

FORD · POWERTRAIN

P1297

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1297 · Ford

Injector High Sides Shorted Together

P1297 on Ford vehicles means the powertrain control module (PCM) has detected that the high-side driver circuits for two or more fuel injectors are electrically connected when they should be isolated. The PCM monitors the voltage on each injector high-side output and flags this code when the signals from separate injector drivers rise and fall together, indicating a short between those circuits.

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

Symptoms you may notice

- Illuminated check engine light, often with no other symptoms besides the warning light
- Rough idle or misfire if the shorted injectors cause erratic fuel delivery
- Engine may stumble or hesitate under acceleration
- Poor fuel economy from injectors firing at the wrong time
- In severe cases, the engine may stall or fail to start
- Possible reduced engine power or limp mode if the PCM disables affected injectors

Common causes, most likely first

- 1 Chafed or damaged injector wiring harness where high-side wires for two injectors run together
- 2 Corrosion or water intrusion in an injector connector causing pins to bridge
- 3 Internal short inside an injector solenoid between the high-side terminals of two injectors
- 4 Pinched harness under the intake manifold or valve cover during previous repairs
- 5 Aftermarket alarm or remote start wiring improperly spliced into injector circuits
- 6 Failed PCM driver circuit (rare but possible after a shorted injector or harness)



How to diagnose and fix it

- 1 Inspect the injector harness for visible chafing, pinches, or corrosion, especially near the intake manifold and valve cover
- 2 Disconnect the PCM and measure resistance between the high-side injector wires for the affected cylinders to confirm a short
- 3 Unplug injectors one at a time and recheck resistance to isolate whether the short is in the harness or an injector
- 4 Repair or replace the damaged section of harness, using proper solder and heat-shrink, and secure it away from heat and moving parts
- 5 If an injector is internally shorted, replace that injector and clear the code
- 6 After repairs, clear adaptive fuel trims and verify the code does not return during a road test with live data monitoring
- 7 If the short persists with injectors and harness disconnected, test the PCM driver circuit or replace the PCM as a last resort

When the harness looks fine but the code returns

- A common miss is a short inside the injector itself that only appears when the engine is hot, so a cold resistance check can pass while the code sets after warm-up.
- The code can be set by a short between high-side wires that are routed together in the same loom even if the insulation looks intact, so a wiggle test while watching live misfire counters is essential.
- Aftermarket remote start or alarm installers sometimes tap into injector wires and create this exact short, so always check for non-factory splices before condemning the PCM.
- P1297 does not always mean the injectors are faulty; a shorted high-side circuit can cause the PCM to disable multiple injectors, leading to a no-start that looks like a fuel pump failure.
- On some Ford engines, the injector harness passes through a tight area near the EGR tube, and heat damage there can short the high-side wires without any visible external damage.

Can I keep driving with P1297?

If the check engine light is on but the engine runs smoothly, you can drive cautiously to a repair shop, but avoid hard acceleration and towing. If the engine is misfiring, stumbling, or stalling, stop driving and have the vehicle towed to prevent catalytic converter damage and unsafe driving conditions.

Tools that help

- Digital multimeter with resistance and voltage measurement
- OBD-II scan tool with live data and misfire counter capability
- Wiring diagram for the specific Ford model and engine
- Back probe pins and jumper wires
- Insulated hand tools and heat-shrink tubing for harness repair



Reading P1297

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

Often seen with

P1298 Electrical Load Detector Circuit High Voltage · **P1298** Injector Driver Module Failure · **P1298** Electrical Load Detector Circuit High Voltage · **P1298** Lean Operation At Wide Open Throttle · **P1298** IDM Failure · **P1298** Lean Operation At Wide Open Throttle · **P0201** Injector Circuit Malfunction - Cylinder 1 · **P0202** Injector Circuit Malfunction - Cylinder 2 · **P0203** Injector Circuit Malfunction - Cylinder 3 · **P0204** Injector Circuit Malfunction - Cylinder 4

See it working

Watch the animated explainer [How the EVAP System Works: Fuel Vapour and Leak Test](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1297/>

