

GENERIC · POWERTRAIN

P0261

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0261

Cylinder 1 Injector Circuit Low

P0261 means the engine computer has detected an abnormally low voltage on the electrical circuit that operates the fuel injector for cylinder 1. The computer expects to see battery voltage on the injector control wire when the injector is commanded off, and a low voltage reading indicates a short to ground, a faulty injector, or a wiring problem.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or misfire that may be intermittent
- Noticeable loss of power or hesitation during acceleration
- Shaking or vibration from the engine, especially at low speeds
- Poor fuel economy due to incomplete combustion in cylinder 1
- In severe cases, the engine may enter limp mode or stall

Common causes, most likely first

- 1 Faulty fuel injector on cylinder 1 (internally shorted coil)
- 2 Damaged or chafed injector wiring harness shorting to ground
- 3 Corroded or loose electrical connector at the cylinder 1 injector
- 4 Short to ground in the injector control circuit between the PCM and injector
- 5 Failed driver circuit inside the powertrain control module (PCM)
- 6 Moisture or contamination inside the injector connector causing a low-resistance path



How to diagnose and fix it

- 1 Inspect the cylinder 1 injector connector and wiring for visible damage, corrosion, or looseness; clean and reseal as needed
- 2 Disconnect the injector and measure resistance across its terminals with a multimeter; compare to the manufacturer's specification
- 3 Check for a short to ground on the injector control wire using a multimeter with the injector and PCM disconnected
- 4 Perform a wiggle test on the harness while monitoring injector voltage or resistance to reveal intermittent shorts
- 5 Swap the cylinder 1 injector with a known-good injector from another cylinder and see if the code moves; replace the injector if the fault follows it
- 6 If wiring and injector are good, test the PCM driver circuit with an oscilloscope or a noid light to confirm the PCM is commanding the injector correctly
- 7 Replace the PCM only after all other possibilities are ruled out and the driver circuit is confirmed faulty

Why a low injector circuit is not always the injector

- A shorted injector coil is a common cause, but a chafed wire rubbing against a metal bracket often mimics a failed injector and is missed during a quick visual inspection.
- The PCM may set P0261 even when the injector still fires; a low-voltage condition can be intermittent and only appear when the engine is hot or vibrating.
- Swapping injectors between cylinders is a fast diagnostic step, but the code may not follow the injector if the fault is in the harness or PCM, leading to unnecessary replacement.
- Corrosion inside the injector connector can create a low-resistance path to ground that only shows up under vibration, so a static resistance test may pass.
- A failing PCM driver for one injector can set P0261 without any other codes, but PCM failure is rare and should be the last suspect after thorough circuit testing.

Can I keep driving with P0261?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because a misfiring cylinder can overheat the catalytic converter. If the engine is running very rough or stalling, stop driving and have it towed to prevent further damage.



Tools that help

- OBD-II scan tool
- Digital multimeter
- Noid light or injector test light
- Oscilloscope (optional for advanced diagnosis)
- Wire terminal removal tools
- Factory service information for wiring diagrams and resistance specifications

Reading P0261

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).
61	The exact fault within that area.

Often seen with

P0201 Injector Circuit Malfunction - Cylinder 1 · **P0262** Cylinder 1 Injector Circuit High · **P0264** Cylinder 2 Injector Circuit Low · **P0301** Cylinder 1 Misfire Detected · **P2146** Fuel Injector Group 'A' Supply Voltage Circuit/Open

See it working

Watch the animated explainer [Readiness Monitors and the OBD-II Drive Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0261/>

