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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for PHEV Model): "HAVE TRACTION BATTERY INSPECTED" is displayed; 2023 - 2024 MY Prius Prime [03/2023 -]		

"HAVE TRACTION BATTERY INSPECTED" is displayed

DESCRIPTION

The battery ECU assembly monitors the SOC (state of charge) of the HV battery. When it finds the HV battery has deteriorated excessively, it will display "Maintenance Required for Traction Battery at Your Dealer" on the multi-information display. If "Maintenance Required for Traction Battery at Your Dealer" is displayed, perform "Battery Diagnosis" and replace the HV supply stack sub-assembly as necessary.

CAUTION / NOTICE / HINT

CAUTION:

Refer to the precautions before inspecting high voltage circuit.

Click here INFO

NOTICE:

- If "Maintenance Required for Traction Battery at Your Dealer" is displayed on the multi-information display, the message will not be cleared until one of the following conditions is met. If the traction battery is used continually without performing "Battery Diagnosis" for a few weeks*, "VEHICLE START WILL SOON BE DISABLED" and "Maintenance Required for Traction Battery at Your Dealer" are displayed and the use of the HV battery is limited. If it is used more, the ignition switch ON (READY) operation will be disabled.

  *: Timing may vary depending on vehicle usage.
- Perform plug-in charging several times as specified.
- After the ignition switch is turned off, there may be a waiting time before disconnecting the auxiliary negative (-) battery terminal.

  Click here INFO
- When disconnecting and reconnecting the auxiliary battery.

HINT:

When disconnecting and reconnecting the auxiliary battery, there is an automatic learning function that completes learning when the respective system is used.

Click here INFO

PROCEDURE

1.	**READ VALUE USING GTS**

(a) Enter the following menus: Powertrain / HV Battery / Data List / Hybrid/EV Battery Cell 1 to 72 Internal Resistance.

Powertrain > HV Battery > Data List

TESTER DISPLAY
Hybrid/EV Battery Cell 1 Internal Resistance
Hybrid/EV Battery Cell 2 Internal Resistance
Hybrid/EV Battery Cell 3 Internal Resistance
Hybrid/EV Battery Cell 4 Internal Resistance
Hybrid/EV Battery Cell 5 Internal Resistance
Hybrid/EV Battery Cell 6 Internal Resistance
Hybrid/EV Battery Cell 7 Internal Resistance
Hybrid/EV Battery Cell 8 Internal Resistance
Hybrid/EV Battery Cell 9 Internal Resistance
Hybrid/EV Battery Cell 10 Internal Resistance
Hybrid/EV Battery Cell 11 Internal Resistance
Hybrid/EV Battery Cell 12 Internal Resistance
Hybrid/EV Battery Cell 13 Internal Resistance
Hybrid/EV Battery Cell 14 Internal Resistance
Hybrid/EV Battery Cell 15 Internal Resistance
Hybrid/EV Battery Cell 16 Internal Resistance
Hybrid/EV Battery Cell 17 Internal Resistance
Hybrid/EV Battery Cell 18 Internal Resistance
Hybrid/EV Battery Cell 19 Internal Resistance

TESTER DISPLAY
Hybrid/EV Battery Cell 20 Internal Resistance
Hybrid/EV Battery Cell 21 Internal Resistance
Hybrid/EV Battery Cell 22 Internal Resistance
Hybrid/EV Battery Cell 23 Internal Resistance
Hybrid/EV Battery Cell 24 Internal Resistance
Hybrid/EV Battery Cell 25 Internal Resistance
Hybrid/EV Battery Cell 26 Internal Resistance
Hybrid/EV Battery Cell 27 Internal Resistance
Hybrid/EV Battery Cell 28 Internal Resistance
Hybrid/EV Battery Cell 29 Internal Resistance
Hybrid/EV Battery Cell 30 Internal Resistance
Hybrid/EV Battery Cell 31 Internal Resistance
Hybrid/EV Battery Cell 32 Internal Resistance
Hybrid/EV Battery Cell 33 Internal Resistance
Hybrid/EV Battery Cell 34 Internal Resistance
Hybrid/EV Battery Cell 35 Internal Resistance
Hybrid/EV Battery Cell 36 Internal Resistance
Hybrid/EV Battery Cell 37 Internal Resistance
Hybrid/EV Battery Cell 38 Internal Resistance

TESTER DISPLAY
Hybrid/EV Battery Cell 39 Internal Resistance
Hybrid/EV Battery Cell 40 Internal Resistance
Hybrid/EV Battery Cell 41 Internal Resistance
Hybrid/EV Battery Cell 42 Internal Resistance
Hybrid/EV Battery Cell 43 Internal Resistance
Hybrid/EV Battery Cell 44 Internal Resistance
Hybrid/EV Battery Cell 45 Internal Resistance
Hybrid/EV Battery Cell 46 Internal Resistance
Hybrid/EV Battery Cell 47 Internal Resistance
Hybrid/EV Battery Cell 48 Internal Resistance
Hybrid/EV Battery Cell 49 Internal Resistance
Hybrid/EV Battery Cell 50 Internal Resistance
Hybrid/EV Battery Cell 51 Internal Resistance
Hybrid/EV Battery Cell 52 Internal Resistance
Hybrid/EV Battery Cell 53 Internal Resistance
Hybrid/EV Battery Cell 54 Internal Resistance
Hybrid/EV Battery Cell 55 Internal Resistance
Hybrid/EV Battery Cell 56 Internal Resistance
Hybrid/EV Battery Cell 57 Internal Resistance

