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| Model Year Start: 2023 | Model: Prius Prime | Prod Date Range: [03/2023 -] |
| Title: HYBRID / BATTERY CONTROL: MOTOR GENERATOR CONTROL SYSTEM (for PHEV Model): P0AED11,P0AED15; Drive Motor Inverter Temperature Sensor "A" Circuit Short to Ground; 2023 - 2024 MY Prius Prime [03/2023 -] | | |

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| DTC | P0AED11 | Drive Motor Inverter Temperature Sensor "A" Circuit Short to Ground |
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| DTC | P0AED15 | Drive Motor Inverter Temperature Sensor "A" Circuit Short to Battery or Open |
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DESCRIPTION

The motor generator control ECU (MG ECU), which is built into the inverter with converter assembly, detects the temperature of the motor inverter using the motor inverter temperature sensor. The inverter cooling system operates independently of the engine cooling system. The motor generator control ECU (MG ECU) uses signals from the motor inverter temperature sensor to check the effectiveness of the inverter cooling system. If necessary, the motor generator control ECU (MG ECU) will limit inverter output to help prevent inverter overheating. The motor generator control ECU (MG ECU) also detects malfunctions in the motor inverter temperature sensor and its wiring.

| DTC NO. | DETECTION ITEM | DTC DETECTION CONDITION | TROUBLE AREA | MIL | WARNING INDICATE | DTC OUTPUT FROM | PRIORITY | NOTE |
|---------|--|---|----------------------------------|----------|---------------------------------|-----------------|----------|------------------------|
| P0AED11 | Drive Motor Inverter Temperature Sensor "A" Circuit Short to Ground | Short to ground detected in motor inverter temperature sensor circuit (1 trip detection logic) | Inverter with converter assembly | Comes on | Master Warning: Comes on | Motor Generator | A | SAE Code: P0AEF |
| P0AED15 | Drive Motor Inverter Temperature Sensor "A" Circuit Short to Battery or Open | Open or short to +B detected in motor inverter temperature sensor circuit (1 trip detection logic) | Inverter with converter assembly | Comes on | Master Warning: Comes on | Motor Generator | A | SAE Code: P0AF0 |

MONITOR DESCRIPTION

If the motor generator control ECU detects a malfunction of the motor inverter temperature sensor, it will illuminate the MIL and store a DTC.

MONITOR STRATEGY

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| Related DTCs | P0AEF (INF P0AED11): Drive Motor Inverter Temperature Sensor "A" |
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| | P0AF0 (INF P0AED15): Drive Motor Inverter Temperature Sensor "A" |
| Required sensors/components | Motor inverter temperature sensor |
| Frequency of operation | Continuous |
| Duration | TMC's intellectual property |
| MIL operation | Immediately |
| Sequence of operation | None |

TYPICAL ENABLING CONDITIONS

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| 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

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| TMC's intellectual property | - |
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COMPONENT OPERATING RANGE

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| Motor generator control ECU | DTC P0AEF (INF P0AED11) is not detected DTC P0AF0 (INF P0AED15) 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 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

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| 1. | REPLACE INVERTER WITH CONVERTER ASSEMBLY |
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Click here 

NEXT  **COMPLETED**

