

GENERIC · POWERTRAIN

P0286

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0286

Cylinder 9 Injector Circuit High

P0286 means the engine computer has detected an abnormally high current or voltage on the electrical circuit that operates the fuel injector for cylinder 9. The computer monitors the injector driver circuit and sets this code when the signal exceeds the expected range, indicating a short to power, a faulty injector, or a wiring 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, especially noticeable at low speeds
- Engine hesitation or stumble during acceleration
- Reduced power and poor fuel economy
- Possible fuel smell or rich-running condition if the injector is stuck open
- In some cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- 1 Faulty fuel injector for cylinder 9 (internally shorted coil or stuck open)
- 2 Short to power in the injector wiring harness between the computer and the injector
- 3 Corroded, damaged, or loose electrical connector at the injector
- 4 Failed injector driver inside the engine control module (ECM) or powertrain control module (PCM)
- 5 Damaged wiring from heat, chafing, or rodent damage
- 6 Poor ground connection for the injector circuit
- 7 Aftermarket or incorrect injector installed that does not match the engine's requirements



How to diagnose and fix it

- 1 Inspect the injector connector and wiring for obvious damage, corrosion, or loose pins; clean and reseat as needed
- 2 Measure the resistance of the cylinder 9 injector with a multimeter and compare to the manufacturer's specification
- 3 Check for a short to power on the injector control circuit using a multimeter or test light with the key on and engine off
- 4 Swap the cylinder 9 injector with a known-good injector from another cylinder (if accessible) to see if the code moves
- 5 Perform a injector balance test or use a lab scope to observe the injector command signal and current ramp
- 6 Check the ECM/PCM driver by testing the control circuit with a noid light or oscilloscope; if the driver is faulty, the ECM may need replacement or reprogramming
- 7 Repair or replace the faulty wiring harness section or connector, then clear the code and verify the repair with a test drive

Don't overlook the injector driver circuit

- A shorted injector coil can cause the driver in the ECM to fail, so replacing only the injector without checking the driver may lead to a repeat failure.
- This code can be set by a poor connection at the injector that intermittently shorts to power, so wiggle-testing the harness while monitoring live data is a valuable step.
- Cylinder 9 is often on a V8 or V10 engine where access is difficult, so technicians sometimes misdiagnose the code as a coil or spark plug issue without testing the injector circuit.
- A stuck-open injector can fill the crankcase with fuel, diluting the oil and causing serious engine damage, so address the fault promptly.
- The ECM may set P0286 along with misfire codes for cylinder 9, but the misfire is a symptom, not the root cause, so focus on the injector circuit first.

Can I keep driving with P0286?

You can drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because a stuck-open injector can cause catalytic converter damage and engine oil dilution. If the engine runs very rough or smells strongly of fuel, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data and injector balance capabilities
- Digital multimeter
- Noid light or injector test light
- Oscilloscope (for advanced diagnosis)
- Hand tools for accessing the injector (sockets, wrenches, screwdrivers)



Reading P0286

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

Often seen with

P0209 Injector Circuit/Open - Cylinder 9 · **P0285** Cylinder 9 Injector Circuit Low · **P0287** Cylinder 9 Contribution/Balance · **P0309** Cylinder 9 Misfire Detected · **P2149** Fuel Injector Group 'B' Supply Voltage Circuit/Open

See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0286/>

