

GENERIC · POWERTRAIN

P0152

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0152

O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)

P0152 means the engine computer detected a persistently high voltage signal from the upstream oxygen sensor on bank 2, which is the side of the engine that does not contain cylinder number one. A high voltage on this sensor circuit tells the computer that the exhaust is being reported as rich, or that the signal wire is being pulled toward the sensor's reference voltage, so the computer cannot trust the reading for fuel control.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Noticeably worse fuel economy as the computer adds fuel based on a false rich reading
- Rough idle or uneven running, especially when the engine is cold
- Black smoke or a strong fuel smell from the exhaust in severe cases
- Failed emissions test due to high carbon monoxide or hydrocarbon readings
- Occasional hesitation or stumble during acceleration

Common causes, most likely first

- 1 A failed upstream oxygen sensor on bank 2 that is stuck at a high voltage output
- 2 A short to voltage on the sensor signal wire between the sensor and the engine computer
- 3 Contaminated sensor element from coolant, oil, or silicone poisoning that skews the signal high
- 4 A poor sensor ground connection at the engine block or chassis that raises the signal voltage
- 5 A leaking fuel injector or high fuel pressure on bank 2 that genuinely drives the exhaust rich
- 6 A restricted or contaminated mass airflow sensor that misreports airflow and forces a rich command
- 7 A failing engine computer driver circuit for that oxygen sensor, though this is rare



How to diagnose and fix it

- 1 Scan all stored and pending codes and record freeze-frame data to confirm the fault is present and not intermittent
- 2 Inspect the bank 2 sensor 1 wiring harness for chafing, pinched insulation, or contact with the exhaust, and repair any damage
- 3 Check the sensor ground circuit and engine ground straps for corrosion or looseness using a voltage drop test
- 4 Measure the oxygen sensor signal voltage with a scan tool or digital voltmeter while the engine runs and compare it to the commanded fuel trim
- 5 Perform a propane or smoke test to check for vacuum leaks and inspect fuel injector balance and fuel pressure on bank 2
- 6 Replace the bank 2 upstream oxygen sensor only after electrical and fuel delivery checks confirm the sensor itself is at fault
- 7 Clear the codes and complete a drive cycle to verify the repair and confirm the monitor runs without resetting the code

Why a high O2 voltage is not always the sensor

- A stuck-high oxygen sensor signal is frequently caused by a short to voltage in the signal wire rather than a dead sensor, so ohm-testing the sensor alone will miss the real fault.
- Technicians often replace the sensor first and then find the code returns because a leaking injector on bank 2 is genuinely flooding that cylinder bank and driving the sensor voltage high.
- A contaminated mass airflow sensor can skew fuel trims rich enough to hold the upstream oxygen sensor voltage high, so airflow data must be reviewed before condemning the sensor.
- The engine computer may set P0152 when the sensor heater circuit is faulty and the sensor never reaches operating temperature, because a cold sensor can bias its output voltage high.
- Bank 2 sensor 1 is the upstream sensor before the catalytic converter, and replacing the downstream sensor by mistake is a common parts-counter error that leaves the code unresolved.

Can I keep driving with P0152?

You can usually drive the vehicle short distances to a repair shop, but prolonged driving with a false rich signal wastes fuel and can overheat or clog the catalytic converter. Avoid heavy acceleration and towing until the fault is diagnosed, and do not ignore the code for weeks.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital voltmeter with back-probing pins
- Wiring diagram for the bank 2 oxygen sensor circuit
- Propane enrichment tool or smoke machine for vacuum leak testing
- Fuel pressure gauge
- Oxygen sensor socket and hand tools

Reading P0152

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.
52	The exact fault within that area.

Often seen with

P0150 O2 Sensor Circuit Malfunction (Bank 2 Sensor 1) · **P0151** O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1) · **P0153** O2 Sensor Circuit Slow Response (Bank 2 Sensor 1) · **P0172** System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2)

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0152/>

