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Model Year Start: 2014	Model: RAV4 EV	Prod Date Range: [09/2013 -]
Title: HYBRID / BATTERY CONTROL: HV BATTERY: REMOVAL; 2014 MY RAV4 EV [09/2013 -]		

REMOVAL

1. PRECAUTION

CAUTION:

- The electric vehicle system has high-voltage circuits. Accidents, such as electric shock, or electric leaks may result if the electric vehicle system is not operated in a correct manner. Make sure to follow the correct procedure [INFO](#).
- The electric vehicle battery assembly is very heavy. Be sure to follow the procedure described in the repair manual, or the powertrain lift table or equivalent may suddenly drop.
- Use a powertrain lift table or equivalent that can support a weight of 500 kg (1100 lb) or more.

2. DISCONNECT CABLE FROM NEGATIVE AUXILIARY BATTERY TERMINAL

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected [INFO](#).

3. REMOVE SERVICE PLUG GRIP

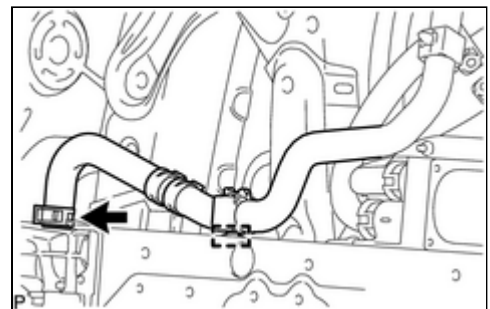
[INFO](#)

4. REMOVE NO. 1 MOTOR UNDER COVER ASSEMBLY [INFO](#)

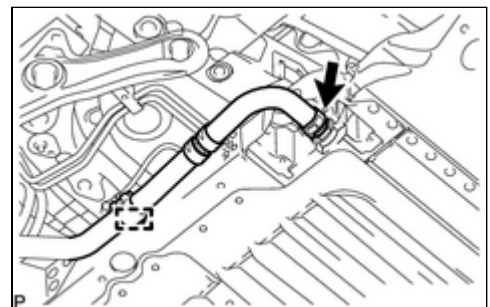
5. REMOVE UPPER NO. 1 FLOOR BOARD [INFO](#)

6. DISCONNECT COOLING HOSE

- (a) Disconnect the No. 7 EV battery hose and detach the clamp.



- (b) Disconnect the No. 8 EV battery hose and detach the clamp.



7. DRAIN COOLANT (for HV Battery)

[INFO](#)

8. REMOVE ELECTRIC VEHICLE BATTERY ACCESS COVER

CAUTION:

Wear insulated gloves and protective goggles.

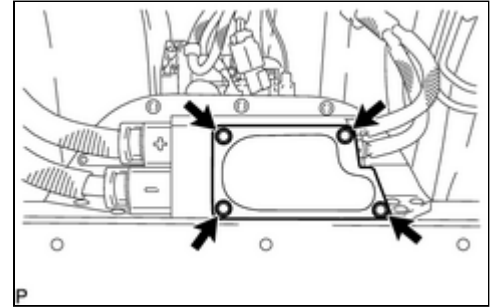
NOTICE:

Do not allow any foreign matter or water to enter the electric vehicle battery assembly.

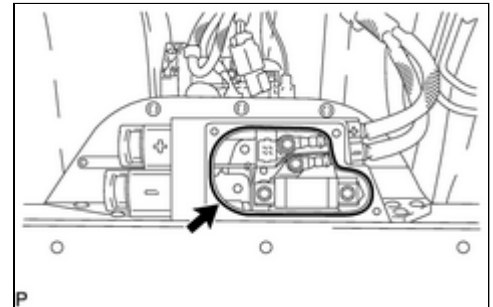
- (a) Using an insulated tool, remove the 4 bolts and electric vehicle battery access cover.

HINT:

Make sure to pull the electric vehicle battery access cover straight down, as a connector is connected to the bottom of the cover.



- (b) Remove the gasket.

**9. CHECK TERMINAL VOLTAGE****CAUTION:**

Wear insulated gloves and protective goggles.

NOTICE:

Do not allow any foreign matter or water to enter the electric vehicle battery assembly.

