

GENERIC · POWERTRAIN

P015A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P015A

O2 Sensor Delayed Response - Rich to Lean Bank 1 Sensor 1

P015A means the engine computer has detected that the upstream oxygen sensor on bank 1 is taking too long to switch from a rich exhaust reading to a lean one. The computer commands a change in fuel mixture and watches how quickly the sensor voltage responds; when the transition time exceeds the calibrated limit, it stores this code.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms noticed by the driver
- A slight decrease in fuel economy as the computer struggles to correct the mixture quickly enough
- Occasional rough idle or hesitation during acceleration when the sensor response is especially slow
- Intermittent surging or uneven power delivery under light throttle
- A pending code or stored code that returns after clearing, especially during steady cruise conditions

Common causes, most likely first

- 1 A contaminated or aged oxygen sensor that has slowed its switching response
- 2 Exhaust leaks upstream of the sensor, allowing outside air to dilute the sample and delay the rich-to-lean transition
- 3 Wiring damage or corrosion in the sensor circuit, including the signal, ground, or heater circuits
- 4 A failing sensor heater that prevents the sensor from reaching operating temperature quickly
- 5 Fuel system issues such as a leaking injector or incorrect fuel pressure that keep the mixture rich longer than expected
- 6 A restricted or failing catalytic converter that alters exhaust flow and sensor behavior
- 7 Engine mechanical problems like a misfire or vacuum leak that affect exhaust composition and sensor response



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 between the engine and the upstream sensor using a smoke test or listening for ticking sounds
- 3 Verify the sensor 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 rich-to-lean transition before replacing parts
- 5 Perform a fuel system check for leaking injectors or incorrect pressure if the sensor response remains slow after electrical checks
- 6 Replace the upstream oxygen sensor if diagnostics confirm it is the source of the delayed response
- 7 Clear the code and verify the repair by completing a drive cycle and confirming the sensor switches normally

Why a slow O2 sensor is not always the sensor

- A small exhaust leak upstream of the sensor can pull in outside air and mimic a lazy sensor, so always smoke-test the exhaust before condemning the sensor.
- A failing heater circuit often sets a heater code first, but a partially degraded heater can slow sensor response without triggering a separate code.
- Fuel system problems that keep the mixture rich, such as a leaking injector, can delay the rich-to-lean switch and set P015A even when the sensor itself is healthy.
- After replacing the sensor, the computer may need a full drive cycle with steady cruise and deceleration to relearn and confirm the fix.
- A misfire or vacuum leak can alter exhaust oxygen content and cause a slow response code, so check for other stored codes and engine performance issues first.

Can I keep driving with P015A?

You can usually continue driving with this code, but avoid heavy acceleration and towing until it is diagnosed, because a slow sensor can affect fuel economy and 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 capability
- Digital multimeter
- Smoke machine for exhaust leak testing
- Oxygen sensor socket
- Fuel pressure gauge



Reading P015A

- 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.
- 5A** The exact fault within that area.

Often seen with

P0133 O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0150** O2 Sensor Circuit Malfunction (Bank 2 Sensor 1) · **P0151** O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1) · **P0152** O2 Sensor Circuit High Voltage (Bank 2 Sensor 1) · **P0153** O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p015a/>

