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Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for M20A-FXS): P300000; Hybrid/EV Battery Discharge Control Malfunction; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**P300000**	**Hybrid/EV Battery Discharge Control Malfunction**

DESCRIPTION

The battery ECU assembly alerts the driver and performs fail-safe control based on malfunction signals. If the SOC drops due to running out of fuel, the vehicle being left with the shift lever in N for a long time or a hybrid control system malfunction, this DTC will be stored.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P300000	Hybrid/EV Battery Discharge Control Malfunction	Discharging of the HV battery continues even after discharging is prohibited when the "SOC" has reached the lower limit. (1 trip detection logic)	• SFI system • Fuel level • HV battery state of charge	Does not come on	Master Warning: Does not come on	HV Battery	A	SAE Code: P3000

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 off and wait for 2 minutes or more.
3. Turn the ignition switch to ON (READY) with the shift lever in P and cause the "Hybrid/EV Battery SOC" to decrease. Check that the engine is started to charge the HV battery, and the value of Data List item "Hybrid/EV Battery SOC" increases and then remains within an appropriate range.
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, perform driving pattern again.

CAUTION / NOTICE / HINT

HINT:

- Thoroughly interview the customer as DTC P300000 may be stored if the SOC drops due to the vehicle running out of fuel, or the use of incorrect or low-quality fuel.
- If the vehicle is left with the shift lever in N (parked or stopped) for a long time, the battery cannot be charged. In this case, the SOC may drop below the lower limit and DTC P300000 may be stored. (This is not a system malfunction.)
- When the engine cannot be started, DTC P300000 may be stored because the HV battery cannot be charged.
- Repeated engine start checks may cause the SOC to drop, resulting in DTC P300000 being stored. In this case, charge the HV battery using the THS charger.
- Cranking the engine once causes the SOC to drop approximately 1%.
- Charging the HV battery once (10 minutes) using the THS charger restores the SOC approximately 2%.
- Charging the HV battery using the THS charger takes approximately 10 minutes when the battery temperature is 25°C (77°F) or approximately 30 minutes when the battery temperature is 0°C (32°F).
- The THS charger is a supplemental charging device that enables the hybrid system to start (READY-on state).
- If the result of this inspection is to charge the HV battery, clear the DTCs and then charge the HV battery using the THS charger.

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
"P300000 or P300016" only is output.	A
DTCs except "P300000 or P300016" of hybrid battery system are output.	B
DTCs except "P300000 or P300016" of hybrid control system are output.	C

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 OUTPUT (ENGINE)**

Pre-procedure1

(a) None

Procedure1

(b) Check for DTCs.

Powertrain > Engine > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
DTCs are output	B

Post-procedure1

(c) Turn the ignition switch off.

B **GO TO DTC CHART (SFI SYSTEM)**

Click here INFO

A

3.	**CHECK AMOUNT OF FUEL**

Pre-procedure1

(a) Turn the ignition switch to ON.

Procedure1

(b) Check the amount of fuel by referring to the fuel gauge in the meter.

RESULT	PROCEED TO
Proper amount of fuel is in the tank.	A
There is no fuel in the tank.	B

HINT:

Add fuel until the low fuel level warning light turns off.

Post-procedure1

(c) Turn the ignition switch off.

B ▶ **REFUEL VEHICLE**

A

4.	**CHECK FREEZE FRAME DATA (SHIFT POSITION)**

Pre-procedure1

(a) None

Procedure1

(b) Read the freeze frame data item "Shift Position" of DTC P300000.

Powertrain > HV Battery > Trouble Codes
Powertrain > HV Battery

TESTER DISPLAY
Shift Position

NOTICE:

- When the freeze frame data "Shift Position" was N, DTC P300000 may be stored due to the vehicle was left with the shift lever in N and the HV battery could not be charged.
- If DTC "P300000" only is output, charge the HV battery without replacing the HV battery if necessary.

Post-procedure1

(c) Turn the ignition switch off.

NEXT

5.	**CHECK ENGINE START**

Pre-procedure1

(a) Turn the ignition switch to ON (READY).

Procedure1

(b) Check if the engine starts.

HINT:

- Depressing the accelerator pedal with the shift lever in P will cause the engine to start.
- Turning the ignition switch to ON (READY) and off repeatedly while the SOC is low may cause the SOC to drop further, resulting in DTC P300016 being stored. Charge the HV battery using the THS charger as necessary.
- Cranking the engine once causes the SOC to drop approximately 1%.
- Charging the HV battery once (10 minutes) using the THS charger restores the SOC approximately 2%.

RESULT	PROCEED TO
The engine starts.	A
The engine does not start.	B

Post-procedure1

(c) If the engine does not start, turn the ignition switch off.

A ▶ **LEAVE VEHICLE WITH THE SHIFT LEVER IN P, AND CHARGE HV BATTERY BY IDLING UNTIL IDLING STOPS**

B ▼

6.	**CLEAR DTC (HV BATTERY)**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs and freeze frame data.

Powertrain > HV Battery > Clear DTCs

Post-procedure1

(c) Perform a road test.

NEXT ▶ **CHARGE HV BATTERY**

(a) Charge the HV battery using the THS charger, then check that engine starts.