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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: HYBRID / BATTERY CONTROL: HYBRID CONTROL SYSTEM (for M20A-FXS): P06881F; ECM/PCM Power Relay Sense Circuit Intermittent; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	P06881F	ECM/PCM Power Relay Sense Circuit Intermittent
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DESCRIPTION

This DTC indicates that the hybrid vehicle control ECU detected an instantaneous interruption in +B power source voltage.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P06881F	ECM/PCM Power Relay Sense Circuit Intermittent	When the ignition switch is ON (READY), the hybrid vehicle control ECU is reset due to an instantaneous interruption of power source. (1 trip detection logic)	<ul style="list-style-type: none"> Wire harness or connector Hybrid vehicle control ECU 	Comes on	Master Warning: Comes on	Hybrid Control	A	SAE Code: P2511

MONITOR DESCRIPTION

The hybrid vehicle control ECU monitors the +B power source voltage and detects momentary interruptions. If there is a momentary interruption in the +B power source voltage, the hybrid vehicle control ECU will illuminate the MIL and store a DTC.

MONITOR STRATEGY

Related DTCs	P2511 (INF P06881F): ECM/PCM Power relay sense circuit intermittent
Required sensors/components	Main: Power source circuit Sub: Hybrid vehicle control ECU
Frequency of operation	Continuous
Duration	TMC's intellectual property
MIL operation	Immediately
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

Hybrid vehicle control ECU	DTC P2511 (INF P06881F) is not detected
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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](#)

- 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.
- Turn the ignition switch to ON (READY) and wait for 30 seconds or more. [*1]

(If the DTC is not output, drive the vehicle on urban roads according to the freeze frame data item "Vehicle Speed" for approximately 5 minutes.)

HINT:

[*1]: Normal judgment procedure.

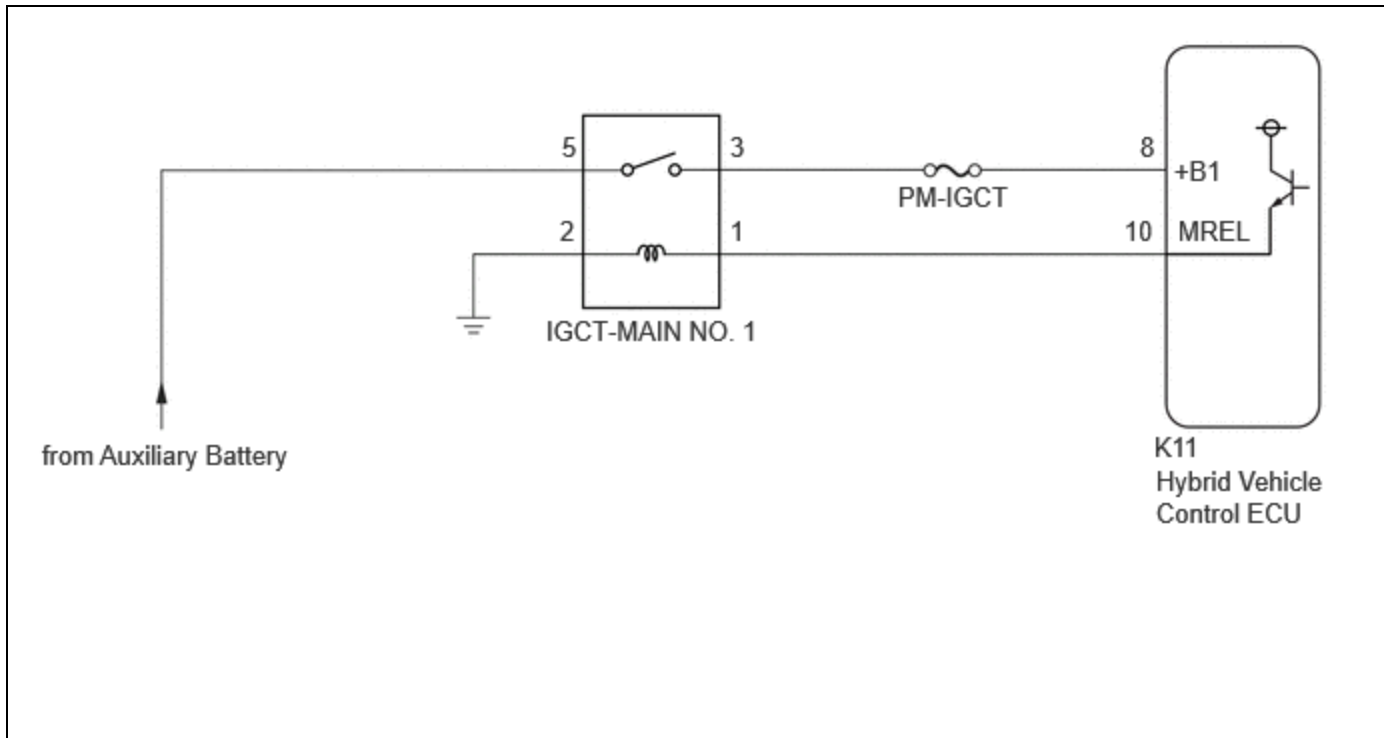
The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.

