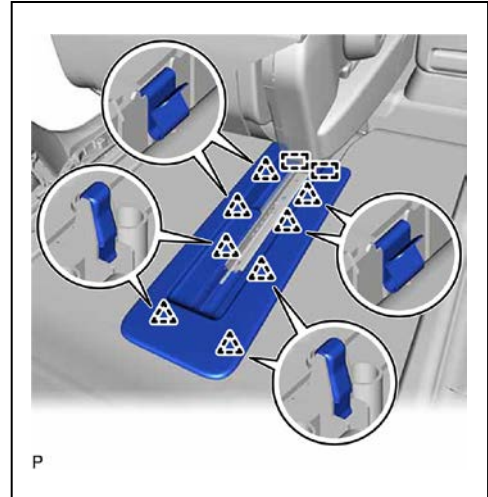
49. REMOVE REAR SEAT HEADREST ASSEMBLY (w/ Rear No. 2 Seat)

- (1) Remove the rear seat headrest assembly.

50. REMOVE SEAT INNER TRACK BRACKET COVER LH (w/ Rear No. 2 Seat)

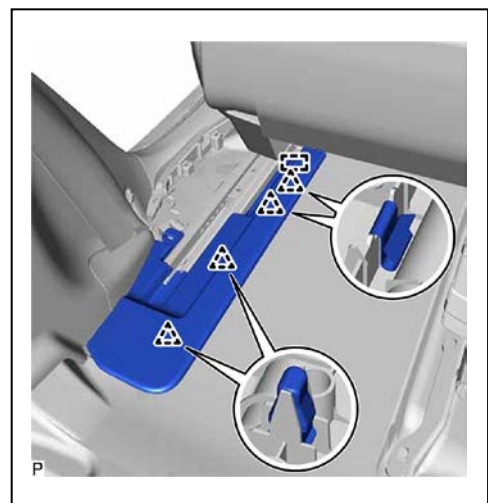
- (1) Operate the seat track adjusting handle and move the rear No. 1 seat assembly LH to the foremost position.

- (2) Disengage the 8 clips and 2 guides, and remove the seat inner track bracket cover LH.



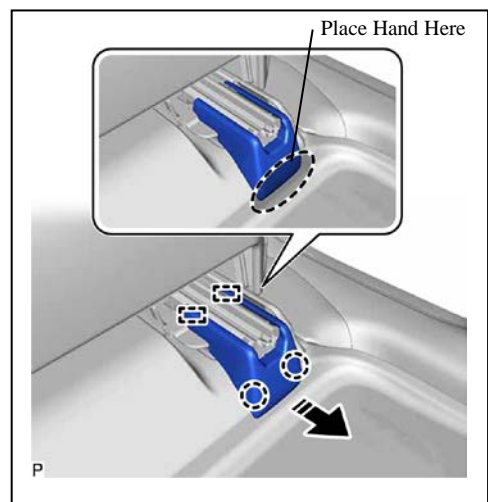
51. REMOVE REAR SEAT OUTER TRACK BRACKET COVER LH (w/ Rear No. 2 Seat)

- (1) Disengage the 4 clips and guide, and remove the rear seat outer track bracket cover LH.



52. REMOVE REAR SEAT OUTER TRACK BRACKET COVER LH (w/ Rear No. 2 Seat)

- (1) Operate the seat track adjusting handle and move the rear No. 1 seat assembly LH to the rearmost position.
- (2) Disengage the 2 claws and 2 guides to remove the rear seat outer track bracket cover LH as shown in the illustration.



53. REMOVE REAR SEAT INNER TRACK BRACKET COVER LH (w/ Rear No. 2 Seat)

Hint:

Use the same procedure as for the rear seat outer track bracket cover LH.

54. REMOVE REAR NO. 1 SEAT ASSEMBLY LH (w/ Rear No. 2 Seat)

- (1) Disconnect the rear seat airbag assembly connector.

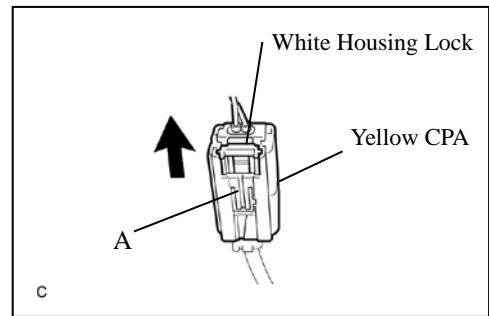
Notice:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

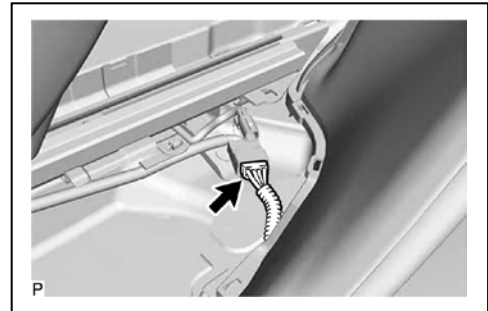
- a) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)
- b) Push down the white housing lock again and disconnect the connector.

Notice:

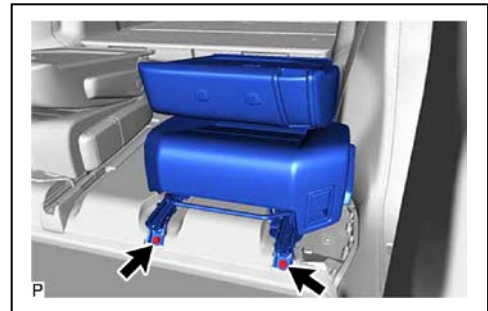
Do not push the part (A) shown in the illustration when disconnecting the connector.



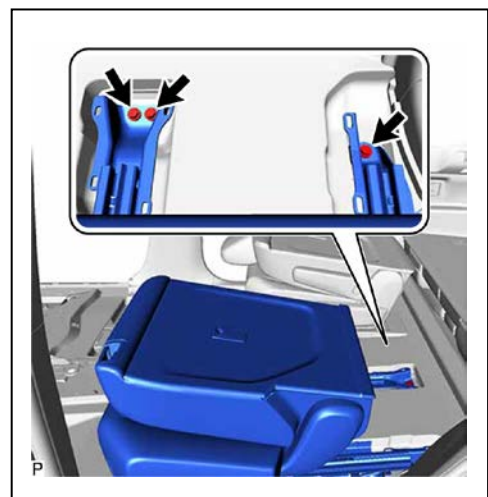
- (2) Disconnect the connector.



- (3) Remove the 2 bolts.
- (4) Operate the seat track adjusting handle and move the rear No. 1 seat assembly LH to the foremost position.



- (5) Remove the 3 bolts.



- (6) Disengage the 2 pins and remove the rear No. 1 seat assembly LH.

Notice:

Be careful not to damage the rear No. 1 seat assembly LH, vehicle body or vehicle interior.



55. REMOVE REAR SEAT HEADREST ASSEMBLY (w/ Rear No. 2 Seat)

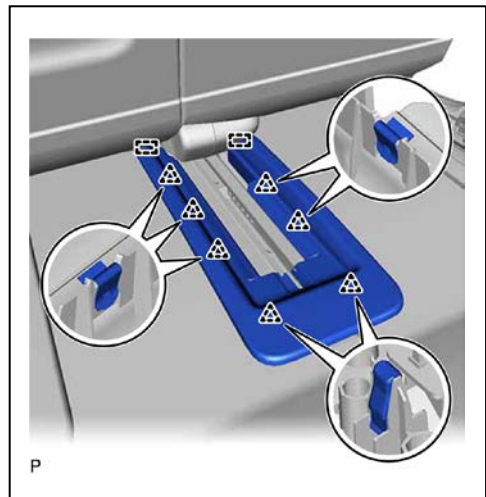
- (1) Remove the rear seat headrest assembly.

