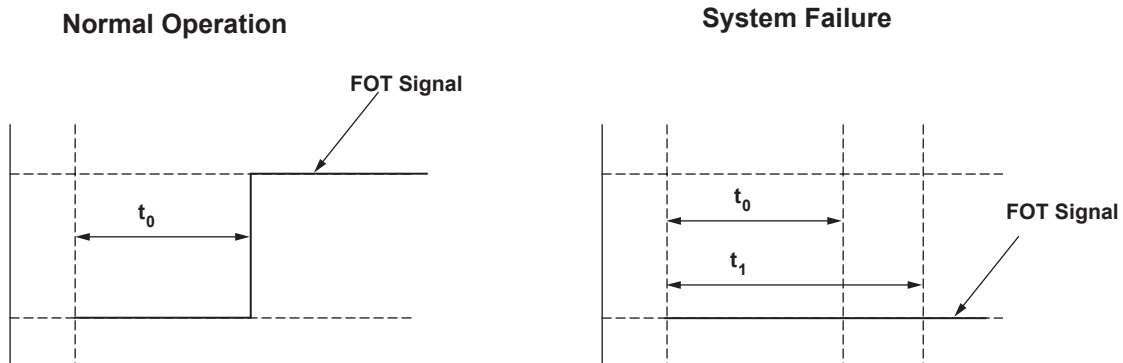


Advanced Diagnostics

DTC P1438 (38): Motor Drive Module (MDM) Overheating Signal Circuit Problem



P1438-0071

General Description

If the flag over temperature (FOT) signals from the power drive unit (PDU) do not vary from the low voltage level to the high voltage level within a set time period after turning the ignition switch on, a malfunction is detected. The signals vary from a low voltage level to a high voltage level within a set time period (t_0) under normal conditions. If a problem occurs in the signal circuit, the signal stays at a low voltage level for at least a set time period (t_1) ($t_1 > t_0$) after turning the ignition switch on, and the motor control module (MCM) detects a malfunction and stores a DTC.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Once per driving cycle
Sequence	None
Duration	2 seconds or more
DTC Type	One drive cycle, MIL ON, IMA system indicator ON

Enable Conditions

Condition	Minimum	Maximum
MCM power-supply voltage	10.5 V	—
No active DTCs	MPI, MCM	

Malfunction Threshold

The FOT signals stay at a low voltage level for at least 2 seconds.

Driving Pattern

Turn the ignition switch off, and wait for at least 1 minute. Then, turn the ignition switch on.

Diagnosis Details

Conditions for illuminating the MIL

When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored in the ECM memory.

Conditions for clearing the MIL

The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.

The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.