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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: PLUG-IN CHARGE CONTROL SYSTEM (for PHEV Model): P1C0012,P1C0014; Voltage Sensor after Boosting by PFC Boosting Circuit Circuit Short to Auxiliary Battery; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	**P1C0012**	**Voltage Sensor after Boosting by PFC Boosting Circuit Circuit Short to Auxiliary Battery**

DTC	**P1C0014**	**Voltage Sensor after Boosting by PFC Boosting Circuit Circuit Short to Ground or Open**

DESCRIPTION

The charge control ECU built into the electric vehicle charger assembly monitors the boosting voltage using the VH sensor. If it detects a VH sensor malfunction, it stores a DTC. If these DTCs are output, replace the electric vehicle charger assembly.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P1C0012	Voltage Sensor after Boosting by PFC Boosting Circuit Circuit Short to Auxiliary Battery	When charging or supplying power, the output voltage value of the VH sensor is more than the threshold (1 trip detection logic)	Electric vehicle charger assembly	Comes on	Master Warning: Comes on	Plug-in Control	A	SAE Code: P1C03
P1C0014	Voltage Sensor after Boosting by PFC Boosting Circuit Circuit Short to Ground or Open	When charging or supplying power, the output voltage value of the VH sensor is more than the threshold (1 trip detection logic)	Electric vehicle charger assembly	Comes on	Master Warning: Comes on	Plug-in Control	A	SAE Code: P1C02

MONITOR DESCRIPTION

The charge control ECU built into the electric vehicle charger assembly monitors the boosting voltage by the VH sensor. If it detects a VH sensor malfunction, it illuminates the MIL and stores a DTC.

MONITOR STRATEGY

Related DTCs	P1C03: Power Factor Correction Output Voltage Sensor P1C02: Power Factor Correction Output Voltage Sensor
Required sensors/components	Electric vehicle charger assembly
Frequency of operation	Continuous
Duration	TMC's intellectual property
MIL operation	1 charging cycle 1 discharging cycle
Sequence of operation	None

TYPICAL ENABLING CONDITIONS

The monitor will run whenever the following DTCs are not stored	TMC's intellectual property
Other conditions belong to TMC's intellectual property	-

TYPICAL MALFUNCTION THRESHOLDS

TMC's intellectual property	-

COMPONENT OPERATING RANGE

Electric vehicle charger assembly	DTC P1C0012 is not detected DTC P1C0014 is not detected

CONFIRMATION DRIVING PATTERN

HINT:

- After repair has been completed, clear the DTC and then check that the vehicle has returned to normal by performing the following All Readiness check procedure.

  Click here INFO
- When clearing the permanent DTCs, refer to the "CLEAR PERMANENT DTC" procedure.

  Click here INFO

1. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
2. Enter the following menus: Powertrain / Hybrid Control / Data List.
3. Check that "Hybrid/EV Battery SOC" shows 70% or less.
4. Turn the ignition switch off and wait for 2 minutes or more.
5. Connect the electric vehicle charger cable assembly, and plug-in charge the vehicle for 30 seconds or more. [*1]
6. Disconnect the electric vehicle charger cable assembly and wait for 10 seconds or more. [*2]

   HINT:

   [*1] to [*2]: Normal judgment procedure.

   The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.
7. Enter the following menus: Powertrain / Plug-in Control / Utility / All Readiness.
8. Check the DTC judgment result.

   HINT:

- If the judgment result shows NORMAL, the system is normal.
- If the judgment result shows ABNORMAL, the system has a malfunction.
- If the judgment result shows INCOMPLETE or N/A, perform the normal judgment procedure again.

PROCEDURE

1.	**CHECK PLUG-IN CHARGE STATE**

Click here INFO

RESULT	PROCEED TO
DTCs are not output and plug-in charge has been completed	A
DTCs are output or plug-in charge cannot be completed	B

A ▶ **END (NO MALFUNCTION IN VEHICLE)**

B ▶ **REPLACE ELECTRIC VEHICLE CHARGER ASSEMBLY**