

NISSAN · POWERTRAIN

P1105

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1105 · Nissan

MAP BARO Pressure Switch Solenoid Valve

P1105 on Nissan vehicles indicates that the engine control module (ECM) has detected an abnormal signal from the manifold absolute pressure (MAP) sensor and barometric pressure (BARO) sensor circuit, specifically involving the pressure switch solenoid valve used for turbocharger boost control on certain models. The ECM compares MAP and BARO readings during key-on and running conditions and sets this code when the voltage or pressure relationship falls outside the expected range, often due to a faulty solenoid valve, wiring issue, or sensor error.

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 (malfunction indicator lamp) on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced engine performance or sluggish acceleration due to incorrect boost pressure
- Poor fuel economy or rough idle in some cases
- Turbocharger not building boost properly or overboosting on turbocharged models
- Possible hesitation or stumble during acceleration

Common causes, most likely first

- 1 Faulty MAP/BARO pressure switch solenoid valve (sticking, clogged, or electrically failed)
- 2 Damaged or disconnected vacuum hoses between the solenoid valve, MAP sensor, and intake manifold
- 3 Corroded, shorted, or open wiring in the MAP/BARO sensor or solenoid valve circuit
- 4 Failed MAP sensor or BARO sensor (integrated in some Nissan models)
- 5 Clogged or restricted pressure port at the intake manifold or sensor
- 6 ECM software issue or faulty ECM (rare)



How to diagnose and fix it

- 1 Connect a scan tool and verify P1105 is current; check freeze-frame data for MAP and BARO voltages
- 2 Inspect all vacuum hoses and connections at the solenoid valve, MAP sensor, and intake for cracks, leaks, or disconnection
- 3 Test the solenoid valve for resistance and operation using a multimeter and apply 12V to confirm it clicks and holds vacuum
- 4 Check wiring continuity and voltage signals at the MAP sensor and solenoid valve connectors, looking for corrosion or damage
- 5 Compare MAP sensor reading with a known-good vacuum gauge or BARO reading at key-on to verify sensor accuracy
- 6 Replace the faulty solenoid valve or MAP sensor as needed, clear codes, and road-test to confirm the repair
- 7 If the code persists, inspect the ECM connectors and consider reprogramming or replacement as a last resort

Don't overlook the simple vacuum leak

- A cracked or disconnected vacuum hose at the solenoid valve is a far more common cause of P1105 than a failed solenoid itself, so always inspect hoses before replacing parts.
- On some Nissan models, the MAP and BARO sensors are integrated into a single unit, and a faulty BARO portion can set P1105 even if the MAP signal appears normal.
- The pressure switch solenoid valve is used for turbocharger boost control on certain engines, so a sticking valve can cause both underboost and overboost conditions that may not trigger other codes.
- Intermittent P1105 codes often result from poor electrical connections at the solenoid valve, especially in areas exposed to heat and vibration, so wiggle-test the harness while monitoring live data.
- A dirty or clogged pressure port at the intake manifold can mimic a failed sensor, so cleaning the port is a cheap first step before condemning the sensor or solenoid.

Can I keep driving with P1105?

You can usually continue driving with P1105, but avoid heavy acceleration or towing until the fault is repaired, as incorrect boost control may cause poor performance or potential engine damage over time. If the check engine light flashes or you notice severe power loss, stop driving and seek professional diagnosis.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Hand vacuum pump
- Basic socket and wrench set
- Wire probe and electrical contact cleaner



Reading P1105

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

Often seen with

P0105 MAP/Barometric Pressure Circuit Malfunction · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input · **P0234** Engine Overboost Condition

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1105/>

