Overview

<table>
<thead>
<tr>
<th>CODE</th>
<th>REASON</th>
<th>EFFECT</th>
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<tbody>
<tr>
<td>Fault Code: 351   PID: S251 SPN: 627 FMI: 12/12 LAMP: Amber SRT:</td>
<td>Injector Power Supply - Bad Intelligent Device or Component. The ECM measured injector boost voltage is low.</td>
<td>Possible smoke, low power, engine misfire, and/or engine will <strong>not</strong> start.</td>
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</table>

ISF2.8 CM2220 E/ISF2.8 CM2220 AN - Injector Power Supply Circuit

ISF3.8 CM2220 AN - Injector Power Supply Circuit
ISB4.5, ISB6.7, ISD4.5, and ISD6.7 CM2150 SN - Injector Power Supply Circuit (4 cylinder engine)

ISB4.5, ISB6.7, ISD4.5, and ISD6.7 CM2150 SN - Injector Power Supply Circuit (6 cylinder engine)

ISL8.9 CM2150 SN - Injector Power Supply Circuit
Circuit Description

Between each injection event, the electronic control module (ECM) attempts to recharge the injector power supply. The injector power supply consists of a bank of capacitors; this power supply is maintained at high voltage. Recharging is accomplished by recovering energy stored in the injector solenoids. For the injector power supply to remain fully charged, there must be good ECM battery power and ground, a good engine speed sensor, and good injector circuits.

Component Location

The injector power supply is located inside the ECM.

Conditions for Running the Diagnostics

This diagnostic runs continuously when the engine speed is greater than 500 rpm, the primary engine speed sensor signal is present, and the battery charge is above a minimum threshold.

Conditions for Setting the Fault Codes

The ECM detects that the measured injector power supply voltage is lower than the commanded injector power supply voltage.
**Action Taken When the Fault Code is Active**

- The ECM illuminates the amber CHECK ENGINE light and/or the malfunction indicator lamp (MIL) immediately when the diagnostic runs and fails.

**Conditions for Clearing the Fault Code**

- To validate the repair, start the engine and let it idle for 1 minute.
- The ECM will turn off the amber CHECK ENGINE light immediately after the measured injector power supply voltage reaches the commanded injector power supply voltage and the diagnostic runs and passes.
- The ECM will turn off the malfunction indicator lamp (MIL) after three consecutive ignition cycles that the diagnostic runs and passes.
- The inactive fault code will be cleared from memory after the completion of 40 warm-up cycles.
- This fault code and malfunction indicator lamp (MIL) can also be cleared with INSITE™ electronic service tool.

**Shop Talk**

Verify the electronic control module (ECM) calibration is correct. Check the calibration revision history found on QuickServe™ Online for applicable fixes to the calibration stored in the ECM. If necessary, calibrate the ECM.

This fault code will become active when the engine is running, the primary engine speed sensor signal is present, the battery charge is above a minimum threshold, and, at the same time, the measured injector power supply voltage is lower than the commanded injector power supply voltage.

This fault code will become inactive whenever the keyswitch is turned on.

This fault code will become inactive whenever the engine is running and measured injector power supply voltage reaches the commanded injector power supply voltage.

Refer to Troubleshooting Fault Code 351.