## 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 $\times 2$ ) 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 | No blinks | - Faulty ECM | - Engine does not start |
|  | No blinks | - Faulty ECM (PGM-FI warning indicator output) | - Engine operates normally |
|  | Stay lit | - Short circuit in service check connector <br> - Faulty ECM (PGM-FI warning indicator output) | - Engine operates normally |
| 1 | Blink | - Open or short circuit in MAP sensor line (in the ECM) <br> - Faulty MAP sensor | - Poor idle |
| 7 | Blinks | - Loose or poor contact on ECT sensor <br> - Open or short circuit in ECT sensor wire <br> - Faulty ECT sensor | - Hard starting at a low temperature <br> (Simulate using numerical values; $90^{\circ} \mathrm{C} / 194^{\circ} \mathrm{F}$ ) <br> - Cooling fan does not stop |
| 8 | Blinks | - Open or short circuit in TP sensor line (in the ECM) <br> - Faulty TP sensor | - Poor engine response when operating the throttle quickly (Simulate using numerical values; throttle open $0^{\circ}$ ) |
| 9 | Blinks | - Open or short circuit in IAT sensor line (in the ECM) | - Engine operates normally (Simulate using numerical values; $25^{\circ} \mathrm{C} / 77^{\circ} \mathrm{F}$ ) |
| 12 | Blinks | - Loose or poor contact on injector connector <br> - Open or short circuit in injector wire <br> - Faulty injector | - Engine does not start |
| 21 | Blinks | - Loose or poor contact on O2 sensor <br> - Open or short circuit in O 2 sensor wire <br> - Faulty O 2 sensor | - Engine operates normally |
| 54 | Blinks | - Loose or poor contact on bank angle sensor connector <br> - Open circuit in bank angle sensor wire <br> - Faulty bank angle sensor | - Engine starts but stops after few seconds. |

