

NISSAN · POWERTRAIN

P1163

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1163 · Nissan

HO2S11 Slow Response Bank 1 Sensor 1

P1163 on Nissan vehicles means the powertrain control module has detected that the upstream heated oxygen sensor on bank 1, sensor 1, is responding too slowly to changes in exhaust oxygen content. The computer monitors the sensor's voltage switching rate during closed-loop fuel control and flags the code when the signal transitions fall outside the expected time window.

SYSTEM

Powertrain

CODE TYPE

Nissan specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slight decrease in fuel economy as the system stays in open-loop fueling longer
- Occasional rough idle or hesitation during acceleration when the sensor is severely lazy
- Elevated hydrocarbon emissions that may be caught during an emissions inspection
- In rare cases, a faint rotten-egg smell from the exhaust if the slow sensor causes rich running

Common causes, most likely first

- 1 Aged or contaminated heated oxygen sensor that has lost switching speed
- 2 Exhaust leaks upstream of the sensor allowing outside air to reach the sensing element
- 3 Wiring damage or corroded connector pins in the sensor circuit adding resistance
- 4 A failing sensor heater circuit that prevents the sensor from reaching operating temperature quickly
- 5 Engine oil or coolant contamination from internal leaks coating the sensor element
- 6 A vacuum leak or intake leak that creates a lean condition the sensor cannot track quickly enough
- 7 Rarely, a PCM calibration issue or a fault in the PCM's oxygen sensor input circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code set during closed-loop operation
- 2 Inspect the sensor wiring and connector for chafing, corrosion, or oil intrusion, and repair as needed
- 3 Perform a propane enrichment test or use a scan tool to graph the upstream oxygen sensor voltage and compare switching speed to the downstream sensor
- 4 Check for exhaust leaks between the cylinder head and the sensor using a smoke machine or by listening for ticking when cold
- 5 Verify the sensor heater circuit resistance and supply voltage against Nissan specifications for the specific model
- 6 Replace the bank 1 sensor 1 heated oxygen sensor with a quality direct-fit unit if testing confirms slow response
- 7 Clear the code and complete a drive cycle to verify the repair, then recheck for pending codes

Why a lazy oxygen sensor fools many diag routines

- A sensor that is merely slow often passes a simple voltage swing test because it still reaches the high and low limits, so graphing the transition time is essential rather than just watching the voltage move.
- Exhaust leaks upstream of the sensor are a common cause of a false slow-response code because the pulsing outside air makes the sensor signal appear sluggish to the PCM.
- Oil or coolant contamination from a failing head gasket or valve cover gasket can coat the sensor element and slow its response without setting a heater circuit code.
- Some technicians replace the sensor only to have the code return because a vacuum leak or intake boot crack was the real cause of the slow switching.
- On certain Nissan engines, the bank 1 sensor 1 location makes it vulnerable to road splash and thermal shock, so inspecting the sensor body for cracks is worthwhile before condemning it.

Can I keep driving with P1163?

You can usually continue driving to a repair shop, but avoid heavy acceleration and long trips because the slow sensor can cause rich running that damages the catalytic converter over time. If the check engine light begins flashing or you notice misfiring, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter for heater circuit and wiring checks
- Propane enrichment kit or smoke machine for vacuum and exhaust leak testing
- Oxygen sensor socket and ratchet
- Factory service information or wiring diagram for the specific Nissan model



Reading P1163

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

Often seen with

P0133 O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0134** O2 Sensor Circuit No Activity (Bank 1 Sensor 1) · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How Crank and Cam Position Sensors Work](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1163/>

