

GENERIC · POWERTRAIN

P0285

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0285

Cylinder 9 Injector Circuit Low

P0285 means the engine computer has detected a low-voltage condition on the electrical circuit that operates the fuel injector for cylinder number 9. The computer monitors the injector driver circuit and sets this code when the voltage on the control wire is lower than expected, which usually points to a short to ground, a faulty injector, or damaged wiring rather than a mechanical engine problem.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

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 feel like a shake or stumble, especially when the engine is cold
- Reduced engine power or hesitation during acceleration
- Poor fuel economy due to incomplete combustion in cylinder 9
- A faint fuel odor from the exhaust if the injector is stuck open or leaking
- In rare cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- 1 Faulty fuel injector for cylinder 9 with an internally shorted coil
- 2 Chafed or grounded injector control wire between the computer and the injector
- 3 Corroded or loose electrical connector at the cylinder 9 injector
- 4 Damaged engine computer driver circuit for that injector (less common)
- 5 Aftermarket alarm or remote start wiring tapped into the injector circuit
- 6 Moisture intrusion into the injector harness or connector



How to diagnose and fix it

- 1 Inspect the cylinder 9 injector connector for corrosion, tightness, and bent pins, then clean and reseal it
- 2 Use a noid light or oscilloscope to check for a consistent injector pulse at the cylinder 9 connector while cranking the engine
- 3 Measure the resistance of the cylinder 9 injector with a multimeter and compare it to the manufacturer's specification
- 4 Disconnect the computer and check the control wire for continuity to ground; a reading of near zero ohms indicates a short
- 5 Swap the cylinder 9 injector with a known-good injector from another cylinder and see if the code moves with the injector
- 6 If the injector and wiring test good, test the computer driver circuit or substitute a known-good computer for diagnosis
- 7 Repair any damaged wiring, replace the faulty injector, and clear the code to verify the repair

Cylinder 9 injector low circuit traps

- A low circuit code often means the control wire is shorted to ground, not that the injector itself has failed, so testing the wire before replacing the injector saves money.
- Cylinder 9 is typically found on V8 or V10 engines, and its location at the rear of the engine bay makes the connector prone to heat damage and oil contamination that can cause intermittent faults.
- Some aftermarket remote starters or alarm systems tap into injector wiring, and a poor connection there can set this code without any factory component being faulty.
- A stuck-open injector can cause a low circuit code and also dump raw fuel into the exhaust, which may damage the catalytic converter if driven for long.
- The code does not always mean the injector is bad; a weak battery or charging system can cause low voltage on the injector circuit and trigger this code along with others.

Can I keep driving with P0285?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long trips because a misfiring cylinder can overheat the catalytic converter and cause costly damage. If the check engine light begins flashing, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Noid light set
- Oscilloscope (optional but helpful)
- Socket set and trim removal tools
- Factory service information for injector resistance specifications



Reading P0285

- 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).
- 85** The exact fault within that area.

Often seen with

P0209 Injector Circuit/Open - Cylinder 9 · **P0284** Cylinder 8 Contribution/Balance · **P0286** Cylinder 9 Injector Circuit High · **P0309** Cylinder 9 Misfire Detected · **P2149** Fuel Injector Group 'B' Supply Voltage Circuit/Open

See it working

Watch the animated explainer [How a Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0285/>