56. REMOVE REAR SEAT CENTER HEADREST ASSEMBLY (w/ Rear No. 2 Seat for 60/40 Split Seat Type)

- (1) Remove the rear seat center headrest assembly.

57. REMOVE SEAT INNER TRACK BRACKET COVER RH (w/ Rear No. 2 Seat)

- (1) Operate the seat track adjusting handle and move the rear No. 1 seat assembly RH to the foremost position.
- (2) Disengage the 7 clips and 2 guides, and remove the seat inner track bracket cover RH.

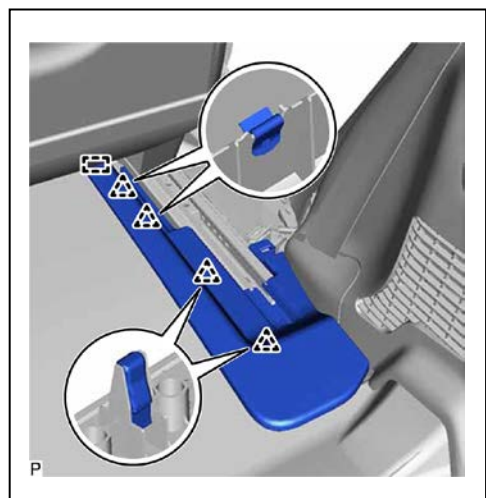


58. REMOVE REAR SEAT OUTER TRACK BRACKET COVER RH (w/ Rear No. 2 Seat)

- (1) Disengage the 4 clips and guide, and remove the rear seat outer track bracket cover RH.

59. REMOVE REAR SEAT OUTER TRACK BRACKET COVER RH (w/ Rear No. 2 Seat)

- (1) Operate the seat track adjusting handle and move the rear No. 1 seat assembly RH to the rearmost position.

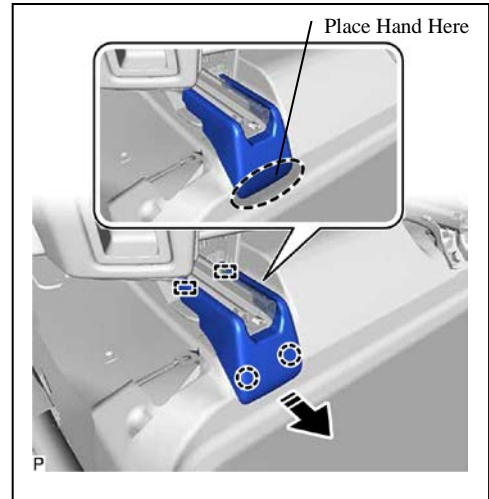


- (2) Disengage the 2 claws and 2 guides to remove the rear seat outer track bracket cover RH as shown in the illustration.

60. REMOVE REAR SEAT INNER TRACK BRACKET COVER RH (w/ Rear No. 2 Seat)

Hint:

Use the same procedure as for the rear seat outer track bracket cover RH.



61. REMOVE REAR NO. 1 SEAT ASSEMBLY RH (w/ Rear No. 2 Seat)

- (1) Disconnect the rear seat airbag assembly connector.

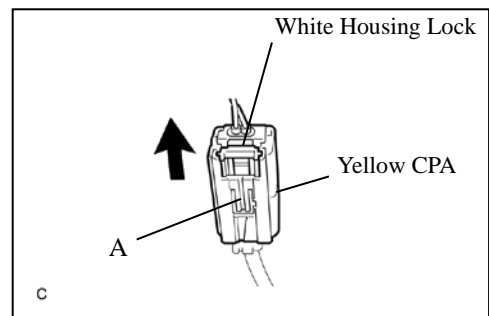
Notice:

When disconnecting any airbag connector, take care not to damage the airbag wire harness.

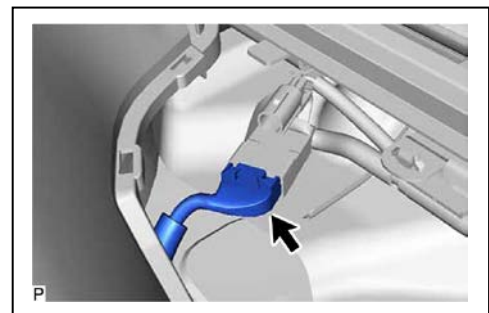
- a) Push down the white housing lock and slide the yellow CPA. (At this time, the connector cannot be disconnected yet.)
- b) Push down the white housing lock again and disconnect the connector.

Notice:

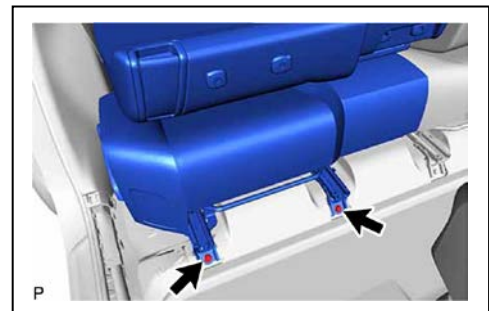
Do not push the part (A) shown in the illustration when disconnecting the connector.



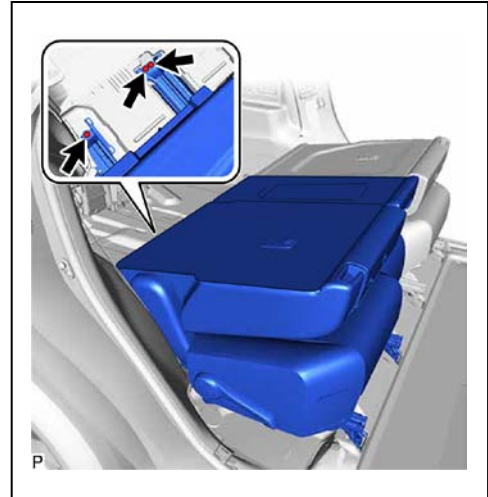
- (2) Disconnect the connector.



- (3) Remove the 2 bolts.
- (4) Operate the seat track adjusting handle and move the rear No. 1 seat assembly RH to the foremost position.



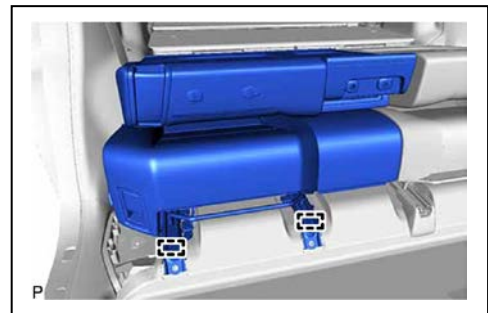
(5) Remove the 3 bolts.



(6) Disengage the 2 pins and remove the rear No. 1 seat assembly RH.

Notice:

Be careful not to damage the rear No. 1 seat assembly RH, vehicle body or vehicle interior.

