Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BHWA
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for PHEV Model): P30004B; Hybrid/EV Battery Control System Over Temperature; 2023 - 2024 MY Prius Prime [03/2023 -]		

DTC	**P30004B**	**Hybrid/EV Battery Control System Over Temperature**

DESCRIPTION

The battery ECU assembly monitors the temperature of the HV battery to detect if it becomes excessively high.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P30004B	Hybrid/EV Battery Control System Over Temperature	The battery ECU assembly detects a HV battery cooling system error signal. (1 trip detection logic)	• Hybrid vehicle control ECU • No. 1 HV supply stack sub-assembly • No. 2 HV supply stack sub-assembly • No. 3 HV supply stack sub-assembly	Does not come on	Master Warning: Comes on	HV Battery	A	SAE Code: P3000

HINT:

The normal HV battery temperature is 60°C (140°F) or less.

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. Drive the vehicle for approximately 10 minutes according to the freeze frame data items "Vehicle Speed", "Hybrid/EV Battery Temperature 1 to 15", "Ambient Temperature" and "Hybrid/EV Battery Current".
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 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.	**INSPECT HV SUPPLY BATTERY ASSEMBLY**

HINT:

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NEXT

2.	**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
"P30004B" 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

RESULT	PROCEED TO
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
	P0A9B11	Hybrid/EV Battery Temperature Sensor "A" Circuit Short to Ground
	P0A9B15	Hybrid/EV Battery Temperature Sensor "A" Circuit Short to Auxiliary Battery or Open
	P0A9B1C	Hybrid/EV Battery Temperature Sensor "A" Voltage Out of Range
	P0A9B2A	Hybrid/EV Battery Temperature Sensor "A" Signal Stuck In Range
	P0AAC11	Hybrid/EV Battery Air Temperature Sensor "A" Circuit Short to Ground
	P0AAC15	Hybrid/EV Battery Air Temperature Sensor "A" Circuit Short to Auxiliary Battery or Open
	P0AB111	Hybrid/EV Battery Air Temperature Sensor "B" Circuit Short to Ground
	P0AB115	Hybrid/EV Battery Air Temperature Sensor "B" Circuit Short to Auxiliary Battery or Open
	P0AC511	Hybrid/EV Battery Temperature Sensor "B" Circuit Short to Ground
	P0AC515	Hybrid/EV Battery Temperature Sensor "B" Circuit Short to Auxiliary Battery or Open
	P0AC51C	Hybrid/EV Battery Temperature Sensor "B" Voltage Out of Range
	P0AC52A	Hybrid/EV Battery Temperature Sensor "B" Signal Stuck In Range
	P0ACA11	Hybrid/EV Battery Temperature Sensor "C" Circuit Short to Ground
	P0ACA15	Hybrid/EV Battery Temperature Sensor "C" Circuit Short to Auxiliary Battery or Open
	P0ACA1C	Hybrid/EV Battery Temperature Sensor "C" Voltage Out of Range
	P0ACA2A	Hybrid/EV Battery Temperature Sensor "C" Signal Stuck In Range
	P0AE811	Hybrid/EV Battery Temperature Sensor "D" Circuit Short to Ground
	P0AE815	Hybrid/EV Battery Temperature Sensor "D" Circuit Short to Auxiliary Battery or Open
	P0AE81C	Hybrid/EV Battery Temperature Sensor "D" Voltage Out of Range
	P0AE82A	Hybrid/EV Battery Temperature Sensor "D" Signal Stuck In Range
	P0BC211	Hybrid/EV Battery Temperature Sensor "E" Circuit Short to Ground
	P0BC215	Hybrid/EV Battery Temperature Sensor "E" Circuit Short to Auxiliary Battery or Open

SYSTEM	RELEVANT DTC	
	P0BC21C	Hybrid/EV Battery Temperature Sensor "E" Voltage Out of Range
	P0BC22A	Hybrid/EV Battery Temperature Sensor "E" Signal Stuck In Range
	P0C3311	Hybrid/EV Battery Temperature Sensor "F" Circuit Short to Ground
	P0C3315	Hybrid/EV Battery Temperature Sensor "F" Circuit Short to Auxiliary Battery or Open
	P0C331C	Hybrid/EV Battery Temperature Sensor "F" Voltage Out of Range
	P0C332A	Hybrid/EV Battery Temperature Sensor "F" Signal Stuck In Range
	P0C7C11	Hybrid/EV Battery Temperature Sensor "G" Circuit Short to Ground
	P0C7C15	Hybrid/EV Battery Temperature Sensor "G" Circuit Short to Auxiliary Battery or Open
	P0C7C1C	Hybrid/EV Battery Temperature Sensor "G" Voltage Out of Range
	P0C7C2A	Hybrid/EV Battery Temperature Sensor "G" Signal Stuck In Range
	P0C8111	Hybrid/EV Battery Temperature Sensor "H" Circuit Short to Ground
	P0C8115	Hybrid/EV Battery Temperature Sensor "H" Circuit Short to Auxiliary Battery or Open
	P0C811C	Hybrid/EV Battery Temperature Sensor "H" Voltage Out of Range
	P0C812A	Hybrid/EV Battery Temperature Sensor "H" Signal Stuck In Range
	P0C8811	Hybrid/EV Battery Temperature Sensor "I" Circuit Short to Ground
	P0C8815	Hybrid/EV Battery Temperature Sensor "I" Circuit Short to Auxiliary Battery or Open
	P0C881C	Hybrid/EV Battery Temperature Sensor "I" Voltage Out of Range
	P0C882A	Hybrid/EV Battery Temperature Sensor "I" Signal Stuck In Range
Hybrid battery system	P0C8D11	Hybrid/EV Battery Temperature Sensor "J" Circuit Short to Ground
	P0C8D15	Hybrid/EV Battery Temperature Sensor "J" Circuit Short to Auxiliary Battery or Open
	P0C8D1C	Hybrid/EV Battery Temperature Sensor "J" Voltage Out of Range
	P0C8D2A	Hybrid/EV Battery Temperature Sensor "J" Signal Stuck In Range
	P0C9211	Hybrid/EV Battery Temperature Sensor "K" Circuit Short to Ground
	P0C9215	Hybrid/EV Battery Temperature Sensor "K" Circuit Short to Auxiliary Battery or Open
	P0C921C	Hybrid/EV Battery Temperature Sensor "K" Voltage Out of Range
	P0C922A	Hybrid/EV Battery Temperature Sensor "K" Signal Stuck In Range
	P0C9711	Hybrid/EV Battery Temperature Sensor "L" Circuit Short to Ground
	P0C9715	Hybrid/EV Battery Temperature Sensor "L" Circuit Short to Auxiliary Battery or Open
	P0C971C	Hybrid/EV Battery Temperature Sensor "L" Voltage Out of Range
	P0C972A	Hybrid/EV Battery Temperature Sensor "L" Signal Stuck In Range
	P0CA811	Hybrid/EV Battery Temperature Sensor "M" Circuit Short to Ground

