

GENERIC · POWERTRAIN

P0628

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0628

Fuel Pump 'A' Control Circuit Low

P0628 means the engine computer has detected an abnormally low voltage condition on the control circuit that commands the fuel pump to run. The computer is not reporting a failed pump directly; it is reporting that the electrical path it uses to command the fuel pump control module or relay is showing low voltage, which can prevent the pump from receiving a proper command.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Computer and output circuits

Symptoms you may notice

- The check engine light illuminates, and in many vehicles this is the only symptom the driver notices.
- The engine may crank but fail to start because the fuel pump is not being commanded on.
- Intermittent stalling or a sudden loss of engine power while driving if the control circuit opens or shorts intermittently.
- A no-start condition that occurs more often in damp or cold weather if the low voltage is caused by corrosion or a marginal connection.
- Rough running or lean fuel mixture codes may accompany the warning light if the pump is being commanded erratically.
- The fuel pump may not prime when the key is turned to the run position, which is often audible as silence instead of the usual brief hum.

Common causes, most likely first

- A damaged, chafed, or corroded wire in the fuel pump control circuit, especially where it passes through a body grommet or near the fuel tank.
- A poor electrical connection at the fuel pump control module, fuel pump relay, or inline connector, often caused by water intrusion or terminal fretting.
- A failed fuel pump control module that is not passing the command signal through to the pump correctly.
- A short to ground on the control circuit, which pulls the command voltage low and triggers the code.
- A faulty fuel pump relay whose coil or contacts have degraded and are not switching the control voltage properly.
- A failing engine computer driver circuit, which is less common but possible when all wiring and modules test good.
- A fuel pump with an internal short that drags down the control circuit voltage, though this usually sets a pump circuit code as well.



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data to see the conditions when P0628 set.
- 2 Inspect the fuel pump control module and relay connectors for corrosion, water intrusion, loose terminals, and chafed wiring.
- 3 Measure control circuit voltage at the fuel pump control module with the key on and during cranking, comparing it to the commanded state.
- 4 Perform a voltage drop test on the control circuit and its ground path to find excessive resistance that a simple continuity test can miss.
- 5 Check for a short to ground on the control wire with the module disconnected, using a wiring diagram to isolate the correct pin.
- 6 Substitute a known-good fuel pump relay or control module only after wiring tests pass, then clear codes and verify the command signal returns.
- 7 If the circuit and modules test good, command the fuel pump on with a scan tool and confirm the pump runs and the code does not reset.

What the low voltage command really means

- P0628 is a circuit code for the command side of the fuel pump control, not a direct pump failure code, so replacing the fuel pump first often does not fix it.
- A common miss is a corroded connector at the fuel pump control module located under the rear seat or near the tank, where moisture collects and terminal tension is lost.
- The code can set intermittently from a wire that only rubs through on bumps, so a wiggle test of the harness while watching live data is more useful than a static meter check.
- Some vehicles use a pulse-width-modulated command signal, and a standard voltmeter may show a misleading average voltage; a lab scope or scan tool data is needed to judge the command correctly.
- A weak battery or charging system can cause low command voltage at the module and set this code even though the fuel pump circuit itself is healthy.

Can I keep driving with P0628?

If the engine still starts and runs normally, you can drive cautiously to a repair shop, but avoid long trips and high-speed driving where a sudden stall would be dangerous. If the engine cranks without starting or stalls repeatedly, stop driving and have the vehicle towed, because a failed fuel pump command can leave you stranded without warning.



Tools that help

- OBD-II scan tool with live data and bidirectional control capability
- Digital multimeter with voltage drop and min/max recording functions
- Automotive test light or logic probe
- Wiring diagram for the fuel pump control circuit
- Lab scope for pulse-width-modulated command signals
- Basic hand tools and terminal pick set for connector inspection

Reading P0628

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
6	Computer and output circuits.
28	The exact fault within that area.

Often seen with

P0230 Fuel Pump Primary Circuit Malfunction · **P0231** Fuel Pump Secondary Circuit Low · **P0232** Fuel Pump Secondary Circuit High · **P0627** Fuel Pump 'A' Control Circuit /Open · **P0629** Fuel Pump 'A' Control Circuit High

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0628/>

