

GENERIC · POWERTRAIN

P01F4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P01F4

O2 Sensor Circuit Slow Response Bank 1 Sensor 4

P01F4 indicates that the powertrain control module (PCM) has detected an excessively slow response from the downstream oxygen sensor on bank 1, sensor 4. The PCM monitors the sensor's voltage switching rate during closed-loop operation and flags the code when the signal transitions too slowly compared to the expected threshold for the operating conditions.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slight decrease in fuel economy over time as the PCM relies on default fueling strategies
- Occasional rough idle or mild hesitation during acceleration if the slow sensor skews fuel trim
- Failed emissions test due to increased tailpipe emissions or an incomplete oxygen sensor monitor
- In rare cases, a sulfur or rotten egg smell from the exhaust if the sensor causes a rich condition

Common causes, most likely first

- 1 Aging or contaminated oxygen sensor (bank 1 sensor 4) that no longer switches rapidly
- 2 Exhaust leaks upstream of the sensor, allowing outside air to dilute the sample and slow the signal
- 3 Wiring damage such as chafed, corroded, or loose connections at the sensor harness or PCM
- 4 A failing PCM driver circuit for the sensor heater or signal return
- 5 Engine oil or coolant contamination from internal leaks fouling the sensor element
- 6 Use of leaded fuel or improper sealants that poison the sensor's sensing element



How to diagnose and fix it

- 1 Inspect the sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed
- 2 Check for exhaust leaks between the engine and the sensor using a smoke test or visual inspection
- 3 Verify the sensor's heater circuit resistance and supply voltage with a multimeter to rule out a failed heater
- 4 Use a scan tool to view live oxygen sensor data and confirm the slow switching rate before condemning the sensor
- 5 Replace the bank 1 sensor 4 oxygen sensor with a direct-fit unit if diagnostics confirm it is lazy or contaminated
- 6 Clear the diagnostic trouble codes and perform a road test to verify the monitor completes and the code does not return
- 7 If the code persists, perform a pinpoint test of the PCM signal circuit and replace the PCM only as a last resort

Why a slow O2 sensor fools many diyers

- A slow-response code often sets without any driveability complaint because the PCM can still fuel the engine adequately using the upstream sensor, so the downstream sensor's laziness goes unnoticed by the driver.
- Exhaust leaks and wiring issues frequently mimic a failed oxygen sensor, so replacing the sensor without checking for leaks or voltage drops can lead to a repeat repair.
- Bank 1 sensor 4 is typically a downstream sensor on a V8 or V6 engine, and its slow response may be caused by a restricted catalytic converter that alters the exhaust pulse reaching the sensor.
- Some aftermarket or universal oxygen sensors have a different switching characteristic than the original equipment sensor and can trigger this code even when new, so a direct-fit OEM-style sensor is preferred.
- The PCM may set P01F4 only after two consecutive trips with the fault present, so a single slow reading during a cold start or a low-battery event is not enough to confirm a bad sensor.

Can I keep driving with P01F4?

The vehicle is generally safe to drive with P01F4 because the fault mainly affects emissions and long-term fuel trim, but avoid towing heavy loads or prolonged idling until the sensor is repaired. Have the system diagnosed soon to prevent potential catalytic converter damage from an overly rich or lean condition.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with back-probing pins
- Exhaust smoke machine or stethoscope for leak detection
- Oxygen sensor socket and ratchet
- Wiring diagram and pinout for the specific vehicle



Reading P01F4

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- F4** The exact fault within that area.

Often seen with

P0133 O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0134** O2 Sensor Circuit No Activity (Bank 1 Sensor 1) · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [Disc Brake Trainer: How Car Brakes Stop a Wheel](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01f4/>

