



P1247 · Nissan

Accelerator Position Sensor 2 Circuit Malfunction

P1247 on Nissan vehicles indicates that the engine control module (ECM) has detected an abnormal signal from accelerator position sensor 2, which is the second track of the drive-by-wire throttle pedal assembly. The ECM compares this signal against sensor 1 and expects a specific mathematical relationship; when the voltage falls outside the acceptable range or the correlation between the two sensors is lost, the ECM stores this code and typically illuminates the warning light.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Nissan specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- The check engine light or electronic throttle control warning light is illuminated on the dashboard.
- The accelerator pedal may feel unresponsive or require more travel than usual to accelerate.
- The engine may enter limp mode, limiting speed to a fast idle or a preset low threshold.
- Intermittent hesitation or a sudden drop in power while driving at a steady speed.
- Often no symptoms besides the warning light, especially if the fault is intermittent and sensor 1 still provides a plausible signal.

Common causes, most likely first

- 1 Wear or contamination inside the accelerator pedal position sensor assembly, particularly the resistive tracks for sensor 2.
- 2 A damaged or corroded electrical connector at the accelerator pedal assembly, causing high resistance or an intermittent open circuit.
- 3 Chafed, pinched, or broken wires in the harness between the pedal sensor and the ECM, often near the pedal bracket or firewall pass-through.
- 4 A faulty ECM that misinterprets a valid sensor 2 signal, though this is far less common than sensor or wiring faults.
- 5 Water intrusion or debris in the pedal assembly housing, leading to signal dropout under certain pedal positions.
- 6 Poor ground connection for the sensor reference circuit, causing voltage offsets that affect sensor 2 more than sensor 1.



How to diagnose and fix it

- 1 Connect a scan tool and read live data for both accelerator position sensors while slowly pressing and releasing the pedal to confirm the fault and observe the voltage relationship.
- 2 Visually inspect the accelerator pedal connector and harness for corrosion, loose pins, or chafed insulation, and repair any obvious damage.
- 3 Backprobe the sensor 2 signal wire at the ECM and at the pedal connector to check for continuity and excessive resistance while wiggling the harness.
- 4 Measure the reference voltage and ground at the pedal connector to ensure they are within specification, then compare sensor 2 voltage to the expected range.
- 5 If wiring and connectors are sound, replace the accelerator pedal assembly with a known-good unit and clear the code to see if it returns.
- 6 After any repair, perform a throttle pedal relearn procedure if required by the Nissan model, then clear codes and verify the live data matches the service manual graph.
- 7 Road test the vehicle under various throttle conditions to confirm the code does not reset and that pedal response is normal.

Why sensor 2 fails before sensor 1

- The second track in Nissan pedal sensors often wears faster because it sits at a different physical location on the resistive film, so a code for sensor 2 alone does not automatically mean the whole pedal is dead.
- A common misdiagnosis is replacing the throttle body when the real problem is the pedal sensor, because both can cause limp mode and similar drivability complaints.
- Intermittent P1247 codes are frequently caused by a loose ground wire at the pedal bracket or a pin that has backed out of the connector, which a simple wiggle test can reveal.
- Some aftermarket floor mats or pedal covers can physically interfere with the pedal travel and trigger correlation errors between the two sensors, so check for obstructions before condemning parts.
- The ECM may set P1247 even when sensor 2 voltage is present but does not follow the expected curve relative to sensor 1, meaning a sensor can be electrically alive yet still fail the rationality test.

Can I keep driving with P1247?

If the vehicle is in limp mode or the pedal response is erratic, avoid highway driving and have it diagnosed promptly because reduced power can be a safety hazard in traffic. If the only symptom is a steady warning light and the car drives normally, you can drive cautiously to a repair shop, but do not ignore the code because the fault may worsen without warning.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or breakout leads
- Socket set and trim removal tools
- Service manual or wiring diagram for the specific Nissan model

Reading P1247

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

Often seen with

P1246 Needle Lift Sensor Circuit Range Performance · **P1248** Injection Start Control Deviation · **P1246** Accelerator Position Sensor 1 Circuit Malfunction · **P1248** Accelerator Position Sensors 1 & 2 Improper Correlation · **P1248** Turbo Boost Pressure Not Detected · **P1246** Crank Signal High Input · **P1246** Accelerator Position Sensor 1 Circuit Malfunction · **P1248** Accelerator Position Sensors 1 & 2 Improper Correlation · **P1246** Alternator Load Input Failed · **P1248** Turbo Boost Pressure Not Detected · **P2122** Accelerator Pedal Position Sensor D Circuit Low · **P2127** Accelerator Pedal Position Sensor E Circuit Low · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1247/>

