

GENERIC · POWERTRAIN

P223D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P223D

O2 Sensor Pumping Current Range/Performance (Bank 2)

P223D means the engine computer has detected that the oxygen sensor's pumping current on Bank 2 is outside the expected range or not responding properly. The sensor's internal heater and pump cell are not maintaining the precise current needed to measure exhaust oxygen, so the computer flags a performance fault.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly rough idle or hesitation during acceleration in some cases
- A drop in fuel economy if the fault persists and the computer defaults to a rich mixture
- Failed emissions test due to incorrect air-fuel ratio readings
- In rare cases, a sulfur or rotten-egg smell from the exhaust if the mixture stays rich

Common causes, most likely first

- 1 Contaminated or aged oxygen sensor (Bank 2) causing the pump cell to lose accuracy
- 2 Wiring damage or corrosion in the sensor circuit, including the pump current wires
- 3 Exhaust leak before the sensor allowing outside air to skew readings
- 4 Faulty sensor heater circuit affecting the sensor's ability to reach operating temperature
- 5 Engine computer (ECM/PCM) software issue or internal driver fault
- 6 Low fuel pressure or a vacuum leak causing the engine to run too rich or too lean, stressing the sensor

How to diagnose and fix it

- 1 Inspect the oxygen sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed
- 2 Check for exhaust leaks upstream of the Bank 2 sensor using a smoke machine or visual inspection
- 3 Measure the sensor heater resistance and compare to specifications; replace the sensor if out of range
- 4 Verify fuel pressure and check for vacuum leaks to rule out mixture problems before condemning the sensor
- 5 Perform a manufacturer-specific oxygen sensor pump current test with a scan tool to confirm the sensor's response
- 6 If the sensor is original and high-mileage, replace the Bank 2 oxygen sensor with a quality part
- 7 After repair, clear the code and complete a drive cycle to verify the fix and ensure the monitor runs



Before you replace the oxygen sensor

- A P223D can be set by a lazy sensor that still switches but cannot pump current accurately, so a simple voltage check may not reveal the fault.
- Exhaust leaks between the engine and the sensor are a common overlooked cause because they introduce oxygen that mimics a lean condition and confuse the pump current reading.
- Some vehicles require a software update to the engine computer to correct a false P223D before any hardware replacement is attempted.
- The code specifically refers to the pump current circuit, not the sensor's heater or signal voltage, so testing only the heater circuit can miss the real problem.
- A failing Bank 2 sensor can sometimes be caused by oil or coolant contamination from an internal engine leak, so check for other symptoms like coolant loss or oil consumption.

Can I keep driving with P223D?

You can usually drive with this code, but avoid heavy acceleration and long trips until it is diagnosed, because a persistent fault can damage the catalytic converter and increase emissions. If the check engine light starts flashing or you notice rough running, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data and oxygen sensor test capabilities
- Digital multimeter for checking wiring and heater resistance
- Smoke machine for exhaust leak detection
- Fuel pressure gauge
- Vacuum gauge
- Basic hand tools for sensor removal and replacement

Reading P223D

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
2	Fuel and air metering (injector circuits).
3D	The exact fault within that area.

Often seen with

P0130 O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0150** O2 Sensor Circuit Malfunction (Bank 2 Sensor 1) · **P0172** System Too Rich (Bank 1) · **P2237** O2 Sensor Positive Current Control Circuit/Open (Bank 1 Sens · **P2240** O2 Sensor Positive Current Control Circuit/Open (Bank 2 Sens



See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p223d/>