- Enter the following menus: Powertrain / Hybrid Control / Utility / All Readiness.
- 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 the normal judgment procedure again.

WIRING DIAGRAM



PROCEDURE

1.	CHECK AUXILIARY BATTERY TERMINAL
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(a) Confirm whether the auxiliary battery terminals have been disconnected recently.

RESULT	PROCEED TO
Terminals have been disconnected.	A
Terminals have not been disconnected.	B

B **GO TO STEP 6**

A

2.	CONFIRM MASTER WARNING
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Pre-procedure1

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

Procedure1

(b) Confirm that the master warning illuminates.

Result	PROCEED TO
Master warning illuminates.	A
Master warning does not illuminate.	B

NOTICE:

DTC P06881F may be stored after disconnecting and reconnecting the auxiliary battery terminals. If this happens, the DTC will not be output if the ignition switch is turned off and then ON (READY) again. In this case, clear the DTCs to complete the inspection.

Post-procedure1

(c) Turn the ignition switch off.

B  **END**

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3.	CHECK DTC OUTPUT
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(a) Read and record the DTCs and freeze frame data.

Powertrain > Hybrid Control > Trouble Codes

NEXT



4.	CLEAR DTC
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Pre-procedure1

(a) None.

Procedure1

(b) Clear the DTCs and freeze frame data.

Powertrain > Hybrid Control > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off and wait for 2 minutes or more.

NEXT**5. CHECK DTC OUTPUT (HYBRID CONTROL)**

Pre-procedure1

(a) None.

Procedure1

(b) Check for DTCs.

Powertrain > Hybrid Control > Trouble Codes

Result	PROCEED TO
Only P06881F is output	A
P06881F and other DTCs are output	B

Post-procedure1

(c) Turn the ignition switch off.

B ► GO TO DTC CHART (HYBRID CONTROL SYSTEM)**A****6. CHECK AUXILIARY BATTERY TERMINAL (CONTACT PROBLEM)**

(a) Check the connection of the auxiliary battery terminal.

OK:

The terminal is connected securely and there is no contact problem.

NG ► CONNECT SECURELY**OK**

7.	CHECK CONNECTOR CONNECTION CONDITION (HYBRID VEHICLE CONTROL ECU CONNECTOR)
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Click here [INFO](#)

NG **CONNECT SECURELY**

OK

8.	CHECK HARNESS AND CONNECTOR (HYBRID VEHICLE CONTROL ECU - IGCT-MAIN NO. 1 RELAY)
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Pre-procedure1

- (a) Remove the IGCT-MAIN NO. 1 relay from the No. 1 engine room relay block and No. 1 junction block assembly.
- (b) Disconnect the hybrid vehicle control ECU connector.

Procedure1

- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(K11\)](#)
[Click Connector\(K11\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K11-8 (+B1) - 3 (IGCT-MAIN NO. 1 relay holder)	Ignition switch off	Below 1 Ω	Ω

Post-procedure1

- (d) Reconnect the hybrid vehicle control ECU connector.
- (e) Reinstall the IGCT-MAIN NO. 1 relay.

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

9. CHECK FOR INTERMITTENT PROBLEMS

(a) Check for intermittent problems.

HINT:

[Click here](#) INFO

- (1) Check the connection and terminal contact pressure of the connectors and wire harnesses between the hybrid vehicle control ECU and the No. 1 engine room relay block and No. 1 junction block assembly.
- (2) When the ignition switch is ON (READY), jiggle the connectors and wire harnesses between the hybrid vehicle control ECU and the No. 1 engine room relay block and No. 1 junction block assembly.

Result	PROCEED TO
Problem symptom does not recur.	A
Problem symptom recurs.	B

A ▶ **REPLACE HYBRID VEHICLE CONTROL ECU** INFO

B ▶ **REPAIR OR REPLACE MALFUNCTIONING PARTS, COMPONENT AND AREA**

