P0004: FUEL VOLUME REGULATOR CONTROL CIRCUIT HIGH

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	**$100-$300**
Can I Still Drive?	:	**Yes** (Short-term only)

What Does The P0004 Code Mean?

A P0004 is not a very common trouble code and is more often seen on common rail diesel (CRD) and/or diesel engine, and gasoline direct injection (GDI) equipped vehicles.

This code relates to the the electrical system as part of the fuel volume regulator system. Automotive fuel systems consist of many components, the fuel tank, fuel pump, filter, lines, injectors, etc. One component in high pressure fuel systems is a high pressure fuel pump. It's job is to increase the fuel pressure for the very high pressure needed at the fuel rail for the injectors. These high pressure fuel pumps have a low pressure side and high pressure side, and a fuel volume regulator which controls the pressure. For this P0004 code, it refers to an electrical reading that is above expected parameters.

This code is related to P0001, P0002, and P0003.

What Are The Symptoms Of The P0004 Code?

Symptoms of a P0004 DTC may include:

- Malfunction indicator lamp (MIL) illumination
- Vehicle won't start
- "Limp mode" enabled and/or lack of power

What Are The Potential Causes Of The P0004 Code?

Potential causes of this engine code may include:

- Failed fuel volume regulator (FVR) solenoid
- FVR wiring/harness electrical problem (wiring short, corrosion, etc.)

How Can You Fix The P0004 Code?

First, check for known Technical Service Bulletins (TSBs) for your year/make/model. If there is a known TSB that addresses this issue, it can save you time & money during diagnosis.

Next, you'll want to visually inspect the wiring and connectors pertaining to the fuel volume regulator circuit and system. Look for obvious breaks in the wires, corrosion, etc. Repair as necessary.

The fuel volume regulator (FVR) is a two-wire device with the wires both going back to the PCM. You should not apply direct battery voltage to the wires or you could damage the system.

Refer to a factory service manual for more specific troubleshooting steps for your year/make/model/engine.

Reference Sources

Diagnostic Trouble Code (DTC) Charts and Descriptions for P0004 - Page 2.