

GM · POWERTRAIN

P1136

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1136 · GM

HO2S Rich Average Bank 1 Sensor 1

P1136 on GM vehicles means the powertrain control module has calculated that the upstream oxygen sensor on bank 1 is reporting an average fuel mixture that is too rich over a calibrated time window. The computer is not saying the sensor is necessarily bad; it is flagging that the sensor's average voltage stayed higher than expected, indicating excess fuel or a skewed reading.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- A slight decrease in fuel economy that the driver may attribute to driving conditions
- Occasional rough idle or a faint fuel odor from the exhaust
- Black sooty exhaust tips or spark plugs showing rich deposits
- Hesitation or a brief stumble during light acceleration
- Failed emissions test due to high carbon monoxide or hydrocarbons

Common causes, most likely first

- 1 Aging or contaminated upstream oxygen sensor that responds slowly or skews rich
- 2 Leaking fuel injector or injectors on bank 1 delivering excess fuel
- 3 High fuel pressure from a failing fuel pressure regulator or restricted return line
- 4 A stuck-open or leaking purge solenoid allowing fuel vapor into the intake
- 5 Vacuum leak or unmetered air that the computer misinterprets as a rich condition after fuel trim correction
- 6 Wiring damage or corrosion in the oxygen sensor signal circuit causing a biased voltage reading
- 7 A biased mass airflow sensor or manifold absolute pressure sensor reporting incorrectly



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data plus long-term and short-term fuel trims on bank 1 to confirm the rich average
- 2 Inspect the upstream oxygen sensor connector and wiring for corrosion, chafing, or oil contamination before condemning the sensor
- 3 Graph the upstream oxygen sensor voltage and compare its switching rate and average to the downstream sensor to spot a lazy or biased sensor
- 4 Check fuel pressure with a gauge and verify it holds within specification after the pump shuts off to rule out a leaking injector or regulator
- 5 Perform a injector balance or cylinder contribution test to identify a rich cylinder on bank 1
- 6 Smoke-test the intake and evaporative system for leaks that can distort fuel trim and oxygen sensor averages
- 7 Replace the upstream oxygen sensor only after electrical and fuel delivery checks pass, then clear codes and verify fuel trims return to normal

What the rich average really tells you

- A rich average on the upstream sensor often reflects a fuel delivery problem rather than a failed sensor, so replacing the oxygen sensor first frequently does not fix the code.
- GM's rich average logic can be triggered by a slow-responding sensor that still passes a simple voltage swing test, so graphing the sensor on a road test is more revealing than a static check.
- A leaking purge solenoid or saturated charcoal canister can introduce fuel vapor that the computer sees as a rich condition only at certain operating temperatures, making the code intermittent.
- Fuel trim corrections from a vacuum leak can push the oxygen sensor average rich after the computer adds fuel, so always review both short-term and long-term trims together.
- This code does not automatically mean the catalytic converter is failing; a rich average can be a symptom of an upstream fault that has not yet damaged the converter.

Can I keep driving with P1136?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long trips because a persistent rich condition can overheat and damage the catalytic converter. If the check engine light begins flashing or the engine runs rough, stop driving and arrange service.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter for circuit voltage and resistance checks
- Fuel pressure gauge
- Smoke machine for intake and EVAP leak testing
- Hand tools for sensor and injector access



Reading P1136

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

Often seen with

P1133 Oxygen Sensor Heating Circuit Bank 1 + 2 Sensor 1 Electrical · **P1133** Air/Fuel Sensor Circuit Response Bank 1 Sensor 1 · **P1133** Bank 1 Fuel Control Shifted Lean · **P1133** O2 Sensor Insufficient Switching (Bank 1 Sensor 1) · **P1133** Bank 1 Fuel Control Shifted Lean · **P1133** HO2S Insufficient Switching · **P1133** O2 Sensor Heater Control Circuit Bank 2 Sensor 1 · **P0130** O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0133** O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0172** System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2)

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1136/>

