

GM · POWERTRAIN

P1155

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1155 · GM

HO2S Lean Average Bank 2 Sensor 1

P1155 on a GM vehicle means the powertrain control module has detected a lean average fuel trim condition from the upstream oxygen sensor on bank 2, which is the side of the engine that does not contain cylinder number one. The computer is not saying the sensor itself has failed; it is reporting that the exhaust stream on that bank contains too much oxygen over a sustained period, so the engine is running lean on that side.

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 lean condition is mild and the long-term fuel trim has not yet maxed out.
- A noticeable hesitation or stumble on acceleration when the engine is cold or under light load.
- Rough idle quality that may feel like a slight misfire on one side of the engine.
- Reduced fuel economy as the computer adds extra fuel trying to correct the lean average.
- In some cases a sulfur or rotten egg smell from the exhaust if the lean condition overheats the catalytic converter.
- Intermittent surging or a lean pop through the intake during hard acceleration.

Common causes, most likely first

- A vacuum leak on the bank 2 side of the intake manifold, including cracked intake gaskets, deteriorated vacuum hoses, or a leaking brake booster check valve.
- A dirty or failing mass airflow sensor that under-reports airflow, causing the computer to command less fuel than the engine actually needs.
- A weak or failing fuel pump, restricted fuel filter, or low fuel pressure that affects bank 2 more than bank 1 due to fuel rail design.
- Leaking or clogged fuel injectors on bank 2, particularly a partially clogged injector that delivers less fuel than commanded.
- An exhaust leak upstream of the bank 2 sensor 1 oxygen sensor, which lets outside air into the exhaust stream and fools the sensor into reporting a false lean condition.
- A failing bank 2 sensor 1 oxygen sensor that is slow to respond or has a contaminated sensing element, though this is less common than a true lean condition.
- A mechanical engine problem such as a burnt valve or worn camshaft lobe on the bank 2 side that reduces airflow through that bank.



How to diagnose and fix it

- 1 Connect a scan tool and record the long-term and short-term fuel trim values for bank 2 sensor 1 at idle and at 2500 rpm to confirm the lean condition and see whether it is worse at idle or under load.
- 2 Visually inspect all vacuum hoses, intake gaskets, and the brake booster check valve on the bank 2 side for cracks or loose connections, using a smoke machine if available.
- 3 Check fuel pressure at the rail and compare it to the manufacturer's specification, then inspect the fuel filter for restriction if pressure is low.
- 4 Perform a propane or carburetor cleaner enrichment test around the intake manifold and vacuum lines on bank 2 to pinpoint a vacuum leak that is not visible.
- 5 Inspect the exhaust system upstream of the bank 2 sensor 1 oxygen sensor for leaks at the manifold flange, gasket, or downpipe, and repair any leaks before condemning the sensor.
- 6 Swap the bank 2 sensor 1 oxygen sensor with a known-good sensor from bank 1 and see if the lean code follows the sensor, which confirms a faulty sensor rather than a true lean condition.
- 7 If all external causes are ruled out, perform a cylinder leak-down and compression test on the bank 2 cylinders to check for mechanical faults such as a burnt valve or worn piston rings.

What a lean bank 2 code really means

- A P1155 does not automatically mean the oxygen sensor is bad; in fact, a true lean condition from a vacuum leak or low fuel pressure is far more common, and replacing the sensor first often wastes money.
- Bank 2 is the side of the engine that does not contain cylinder number one, so on a V6 or V8, a vacuum leak that only affects that bank is frequently caused by a failed intake manifold gasket or a cracked vacuum port on that side.
- An exhaust leak between the engine and the upstream oxygen sensor can pull outside air into the exhaust and create a false lean reading, so always inspect the exhaust before trusting the sensor data.
- A dirty mass airflow sensor can cause a lean average on both banks, but if bank 2 is worse, the problem is more likely to be a bank-specific vacuum leak or fuel delivery issue.
- If the long-term fuel trim on bank 2 is maxed out at a positive value and the engine has a rough idle, a mechanical fault such as a burnt valve should be suspected before replacing any sensors.

Can I keep driving with P1155?

You can drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or sustained high-speed driving because a lean condition can overheat the catalytic converter and cause expensive damage. If the check engine light starts flashing or the engine runs rough, stop driving and have it towed.



Tools that help

- OBD-II scan tool with live data and fuel trim graphing capability
- Smoke machine for locating vacuum leaks
- Fuel pressure gauge
- Propane enrichment tool or carburetor cleaner for vacuum leak testing
- Cylinder compression tester and leak-down tester
- Basic hand tools including socket set and wrench set

Reading P1155

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

Often seen with

P1154 Manifold Switch Over Malfunction · **P1153** Air/Fuel Sensor Circuit Response Bank 1 Sensor 2 · **P1153** Bank 2 Fuel Control Shifted Lean FAOSC · **P1154** Bank 2 Fuel Control Shifted Rich FAOSC · **P1153** O2 Sensor Low Switching (Bank 2 Sensor 1) · **P1154** O2 Sensor Low Transition Time (Bank 2 Sensor 1) · **P1153** Bank 2 Fuel Control Shifted Lean · **P1154** Bank 2 Fuel Control Shifted Rich · **P1153** HO2S Insufficient Switching · **P1154** HO2S Transition Time Ratio · **P1153** O2 Sensor Heater Circuit High Voltage Bank 2 Sensor 1 · **P0131** O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1) · **P0171** System Too Lean (Bank 1) · **P0174** System Too Lean (Bank 2)

See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1155/>

