

GENERIC · POWERTRAIN

P20DE

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P20DE

Exhaust Aftertreatment Fuel Pressure Sensor Circuit Range/Performance

P20DE indicates that the powertrain control module has detected an out-of-range or performance fault in the exhaust aftertreatment fuel pressure sensor circuit, which monitors the pressure of fuel injected into the exhaust system for regeneration. The computer compares the sensor signal against expected values under specific operating conditions and flags the code when the signal is implausible or fails to respond as expected.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode if the fault triggers protective strategies
- Poor fuel economy or increased diesel exhaust fluid consumption in some cases
- Inability to complete a regeneration cycle, leading to soot buildup over time
- Rough running or misfire under certain load conditions if fuel delivery is affected
- A stored freeze-frame showing the fault occurred during regeneration or at a specific pressure reading

Common causes, most likely first

- 1 Faulty exhaust aftertreatment fuel pressure sensor or its electrical connector
- 2 Damaged or corroded wiring in the sensor circuit, including open or short circuits
- 3 Clogged or restricted fuel supply line to the aftertreatment injector
- 4 Weak or failing aftertreatment fuel pump, causing low pressure
- 5 Leaking or stuck aftertreatment fuel injector affecting pressure regulation
- 6 Exhaust system restrictions or excessive backpressure altering sensor readings
- 7 Software calibration issues in the powertrain control module requiring an update



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, connector, and wiring for damage or corrosion
- 2 Use a scan tool to read live data and compare the sensor voltage or pressure reading to the manufacturer's specification
- 3 Check fuel pressure at the aftertreatment injector supply port with a mechanical gauge to verify actual pressure
- 4 Test the sensor circuit with a multimeter for continuity, shorts, and reference voltage
- 5 Inspect the aftertreatment fuel lines and injector for leaks or blockages
- 6 Replace the pressure sensor if testing confirms it is faulty, then clear codes and verify the repair
- 7 If the sensor and wiring are good, diagnose the aftertreatment fuel pump and injector operation

Why this code often misleads

- A clogged aftertreatment fuel filter can cause low pressure and set P20DE without any sensor fault, so always check filter condition first.
The sensor may read correctly at idle but fail under regeneration conditions, so live data must be monitored during an active regeneration.
- Exhaust backpressure from a restricted diesel particulate filter can skew pressure readings and trigger this code, mimicking a sensor failure.
- In some vehicles, a weak battery or charging system can cause erratic sensor signals that set P20DE intermittently.
Replacing the sensor without checking fuel supply pressure often leads to a repeat code because the root cause is a pump or line issue.

Can I keep driving with P20DE?

You can usually drive with this code, but avoid long trips or heavy loads until it is diagnosed because failed regenerations can lead to more serious exhaust system damage. If the engine enters limp mode or you notice reduced power, have it checked promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Fuel pressure gauge
- Hand tools for connector and sensor removal
- Factory service information for specifications



Reading P20DE

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
0	Fuel and air metering and auxiliary emission controls.
DE	The exact fault within that area.

Often seen with

P20DD Exhaust Aftertreatment Fuel Pressure Sensor Circuit · **P20DF** Exhaust Aftertreatment Fuel Pressure Sensor Circuit Low · **P20E0** Reductant Pressure Too Low · **P2452** Diesel Particulate Filter Pressure Sensor Circuit · **P2463** Diesel Particulate Filter Restriction - Soot Accumulation

See it working

Watch the animated explainer [How a Refrigerator Works: The Cooling Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p20de/>

