

NISSAN · POWERTRAIN

**P1106**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1106 · Nissan

## BARO Circuit Range Performance Malfunction

P1106 on Nissan vehicles indicates that the engine control module (ECM) has detected a range or performance problem with the barometric pressure (BARO) sensor circuit, which measures atmospheric pressure for fuel and ignition calculations. The ECM compares the BARO signal against expected values from other sensors, such as the mass air flow (MAF) and manifold absolute pressure (MAP) sensors, and sets this code when the reading falls outside the acceptable range or does not change as expected during key-on or driving conditions.

SYSTEM

Powertrain

CODE TYPE

Nissan specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

### Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or unstable engine speed, especially at high altitudes
- Poor fuel economy or rich/lean fuel mixture symptoms
- Hesitation or stumble during acceleration
- In rare cases, hard starting or stalling when the BARO reading is severely skewed

### Common causes, most likely first

- 1 Faulty barometric pressure (BARO) sensor internal to the mass air flow (MAF) sensor or engine control module (ECM)
- 2 Contaminated or obstructed BARO sensor sensing element
- 3 Damaged or corroded wiring or connectors in the BARO sensor circuit
- 4 Poor electrical connection at the ECM or sensor ground
- 5 ECM software calibration issue requiring reprogramming
- 6 Aftermarket air intake or modifications that affect sensor readings
- 7 Extreme altitude changes without ECM adaptation (less common)



## How to diagnose and fix it

- 1 Verify the stored code and check for any related diagnostic trouble codes (DTCs) using a scan tool
- 2 Inspect the BARO sensor and its wiring for physical damage, corrosion, or loose connections
- 3 Compare the BARO reading on the scan tool with actual atmospheric pressure for your altitude (using a known good source)
- 4 Check the MAF sensor for contamination and clean or replace if the BARO sensor is integrated
- 5 Perform a voltage drop test on the sensor ground and reference voltage circuits
- 6 Reprogram the ECM with the latest calibration if applicable
- 7 Replace the BARO sensor or MAF sensor assembly if testing confirms an internal fault

## BARO Sensor Diagnostics and Hidden Causes

- On many Nissan models, the BARO sensor is integrated into the mass air flow (MAF) sensor, so a faulty MAF can set P1106 even when the MAF signal itself appears normal.
- A dirty or contaminated MAF sensor sensing element can skew the BARO reading without triggering a MAF-specific code, leading to misdiagnosis.
- The ECM may set P1106 if the BARO reading does not change appropriately during a key-on engine-off to engine-running transition, so a sensor that reads correctly at sea level may still fail a dynamic test.
- Altitude changes can cause temporary BARO discrepancies, but the ECM should adapt; persistent codes after driving at different altitudes indicate a real fault.
- Aftermarket air intake systems that alter airflow characteristics can cause the ECM to misinterpret BARO sensor performance, so check for modifications before replacing parts.

## Can I keep driving with P1106?

The vehicle is generally safe to drive with P1106 because the ECM substitutes a default barometric pressure value, but you may experience reduced fuel economy or slight driveability issues. Avoid sustained driving at high altitudes or heavy load until the fault is repaired, as the default value may be inaccurate.

## Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Vacuum pump or hand-held pressure source (for testing BARO sensor response)
- Wiring diagram for the specific Nissan model
- Basic hand tools (screwdrivers, socket set)



## Reading P1106

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

## Often seen with

**P0101** Mass/Volume Air Flow Circuit Range/Performance · **P0102** Mass/Volume Air Flow Circuit Low Input · **P0103** Mass/Volume Air Flow Circuit High Input · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1)

## See it working

Watch the animated explainer [Car Relay Test Bench: Test 4-Pin and 5-Pin Relays](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1106/>