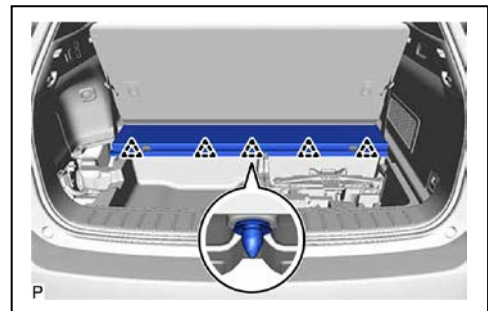


62. REMOVE TONNEAU COVER ASSEMBLY (w/ Rear No. 2 Seat)

(1) Remove the tonneau cover assembly.

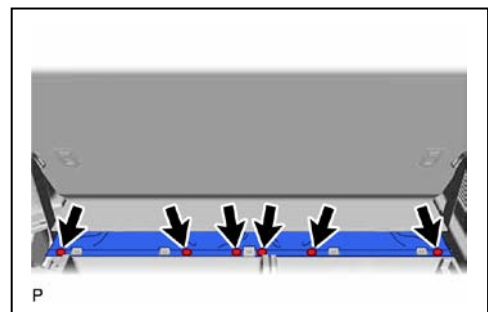
63. REMOVE NO. 1 DECK BOARD (w/ Rear No. 2 Seat)

(1) Disengage the 5 clips to remove the No. 1 deck board.



64. DISCONNECT REAR NO. 2 SEAT ASSEMBLY (w/ Rear No. 2 Seat)

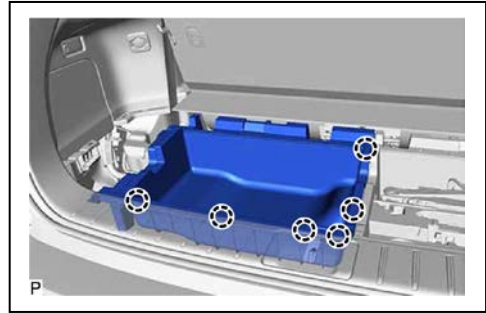
(1) Using a clip remover, remove the 6 clips to disconnect the rear No. 2 seat assembly.



65. REMOVE REAR DECK FLOOR BOX (w/ Rear No. 2 Seat)

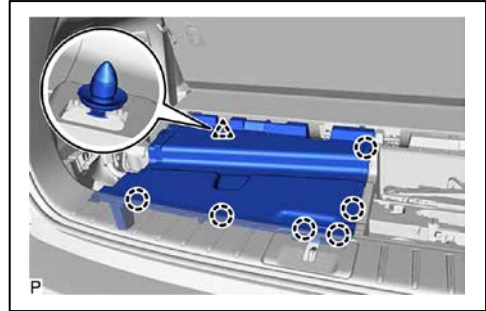
(1) w/o Woofer:

- a) Disengage the 6 claws to remove the rear deck floor box.



(2) w/ Woofer:

- a) Disengage the 6 claws and clip to remove the rear deck floor box.

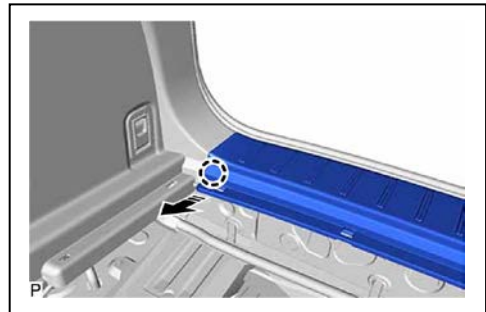


66. REAR FLOOR FINISH PLATE (w/ Rear No. 2 Seat)

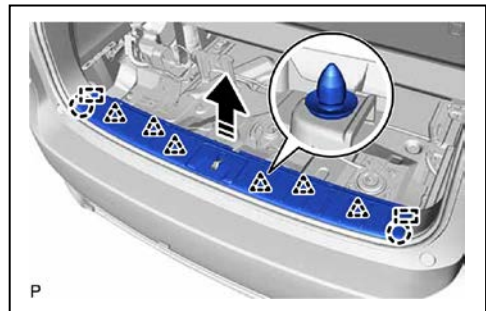
(1) Disengage the claw as shown in the illustration.

Hint:

Use the same procedure for the RH side and LH side.



(2) Disengage the 2 claws, 6 clips and 2 guides to remove the rear floor finish plate as shown in the illustration.

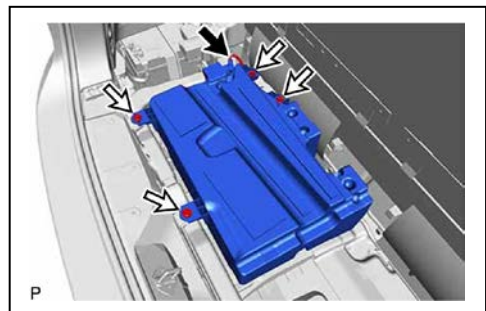


67. REAR NO. 3 SPEAKER ASSEMBLY (w/ Rear No. 2 Seat)

Notice:

Do not touch the speaker cone.

- (1) Disconnect the connector.
- (2) Remove the 4 bolts and rear No. 3 speaker assembly.

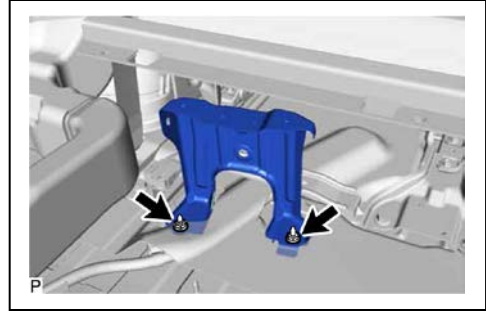


68. REMOVE NO. 2 DECK FLOOR BRACKET LH

(w/ Rear No. 2 Seat)

(1) w/ Woofer:

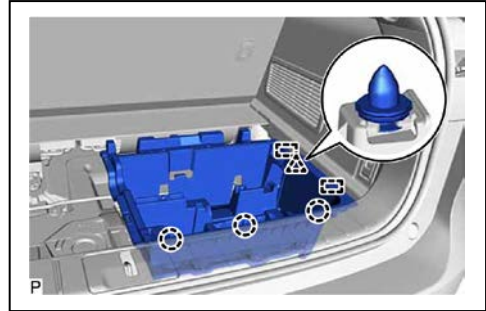
- a) Remove the 2 nuts and No. 2 deck floor bracket LH.



69. REMOVE FRONT DECK FLOOR BOX (w/ Rear No. 2 Seat)

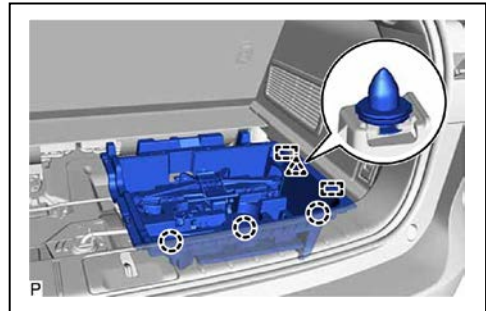
(1) w/o Spare Tire:

- a) Disengage the 3 claws, clip and 2 guides to remove the front deck floor box.



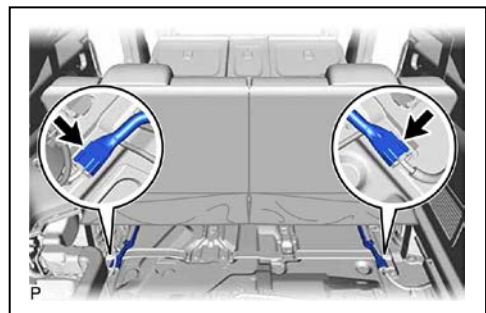
(2) w/ Spare Tire:

- a) Disengage the 3 claws, clip and 2 guides to remove the front deck floor box.



