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<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> HYBRID / BATTERY CONTROL: HYBRID BATTERY SYSTEM (for M20A-FXS): P0A8100,P0A8115; Hybrid/EV Battery Cooling Fan 1 Control Circuit High; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

<b>DTC</b>	<b>P0A8100</b>	<b>Hybrid/EV Battery Cooling Fan 1 Control Circuit High</b>
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<b>DTC</b>	<b>P0A8115</b>	<b>Hybrid/EV Battery Cooling Fan 1 Circuit Short to Auxiliary Battery or Open</b>
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## DESCRIPTION

Refer to the description for DTC P0A8111.

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DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P0A8100	Hybrid/EV Battery Cooling Fan 1 Control Circuit High	Both of the following conditions are met: <ul style="list-style-type: none"> <li>The HV battery temperature is high and the hybrid battery cooling fan speed calculated based on the battery cooling blower assembly output frequency (FP0) is not within the target control speed range.</li> <li>The HV battery temperature is high and the battery cooling blower</li> </ul>	<ul style="list-style-type: none"> <li>Battery cooling blower assembly</li> <li>Battery ECU assembly</li> </ul>	Comes on	Master warning: Comes on	HV Battery	A	SAE Code: P0A85

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
		assembly speed is excessively high when a speed below a certain level is requested. (1 trip detection logic)						
P0A8115	Hybrid/EV Battery Cooling Fan 1 Circuit Short to Auxiliary Battery or Open	Both of the following conditions are met: <ul style="list-style-type: none"> <li>The speed calculated based on the battery cooling blower assembly output frequency (FP0) is not within the target control speed range.</li> <li>The battery cooling blower assembly speed is excessively high when a speed below a certain level is requested.</li> </ul> (2 trip detection logic)	<ul style="list-style-type: none"> <li>Battery cooling blower assembly</li> <li>Battery ECU assembly</li> </ul>	Comes on	Master warning: Comes on	HV Battery	A	SAE Code: P0A85

**HINT:**

- "Hybrid/EV Battery Cooling Fan 1 Frequency" is detected when the battery cooling blower assembly is operating and its value changes in proportion to the battery cooling blower assembly speed.
- If the battery cooling blower assembly speed is excessively high, this DTC is stored.

**MONITOR DESCRIPTION**

If the battery ECU assembly detects that the speed of the battery cooling blower assembly is higher than the target speed, it will illuminate the MIL and store a DTC.

## MONITOR STRATEGY

Related DTCs	P0A85 (INF P0A8100): Hybrid/EV Battery Cooling Fan 1 Control Circuit High P0A85 (INF P0A8115): Hybrid/EV Battery Cooling Fan 1 Circuit Short to Auxiliary Battery or Open
Required sensors/components	Battery cooling blower assembly
Frequency of operation	Continuous
Duration	TMC's intellectual property
MIL operation	1 driving cycle / 2 driving cycles
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	-
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## COMPONENT OPERATING RANGE

Battery ECU assembly	DTC P0A85 (INF P0A8100) is not detected DTC P0A85 (INF P0A8115) is not detected
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## CONFIRMATION DRIVING PATTERN

### HINT:

- After repairs have been completed, clear the DTCs and then check that the vehicle has returned to normal by performing the following All Readiness check procedure.

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- When clearing the permanent DTCs, refer to the "CLEAR PERMANENT DTC" procedure.

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- Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
- Turn the ignition switch off and wait for 2 minutes or more.
- Enter the following menus: Powertrain / HV Battery / Active Test / Control the Hybrid/EV Battery Cooling Fan.[\*1]
- Select fan mode 6 and operate the battery cooling blower assembly and wait for 60 seconds or more.[\*2]

### HINT:

- Operation of the battery cooling blower assembly can be confirmed by checking if air is sucked into the air intake port of the intake duct or by operation sounds.
- [\*1] to [\*2]: Normal judgment procedure.

The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.

- Enter the following menus: Powertrain / HV Battery / Utility / All Readiness.

6. Check the DTC judgment result.

**HINT:**

- o If the judgment result shows NORMAL, the system is normal.
- o If the judgment result shows ABNORMAL, the system has a malfunction.
- o If the judgment result shows INCOMPLETE, perform the normal judgment procedure again.

## WIRING DIAGRAM

Refer to the wiring diagram for DTC P0A8111.

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## 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 negative (-) auxiliary 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

<b>1.</b>	<b>CHECK DTC OUTPUT (HV BATTERY, HYBRID CONTROL)</b>
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Pre-procedure1

(a) None

Procedure1

(b) Check for DTCs.

**Powertrain > HV Battery > Trouble Codes**

**Powertrain > Hybrid Control > Trouble Codes**

RESULT	PROCEED TO
P0A8100 or P0A8115 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**



<b>2.</b>	<b>CHECK BATTERY ECU ASSEMBLY (FREQUENCY)</b>
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**OK** ► **REPLACE BATTERY COOLING BLOWER ASSEMBLY**

**NG** ► **REPLACE BATTERY ECU ASSEMBLY**

