

FORD · POWERTRAIN

P1168

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1168 · Ford

Fuel Rail Sensor In-Range Low Failure

P1168 on Ford vehicles means the powertrain control module (PCM) has detected that the fuel rail pressure sensor signal is lower than the expected range for the current operating conditions. The PCM monitors this sensor to determine fuel rail pressure, and when the voltage or calculated pressure stays below the calibrated minimum, it stores this code and may illuminate the check engine light.

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

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Rough idle or stumbling, especially when the engine is cold
- Hesitation or lack of power during acceleration
- Reduced fuel economy due to incorrect fuel pressure readings
- Hard starting or extended cranking before the engine fires
- In rare cases, the engine may stall or enter limp mode

Common causes, most likely first

- Faulty fuel rail pressure sensor sending a low signal
- Wiring harness damage or corrosion at the sensor connector
- Poor electrical connection or loose pins at the fuel rail pressure sensor
- Low fuel pressure from a weak fuel pump or restricted fuel filter
- Clogged or sticking fuel injectors affecting rail pressure
- PCM calibration issue or internal fault in the pressure sensor circuit

How to diagnose and fix it

- Connect a scan tool and check for other stored codes, then record freeze-frame data for P1168
- Inspect the fuel rail pressure sensor connector and wiring for corrosion, chafing, or loose pins
- Measure the sensor reference voltage and ground at the connector with a multimeter
- Test fuel pressure with a mechanical gauge to confirm actual rail pressure matches the sensor reading
- Replace the fuel rail pressure sensor if electrical tests and fuel pressure checks point to a faulty sensor
- Check fuel pump operation and fuel filter condition if pressure is low, and repair as needed
- Clear the code and perform a road test to verify the repair and ensure the code does not return



What Ford Techs Check Before Swapping the Sensor

- A low fuel rail pressure sensor reading often results from a weak fuel pump or restricted filter rather than a failed sensor, so always verify actual fuel pressure before replacing parts.
- Corroded or loose pins at the sensor connector are a common cause on older Ford models, and simply cleaning the terminals can resolve the code without any new components.
- The PCM may set P1168 intermittently if the sensor signal drops out briefly during vibration or temperature changes, so wiggle-test the harness while monitoring live data.
- This code does not always mean the sensor is bad; a faulty PCM ground or reference voltage circuit can also pull the signal low and trigger P1168.
- After replacing the fuel rail pressure sensor, some Ford vehicles require a fuel system relearn or PCM reset to clear adaptive learning and prevent a repeat code.

Can I keep driving with P1168?

You can usually drive with P1168, but avoid heavy acceleration or towing until the fault is repaired, as incorrect fuel pressure readings can cause poor performance and potentially damage the engine over time. If the engine runs rough or stalls, stop driving and have the vehicle inspected promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Fuel pressure test gauge
- Socket set and basic hand tools
- Electrical contact cleaner and dielectric grease

Reading P1168

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

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0190** Fuel Rail Pressure Sensor Circuit Malfunction · **P0191** Fuel Rail Pressure Sensor Circuit Range/Performance · **P0192** Fuel Rail Pressure Sensor Circuit Low Input · **P0193** Fuel Rail Pressure Sensor Circuit High Input



See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1168/>