70. REMOVE REAR NO. 2 SEAT ASSEMBLY (w/ Rear No. 2 Seat)

(1) Disconnect the 2 connectors.



(2) Disengage the 6 clips.



(3) Remove the 3 bolts on the front side of the rear No. 2 seat assembly.

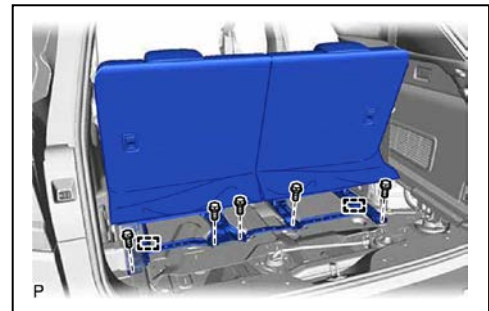


(4) Remove the 5 bolts on the rear side of the rear No. 2 seat assembly.

(5) Disengage the 2 pins and remove the rear No. 2 seat assembly.

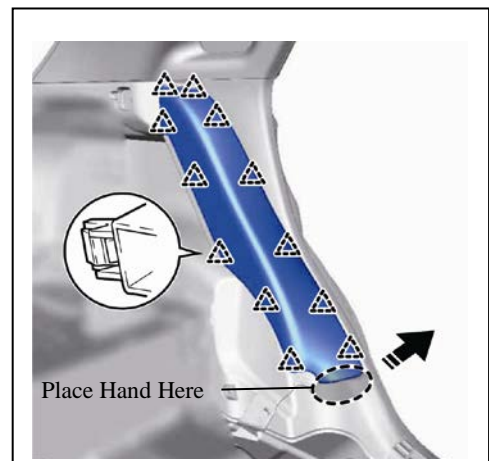
Notice:

Be careful not to damage the rear No. 2 seat assembly, vehicle body or vehicle interior.



71. REMOVE UPPER QUARTER TRIM PAD LH (w/o Rear No. 2 Seat)

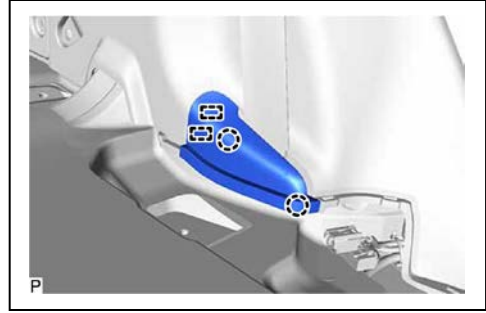
(1) Disengage the 12 clips to remove the upper quarter trim pad LH as shown in the illustration.



72. REMOVE FRONT DECK SIDE TRIM COVER LH

(w/ Rear No. 2 Seat)

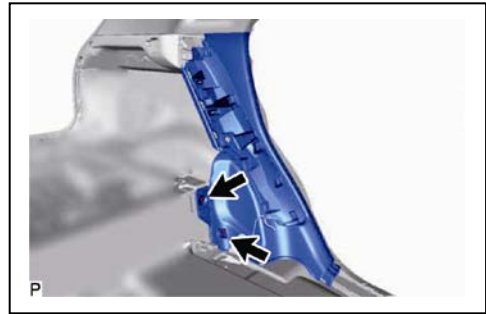
- (1) Disengage the 2 claws and 2 guides to remove the front deck side trim cover LH.



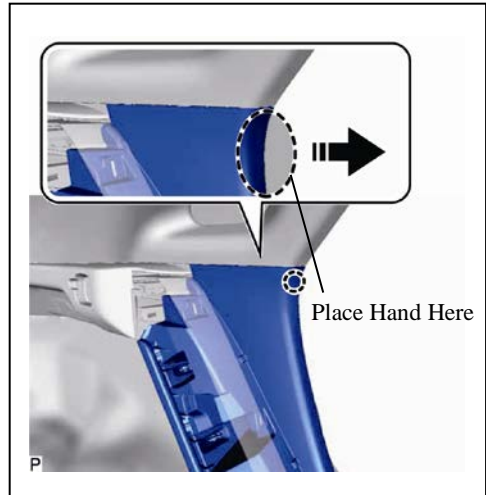
73. REMOVE REAR SEAT SIDE GARNISH LH

(1) w/o Rear No. 2 Seat:

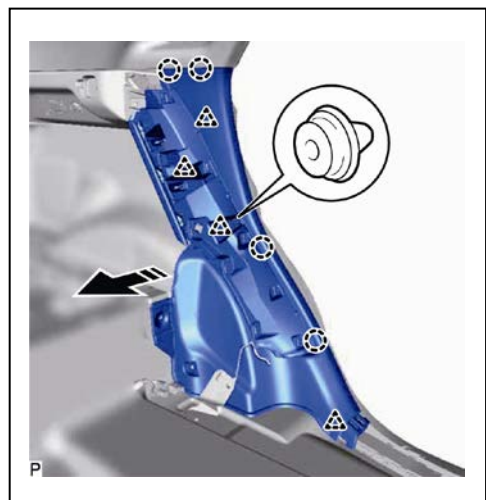
- a) Using a clip remover, remove the 2 clips.



- b) Disengage the claw as shown in the illustration.

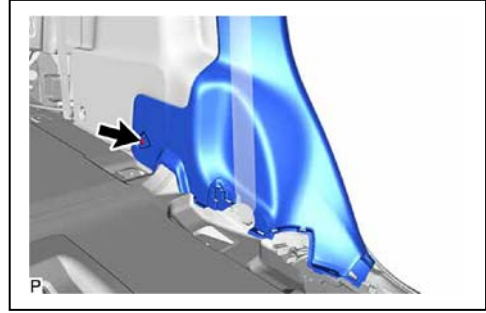


- c) Disengage the 4 claws and 4 clips to remove the rear seat side garnish LH as shown in the illustration.



(2) w/ Rear No. 2 Seat:

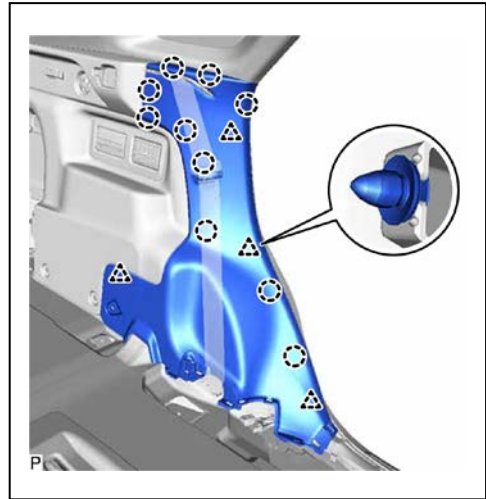
a) Using a clip remover, remove the clip.



b) Disengage the 10 claws and 4 clips to remove the rear seat side garnish LH. (for LHD)

c) Disengage the 10 claws and 4 clips. (for RHD)

d) Disconnect the connector to remove the rear seat side garnish LH. (for RHD)



74. REMOVE UPPER QUARTER TRIM PAD RH

(w/o Rear No. 2 Seat)

Hint:

Use the same procedure as for the LH side.

75. REMOVE FRONT DECK SIDE TRIM COVER RH (w/ Rear No. 2 Seat)

Hint:

Use the same procedure as for the LH side.