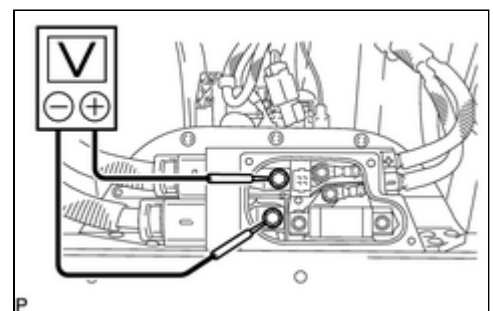
- (a) for Motor cable side:

Using a voltmeter, measure the voltage between the terminals of the 2 phase connectors shown in the illustration.

Standard voltage:
0 V

HINT:

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



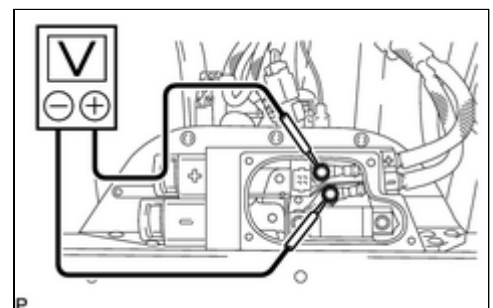
- (b) for Charge cable side:

Using a voltmeter, measure the voltage between the terminals of the 2 phase connectors shown in the illustration.

Standard voltage:
0 V

HINT:

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



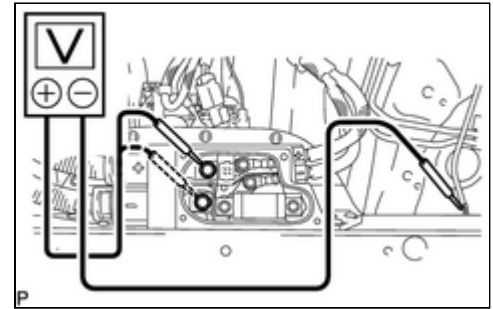
(c) for Motor cable side:

Using a voltmeter, measure the voltage between each terminal and body ground as shown in the illustration.

Standard voltage:
0 V

HINT:

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



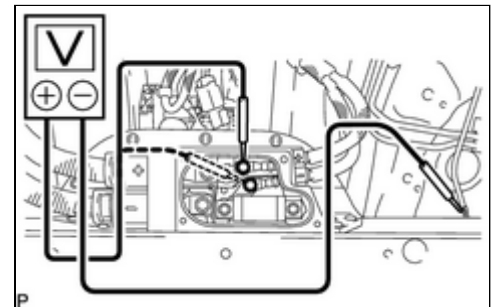
(d) for Charge cable side:

Using a voltmeter, measure the voltage between each terminal and body ground as shown in the illustration.

Standard voltage:
0 V

HINT:

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



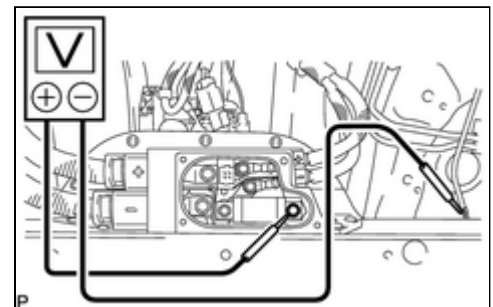
(e) for Fuse side:

Using a voltmeter, measure the voltage between each terminal and body ground as shown in the illustration.

Standard voltage:
0 V

HINT:

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

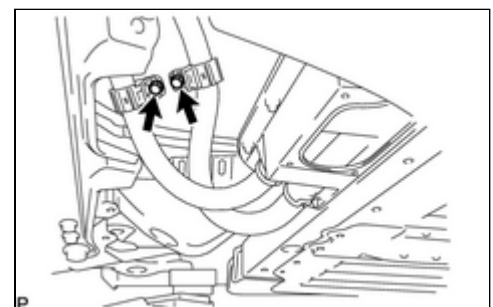


10. DISCONNECT MOTOR CABLE

CAUTION:

Wear insulated gloves and protective goggles.

