Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BIY0
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: PLUG-IN CHARGE CONTROL SYSTEM (for PHEV Model): P056014; System Voltage (BATT) Circuit Short to Ground or Open; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	**P056014**	**System Voltage (BATT) Circuit Short to Ground or Open**

DESCRIPTION

Auxiliary battery power source is always supplied to the AM21 terminal of the plugin charge control ECU assembly for storage of diagnostic codes and freeze frame data. Back-up power source is supplied even after the ignition switch off.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P056014	System Voltage (BATT) Circuit Short to Ground or Open	Malfunction in the plugin charge control ECU assembly back-up power source circuit (1 trip detection logic)	• Wire harness or connector • Plugin charge control ECU assembly • Fuse	Comes on	Master Warning: Comes on	Plug-in Control	A	SAE Code: P0562

MONITOR DESCRIPTION

If a period of time has elapsed with a low voltage at the AM21 terminal of the plugin charge control ECU assembly, the plugin charge control ECU assembly will determine that a malfunction has occurred in the back-up power supply system, and it will store a DTC. The MIL will illuminate the next time the engine is started.

MONITOR STRATEGY

Related DTCs	P0562: System voltage (plug-in charge control module)
Required sensors/components	Plug-in charge control ECU
Frequency of operation	Continuous
Duration	TMC's intellectual property
MIL operation	Immediately
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

Plugin charge control ECU	DTC P056014 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. Turn the ignition switch off and wait for 2 minutes or more.
3. Turn the ignition switch to ON and wait for 5 seconds or more.[*1]

HINT:

[*1]: Normal judgment procedure.

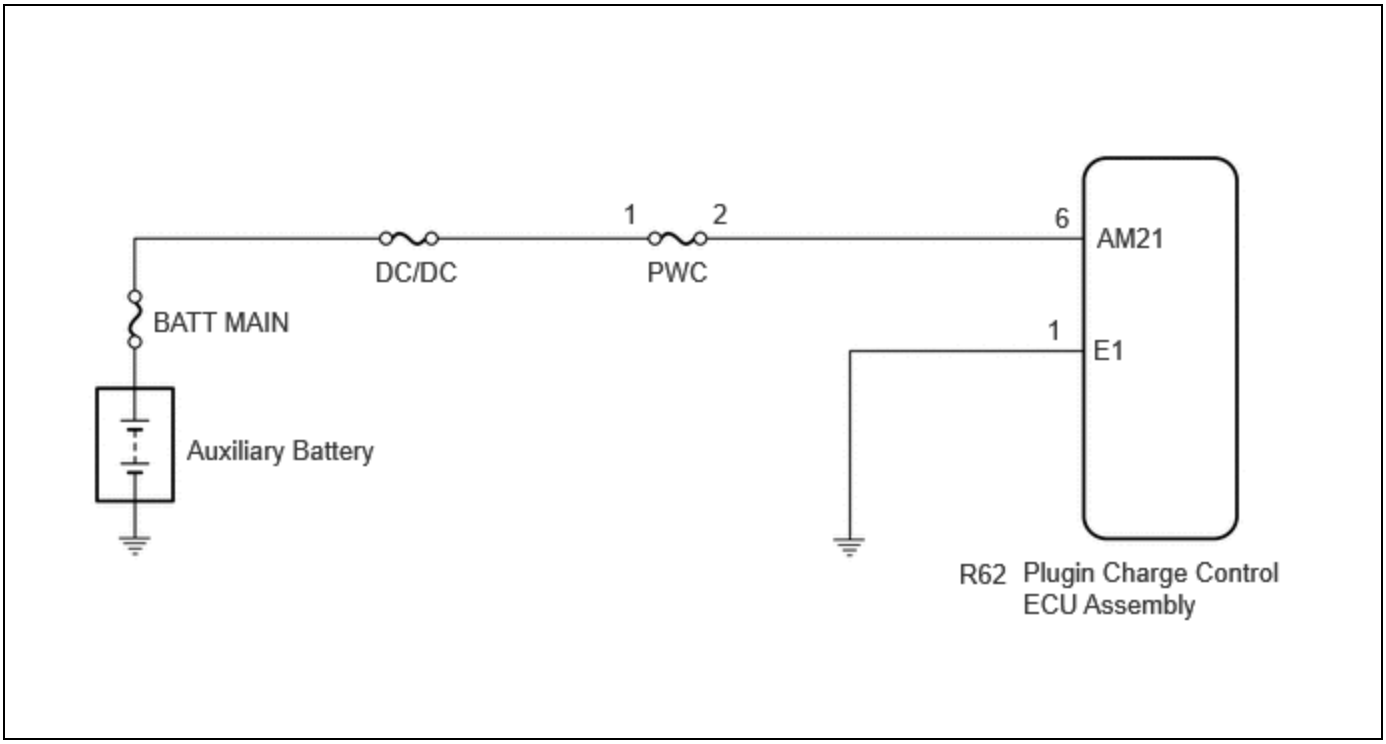
The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.