76. REMOVE REAR SEAT SIDE GARNISH RH

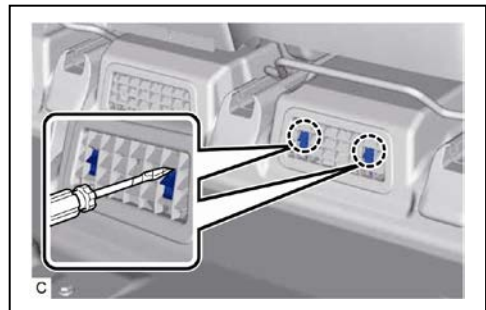
Hint:

Use the same procedure as for the LH side.

77. REMOVE AIR INTAKE COVER (w/o Rear No. 2 Seat)

(1) Remove the air intake cover (for LH Side).

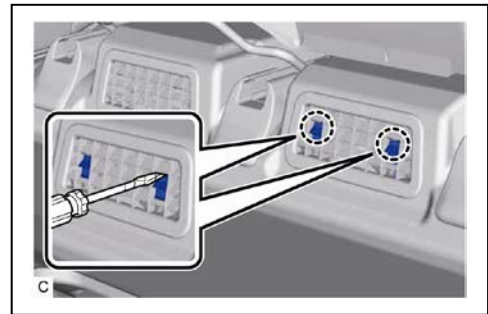
a) Using a screwdriver, disengage the 2 claws and open the 2 hole covers.



- b) Remove the 2 screws.
- c) Disengage the 2 claws and remove the air intake cover (for LH Side).



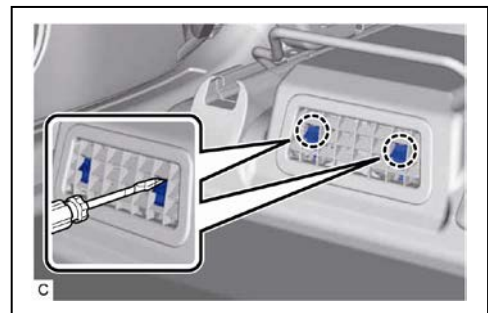
- (2) Remove the air intake cover (for Center).
- a) Using a screwdriver, disengage the 2 claws and open the 2 hole covers.



- b) Remove the 2 screws.
- c) Disengage the 2 claws and remove the air intake cover (for Center).



- (3) Remove the air intake cover (for RH Side).
- a) Using a screwdriver, disengage the 2 claws and open the 2 hole covers.



- b) Remove the 2 screws.
- c) Disengage the 2 claws and remove the air intake cover (for RH Side).

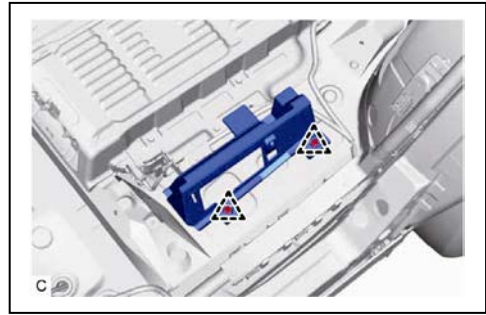


78. SEPARATE FRONT FLOOR CARPET ASSEMBLY

- (1) w/o Rear No. 2 Seat:
 - a) Remove the 3 clips and turn back the front floor carpet assembly.
- (2) w/ Rear No. 2 Seat:
 - a) Turn back the front floor carpet assembly to the point that the HV battery is visible.

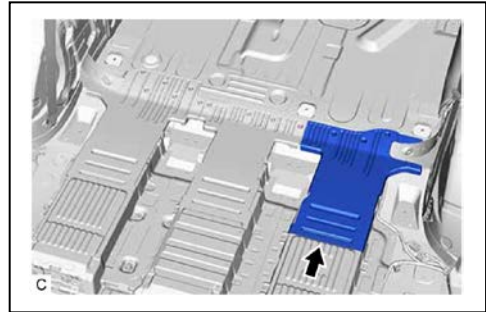
79. REMOVE FLOOR CARPET BRACKET LH (w/o Rear No. 2 Seat)

- (1) Disengage the 2 clips and remove the floor carpet bracket LH.



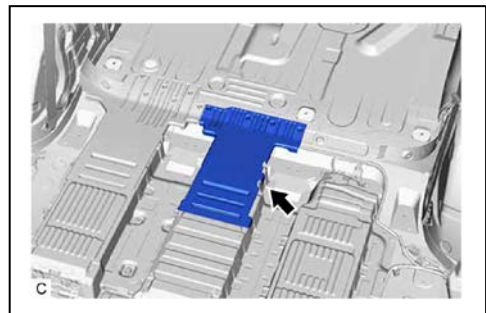
80. REMOVE NO. 1 FLOOR BOARD (w/ Rear No. 2 Seat)

- (1) Remove the No. 1 floor board.



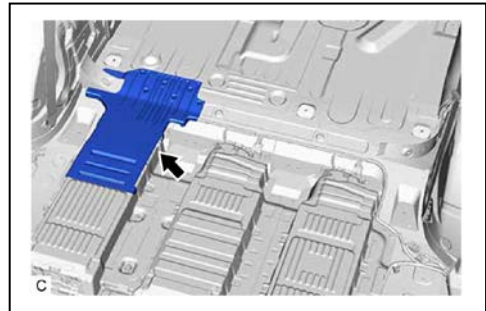
81. REMOVE NO. 2 FLOOR BOARD (w/ Rear No. 2 Seat)

- (1) Remove the No. 2 floor board.



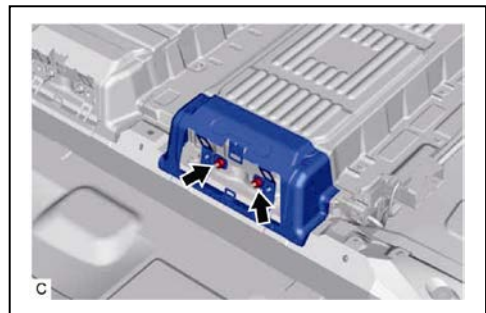
82. REMOVE NO. 3 FLOOR BOARD (w/ Rear No. 2 Seat)

- (1) Remove the No. 3 floor board.

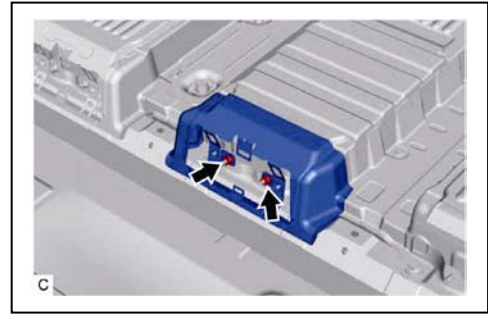


83. REMOVE BATTERY CARRIER DUCT

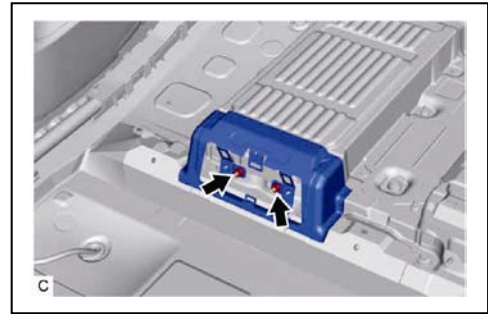
- (1) Remove the 2 nuts and battery carrier duct (for LH Side) from the HV battery.



- (2) Remove the 2 nuts and battery carrier duct (for Center) from the HV battery.



- (3) Remove the 2 nuts and battery carrier duct (for RH Side) from the HV battery.



