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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: HYBRID / BATTERY CONTROL: MOTOR GENERATOR CONTROL SYSTEM (for M20A-FXS): P0C3811,P0C3815,P0C3D11,P0C3D15; DC/DC Converter Temperature Sensor "A" Circuit Short to Ground; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	P0C3811	DC/DC Converter Temperature Sensor "A" Circuit Short to Ground
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DTC	P0C3815	DC/DC Converter Temperature Sensor "A" Circuit Short to Battery or Open
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DTC	P0C3D11	DC/DC Converter Temperature Sensor "B" Circuit Short to Ground
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DTC	P0C3D15	DC/DC Converter Temperature Sensor "B" Circuit Short to Battery or Open
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DESCRIPTION

The motor generator control ECU (MG ECU) located in the inverter with converter assembly detects the temperature of the boost converter using the temperature sensor built into the boost converter. The motor generator control ECU (MG ECU) detects malfunctions in the boost converter temperature sensor and its wiring.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P0C3811	DC/DC Converter Temperature Sensor "A" Circuit Short to Ground	Short to ground detected in boost converter temperature sensor (upper) signal circuit (1 trip detection logic)	Inverter with converter assembly	Comes on	Master Warning: Comes on	Motor Generator	A	SAE Code: P0C3A
P0C3815	DC/DC Converter Temperature Sensor "A" Circuit Short to Battery or Open	Open or short to +B detected in boost converter temperature sensor (upper) signal circuit (1 trip detection logic)	Inverter with converter assembly	Comes on	Master Warning: Comes on	Motor Generator	A	SAE Code: P0C3B

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P0C3D11	DC/DC Converter Temperature Sensor "B" Circuit Short to Ground	Short to ground detected in boost converter temperature sensor (lower) signal circuit (1 trip detection logic)	Inverter with converter assembly	Comes on	Master Warning: Comes on	Motor Generator	A	SAE Code: P0C3F
P0C3D15	DC/DC Converter Temperature Sensor "B" Circuit Short to Battery or Open	Open or short to +B detected in boost converter temperature sensor (lower) signal circuit (1 trip detection logic)	Inverter with converter assembly	Comes on	Master Warning: Comes on	Motor Generator	A	SAE Code: P0C40

MONITOR DESCRIPTION

If the motor generator control ECU detects a malfunction in the boost converter temperature sensor circuit, the motor generator control ECU will illuminate the MIL and store a DTC.

MONITOR STRATEGY

Related DTCs	P0C3A (INF P0C3811): DC/DC Converter Temperature Sensor "A" Range check P0C3B (INF P0C3815): DC/DC Converter Temperature Sensor "A" Range check P0C3F (INF P0C3D11): DC/DC Converter Temperature Sensor "B" Range check P0C40 (INF P0C3D15): DC/DC Converter Temperature Sensor "B" Range check
Required sensors/components	DC/DC converter temperature sensor
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

Motor generator control ECU

DTC P0C3A (INF P0C3811) is not detected
DTC P0C3B (INF P0C3815) is not detected
DTC P0C3F (INF P0C3D11) is not detected
DTC P0C40 (INF P0C3D15) is not detected

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](#) 

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

[Click here](#) 

- 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 and wait for 5 seconds or more. [*1]

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 / Motor Generator / 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.

PROCEDURE

1. REPLACE INVERTER WITH CONVERTER ASSEMBLY

[Click here](#) 

NEXT  **COMPLETED**

