



P2CEC

Particulate Filter Pressure Sensor D Circuit Low

P2CEC indicates that the powertrain control module has detected a low voltage signal on the electrical circuit for the particulate filter pressure sensor, specifically the 'D' circuit. This sensor measures the pressure difference across the diesel particulate filter to help the engine computer monitor filter loading and trigger regeneration when needed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Reduced engine performance or power, as the computer may limit torque to protect the filter.
- Increased fuel consumption due to inhibited or altered regeneration strategies.
- Frequent or failed attempts to regenerate the particulate filter, leading to excessive soot accumulation.
- In some cases, a message on the dashboard indicating a particulate filter or emissions system fault.
- Rough running or hesitation if the filter becomes severely clogged as a consequence.

Common causes, most likely first

- 1 A faulty particulate filter pressure sensor that is unable to produce a correct voltage signal.
- 2 Damaged, chafed, or corroded wiring in the sensor's 'D' circuit, causing an open or high resistance.
- 3 Loose or corroded electrical connector at the sensor or at the powertrain control module.
- 4 A short to ground in the 'D' circuit wiring, pulling the signal voltage low.
- 5 Water or debris intrusion into the sensor connector, leading to signal degradation.
- 6 A failed powertrain control module, although this is rare and should be diagnosed last.



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then visually inspect the sensor and its wiring for obvious damage or corrosion.
- 2 Disconnect the sensor connector and check for reference voltage and ground at the harness side to verify circuit integrity.
- 3 Perform a resistance test on the 'D' circuit wiring between the sensor and the powertrain control module to check for opens or shorts.
- 4 Compare the sensor's live pressure reading with a known-good value or use a pressure gauge to verify actual filter pressure.
- 5 If the circuit tests good, replace the particulate filter pressure sensor with a quality part and clear the codes.
- 6 After repair, perform a road test and monitor the pressure sensor readings to ensure they are within specification and the code does not return.
- 7 If the code persists, follow the manufacturer's diagnostic flow chart for the 'D' circuit, which may involve testing the powertrain control module.

What the pressure sensor D circuit really means

- A low voltage on the 'D' circuit often results from a poor ground connection rather than a failed sensor, so always check ground integrity before replacing parts.
- The 'D' circuit designation refers to a specific sensor circuit in vehicles with multiple pressure sensors; misdiagnosing it as a generic sensor fault can lead to unnecessary replacements.
- Exhaust leaks upstream of the particulate filter can cause pressure readings to be lower than expected, mimicking a circuit low fault, so inspect the exhaust system for leaks.
- Some vehicles use a combined pressure and temperature sensor, and a fault in the temperature element can affect the pressure signal, so check for related codes.
- After repairing the circuit, a forced regeneration may be required to reset the filter's soot load estimation, otherwise the code may reset even with a good sensor.

Can I keep driving with P2CEC?

You can usually continue driving with this code, but avoid long trips or heavy loads until it is repaired, as the filter may not regenerate properly and could become clogged, leading to reduced performance and potential damage. If the engine enters limp mode or you notice severe power loss, seek service immediately.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Pressure gauge (for exhaust backpressure testing)



Reading P2CEC

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- EC** The exact fault within that area.

Often seen with

P2002 Particulate Trap Efficiency Below Threshold (Bank 1) · **P2453** Diesel Particulate Filter Pressure Sensor Circuit Range/Perf · **P2454** Diesel Particulate Filter Pressure Sensor Circuit Low · **P2CEB** Particulate Filter Pressure Sensor D Range/Performance · **P2CED** Particulate Filter Pressure Sensor D Circuit High

See it working

Watch the animated explainer [Car Relay Test Bench: Test 4-Pin and 5-Pin Relays](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2cec/>

