

GM · POWERTRAIN

P1222

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1222 · GM

Injector Control Circuit Intermittent

P1222 on a GM vehicle means the engine control module (ECM) has detected an intermittent fault in the electrical circuit that operates one or more fuel injectors. The ECM monitors injector command and feedback circuits and flags this code when the circuit momentarily opens, shorts, or behaves erratically without staying failed long enough to set a hard circuit code.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the intermittent fault has not recurred during the current drive cycle.
- Intermittent engine misfire or rough running that comes and goes, sometimes felt as a stumble under light throttle.
- A brief hesitation or surge during acceleration when the injector circuit cuts out momentarily.
- Occasional rough idle that smooths out on its own without any repair.
- Reduced fuel economy or a faint fuel smell if an injector is being commanded erratically.
- In some cases the engine may stall or nearly stall when the fault occurs at low speed.

Common causes, most likely first

- Chafed, cracked, or heat-damaged injector wiring harness insulation causing an intermittent short or open circuit.
- Corroded or loose injector connector terminals that lose contact with engine vibration or temperature changes.
- A failing fuel injector with an internal coil that opens intermittently when hot.
- Poor terminal tension at the ECM connector for the affected injector driver circuit.
- Water intrusion or oil contamination in the injector harness connector causing intermittent conductivity.
- A damaged injector driver inside the ECM, though this is less common than harness and connector faults.
- Aftermarket or improperly routed wiring repairs that create a marginal connection.



How to diagnose and fix it

- 1 Inspect the injector harness and connectors for chafing, corrosion, and loose terminals, especially near hot exhaust components and sharp brackets.
- 2 Perform a wiggle test on the injector harness while watching injector command and misfire counters on a scan tool to reproduce the intermittent fault.
- 3 Measure injector coil resistance cold and again after the engine reaches operating temperature, comparing against the manufacturer's specification.
- 4 Check terminal tension and pin fit at both the injector and ECM connectors for the affected circuit.
- 5 Use a lab scope or injector noid light to observe the injector command pulse while flexing the harness and tapping the injector.
- 6 Repair or replace the faulty section of harness or the affected injector connector, then clear the code and verify with a road test that includes the conditions that originally set it.
- 7 If the circuit tests good and the injector is sound, follow the GM diagnostic flow for the ECM driver circuit before condemning the ECM.

Intermittent injector faults that fool technicians

- A P1222 can set from a fault that lasts only milliseconds, so a static resistance check on a cold engine often passes even when the circuit is genuinely failing when hot or vibrating.
- Technicians commonly replace the injector first, but chafed harness sections near the intake or exhaust are a frequent root cause that a visual inspection alone can miss.
- The code does not always mean the injector itself is bad; a marginal ECM driver or a poor ground shared with other engine circuits can produce the same intermittent command fault.
- Scan tool misfire counters may show nothing if the fault occurred on a previous drive cycle, so freeze-frame data and stored history are more useful than live data alone.
- Aftermarket injectors with different coil resistance can trigger intermittent circuit codes on GM vehicles even when the original injector was not the problem.

Can I keep driving with P1222?

You can usually drive short distances to a repair shop, but avoid heavy acceleration, towing, and long trips until the intermittent circuit is found because a sudden injector dropout can cause a misfire, power loss, or stall. If the engine begins running rough continuously or the check engine light starts flashing, stop driving and have the vehicle towed.



Tools that help

- Scan tool with GM-specific injector and misfire data
- Digital multimeter with min/max recording
- Lab scope or injector noid light
- Back probe pins and terminal test kit
- Wiring diagram for the affected injector circuit

Reading P1222

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (GM): its meaning depends on the make.

2 Fuel and air metering (injector circuits).

22 The exact fault within that area.

Often seen with

P1221 CAN Communication ETC Or ETS Interrupted · **P1223** Fuel Rack Position Sensor Y2311 · **P1221** Traction Control System · **P1221** Pedal Demand Sensor B Circuit Range Performance · **P1221** Throttle Position (TP) Sensor 1 2 Correlation · **P1221** Traction Control System Malfunction · **P1223** Pedal Demand Sensor B Circuit High Input · **P1221** Throttle Position (TP) Sensor 1-2 Correlation · **P1221** Pedal Position Sensor 2 Range Performance Problem · **P1223** Pedal Position Sensor 2 High Input · **P0200** Injector Circuit Malfunction · **P0201** Injector Circuit Malfunction - Cylinder 1 · **P0300** Random/Multiple Cylinder Misfire Detected

See it working

Watch the animated explainer [How Coil-on-Plug Ignition Works: Coil and Spark Plug](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1222/>

