

GENERIC · POWERTRAIN

P2C62

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C62

O2 Sensor Pumping Current Trim Circuit/Open Bank 1 Sensor 3

P2C62 indicates that the engine control module has detected an open circuit or abnormal condition in the pumping current trim circuit for the upstream oxygen sensor on bank 1 sensor 3. This sensor is a wideband air-fuel ratio sensor that uses a pumping current to maintain a reference voltage, and the trim circuit fine-tunes that current for accurate measurement. The code sets when the ECM sees a voltage or current outside the expected range for the trim circuit, typically due to a wiring fault, sensor failure, or ECM issue.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or hesitation during acceleration due to incorrect air-fuel ratio feedback
- Poor fuel economy as the ECM may default to a rich or lean condition
- Increased emissions and possible failure of an emissions inspection
- In rare cases, engine surging or stalling when the sensor signal is erratic

Common causes, most likely first

- 1 Open or damaged wiring in the pumping current trim circuit, such as a broken wire or corroded connector
- 2 Failed wideband oxygen sensor (bank 1 sensor 3) with an internal open circuit in the trim element
- 3 Poor electrical connection at the sensor or ECM harness, including loose pins or water intrusion
- 4 Short to ground or short to voltage in the trim circuit wiring
- 5 Faulty engine control module (ECM) driver for the trim circuit, though this is less common
- 6 Exhaust leaks upstream of the sensor causing false readings and circuit stress



How to diagnose and fix it

- 1 Inspect the sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed
- 2 Check the trim circuit for continuity and resistance using a multimeter, comparing to manufacturer specifications
- 3 Test for short circuits to ground or voltage on the trim circuit with the ignition on and off
- 4 Replace the wideband oxygen sensor if wiring and connections are good but the circuit remains open
- 5 Verify the ECM connector pins are clean and tight, and check for water intrusion in the ECM housing
- 6 Clear the code and perform a road test to confirm the repair, monitoring live data for the sensor trim current
- 7 If the code persists after sensor replacement and wiring checks, diagnose the ECM driver circuit or replace the ECM as a last resort

Don't overlook the trim circuit wiring

- A common mistake is replacing the oxygen sensor without first checking the trim circuit wiring, which often has chafed or broken wires near the exhaust manifold.
The pumping current trim circuit is separate from the sensor heater circuit, so a good heater resistance reading does not rule out a faulty sensor.
- Exhaust leaks upstream of the sensor can cause the ECM to command extreme trim currents, eventually setting this code even if the sensor is healthy.
- This code can be set by a poor ground connection at the ECM or engine block, which affects the reference voltage for the trim circuit.
On some vehicles, a weak battery or charging system issue can cause voltage spikes that damage the trim circuit driver in the ECM.

Can I keep driving with P2C62?

You can usually drive the vehicle with this code, but avoid aggressive acceleration or heavy loads because the air-fuel ratio may be incorrect, leading to poor performance and increased emissions. Have the fault diagnosed soon to prevent potential catalytic converter damage from prolonged rich or lean operation.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Back probe pins or breakout box
- Soldering iron and heat shrink tubing for wire repairs



Reading P2C62

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- 62** The exact fault within that area.

Often seen with

P0135 O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0155** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1) · **P2195** O2 Sensor Signal Stuck Lean (Bank 1 Sensor 1) · **P2C63** O2 Sensor Pumping Current Trim Circuit Low Bank 1 Sensor 3 · **P2C64** O2 Sensor Pumping Current Trim Circuit High Bank 1 Sensor 3

See it working

Watch the animated explainer [How an Elevator Works: Traction Lift in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2c62/>