84. REMOVE NO. 8 HV BATTERY SHIELD PANEL

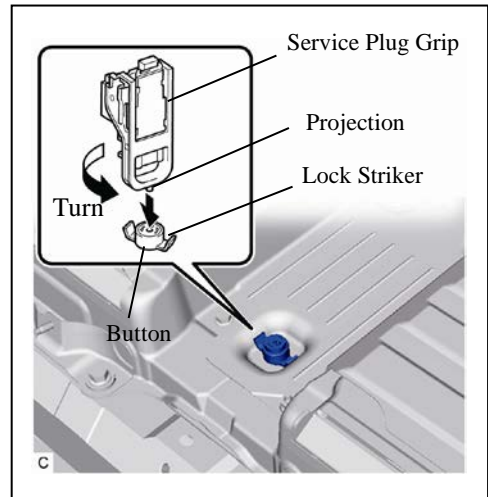
Caution:

Wear insulated gloves.

- (1) Using the service plug grip, remove the battery cover lock striker from the No. 8 HV battery shield panel.

Hint:

Insert the projection of the service plug grip, turn the button of the battery cover lock striker counterclockwise, and release the lock.

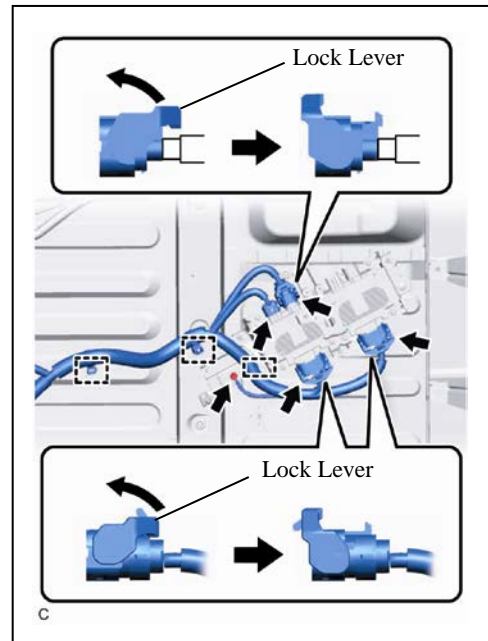


- (2) Remove the 3 nuts and No. 8 HV battery shield panel from the upper HV battery cover sub-assembly.



85. DISCONNECT HV FLOOR UNDER WIRE (w/ Active Stabilizer System)

- (1) Move the lock lever as shown in the illustration and disconnect the 3 active stabilizer control computer assembly connectors.
- (2) Disconnect the active stabilizer control computer assembly connector.
- (3) Remove the bolt to disconnect the HV floor under wire.
- (4) Disengage the 3 clamps.



86. DISCONNECT NO. 2 FLOOR WIRE

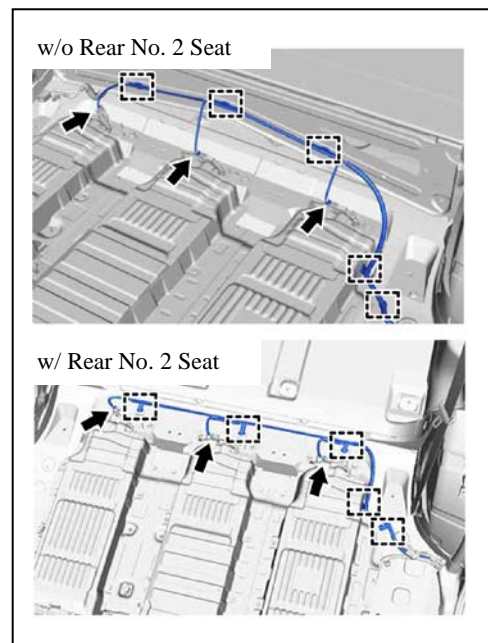
Caution:

Wear insulated gloves.

- (1) Disconnect the 3 No. 2 floor wire connectors.
- (2) Disengage the 5 clamps and disconnect the No. 2 floor wire from the upper HV battery cover sub-assembly.

Notice:

Insulate the disconnected connectors with insulating tape.

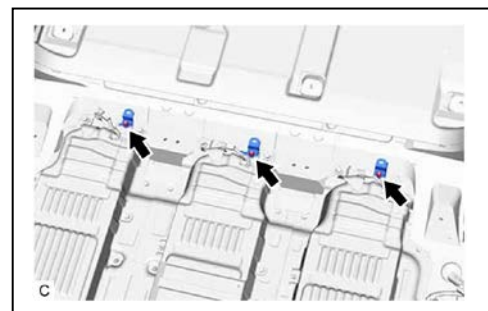


87. REMOVE WIRE HARNESS CLAMP BRACKET (w/ Rear No. 2 Seat)

Caution:

Be sure to wear insulated gloves.

- (1) Remove the 3 nuts and 3 wire harness clamp brackets from the upper HV battery cover subassembly.



88. REMOVE UPPER HV BATTERY COVER SUB-ASSEMBLY

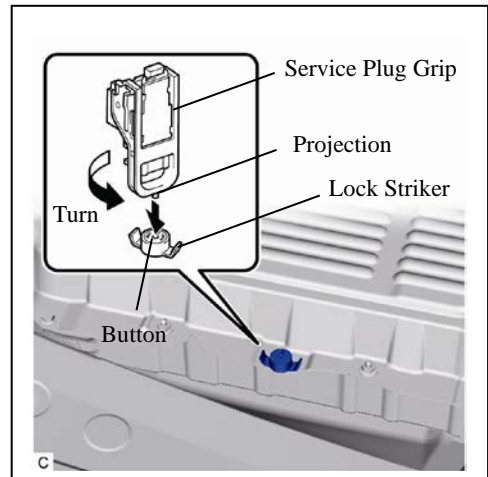
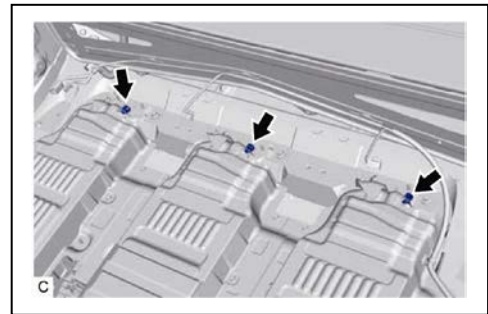
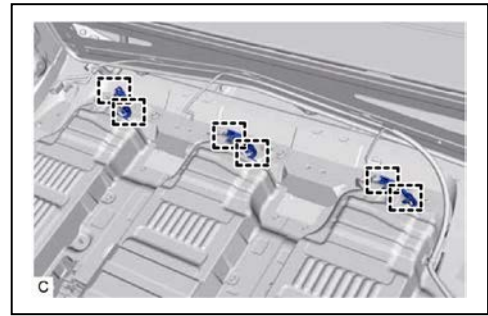
Caution:

Be sure to wear insulated gloves and protective goggles.

