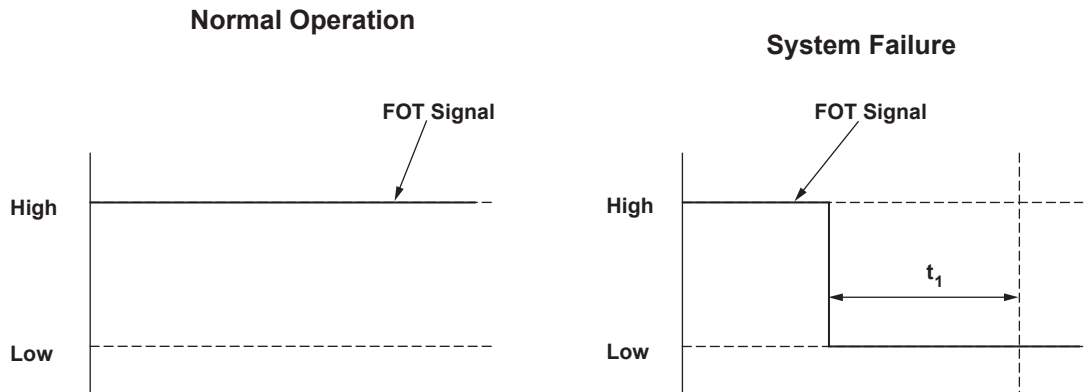


# Advanced Diagnostics

## DTC P1438 (39): Motor Drive Module (MDM) Overheating



P1438-0072

### General Description

If the motor power inverter (MPI) module temperature increases during a drive, the flag over temperature (FOT) signals from the MPI module change from a high voltage level to a low voltage level for when driving self protection. If the FOT signals stay at a low voltage level for a set time period ( $t_1$ ), the motor control module (MCM) detects a malfunction and stores a DTC.

### Monitor Execution, Sequence, Duration, DTC Type

Execution	Continuous
Sequence	None
Duration	0.5 second 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	—
Ignition switch	ON	
No active DTCs	MPI, MCM	

### Malfunction Threshold

The FOT signals stay at a low voltage level for at least 0.5 second.

## **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.