Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM1000000028ZY5
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: HYBRID / BATTERY CONTROL: MOTOR GENERATOR CONTROL SYSTEM (for M20A-FXS): P0E5111,P0E5115,P0E511F; DC/DC Converter Current Sensor Circuit Short to Ground; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	**P0E5111**	**DC/DC Converter Current Sensor Circuit Short to Ground**

DTC	**P0E5115**	**DC/DC Converter Current Sensor Circuit Short to Battery or Open**

DTC	**P0E511F**	**DC/DC Converter Current Sensor Circuit Intermittent**

DESCRIPTION

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	NOTE
P0E5111	DC/DC Converter Current Sensor Circuit Short to Ground	Short to ground detected in reactor current sensor circuit (1 trip detection logic)	Inverter with converter assembly	Comes on	Master Warning: Comes on	Motor Generator	A	SAE Code: P0E53
P0E5115	DC/DC Converter Current Sensor Circuit Short to Battery or Open	Open or short to +B detected in reactor current sensor circuit (1 trip detection logic)	Inverter with converter assembly	Comes on	Master Warning: Comes on	Motor Generator	A	SAE Code: P0E54
P0E511F	DC/DC Converter Current Sensor Circuit Intermittent	Short to ground, open or short to +B detected in reactor current sensor circuit when DTC P0C7917, P0E5717, P0D3319, P1C5D19, P1C5F19 or P1C5E19 is stored. (1 trip detection logic)	Inverter with converter assembly	Does not come on	Master Warning: Does not come on	Motor Generator	A	SAE Code: P0E55

MONITOR DESCRIPTION

If the motor generator control ECU detects an open or short in the DC/DC converter current sensor circuit, it will illuminate the MIL and store a DTC.

MONITOR STRATEGY

Related DTCs	P0E53 (INF P0E5111): DC/DC Converter Current Sensor Range "A" check (Low voltage) P0E54 (INF P0E5115): DC/DC Converter Current Sensor Range "A" check (High voltage)
Required sensors/components	DC/DC converter current 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	-

COMPONENT OPERATING RANGE

Motor generator control ECU	DTC P0E53 (INF P0E5111) is not detected DTC P0E54 (INF P0E5115) 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.

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

  Click here INFO

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 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.
4. Enter the following menus: Powertrain / Motor Generator / 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 the normal judgment procedure 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 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

1.	**REPLACE INVERTER WITH CONVERTER ASSEMBLY**

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NEXT **COMPLETED**