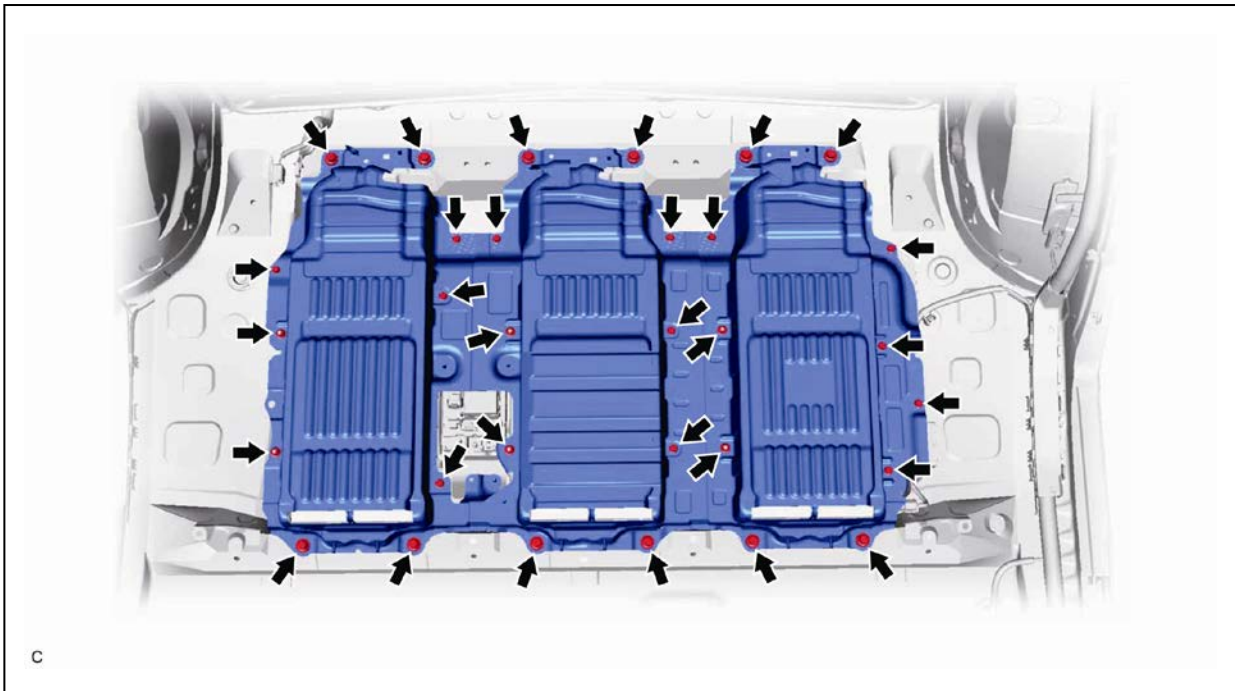
- (1) Disengage the 6 clamps.
- (2) Remove the 3 wire harness clamps from the upper HV battery cover sub-assembly.
- (3) Using the service plug grip, remove the battery cover lock striker from the upper HV battery cover sub-assembly.

Hint:

Insert the projection of the service plug grip, turn the button of the battery cover lock striker counterclockwise, and release the lock.



- (4) Remove the 25 bolts, 6 nuts and upper HV battery cover sub-assembly.



89. REMOVE BATTERY VOLTAGE SENSOR

Caution:

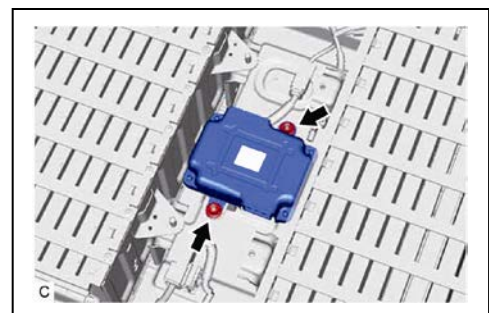
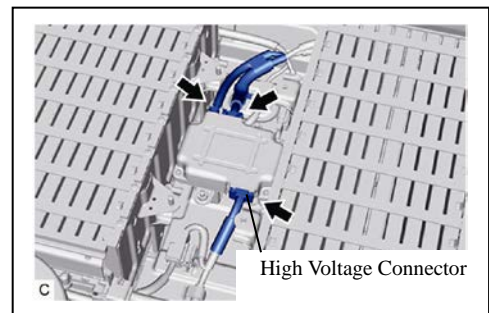
Be sure to wear insulated gloves and protective goggles.

- (1) Disconnect the 3 battery voltage sensor connectors.

Notice:

Insulate the disconnected high-voltage connectors with insulating tape.

- (2) Remove the 2 nuts and battery voltage sensor from the lower HV battery carrier panel.



90. REMOVE HV BATTERY

Caution:

Be sure to wear insulated gloves and protective goggles.

Notice:

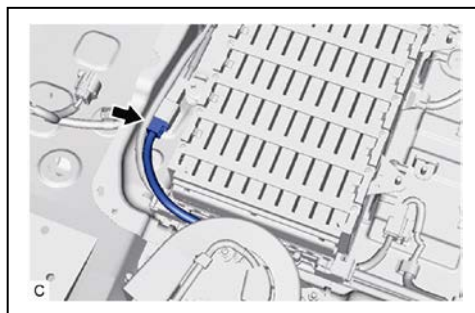
- To prevent the wire harness from being caught, make sure to bundle the wire harness using insulating tape or equivalent.
- Use cardboard or another similar material to protect the HV battery module from damage.
- When removing/ moving an HV battery module, make sure not to tilt it more than 80°.
- Since the HV battery is very heavy, 2 people are needed to remove it.
- Insulate the disconnected terminals or connectors with insulating tape.
- Do not touch any high voltage wire harnesses, connectors or parts with bare hands.
- When moving an HV battery module, make sure to use an engine lifter.

(1) Remove the HV battery module (for LH Side).

- a) Disconnect the No. 2 HV battery pack cable connector.

Notice:

Insulate the disconnected connectors with insulating tape.

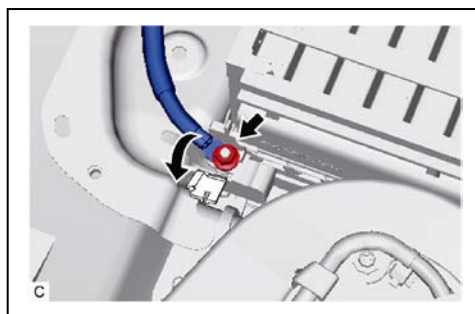


- b) Open the terminal cover.

- c) Using an insulated tool, remove the nut and disconnect the electric vehicle battery plug assembly cable from the HV battery module (for LH Side).

Notice:

- Do not use a universal joint with a socket extension. Using a universal joint may cause the socket extension to drop and create a short circuit.
- Insulate the disconnected terminal with insulating tape.

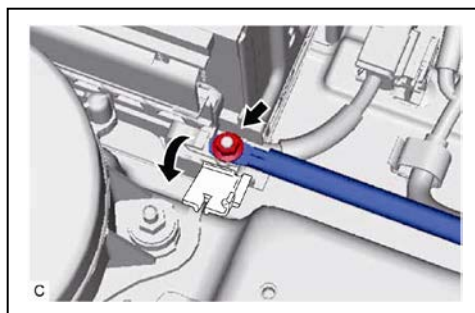


- d) Close the terminal cover.

Notice:

Make sure that the terminal cover is closed securely.

- e) Open the terminal cover.



- f) Using an insulated tool, remove the nut and disconnect the HV battery module (for Center) cable from the HV battery module (for LH Side).

Notice:

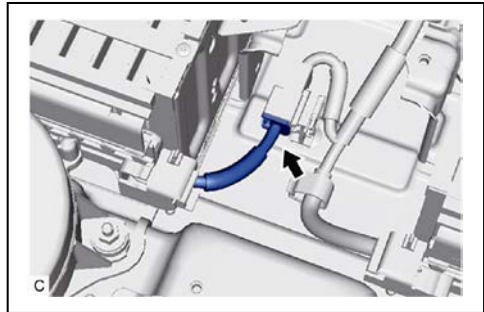
- Do not use a universal joint with a socket extension. Using a universal joint may cause the socket extension to drop and create a short circuit.
- Insulate the disconnected terminal with insulating tape.

