

P025A: FUEL PUMP MODULE CONTROL CIRCUIT/OPEN

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Advanced
Repair Cost	:	\$50-\$600
Can I Still Drive?	:	Yes (Short-term only)

What Does The P025A Code Mean?

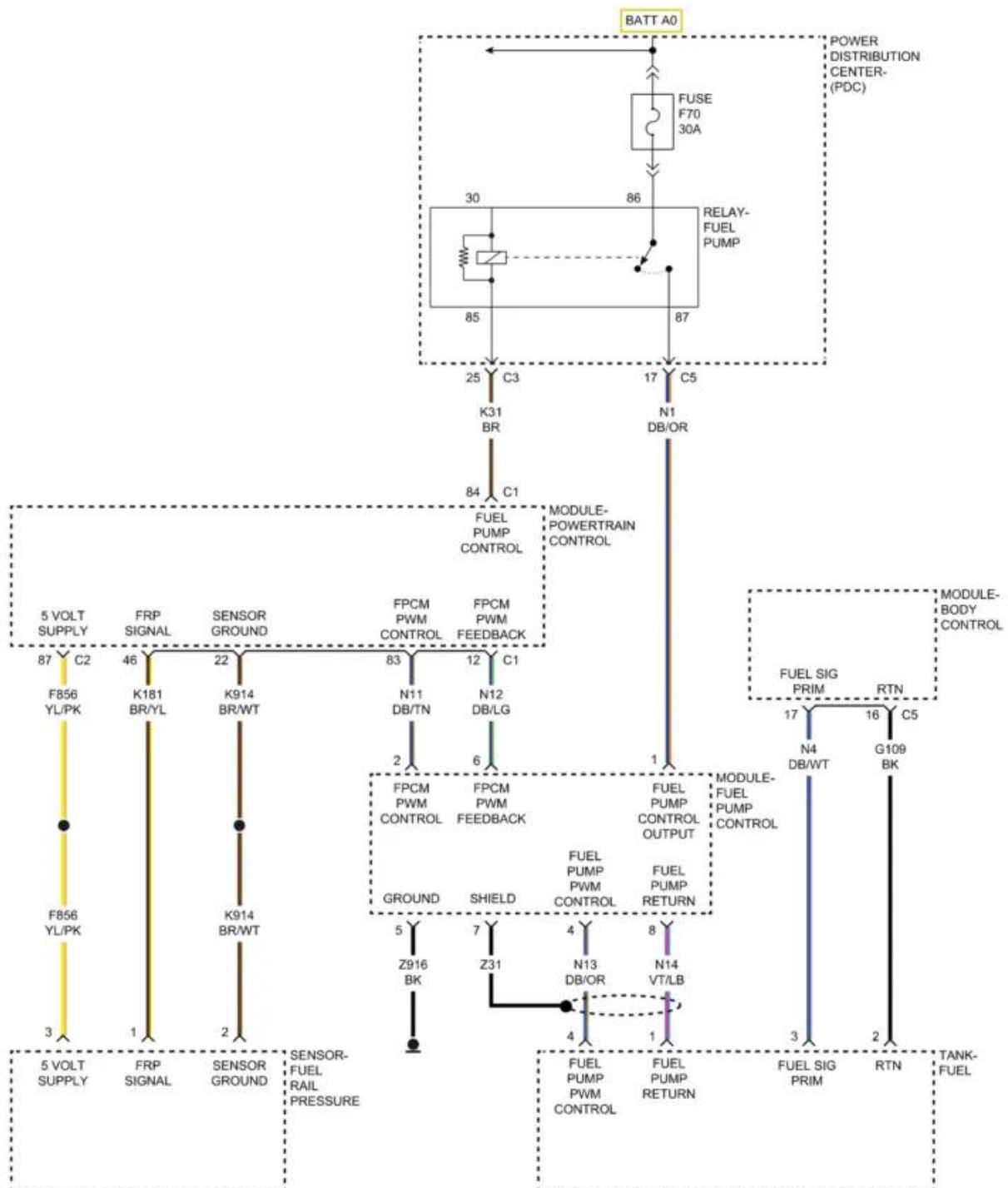
In older systems, vehicles required very little fuel pressure. These days on the other hand, with the invention of fuel injection and other systems, our vehicles require higher fuel pressures.

