

FORD · POWERTRAIN

P1232

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1232 · Ford

Low Speed Fuel Pump Primary Circuit Failure

P1232 on Ford vehicles means the powertrain control module (PCM) has detected a fault in the primary electrical circuit for the low-speed fuel pump, which is the pump circuit used during low-demand conditions such as idle and light cruise. The PCM monitors the circuit for expected voltage and current and sets this code when the signal falls outside the programmed range, indicating an open, short, or excessive resistance in the pump feed or ground path.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Engine may stumble or hesitate at idle or during light acceleration
- Intermittent stall at low speeds or when coming to a stop
- Rough idle quality or a lean-running condition at low load
- Hard starting or extended cranking before the engine fires
- Loss of power or reduced fuel delivery under low-speed driving conditions

Common causes, most likely first

- 1 Corroded or loose electrical connector at the low-speed fuel pump module or at the fuel pump driver module
- 2 Damaged or chafed wiring in the fuel pump primary circuit, often near the fuel tank or along the frame rail
- 3 Failed fuel pump driver module (FPDM) not supplying the correct pulse-width-modulated signal to the low-speed pump
- 4 Open or shorted fuel pump relay or a faulty relay socket in the power distribution box
- 5 High resistance in the fuel pump ground circuit, including the chassis ground point for the pump module
- 6 Failed low-speed fuel pump motor winding or internal brush wear causing excessive current draw
- 7 Blown fuse or fusible link in the fuel pump power feed circuit



How to diagnose and fix it

- 1 Connect a scan tool and verify P1232 is current, then check for any related fuel pump or fuel system codes before proceeding
- 2 Inspect the fuel pump fuse and relay in the power distribution box, and swap the relay with a known-good identical relay to rule out relay failure
- 3 Visually inspect the fuel pump driver module and its connector for corrosion, water intrusion, or loose pins, especially on models where the module is mounted above the spare tire
- 4 Disconnect the fuel pump connector and check for battery voltage and a good ground at the pump harness with the key on, using a digital multimeter
- 5 Perform a voltage drop test on both the power feed and ground circuits while the pump is commanded on to identify excessive resistance in the wiring
- 6 Command the low-speed fuel pump on with the scan tool and listen for pump operation, then measure current draw with a low-amp clamp to compare against specification
- 7 If the circuit and driver module test good, replace the low-speed fuel pump assembly and recheck for the code after clearing

Ford fuel pump driver module traps

- On many Ford trucks and SUVs, the fuel pump driver module is mounted on the frame above the spare tire where road salt and water collect, causing corrosion that sets P1232 without any pump failure
- A failed fuel pump driver module can command the low-speed pump incorrectly while the high-speed pump still works, so the vehicle may drive normally at higher speeds and only act up at idle
- Technicians often replace the fuel pump when the real fault is a chafed wire in the harness near the fuel tank, so always perform a voltage drop test before condemning the pump
- P1232 can be set by a weak battery or charging system fault that causes low voltage during cranking, so check battery condition and charging voltage before chasing the pump circuit
- Some Ford models use a returnless fuel system with a fuel pump control module that varies pump speed, and a failing module can set P1232 without any stored fuel pressure code

Can I keep driving with P1232?

You can usually drive the vehicle to a repair shop if the engine runs and the warning light is the only symptom, but avoid heavy loads, towing, and prolonged idling because a failing low-speed pump circuit can cause a stall at low speed. If the engine stalls, hesitates, or loses power, stop driving and have the vehicle towed to prevent a safety hazard.



Tools that help

- OBD-II scan tool with Ford-specific capability
- Digital multimeter
- Low-amp clamp meter
- Fuel pressure gauge
- Test light
- Basic hand tools and socket set

Reading P1232

P Powertrain: engine, transmission and emissions.

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

2 Fuel and air metering (injector circuits).

32 The exact fault within that area.

Often seen with

P1237 Cylinder 1 Injector Circuit Open Circuit · **P1235** Fuel Pump Control Circuit · **P1235** VSV 1/2/3 Circuit Range Performance · **P1237** VSV 2 Circuit · **P1237** Injector Circuit Cylinder 6 Intermittent · **P1233** Fuel Pump Driver Module Off-Line · **P1235** Fuel Pump Control Out of Range · **P1237** Fuel Pump Secondary Circuit Fault · **P1237** Injector Circuit Cylinder 6 Intermittent · **P0230** Fuel Pump Primary Circuit Malfunction · **P0231** Fuel Pump Secondary Circuit Low

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-p1232/>

