

GENERIC · POWERTRAIN

P0163

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0163

O2 Sensor Circuit Low Voltage (Bank 2 Sensor 3)

P0163 means the engine computer has detected a low-voltage condition on the downstream oxygen sensor circuit for bank 2 sensor 3, which is the post-catalytic converter sensor on the bank opposite cylinder one. The sensor's signal voltage stayed below the expected threshold for longer than the calibration allows, indicating either a lean exhaust stream, a wiring fault, or a failing sensor.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	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 as the computer adjusts fuel trim based on faulty feedback
- Occasional rough idle or hesitation if the low voltage is caused by a lean condition
- Failed emissions test due to the oxygen sensor monitor not completing or reporting a fault
- In rare cases, a sulfur or rotten egg smell from the exhaust if the converter is being overworked

Common causes, most likely first

- 1 Failed downstream oxygen sensor (bank 2 sensor 3) due to contamination or age
- 2 Open or high-resistance wiring in the sensor signal circuit, including a bad connector or chafed harness
- 3 Poor ground connection at the sensor or engine block causing a voltage drop
- 4 Exhaust leak upstream of the sensor allowing outside air to skew the reading
- 5 Leaking fuel injector or rich condition on bank 2 that contaminates the sensor
- 6 Faulty engine coolant temperature sensor or thermostat stuck open causing a lean-running condition
- 7 Rarely, a failing engine control module driver for the oxygen sensor heater circuit



How to diagnose and fix it

- 1 Connect a scan tool and verify the code is current, then check live data for bank 2 sensor 3 voltage to confirm it is stuck low
- 2 Inspect the sensor wiring and connector for corrosion, chafing, or loose pins, and repair any damage found
- 3 Check for exhaust leaks between the converter and the sensor using a smoke machine or by listening for ticking
- 4 Measure the sensor heater resistance and compare to specification, and check the heater circuit for power and ground
- 5 Perform a propane enrichment test at the intake to see if the sensor voltage responds, which helps rule out a stuck sensor
- 6 Replace the downstream oxygen sensor only after electrical and exhaust integrity checks pass
- 7 Clear the code and complete a drive cycle to verify the repair and ensure the monitor runs without resetting

Downstream sensor codes are not always the sensor

- A low voltage on a downstream sensor often indicates a lean exhaust stream rather than a dead sensor, so check fuel trims and look for vacuum leaks before condemning the part.
- The bank 2 sensor 3 location is frequently exposed to road splash and debris, making harness chafing and connector corrosion more common than on upstream sensors.
- An exhaust leak just ahead of the sensor can draw in outside air and produce a false low-voltage reading that mimics a failed sensor.
- Replacing the sensor without addressing a rich-running condition or coolant temperature sensor fault will quickly foul the new part and set the code again.
- Some vehicles use the downstream sensor to monitor catalyst efficiency, so a persistent low voltage may be an early warning of converter degradation rather than a sensor fault.

Can I keep driving with P0163?

The vehicle remains safe to drive with P0163 because the fault affects emissions monitoring rather than immediate engine operation. Avoid long-term driving with the light on, as continued operation with a faulty sensor can damage the catalytic converter and increase emissions.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Propane enrichment tool
- Smoke machine for exhaust leak detection
- Jack and jack stands or ramps for under-vehicle access
- Oxygen sensor socket



Reading P0163

- 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.
- 63** The exact fault within that area.

Often seen with

P0138 O2 Sensor Circuit High Voltage (Bank 1 Sensor 2) · **P0158** O2 Sensor Circuit High Voltage (Bank 2 Sensor 2) · **P0164** O2 Sensor Circuit High Voltage (Bank 2 Sensor 3) · **P0165** O2 Sensor Circuit Slow Response (Bank 2 Sensor 3) · **P0166** O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 3)

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0163/>