4. Enter the following menus: Powertrain / Plug-in Control / Utility / All Readiness.
5. 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.

WIRING DIAGRAM



CAUTION / NOTICE / HINT

CAUTION:

Refer to the precautions before inspecting high voltage circuit.

Click here INFO

NOTICE:

- Be sure to check that the applicable DTC is output from the Plug-in Charge Control System.
- After the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) auxiliary 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.	**CHECK CONNECTOR CONNECTION CONDITION (PLUGIN CHARGE CONTROL ECU ASSEMBLY CONNECTOR)**

(a) Check the connections of the plugin charge control ECU assembly connector.

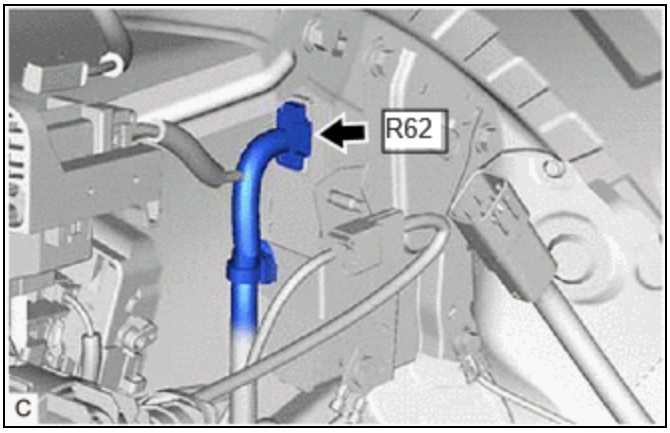
HINT:

Click here INFO

OK:

The connectors are connected securely and there are no contact pressure problems.

Result:



PROCEED TO
OK
NG

NG ▶ **CONNECT SECURELY**

OK ▼

2.	**CHECK HARNESS AND CONNECTOR (PLUGIN CHARGE CONTROL ECU ASSEMBLY - PWC FUSE)**

Pre-procedure1

(a) Disconnect the R62 plugin charge control ECU assembly connector.

(b) Connect the cable to the negative (-) auxiliary battery terminal.

Procedure1

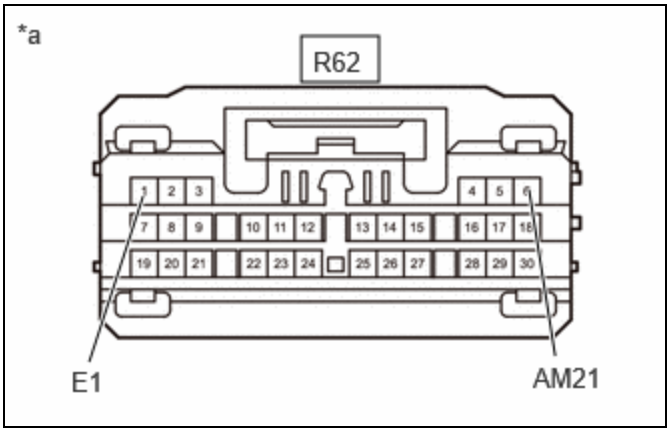
(c) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

EWD INFO

Click Location & Routing(R62)
Click Connector(R62)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
R62-6 (AM21) - R62-1 (E1)	Ignition switch off	11 to 14 V	V



*a	Front view of wire harness connector (to Plugin Charge Control ECU Assembly)

Result:

PROCEED TO
OK
NG

Post-procedure1

(d) Disconnect the cable from the negative (-) auxiliary battery terminal.

(e) Reconnect the plugin charge control ECU assembly connector.

OK ▶ **REPLACE PLUGIN CHARGE CONTROL ECU ASSEMBLY**

NG ▼

3.	**CHECK FUSE (PWC)**

Pre-procedure1

(a) Remove the PWC fuse from the No. 1 engine room relay block and No. 1 junction block assembly.

Procedure1

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
PWC fuse terminals	Always	Below 1 Ω	Ω

Post-procedure1

(c) Install the PWC fuse.

OK ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (PLUGIN CHARGE CONTROL ECU ASSEMBLY - PWC FUSE)**

NG ▶ **REPLACE FUSE (PWC)**