

NISSAN · POWERTRAIN

P1241

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1241 · Nissan

## Throttle Vent Control Motor Circuit 1 Malfunction

P1241 on Nissan vehicles indicates that the engine control module (ECM) has detected an electrical fault in the throttle vent control motor circuit, specifically circuit 1. The ECM monitors the motor's command and feedback signals and sets this code when the expected current or voltage is outside the normal range, often due to an open, short, or excessive resistance in the wiring or motor.

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

### Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) on the dashboard.
- Often no symptoms besides the warning light, especially if the vent control motor is not critical for immediate engine operation.
- Rough idle or unstable engine speed as the throttle body may not vent properly during certain conditions.
- Reduced engine performance or hesitation during acceleration if the throttle plate position is affected.
- In some cases, the engine may enter limp mode, limiting power to protect the system.
- A faint clicking or buzzing noise from the throttle body area when the ignition is turned on, indicating the motor is attempting to move.

### Common causes, most likely first

- 1 Damaged or corroded wiring harness or connector at the throttle vent control motor, often due to heat, vibration, or contamination.
- 2 Failed throttle vent control motor itself, such as a burned-out winding or seized internal mechanism.
- 3 Open or short circuit in the motor circuit, including a broken wire or a short to ground or power.
- 4 Poor electrical connection at the ECM connector, such as loose pins or corrosion.
- 5 Faulty ECM driver for the vent control motor circuit, though this is less common and should be diagnosed last.
- 6 Contamination or carbon buildup inside the throttle body interfering with the vent control motor's operation.



## How to diagnose and fix it

- 1 Verify the code with a Nissan-specific scan tool and check for any related codes in the throttle control system.
- 2 Inspect the wiring harness and connector at the throttle vent control motor for signs of damage, corrosion, or loose pins; repair as needed.
- 3 Measure resistance of the vent control motor windings and compare to the manufacturer's specification; replace the motor if out of range.
- 4 Check for continuity and short circuits in the wiring between the motor and the ECM; repair any open or shorted wires.
- 5 Clean the throttle body and vent control motor passages to remove carbon buildup that may cause binding.
- 6 If all electrical checks pass, test the ECM output signal to the motor with an oscilloscope or bidirectional scan tool; replace the ECM only if confirmed faulty.
- 7 After repairs, clear the code and perform a throttle relearn procedure if required, then test-drive to confirm the code does not return.

## Common Misdiagnosis Traps for P1241

- A dirty throttle body is frequently overlooked as a cause of P1241; carbon buildup can restrict the vent control motor's movement, leading to circuit codes even when electrical components are healthy.
- The throttle vent control motor is often confused with the throttle actuator motor; P1241 specifically refers to the vent control circuit, not the main drive motor, so testing the wrong component wastes time.
- Intermittent wiring faults due to heat or vibration may not appear during static testing; a wiggle test of the harness while monitoring live data can reveal the issue.
- Some aftermarket scan tools misreport P1241 as a generic throttle position sensor code; always use a Nissan-capable tool to ensure accurate diagnosis.
- A weak battery or charging system issue can cause voltage drops that trigger P1241; always check battery health and ground connections before condemning the motor or ECM.

## Can I keep driving with P1241?

You can generally drive the vehicle with P1241, but avoid aggressive acceleration or heavy loads until the fault is repaired, as the engine may enter limp mode or exhibit reduced performance. If the check engine light begins flashing or you notice severe power loss, stop driving and seek professional diagnosis immediately.

## Tools that help

- Nissan-specific OBD-II scan tool with bidirectional control and live data
- Digital multimeter for measuring resistance and voltage
- Oscilloscope for analyzing motor control signals
- Wire repair kit with crimpers and heat shrink
- Throttle body cleaner and soft brushes
- Basic hand tools (screwdrivers, socket set) for accessing components



## Reading P1241

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

## Often seen with

**P1242** Cylinder 6 Injector Circuit Open Circuit · **P1243** Cylinder 7 Injector Circuit Open Circuit · **P1242** Throttle Vent Control Motor Circuit 2 Malfunction · **P1243** Throttle Position Insufficient · **P1242** Sensor Power Supply High Input · **P1243** Analog Ground · **P1242** Throttle Vent Control Motor Circuit 2 Malfunction · **P1243** Throttle Position Insufficient · **P1243** Injector Circuit Cylinder 8 Intermittent · **P1243** Second Fuel Pump Faulty or Ground Fault · **P1243** Open Or Shorted Condition Detected In The Turbocharger Surge · **P2100** Throttle Actuator Control Motor Circuit/Open · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

## See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1241/>

