

GENERIC · POWERTRAIN

P025C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P025C

Fuel Pump Module A Control Circuit Low

P025C indicates that the powertrain control module (PCM) has detected a low-voltage condition on the control circuit for fuel pump module A, which is the primary fuel delivery module on most vehicles. The PCM commands the fuel pump on and expects to see voltage on the control circuit within a specific range, but the circuit is showing voltage below the expected threshold, indicating a short to ground, an open circuit, or a faulty module.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- The engine may crank but not start, or may start and then stall immediately due to lack of fuel pressure.
- The check engine light (malfunction indicator lamp) illuminates, often accompanied by a stored P025C code.
- In some cases, the driver may notice no symptoms besides the warning light, especially if the fault is intermittent.
- Engine may hesitate, stumble, or lose power under load if the fuel pump is not delivering adequate volume.
- A no-start condition may be intermittent, occurring more frequently in hot weather or after the vehicle sits.
- The fuel pump may not prime when the key is turned to the run position, resulting in a longer crank time.

Common causes, most likely first

- A short to ground in the fuel pump control circuit wiring, often due to chafed insulation or a pinched harness.
- An open circuit in the control circuit, such as a broken wire or a disconnected connector at the fuel pump module.
- A faulty fuel pump module A, where the internal electronics or pump motor have failed and are drawing excessive current or not responding.
- Corroded or damaged electrical connectors at the fuel pump module or the PCM, causing high resistance or intermittent connection.
- A failed fuel pump control module (if equipped) that regulates voltage to the pump, though this is less common on vehicles with a direct PCM-controlled circuit.
- A poor ground connection for the fuel pump circuit, leading to voltage drops that the PCM interprets as a low control circuit.
- Rarely, a faulty PCM driver for the fuel pump control circuit, but this should only be suspected after all other causes are ruled out.



How to diagnose and fix it

- 1 Check for any technical service bulletins (TSBs) or recalls related to the fuel pump control circuit for the specific vehicle make and model.
- 2 Perform a visual inspection of the fuel pump wiring harness and connectors, looking for chafing, corrosion, or loose pins, especially near the fuel tank and along the frame.
- 3 Use a digital multimeter to measure voltage and resistance on the fuel pump control circuit at the fuel pump module connector, comparing readings to manufacturer specifications.
- 4 Test the fuel pump module by applying direct battery voltage to the pump terminals (if accessible) to verify if the pump runs; if it does not, replace the module.
- 5 Check the ground circuit for the fuel pump module using a voltage drop test to ensure it is clean and tight.
- 6 If the circuit and module test good, inspect the PCM connector for corrosion or damage and verify the PCM is commanding the pump on using a scan tool with bidirectional controls.
- 7 Repair any damaged wiring or connectors, clear the code, and road-test the vehicle to confirm the repair.

Before you replace the fuel pump module

- A common misdiagnosis is replacing the fuel pump module when the actual problem is a shorted oxygen sensor heater circuit sharing the same power feed, which can drag down voltage on the fuel pump control circuit.
- On many vehicles, the fuel pump control circuit is pulse-width modulated (PWM), so a standard test light may not illuminate steadily; use a duty-cycle-capable meter or oscilloscope to verify the signal.
- Intermittent P025C codes often occur due to a chafed wire inside the fuel tank harness where it passes through the tank flange, a spot that is frequently overlooked during visual inspection.
- A weak battery or poor charging system can cause low voltage on the control circuit and set P025C, so always verify battery voltage and connections before condemning the fuel pump.
- Some vehicles use a fuel pump control module that is separate from the pump; this module can fail and set P025C even though the pump itself is good, so check for power and ground at the module first.

Can I keep driving with P025C?

If the vehicle is running, it may be safe to drive short distances to a repair shop, but avoid hard acceleration or sustained high speeds because the fuel pump may not deliver enough fuel under load. If the engine will not start or stalls repeatedly, do not drive; have the vehicle towed to prevent a dangerous stall in traffic.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter (DMM) with duty cycle and frequency functions
- Fuel pressure gauge
- Test light
- Wire repair kit (solder, heat shrink, crimp connectors)
- Factory service information for wiring diagrams and specifications

Reading P025C

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
2	Fuel and air metering (injector circuits).
5C	The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0230** Fuel Pump Primary Circuit Malfunction · **P0231** Fuel Pump Secondary Circuit Low · **P0232** Fuel Pump Secondary Circuit High · **P025D** Fuel Pump Module A Control Circuit High

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p025c/>

