

## Electrical servicing

### PGM-FI Self-diagnosis malfunction indicator lamp (MIL) failure codes

- The PGM-FI MIL denotes the failure codes (the number of blinks from 0 to 54). When the indicator lights for 1.3 seconds, it is equivalent to ten blinks. For example; a 1.3 second illumination and two blinks (0.5 second x 2) of the indicator equals 12 blinks. Follow code 12 troubleshooting.
- When more than one failure occurs, the MIL shows the blinks in the order of lowest number to highest number. For example; if the indicator blinks once, then seven times, two failures have occurred. Follow codes 1 and 7 troubleshooting.

Number of blinks	Causes	Symptoms
0	<ul style="list-style-type: none"> <li>• Faulty ECM</li> </ul>	<ul style="list-style-type: none"> <li>• Engine does not start</li> </ul>
No blinks	<ul style="list-style-type: none"> <li>• Faulty ECM (PGM-FI warning indicator output)</li> </ul>	<ul style="list-style-type: none"> <li>• Engine operates normally</li> </ul>
Stay lit	<ul style="list-style-type: none"> <li>• Short circuit in service check connector</li> <li>• Faulty ECM (PGM-FI warning indicator output)</li> </ul>	<ul style="list-style-type: none"> <li>• Engine operates normally</li> </ul>
1	<ul style="list-style-type: none"> <li>• Open or short circuit in MAP sensor line (in the ECM)</li> <li>• Faulty MAP sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Poor idle</li> </ul>
7	<ul style="list-style-type: none"> <li>• Loose or poor contact on ECT sensor</li> <li>• Open or short circuit in ECT sensor wire</li> <li>• Faulty ECT sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Hard starting at a low temperature (Simulate using numerical values; 90 °C/194 °F)</li> <li>• Cooling fan does not stop</li> </ul>
8	<ul style="list-style-type: none"> <li>• Open or short circuit in TP sensor line (in the ECM)</li> <li>• Faulty TP sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Poor engine response when operating the throttle quickly (Simulate using numerical values; throttle open 0 °)</li> </ul>
9	<ul style="list-style-type: none"> <li>• Open or short circuit in IAT sensor line (in the ECM)</li> </ul>	<ul style="list-style-type: none"> <li>• Engine operates normally (Simulate using numerical values; 25 °C/77 °F)</li> </ul>
12	<ul style="list-style-type: none"> <li>• Loose or poor contact on injector connector</li> <li>• Open or short circuit in injector wire</li> <li>• Faulty injector</li> </ul>	<ul style="list-style-type: none"> <li>• Engine does not start</li> </ul>
21	<ul style="list-style-type: none"> <li>• Loose or poor contact on O2 sensor</li> <li>• Open or short circuit in O2 sensor wire</li> <li>• Faulty O2 sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Engine operates normally</li> </ul>
54	<ul style="list-style-type: none"> <li>• Loose or poor contact on bank angle sensor connector</li> <li>• Open circuit in bank angle sensor wire</li> <li>• Faulty bank angle sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Engine starts but stops after few seconds.</li> </ul>