



P1277 · Ford

Cylinder 7 High To Low Side Open

P1277 on a Ford vehicle indicates that the powertrain control module (PCM) has detected an open circuit between the high side and low side of the fuel injector circuit for cylinder 7. This means the electrical path through the injector coil is broken, so the PCM cannot command that injector to fire and cylinder 7 receives no fuel.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms at first
- Rough idle or misfire felt as a shake or stumble, especially when the engine is cold
- Noticeable loss of power and reduced fuel economy due to a dead cylinder
- Engine may run rough under load or hesitate during acceleration
- In severe cases, the engine may enter limp mode or flash the check engine light if misfire is detected
- Often no symptoms besides the warning light, particularly at higher speeds or light load

Common causes, most likely first

- 1 Open or damaged wiring between the PCM and the cylinder 7 injector, such as a broken wire or corroded connector
- 2 Failed fuel injector with an open internal coil
- 3 Loose or dirty electrical connector at the injector or PCM
- 4 Rodent damage or chafing of the injector harness
- 5 PCM driver circuit failure (less common but possible)
- 6 Aftermarket alarm or remote start wiring tapped into the injector circuit incorrectly



How to diagnose and fix it

- 1 Scan all modules for codes and record freeze-frame data to confirm P1277 is current and not history
- 2 Perform a visual inspection of the cylinder 7 injector connector and harness for damage, corrosion, or loose pins
- 3 Use a noid light or injector test light to check for a pulse at the cylinder 7 injector connector while cranking
- 4 Measure resistance of the cylinder 7 injector with a multimeter and compare to the manufacturer's specification (typically 12–16 ohms)
- 5 Check continuity and resistance of the high and low side wires from the injector connector to the PCM, wiggle-testing the harness
- 6 If wiring and injector test good, substitute a known-good injector or swap with another cylinder to see if the code moves
- 7 If the injector and wiring are confirmed good, diagnose the PCM driver circuit or replace the PCM as a last resort

Don't overlook the injector harness

- A common cause of P1277 is a chafed or broken wire inside the flexible conduit near the cylinder 7 injector, often caused by engine vibration or heat, which can be missed during a quick visual check.
- The code can set intermittently due to a loose connector pin that only loses contact when the engine is cold or during certain driving conditions, so a wiggle test of the harness while monitoring live data is essential.
- A failed injector coil can test good when cold but open when hot, so resistance checks should be done both cold and after warming the engine if the fault is intermittent.
- Ford's injector circuits are often ground-controlled; a short to ground on the low side can mimic an open circuit, so check for continuity to ground on both wires before condemning the PCM.
- Aftermarket remote start or alarm systems that tap into injector wiring are a frequent source of this code, especially if the installation was less than professional.

Can I keep driving with P1277?

You can drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the misfire can overheat the catalytic converter and cause further damage. If the check engine light is flashing, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Noid light or injector test light
- Wire piercing probes and back-probe kit
- Factory service information for wiring diagrams and resistance specifications



Reading P1277

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 77** The exact fault within that area.

Often seen with

P1275 Accelerator Pedal Position Sensor Circuit · **P1276** Accelerator Pedal Positioning Sensor 1 Circuit · **P1278** Accelerator Pedal Position Sensor 1 Circuit High Voltage · **P1275** Cylinder 5 High To Low Side Open · **P1276** Cylinder 6 High To Low Side Open · **P1278** Cylinder 8 High To Low Side Open · **P1275** Accelerator Pedal Position (APP) Sensor 1 Circuit · **P1276** Accelerator Pedal Position (APP) Sensor 1 Performance · **P1278** Accelerator Pedal Position Sensor 1 Circuit High Voltage · **P0207** Injector Circuit/Open - Cylinder 7 · **P0307** Cylinder 7 Misfire Detected

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1277/>