SYSTEM	RELEVANT DTC	
	P0CA815	Hybrid/EV Battery Temperature Sensor "M" Circuit Short to Auxiliary Battery or Open
	P0CA81C	Hybrid/EV Battery Temperature Sensor "M" Voltage Out of Range
	P0CA82A	Hybrid/EV Battery Temperature Sensor "M" Signal Stuck In Range
	P0CAD11	Hybrid/EV Battery Temperature Sensor "N" Circuit Short to Ground
	P0CAD15	Hybrid/EV Battery Temperature Sensor "N" Circuit Short to Auxiliary Battery or Open
	P0CAD1C	Hybrid/EV Battery Temperature Sensor "N" Voltage Out of Range
	P0CAD2A	Hybrid/EV Battery Temperature Sensor "N" Signal Stuck In Range
	P0CB211	Hybrid/EV Battery Temperature Sensor "O" Circuit Short to Ground
	P0CB215	Hybrid/EV Battery Temperature Sensor "O" Circuit Short to Auxiliary Battery or Open
	P0CB21C	Hybrid/EV Battery Temperature Sensor "O" Voltage Out of Range
	P0CB22A	Hybrid/EV Battery Temperature Sensor "O" Signal Stuck In Range
	P0CB711	Hybrid/EV Battery Temperature Sensor "P" Circuit Short to Ground
	P0CB715	Hybrid/EV Battery Temperature Sensor "P" Circuit Short to Auxiliary Battery or Open
	P0CB71C	Hybrid/EV Battery Temperature Sensor "P" Circuit Voltage Out of Range
	P0CB72A	Hybrid/EV Battery Temperature Sensor "P" Signal Stuck In Range
	P1B5B11	Hybrid/EV Battery Temperature Sensor "Q" Circuit Short to Ground
	P1B5B15	Hybrid/EV Battery Temperature Sensor "Q" Circuit Short to Auxiliary Battery or Open
	P1B5B1C	Hybrid/EV Battery Temperature Sensor "Q" Circuit Voltage Out of Range
	P1B5B2A	Hybrid/EV Battery Temperature Sensor "Q" Signal Stuck In Range
	P1B6011	Hybrid/EV Battery Temperature Sensor "R" Circuit Short to Ground
	P1B6015	Hybrid/EV Battery Temperature Sensor "R" Circuit Short to Auxiliary Battery or Open
	P1B601C	Hybrid/EV Battery Temperature Sensor "R" Circuit Voltage Out of Range
	P1B602A	Hybrid/EV Battery Temperature Sensor "R" Signal Stuck In Range
	P1B6511	Hybrid/EV Battery Temperature Sensor "S" Circuit Short to Ground
	P1B6515	Hybrid/EV Battery Temperature Sensor "S" Circuit Short to Auxiliary Battery or Open
	P1B651C	Hybrid/EV Battery Temperature Sensor "S" Circuit Voltage Out of Range
	P1B652A	Hybrid/EV Battery Temperature Sensor "S" Signal Stuck In Range
	P1B6A11	Hybrid/EV Battery Temperature Sensor "T" Circuit Short to Ground
	P1B6A15	Hybrid/EV Battery Temperature Sensor "T" Circuit Short to Auxiliary Battery or Open
	P1B6A1C	Hybrid/EV Battery Temperature Sensor "T" Circuit Voltage Out of Range

SYSTEM	RELEVANT DTC	
	P1B6A2A	Hybrid/EV Battery Temperature Sensor "T" Signal Stuck In Range
	P306562	Hybrid/EV Battery Temperature Sensor "Group 1" Signal Compare Failure
	P306A62	Hybrid/EV Battery Temperature Sensor "Group 2" Signal Compare Failure
	P306B62	Hybrid/EV Battery Temperature Sensor "Group 3" Signal Compare Failure
	P306F62	Hybrid/EV Battery Temperature Sensor "Group 4" Signal Compare Failure
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

▼

3.	**REPLACE HYBRID VEHICLE CONTROL ECU**

HINT:

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NEXT ▶ **REPLACE HV SUPPLY STACK SUB-ASSEMBLY (NO. 1 THROUGH NO. 3)**