The Engine Control Module (ECM) meets our fuel needs by relying on the Fuel Pump Module to regulate pressures within the fuel system. The fuel pump itself, is responsible for delivering the fuel to the engine.

A failure here is most likely extremely evident as your car may not even start. The 3 main things an internal combustion engine needs to run is : Air, Fuel and Spark. Anyone of these missing and your engine will not operate.

The ECM activates P025A and associated codes when it monitors one or multiples conditions outside a specific electrical range within the Fuel Pump Control Module or it's circuit. This can be caused by either a mechanical or an electrical problem. Working with/around such a volatile substance makes it somewhat dangerous to diagnose or repair anything here so make sure you are properly trained and are familiar with the hazards involved.

P025A Fuel Pump Module Control Circuit/Open code is set when the ECM monitors a general malfunction or an open circuit within the Fuel Pump Module or it's circuit(s). It is one of four related codes, which are [P025A](#), [P025B](#), [P025C](#), and [P025D](#).



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P025A wiring diagram

What Are The Symptoms Of The P025A Code?

Symptoms of a P025A trouble code may include:

- Engine will not start
- Hard start
- Engine stalling
- Poor fuel mileage
- Inaccurate fuel level
- Fuel smell
- Poor engine performance

What Are The Potential Causes Of The P025A Code?

Causes for this code may include:

- Defective Fuel Pump Module
- Defective Fuel Pump
- Debris in Fuel Pump screen
- Wiring Issue (i.e.: frayed wire, melted, cut/open etc.)
- Connector problem (i.e.: melted, disconnected, intermittent connections etc.)
- ECM problem

How Can You Fix The P025A Code?

Be sure to check for technical service bulletins (TSBs) for your vehicle. Getting access to a known fix can save you time and money during diagnosis.

Tools

Some of the things you may need when diagnosing or repairing the fuel pump circuits and systems:

- OBD code reader
- Multimeter
- Basic socket set
- Basic ratchet and wrench sets
- Basic screwdriver set
- Battery terminal cleaner
- Service manual

Safety Tips

- Let engine cool

- Chalk wheels
- Wear PPE (Personal protective equipment)

NOTE: ALWAYS verify and record the integrity of your battery and charging system before further troubleshooting.

Basic Step #1

If your car does not start, there is one very easy backyard diagnosing approach. If your vehicle is equipped with a fuel pump mounted inside the fuel tank, you could give the tank a hit with a rubber mallet to potentially dislodge debris out of the pump while someone tries to start the vehicle. If your vehicle fires up when you do this, your diagnosing is complete, you need to replace the fuel pump itself.

NOTE: Whenever diagnosing/repairing anything involving the fuel system, make sure there are no fuel leaks present. Working around fuel with metal tools is an avoidable hazard. Be aware!

Basic Step #2

Take a peek at the connectors and wires. Given the location of most fuel pumps and circuits, they may be difficult to access. You may have to elevate the vehicle somehow (Ramps, jacks, stands, hoist etc..) to gain better access to connectors. Typically, the pump's harness' are susceptible to extreme conditions being that most are routed under the vehicle. Make sure the connectors are properly fastened and are not damaged.

NOTE: Sometimes these harness' are routed along frame rails, rocker panels and other location where wire pinching is common.

Basic Tip #3

Test your pump. Testing the Fuel Pump may not be an easy task. If the fuel pump's connector is accessible you could use your multimeter to do a series of tests to verify the functionality of the fuel pump itself.

NOTE: Refer to your service manual to know what specific tests can be done here. There is no generic test here so make sure you have the correct information before proceeding.

Basic Step #4

Is there a fuse involved? Maybe a relay? If so, check these. Specifically, a blown fuse could potentially cause an open condition with the circuit (P025A).

Basic Step #5

To verify the integrity of the wires within the circuit, you may be able to disconnect the circuit at both the fuel pump and the ECM. If this is possible, you could perform a series of tests to determine: if there is a fault within the wires and/or what type of fault is present.

Severity Description

I would say the severity of this code would be determined by your symptoms. If your car does not start, this would be severe. On the other hand, if your vehicle is operating normally and fuel mileage isn't being affected and this code is active, this isn't a very severe situation. That being said, neglecting any fault may result in further time and costs.

Reference Sources

[Diagnostic Trouble Code \(DTC\) Charts and Descriptions for P025A](#) - Page 52.