Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BHW3
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for PHEV Model): P33E600-P33E800; Hybrid/EV Battery Stack 1 Capacity Decline; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	**P33E600**	**Hybrid/EV Battery Stack 1 Capacity Decline**

DTC	**P33E700**	**Hybrid/EV Battery Stack 2 Capacity Decline**

DTC	**P33E800**	**Hybrid/EV Battery Stack 3 Capacity Decline**

DESCRIPTION

The HV battery is composed of 72 cells (3.7 V each) in series. The battery ECU assembly monitors the capacity of each HV battery cell to detect malfunctions of the HV battery.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P33E600	Hybrid/EV Battery Stack 1 Capacity Decline	Full charge capacity of the No. 1 HV supply stack sub-assembly is less than the specified value. (1 trip detection logic)	No. 1 HV supply stack sub-assembly	Does not come on	Master Warning: Comes on	HV Battery	A	SAE Code: P33E6
P33E700	Hybrid/EV Battery Stack 2 Capacity Decline	Full charge capacity of the No. 2 HV supply stack sub-assembly is less than the specified value. (1 trip detection logic)	No. 2 HV supply stack sub-assembly	Does not come on	Master Warning: Comes on	HV Battery	A	SAE Code: P33E7
P33E800	Hybrid/EV Battery Stack 3 Capacity Decline	Full charge capacity of the No. 3 HV supply stack sub-assembly is less than the specified value. (1 trip detection logic)	No. 3 HV supply stack sub-assembly	Does not come on	Master Warning: Comes on	HV Battery	A	SAE Code: P33E8

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.

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1. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
2. Turn the ignition switch to ON (READY) and drive the vehicle in EV mode until the mode changes to HV mode.
3. Turn the ignition switch off and wait for 1.5 hours or more.
4. Perform plug-in charging until fully charged.
5. After plug-in charging, wait for 35 minutes or more.
6. Turn the ignition switch to ON and wait for 10 seconds or more.
7. Turn the ignition switch off and wait for 2 minutes or more.
8. Turn the ignition switch to ON (READY) and drive the vehicle in EV mode until the mode changes to HV mode.
9. Turn the ignition switch off and wait for 1.5 hours or more.
10. Perform plug-in charging until fully charged.
11. After plug-in charging, wait for 35 minutes or more.
12. Turn the ignition switch to ON and wait for 10 seconds or more.
13. Enter the following menus: Powertrain / HV Battery / Utility / All Readiness.
14. 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 driving pattern again.

CAUTION / NOTICE / HINT

CAUTION:

Refer to the precautions before inspecting high voltage circuit.

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NOTICE:

- After the ignition switch is turned off, there may be a waiting time before disconnecting the auxiliary negative (-) battery terminal.

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- 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.

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PROCEDURE

1.	**CHECK DTC OUTPUT (HV BATTERY, HYBRID CONTROL)**

Pre-procedure1

(a) None

Procedure1

(b) Check for DTCs.

Powertrain > HV Battery > Trouble Codes
Powertrain > Hybrid Control > Trouble Codes

RESULT	PROCEED TO
"P33E600, P33E700 or P33E800" only is output, or DTCs except the ones in the table below are also output.	A
DTCs of hybrid battery system in the table below are output.	B
DTCs of hybrid control system in the table below are output.	C

SYSTEM	RELEVANT DTC	
Hybrid battery system	P060A47	Hybrid/EV Battery Energy Control Module Monitoring Processor Watchdog / Safety MCU Failure
	P060B49	Hybrid/EV Battery Energy Control Module A/D Processing Internal Electronic Failure
	P060687	Hybrid/EV Battery Energy Control Module Processor to Monitoring Processor Missing Message
Hybrid control system	P0A1F94	Hybrid/EV Battery Energy Control Module Unexpected Operation

Post-procedure1

(c) Turn the ignition switch off.

B ▶ **GO TO DTC CHART (HYBRID BATTERY SYSTEM)**

C ▶ **GO TO DTC CHART (HYBRID CONTROL SYSTEM)**

A

2.	**CHECK DTC**

(a) Check the DTCs that were output when the vehicle was brought to the workshop.

RESULT	PROCEED TO
"P33E600" is also output.	A
"P33E700" is also output.	B

RESULT	PROCEED TO
"P33E800" is also output.	C

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**