

GM · POWERTRAIN

P1154

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1154 · GM

O2 Sensor Low Transition Time (Bank 2 Sensor 1)

P1154 on a GM vehicle means the powertrain control module (PCM) has detected that the upstream oxygen sensor on bank 2 (the side of the engine that does not contain cylinder 1) is switching too slowly between rich and lean readings. The PCM monitors how quickly the sensor voltage transitions from low to high and back; when the average transition time exceeds the calibrated limit, it sets this code and turns on the check engine light.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the sensor is only slightly slow.
- A noticeable drop in fuel economy because the PCM cannot fine-tune the air-fuel mixture quickly enough.
- Slightly rough idle or hesitation during light acceleration when the engine is cold.
- Failed emissions test due to increased hydrocarbons or carbon monoxide.
- In some cases, a subtle surging feeling at steady cruising speeds as the mixture oscillates.
- The check engine light may clear itself after several drive cycles if the slow switching is intermittent.

Common causes, most likely first

- Aged or contaminated bank 2 upstream oxygen sensor (the most common cause on high-mileage GM engines).
- Exhaust leaks upstream of the sensor, allowing outside air to pulse and slow the sensor's response.
- Wiring damage or corroded connector pins between the sensor and the PCM, adding resistance to the signal circuit.
- A failing PCM driver circuit for the heater or signal return on that sensor circuit (rare but possible).
- Engine oil or coolant contamination from internal leaks (blown head gasket, worn valve guides) coating the sensor element.
- Use of leaded fuel or silicone-based sealants that poison the sensor's zirconia element.
- A restricted exhaust or partially clogged catalytic converter on bank 2 that alters exhaust pulses and sensor behavior.



How to diagnose and fix it

- 1 Connect a scan tool and verify the code is current, then check bank 2 upstream oxygen sensor live data for switching frequency and amplitude.
- 2 Inspect the entire exhaust system on bank 2 for leaks, especially at the manifold flange and downpipe, using a smoke machine or stethoscope.
- 3 Perform a visual inspection of the sensor wiring and connector for chafing, corrosion, or loose pins; wiggle-test the harness while watching sensor data.
- 4 Check the sensor's heater circuit resistance and compare it to the bank 1 sensor; a failed heater can slow the sensor's readiness.
- 5 If the sensor is original and the vehicle has over 100,000 miles, replace the bank 2 upstream oxygen sensor with the correct GM-spec part.
- 6 After replacement, clear the codes and complete a drive cycle that includes steady cruise and several acceleration events to verify the transition time returns to normal.
- 7 If the code persists, perform a fuel trim and injector balance test to rule out a rich or lean condition that is masking as a slow sensor.

What a slow O2 sensor really tells you

- A slow transition time does not always mean the sensor is bad; exhaust leaks between the engine and sensor are a frequent cause that many technicians overlook.
- On GM V6 and V8 engines, bank 2 is often the side with the catalytic converter closest to the firewall, making the sensor harder to access and more prone to heat damage.
- A contaminated sensor from coolant or oil may still switch, but its transition time is stretched; replacing the sensor without fixing the root leak will set the code again.
- The PCM compares bank 2 sensor 1 transition time to bank 1 sensor 1; a lazy bank 1 sensor can mask a good bank 2 sensor, so always check both banks.
- Some aftermarket oxygen sensors have a different internal heater resistance that can cause slow switching on GM vehicles even when new, so use the correct OEM specification.

Can I keep driving with P1154?

You can usually continue driving with P1154, but avoid heavy acceleration and towing until it is repaired because the slow sensor can cause a rich or lean mixture that stresses the catalytic converter. If the check engine light starts flashing or you notice misfiring, stop driving and diagnose immediately.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oxygen sensor socket
- Smoke machine for exhaust leak testing
- Wiring diagram for the bank 2 upstream sensor circuit

Reading P1154

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (GM): its meaning depends on the make.
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- 1** Fuel and air metering.
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- 54** The exact fault within that area.

Often seen with

P1153 Air/Fuel Sensor Circuit Response Bank 1 Sensor 2 · **P1153** Bank 2 Fuel Control Shifted Lean FAOSC · **P1153** O2 Sensor Low Switching (Bank 2 Sensor 1) · **P1153** Bank 2 Fuel Control Shifted Lean · **P1153** HO2S Insufficient Switching · **P1153** O2 Sensor Heater Circuit High Voltage Bank 2 Sensor 1 · **P0130** O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0133** O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0150** O2 Sensor Circuit Malfunction (Bank 2 Sensor 1) · **P0153** O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)

See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1154/>

