



P1642 · Ford

Fuel Pump Monitor Circuit High Input

P1642 on Ford vehicles means the powertrain control module (PCM) has detected a high voltage condition on the fuel pump monitor circuit, which is the feedback wire the PCM uses to confirm the fuel pump is receiving power. The PCM expects a voltage within a specific range when the pump is commanded on, and a reading above that range triggers this code.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Engine may crank but fail to start if the fuel pump is not running
- Intermittent stalling or a sudden loss of power while driving
- Rough idle or hesitation under acceleration due to inconsistent fuel delivery
- Fuel pump may be inaudible when the key is turned to the run position

Common causes, most likely first

- 1 Open or high-resistance ground connection at the fuel pump monitor circuit or chassis ground
- 2 Damaged or chafed fuel pump monitor wire shorted to voltage
- 3 Failed fuel pump driver module (FPDM) on vehicles equipped with a returnless fuel system
- 4 Faulty fuel pump assembly with an internal open circuit in the monitor circuit
- 5 Corroded or loose electrical connector at the fuel pump or FPDM
- 6 PCM internal fault causing incorrect monitor circuit interpretation (rare)



How to diagnose and fix it

- 1 Connect a scan tool and verify P1642 is the only code; check fuel pump commanded state and monitor voltage in live data
- 2 Inspect the fuel pump monitor circuit wiring for chafing, shorts to voltage, or loose connectors, especially near the fuel tank and FPDM
- 3 Measure resistance to ground on the monitor circuit with the key off; repair any open or high-resistance ground
- 4 Test the fuel pump driver module (if equipped) by checking its power, ground, and signal outputs according to Ford service information
- 5 Command the fuel pump on with the scan tool and measure voltage at the pump connector; replace the pump if voltage is present but the pump does not run
- 6 If all external circuits and components test good, substitute a known-good PCM and retest before condemning the original module

What Ford Techs Check Before Replacing Parts

- A high input on the fuel pump monitor circuit often results from a poor ground rather than a failed pump, so always verify ground integrity at the FPDM and chassis before condemning the pump.
- On Ford returnless fuel systems, the fuel pump driver module (FPDM) is a common failure point that can set P1642 even when the pump itself is healthy.
- The fuel pump monitor circuit is a low-current feedback line; a short to voltage from a nearby power wire can set this code without affecting pump operation, so inspect harness routing carefully.
- P1642 can be stored intermittently by a loose fuel pump connector that makes contact only when the vehicle is moving, so wiggle-test the harness while monitoring live data.
- Do not confuse P1642 with fuel pump circuit codes like P0230 or P0231; P1642 specifically refers to the monitor feedback voltage being too high, not the pump power circuit itself.

Can I keep driving with P1642?

If the engine starts and runs normally, you can drive cautiously to a repair shop, but avoid hard acceleration and long trips because the fuel pump may fail without warning. If the engine cranks but does not start or stalls repeatedly, stop driving and have the vehicle towed to prevent a no-start situation.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Ford service information or wiring diagrams
- Test light or fused jumper wire
- Fuel pressure gauge (for verification)



Reading P1642

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 6** Computer and output circuits.
- 42** The exact fault within that area.

Often seen with

P1235 Fuel Pump Control Circuit · **P1235** VSV 1/2/3 Circuit Range Performance · **P1233** Fuel Pump Driver Module Off-Line · **P1235** Fuel Pump Control Out of Range · **P0230** Fuel Pump Primary Circuit Malfunction · **P0231** Fuel Pump Secondary Circuit Low · **P0232** Fuel Pump Secondary Circuit High

See it working

Watch the animated explainer [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1642/>

