

# Failure Mode Identifier (FMI) Codes on J1939 data link

The FMI is used along with the SPN to provide specific information that relates to a diagnostic trouble code (DTC). The FMI may indicate that a problem with an electronic circuit or an electronic component has been detected. The FMI may also indicate that an abnormal operating condition has been detected.

The codes are displayed in the form “SPN – FMI”. The ECM / ECU also attaches a text description to the message that is transmitted over the J1939 data link. This text description is used to describe the SPN – FMI.

The failure mode of the DTC is determined by evaluating the electronic signal from the suspect circuit. The failure mode identifiers can be divided into two categories:

- Codes that indicate that a problem with an electronic circuit or an electronic component has been detected
- Codes that indicate that a system event has been detected

Typically, the first category of code is generated when the signal for the circuit is outside the range of the sensor.

The second category of code indicates that the sensor signal is OK, but the signal is outside the normal operating range of the parameter.

Refer to the troubleshooting guide for the specific product. The troubleshooting guide procedure will help determine the root cause of a DTC.

<b>FMI</b>	<b>Description</b>
0	High – most severe (3)
1	Low – most severe (3)
2	Erratic, Intermittent, or Incorrect
3	Voltage Above Normal
4	Voltage Below Normal
5	Current Below Normal
6	Current Above Normal
7	Not Responding Properly
8	Abnormal Frequency, Pulse Width, or Period
9	Abnormal Update Rate

10	Abnormal Rate of Change
11	Other Failure Mode
12	Failure
13	Out of Calibration
14	Special Instruction
15	High – least severe (1)
16	High – moderate severity (2)
17	Low – least severe (1)
18	Low – moderate severity (2)
19	Data Error
20	Data Drifted High
21	Data Drifted Low
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