P0611: FUEL INJECTOR CONTROL MODULE PERFORMANCE

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$300-$900**
Can I Still Drive?	:	No

What Does The P0611 Code Mean?

A stored code P0611 means that the powertrain control module (PCM) has detected an internal control module performance issue. The malfunction is related to the portion of the PCM that controls fuel injector function.

In some cases, the fuel injector controller may be separate from the PCM. Most frequently, it is integrated into the PCM. This saves automakers space, time, and money.

Each time the ignition is turned on and the PCM is energized, multiple controller self-tests are performed. In addition to running internal controller self-tests, the controller area network (CAN) is used to compare signals from each individual module to ensure that the various controllers are interacting properly.

If the PCM finds that fuel injector function cannot be effectively controlled, a code P0611 will be stored and a malfunction indicator lamp (MIL) may be illuminated. Depending upon the perceived severity of the malfunction, multiple failure cycles may be necessary for MIL illumination.

What Are The Symptoms Of The P0611 Code?

Symptoms of a P0611 trouble code may include:

- Engine drivability issues
- Reduced engine performance
- Diminished fuel efficiency
- Other stored codes

What Are The Potential Causes Of The P0611 Code?

Causes for this code may include:

- Faulty PCM
- PCM programming error
- Open or shorted circuit or connectors in the CAN harness
- Failed PCM power source
- Insufficient control module ground

How Can You Fix The P0611 Code?

Unfortunately, even the most experienced and well-equipped professional technician may find diagnosing a code P0611 to be quite a challenge. There is also the issue of reprogramming. Without the necessary reprogramming equipment, it will be impossible to replace a defective controller and complete a successful repair.

If ECM/PCM power supply codes are present, they will need to be repaired before attempting to diagnose a P0611.

There are several preliminary tests that can be performed prior to declaring any controller defective. A diagnostic scanner, a digital volt/ohmmeter (DVOM), and a source of reliable vehicle information will be required.

Step 1

Connect the scanner to the vehicle diagnostic port and retrieve all stored codes and freeze frame data. You will want to write this information down, just in case the code proves to be an intermittent one. After recording all pertinent information, clear the codes and test drive the vehicle until the code is reset or the PCM enters readiness mode.

If the PCM enters readiness mode, the code is intermittent and will be more difficult to diagnose. The condition, which caused the P0611 to be stored, may even need to worsen before a diagnosis can be made. If the code is reset, continue with this short list of preliminary tests.

Step 2

When attempting to diagnose a P0611, information may be your greatest tool. Search your vehicle

information source for technical service bulletins (TSB) that parallel the code stored, vehicle (year, make, model, and engine), and symptoms exhibited. If you find the right TSB, it may yield diagnostic information that will aid you in a major way.

Step 3

Use your source of vehicle information to obtain connector face views, connector pin-out charts, component locators, wiring diagrams, and diagnostic flow charts related to the code and vehicle in question.

Use the DVOM to test controller power supply fuses and relays. Test and replace blown fuses as required. Fuses should be tested with the circuit loaded.

Step 4

If all fuses and relays appear to be functioning as intended, a visual inspection of controller related wiring and harnesses is in order. You will also want to check chassis and engine ground junctions. Use your vehicle information source to obtain ground locations for related circuits. Use the DVOM to test ground integrity.

Step 5

Visually inspect system controllers for signs of water, heat, or collision damage. Any controller that is damaged, especially by water, should be considered defective.

Step 6

If controller power and ground circuits are intact, suspect a defective controller or a controller programming error. Controller replacement will require reprogramming.

In some cases, you may purchase reprogrammed controllers through aftermarket sources. Other vehicles/controllers will require on-board reprogramming that may only be done through a dealership or other qualified source.

- Unlike most other codes, the P0611 is likely caused by a defective controller or a controller programming error
- Test system ground integrity by connecting the negative test lead of the DVOM to ground and the positive test lead to battery voltage

Severity Description

Internal control module codes must always be taken seriously. A stored code P0611 could result in a variety of drivability concerns, including a no-start condition.

Reference Sources

ENGINE CONTROL SYSTEM [GASOLINE ENGINE (V-6)] SERVICE MANUAL for P0611 - Page 629.