TESTER DISPLAY
Hybrid/EV Battery Cell 58 Internal Resistance
Hybrid/EV Battery Cell 59 Internal Resistance
Hybrid/EV Battery Cell 60 Internal Resistance
Hybrid/EV Battery Cell 61 Internal Resistance
Hybrid/EV Battery Cell 62 Internal Resistance
Hybrid/EV Battery Cell 63 Internal Resistance
Hybrid/EV Battery Cell 64 Internal Resistance
Hybrid/EV Battery Cell 65 Internal Resistance
Hybrid/EV Battery Cell 66 Internal Resistance
Hybrid/EV Battery Cell 67 Internal Resistance
Hybrid/EV Battery Cell 68 Internal Resistance
Hybrid/EV Battery Cell 69 Internal Resistance
Hybrid/EV Battery Cell 70 Internal Resistance
Hybrid/EV Battery Cell 71 Internal Resistance
Hybrid/EV Battery Cell 72 Internal Resistance

RESULT	PROCEED TO
"Hybrid/EV Battery Cell 1 to 24 Internal Resistance" is out of the specified range.	A
"Hybrid/EV Battery Cell 25 to 48 Internal Resistance" is out of the specified range.	B
"Hybrid/EV Battery Cell 49 to 72 Internal Resistance" is out of the specified range.	C

RESULT	PROCEED TO
All values are not within the specified range.	D

(b) Turn the ignition switch off.

A ▶ **REPLACE NO. 1 HV SUPPLY STACK SUB-ASSEMBLY**

B ▶ **REPLACE NO. 2 HV SUPPLY STACK SUB-ASSEMBLY**

C ▶ **REPLACE NO. 3 HV SUPPLY STACK SUB-ASSEMBLY**

D

2.	DIAGNOSIS

(a) Confirm with the owner whether or not to perform "Battery Diagnosis".

HINT:

- Battery Diagnosis normally takes about 30 minutes to perform. If HV battery SOC learning has not been completed, Battery Diagnosis takes about 1 hour in addition to the time required to perform plug-in charging.
- Depending on the vehicle usage, it is possible to reuse the HV supply stack sub-assembly. However, if it is judged not possible to be reused, replace the HV supply stack sub-assembly.

RESULT	PROCEED TO
"Battery Diagnosis" is performed.	A
"Battery Diagnosis" is not performed.	B

B ▶ **REPLACE HV SUPPLY BATTERY ASSEMBLY**

A

3.	PERFORM UTILITY (BATTERY DIAGNOSIS)

(a) Perform the "Battery Diagnosis".

HINT:

Click here INFO

NOTICE:

- Do not perform battery diagnosis while the hybrid system light is illuminated.
- Perform battery diagnosis with the HV battery installed correctly.
- Do not perform battery diagnosis while changing from inspection mode to another mode.
- Make sure to turn the ignition switch off after battery diagnosis to prevent the auxiliary battery from being discharged.
- If the learning of SOC (state of charge) has not been performed, perform battery diagnosis after plug-in charging the vehicle as specified.

HINT:

As the "Battery Diagnosis" discharges the HV battery to a low SOC, if the ignition switch is turned to ON immediately after the "Battery Diagnosis" is completed, DTC P31AB16 (Hybrid Battery Cell Low Voltage) may be stored. For this reason, leave the vehicle as is for 1 hour to allow the HV battery SOC to recover.

(b) Check the battery diagnosis result.

RESULT	PROCEED TO
Normal ("There is no need to replace HV supply battery assembly.")	A
Replace (Replace the listed HV supply stack sub-assemblies)	B

NOTICE:

- If "Maintenance Required for Traction Battery at Your Dealer" is displayed on the multi-information display, the message will not be cleared even after it is judged that "There is no need to replace battery". It can be cleared only after performing "Battery Status Info Update".
- Perform "Battery Status Info Update" after replacing a HV supply stack sub-assembly of HV battery.

B ▶ REPLACE HV SUPPLY STACK SUB-ASSEMBLY

A

4.	**PERFORM UTILITY (BATTERY STATUS INFO UPDATE)**

(a) Perform "Battery Status Info Update".

HINT:

Click here INFO

NOTICE:

- Do not perform battery status info update while the hybrid system light is illuminated.
- Perform battery status info update with the HV battery installed correctly.
- If "Battery Status Info Update" is performed more than necessary, it may deteriorate the HV battery.
- Make sure to perform "Battery Status Info Update" if the HV supply stack sub-assembly or HV supply battery assembly is replaced.
- Make sure to turn the ignition switch off after battery status info update to prevent the auxiliary battery from being discharged.

NEXT ▶ COMPLETED