

GENERIC · POWERTRAIN

P0280

OBD-II TROUBLE CODE

P0280

Cylinder 7 Injector Circuit High

P0280 indicates that the engine control module (ECM) has detected an abnormally high current or voltage on the control circuit for cylinder 7's fuel injector. This typically means the injector coil is shorted to power or ground, the wiring is damaged, or the injector driver inside the ECM has failed.

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, especially noticeable at idle or low speeds
- Engine hesitation or stumble during acceleration
- Decreased fuel economy due to improper fuel delivery
- Possible rich-running condition if the injector is stuck open, leading to black smoke or fuel smell
- In rare cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- Faulty cylinder 7 fuel injector with an internally shorted coil
- Damaged or chafed wiring in the injector circuit, shorting to power or ground
- Corroded or loose electrical connector at the injector or ECM
- Failed ECM injector driver circuit for cylinder 7
- Aftermarket or improperly installed electrical accessories tapping into the injector circuit
- Engine wiring harness damage from heat, rodents, or mechanical wear

How to diagnose and fix it

- Perform a visual inspection of the cylinder 7 injector connector and wiring for damage or corrosion
- Use a scan tool to check for related misfire codes and freeze-frame data to confirm the fault
- Measure the resistance of the cylinder 7 injector with a multimeter and compare to specifications
- Disconnect the ECM and check for shorts to power or ground on the injector control circuit
- Swap the cylinder 7 injector with a known-good injector from another cylinder to see if the code moves
- Inspect the ECM connector for corrosion or loose pins, and test the driver circuit with a noid light or oscilloscope
- If all external checks pass, replace the ECM and reprogram it as needed



Don't overlook the injector driver circuit

- A shorted injector coil can sometimes test fine when cold but fail when hot, so resistance checks should be done both cold and after warming the engine.
- The ECM driver for cylinder 7 can be damaged by a shorted injector, so replacing only the injector without checking the driver may lead to a repeat failure.
- Aftermarket alarm or remote start installations often splice into injector wiring, creating intermittent shorts that set this code.
- This code can be set by a poor ground connection at the engine block, causing the injector circuit to find a ground path through other components.
- A noid light test can quickly confirm whether the ECM is pulsing the injector; if the light stays on constantly, the driver is likely shorted.

Can I keep driving with P0280?

Driving with P0280 is generally not recommended because a shorted injector can cause a misfire that damages the catalytic converter or leads to a rich-running condition that dilutes engine oil. If you must drive, avoid heavy acceleration and have the vehicle inspected as soon as possible.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Noid light
- Oscilloscope (optional but helpful)
- Basic hand tools for connector and injector removal

Reading P0280

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).
80	The exact fault within that area.

Often seen with

P0207 Injector Circuit/Open - Cylinder 7 · **P0279** Cylinder 7 Injector Circuit Low · **P0281** Cylinder 7 Contribution/Balance · **P0307** Cylinder 7 Misfire Detected · **P2149** Fuel Injector Group 'B' Supply Voltage Circuit/Open



See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0280/>