- g) Close the terminal cover.

Notice:

Make sure that the terminal cover is closed securely.

- h) Disconnect the HV battery module (for LH side) cable connector.



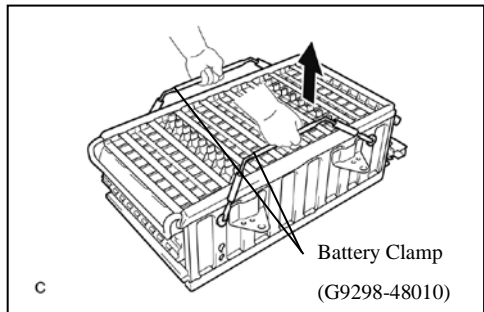
Notice:

Insulate the disconnected connectors with Insulating tape.

- i) Install the 2 battery clamps to the HV battery module (for LH Side).

Notice:

Insert the ends of the 2 battery clamps into the installation holes. Pull the 2 battery clamps upward to securely install them.

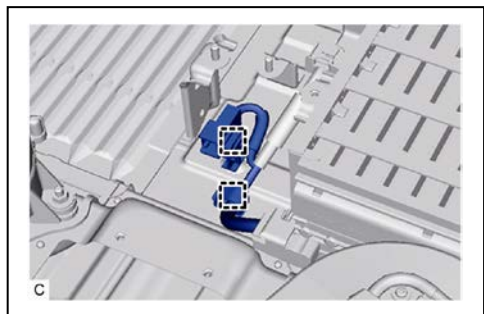


- j) Remove the HV battery module (for LH Side).

- k) Remove the 2 battery clamps from the HV battery module (for LH Side).

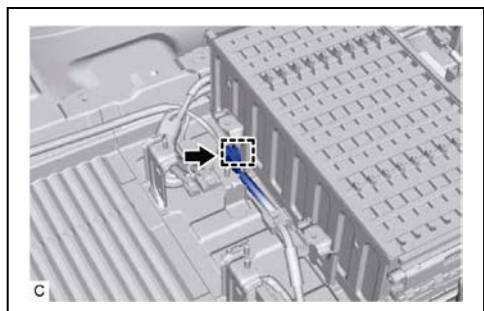
- (2) Remove the HV battery module (for Center).

- a) Disengage the 2 clamps.



- b) Disconnect the No. 2 HV battery pack wire connector.

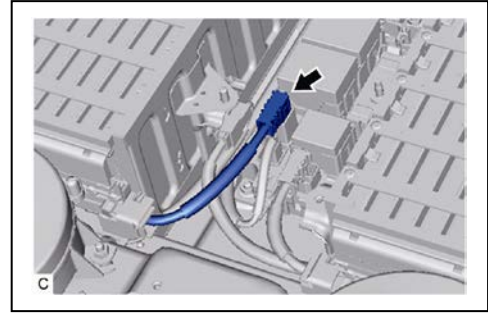
- c) Disengage the clamp.



- d) Disconnect the HV battery junction block assembly connector.

Notice:

Insulate the disconnected connectors with Insulating tape.

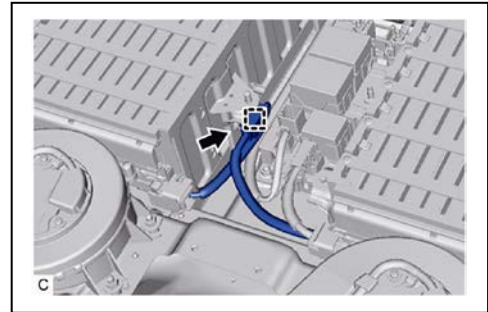


- e) Disconnect the HV battery module (for RH Side) cable connector.

Notice:

Insulate the disconnected connectors with Insulating tape.

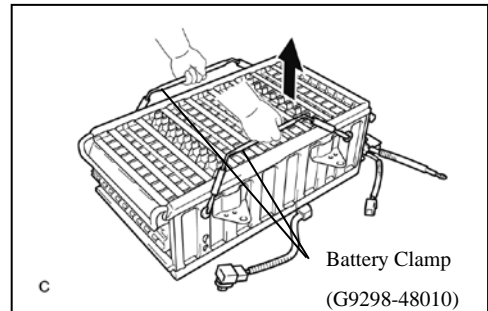
- f) Disengage the clamp.



- g) Install the 2 battery clamps to the HV battery module (for Center).

Notice:

Insert the ends of the 2 battery clamps into the installation holes. Pull the 2 battery clamps upward to securely install them.



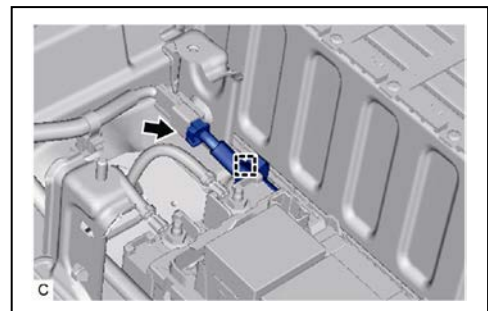
- h) Remove the HV battery module (for Center).

- i) Remove the 2 battery clamps from the HV battery module (for Center).

- (3) Remove the HV battery module (for RH Side).

- a) Disconnect the HV battery module (for RH Side) cable connector.

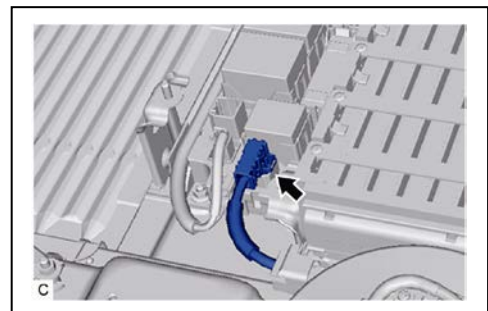
- b) Disengage the clamp.



- c) Disconnect the HV battery junction block assembly connector.

Notice:

Insulate the disconnected connectors with Insulating tape.



- d) Open the terminal cover.
- e) Using an insulated tool, remove the nut and disconnect the No. 2 HV battery pack cable from the HV battery module (for RH Side).



Notice:

- Do not use a universal joint with a socket extension. Using a universal joint may cause the socket extension to drop and create a short circuit.
- Insulate the disconnected terminal with insulating tape.

- f) Close the terminal cover.

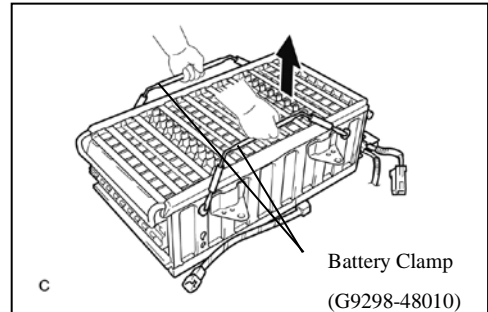
Notice:

Make sure that the terminal cover is closed securely.

- g) Install the 2 battery clamps to the HV battery module (for RH Side).

Notice:

Insert the ends of the 2 battery clamps into the installation holes. Pull the 2 battery clamps upward to securely install them.



- h) Remove the HV battery module (for RH Side).
- i) Remove the 2 battery clamps from the HV battery module (for RH Side).