Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BI21
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: HYBRID 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 is supplied to the BATT terminal of the hybrid vehicle control ECU in order to store DTCs and freeze frame data. Even if the ignition switch is turned off, back-up power is supplied.

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 hybrid vehicle control ECU back-up power source circuit (1 trip detection logic)	• Wire harness or connector • Hybrid vehicle control ECU • Fuse	Comes on	Master Warning: Comes on	Hybrid Control	A	SAE Code: P0562

MONITOR DESCRIPTION

If a period of time has elapsed with a low voltage at the BATT terminal of the hybrid vehicle control ECU, the hybrid vehicle control ECU 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 ignition switch ON.

MONITOR STRATEGY

Related DTCs	P0562 (INF P056014): System voltage range check (Low voltage)
Required sensors/components	Main: Back-up power source circuit Sub: Hybrid vehicle 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

Auxiliary battery voltage	Between 9 and 14 V

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. With ignition switch ON and wait for 5 seconds or more. [*1]

   HINT:

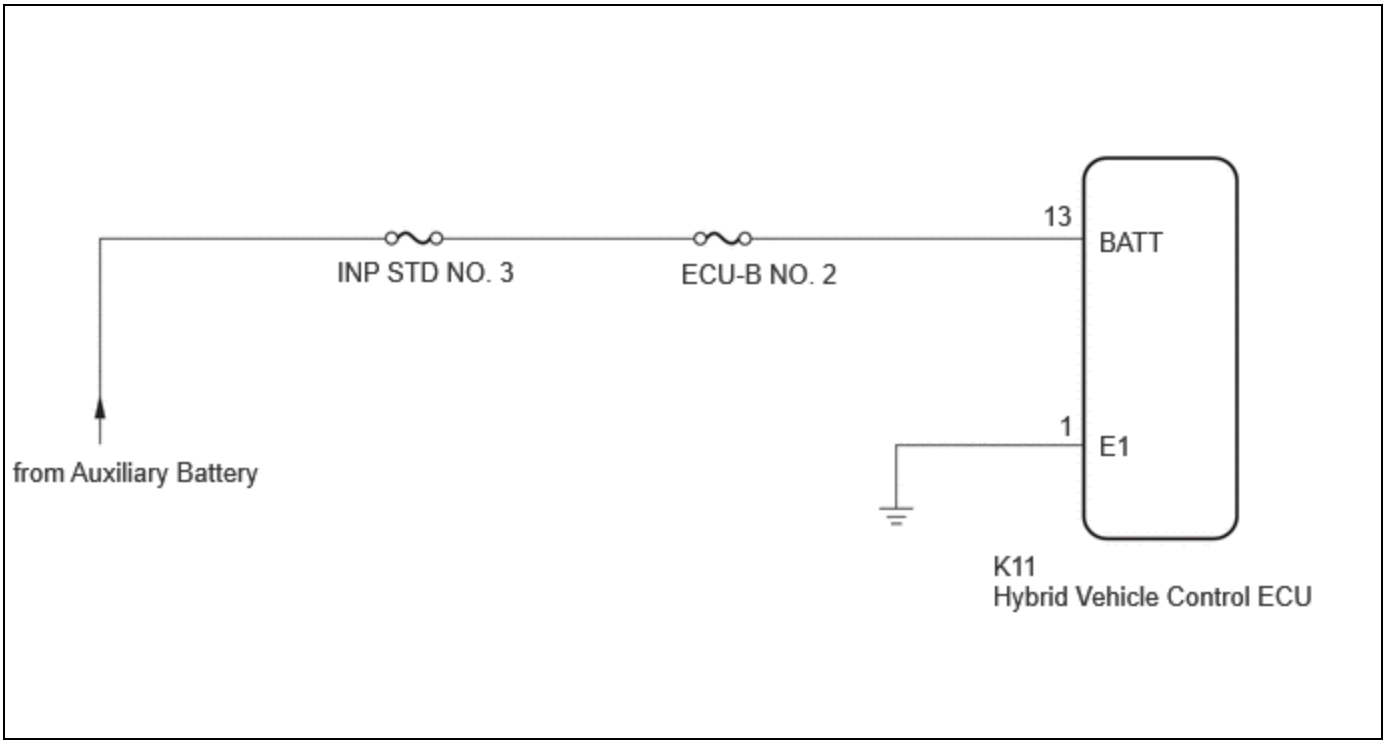
   [*1]: Normal judgment procedure.

   The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.
4. Enter the following menus: Powertrain / Hybrid 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, perform the normal judgment procedure again.

