Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BHUK
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for PHEV Model): P0A1D94; Hybrid/EV Powertrain Control Module Unexpected Operation; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	**P0A1D94**	**Hybrid/EV Powertrain Control Module Unexpected Operation**

DESCRIPTION

The battery ECU assembly monitors the hybrid vehicle control ECU via CAN communication. If the battery ECU assembly detects that the hybrid vehicle control ECU is malfunctioning, it will illuminate the MIL and store a DTC.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P0A1D94	Hybrid/EV Powertrain Control Module Unexpected Operation	Hybrid vehicle control ECU internal malfunction: An abnormal signal from the hybrid vehicle control ECU is detected by the battery ECU assembly. (1 trip detection logic)	Hybrid vehicle control ECU	Comes on	Master Warning: Comes on	HV Battery	A	SAE Code: P0A1D

MONITOR DESCRIPTION

The battery ECU assembly monitors the hybrid vehicle control ECU via CAN communication. If the battery ECU assembly detects a malfunction in the hybrid vehicle control ECU, it will illuminate the MIL and store a DTC.

MONITOR STRATEGY

Related DTCs	P0A1D (INF P0A1D94): Hybrid powertrain control module
Required sensors/components	Hybrid vehicle control ECU
Frequency of operation	Continuous
Duration	TMC's intellectual property
MIL operation	1 driving 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

Battery ECU assembly	DTC P0A1D (INF P0A1D94) 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 2 minutes 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 / HV Battery / 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.

PROCEDURE

1.	**CHECK CONNECTOR CONNECTION CONDITION (HYBRID VEHICLE CONTROL ECU)**

(a) Check the connections of the hybrid vehicle control ECU connector.

HINT:

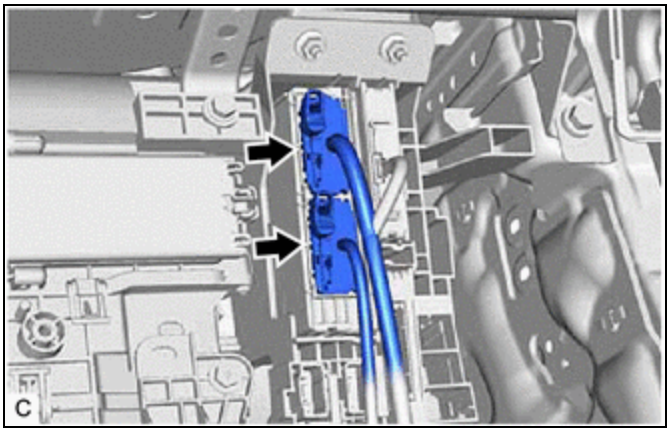
Click here INFO

OK:

The connector is connected securely and there are no contact problems.

Result:

RESULT
OK
NG



NG ▶ **CONNECT SECURELY**

OK ▼

2.	CHECK CONNECTOR CONNECTION CONDITION (NO. 1 TRACTION BATTERY WIRE)

CAUTION:

Be sure to wear insulated gloves and protective goggles.

Pre-procedure1

(a) Check that the service plug grip is not installed.

NOTICE:

After removing the service plug grip, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

Procedure1

(b) Check the connections of the No. 1 traction battery wire connector.

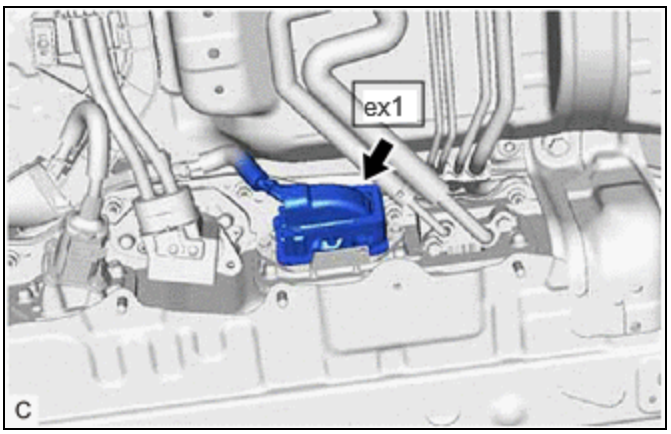
HINT:

Click here INFO

OK:

The connector is connected securely and there are no contact problems.

Result:



RESULT
OK

RESULT
NG

Post-procedure1

(c) None

NG ▶ **CONNECT SECURELY**

OK ▼

3.	**CHECK CONNECTOR CONNECTION CONDITION (BATTERY ECU ASSEMBLY)**

Click here INFO

NG ▶ **CONNECT SECURELY**

OK ▼

4.	**REPLACE HYBRID VEHICLE CONTROL ECU**

HINT:

Click here INFO

NEXT ▶ **COMPLETED**