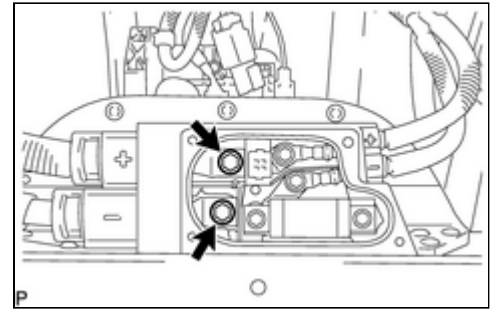
(a) Remove the 2 nuts.



- (b) Using an insulated tool, remove the 2 bolts and pull out the motor cable.

NOTICE:

Use a 13 mm socket wrench with insulated tape wrapped around it.

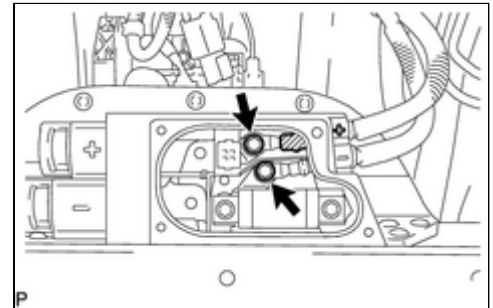


11. DISCONNECT CHARGE CABLE

CAUTION:

Wear insulated gloves and protective goggles.

- (a) Using an insulated tool, remove the 2 bolts and pull out the charge cable.



12. REMOVE HIGH VOLTAGE FUSE

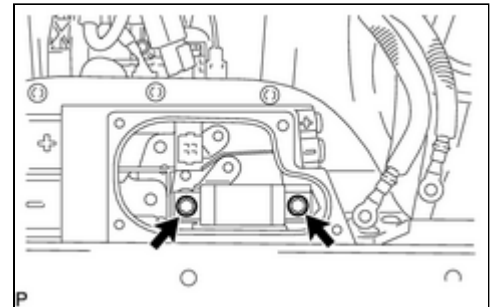
CAUTION:

Wear insulated gloves and protective goggles.

HINT:

Perform this procedure only when replacement of the high voltage fuse is necessary.

- (a) Remove the 2 bolts and high voltage fuse.



13. REMOVE ELECTRIC VEHICLE BATTERY ASSEMBLY

CAUTION:

Wear insulated gloves and protective goggles.

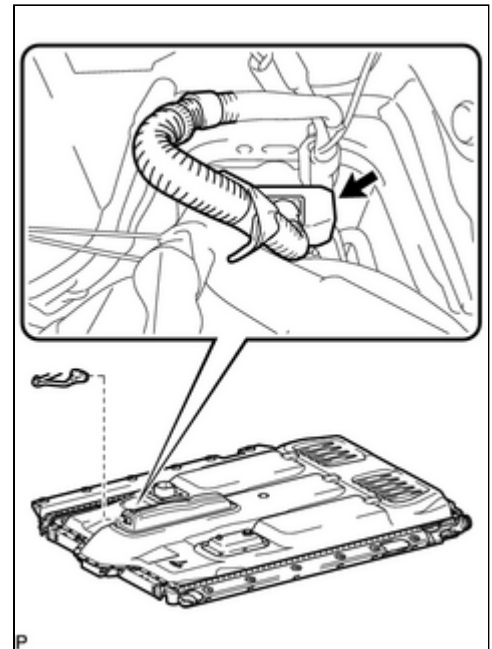
NOTICE:

If the EV battery is replaced, also replace the No. 7 upper floor board.

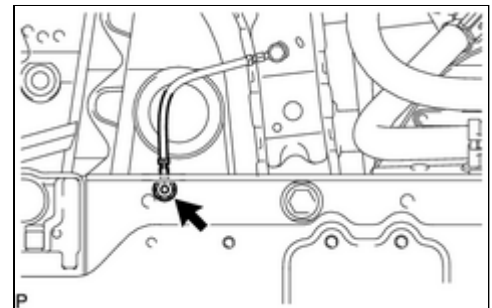
(a) Disconnect the connector.

HINT:

Lift up the claw of the connector to release the lock.