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- Be sure to check that the applicable DTC is output from the hybrid 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 (HYBRID VEHICLE CONTROL ECU CONNECTOR)**

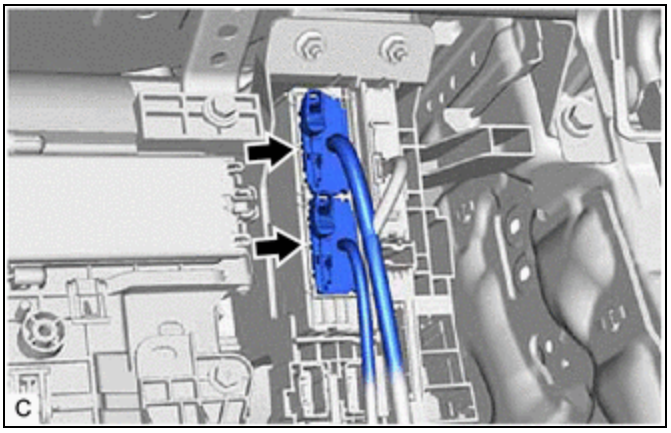
(a) Check the connector connections and contact pressure of the relevant terminals for the hybrid vehicle control ECU connectors.

HINT:

Click here INFO

OK:

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



NG ▶ **CONNECT SECURELY**

OK ▼

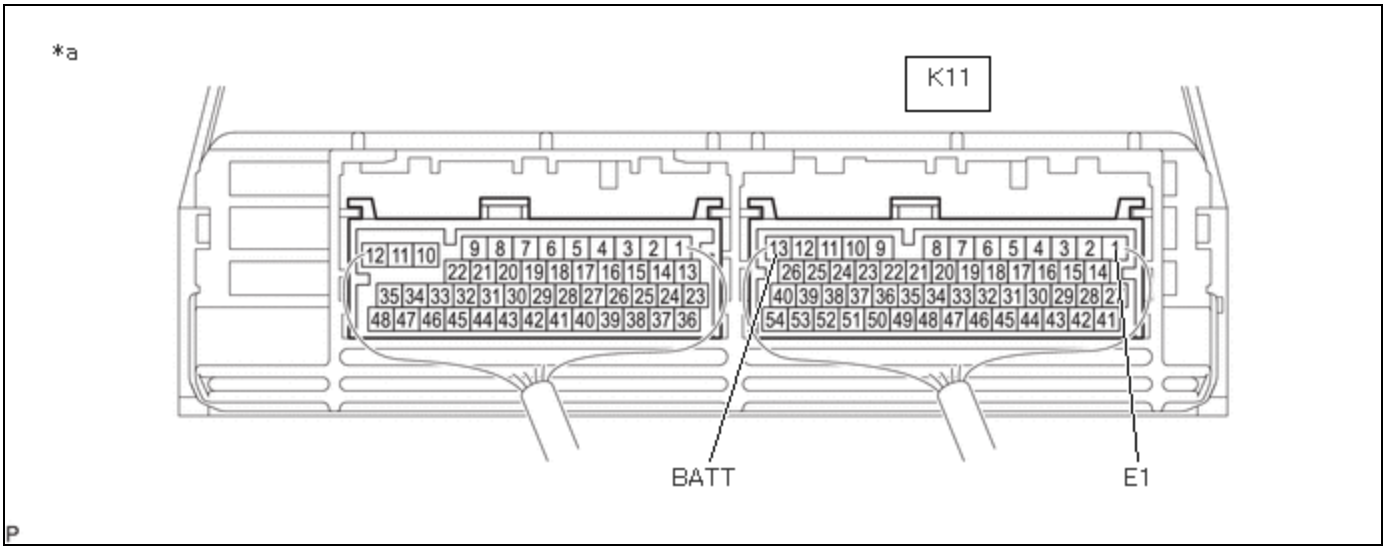
2.	**CHECK HARNESS AND CONNECTOR (POWER SOURCE OF HYBRID VEHICLE CONTROL ECU)**

Pre-procedure1

(a) Turn the ignition switch off.

Procedure1

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



*a	Component with harness connected (Hybrid Vehicle Control ECU)	-	-

Standard Voltage:

EWD INFO

Click Location & Routing(K11)
Click Connector(K11)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K11-13 (BATT) - K11-1 (E1)	Ignition switch off	11 to 14 V	V

Post-procedure1

(c) None.

OK ▶ **REPLACE HYBRID VEHICLE CONTROL ECU**

NG

3.	**CHECK FUSE (ECU-B NO. 2)**

Pre-procedure1

(a) Remove the ECU-B NO. 2 fuse from the power distribution box assembly.

Procedure1

(b) Check if there is an open circuit in the ECU-B NO. 2 fuse in the power distribution box assembly.

OK:
There is no open circuit in the ECU-B NO. 2 fuse.

Post-procedure1

(c) Install the ECU-B NO. 2 fuse.

OK ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE OF HYBRID VEHICLE CONTROL ECU)**

NG ▶ **REPLACE FUSE (ECU-B NO. 2)**