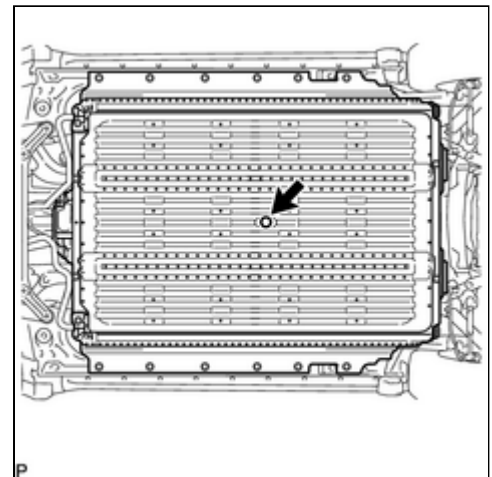
(b) Remove the nut and disconnect the ground cable.



(c) Set a powertrain lift table or equivalent. Check that the lifter is set securely.

NOTICE:

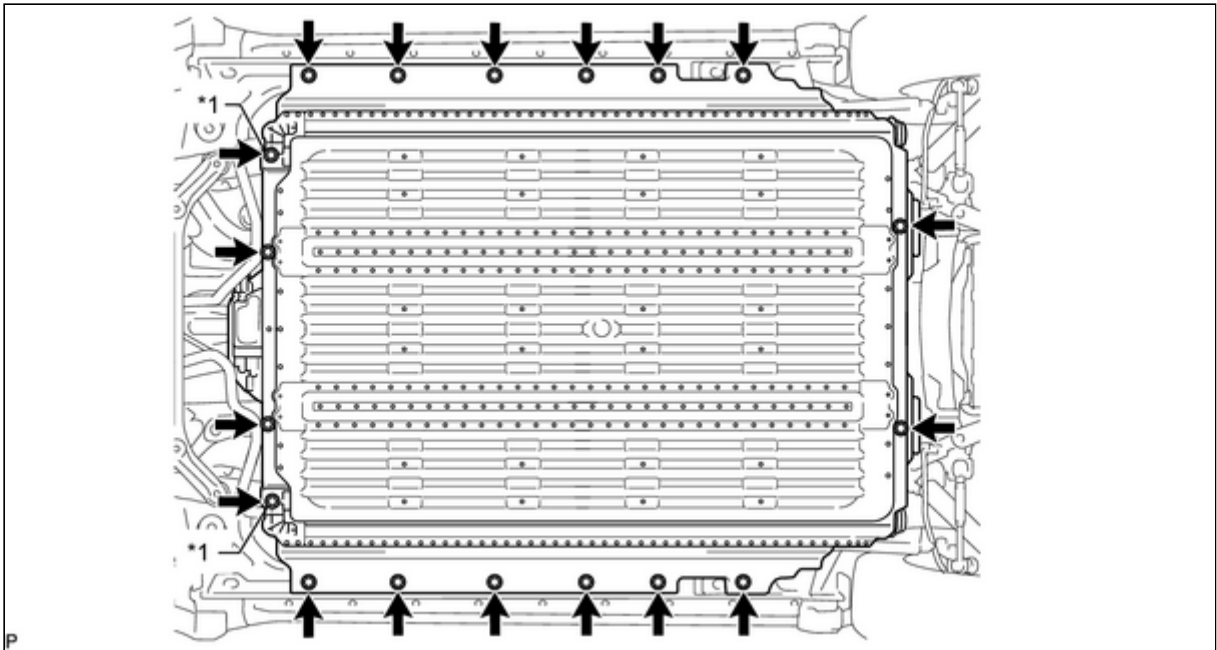
- Align the center of the battery shown in the illustration with the center of the powertrain lift table or equivalent.
- Install a pallet on the lifter cradle to make sure not to apply too much force to the underside of the battery.



(d) Remove the 18 bolts.

NOTICE:

Do not use impact wrenches to prevent internal damage.



Text in Illustration

*1	Washer	-	-
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- (e) w/ Washer:
Remove the 2 washers.
- (f) Raise the vehicle and remove the electric vehicle battery.

14. REMOVE REAR BATTERY PACK FLOOR BOARD SUB-ASSEMBLY

- (a) Remove the 8 bolts and 2 rear battery pack floor boards.

Text in Illustration

*a	LH Side
*b	RH Side

