

GENERIC · POWERTRAIN

P0106

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0106

MAP/Barometric Pressure Circuit Range/Performance

P0106 means the engine computer detected a manifold absolute pressure (MAP) or barometric pressure (BARO) sensor signal that is out of its expected range for the current operating conditions, even though the circuit is electrically intact. The computer compares the sensor's reading against other sensors and calculated models, and flags the code when the value is implausible or stuck within a range that does not match reality.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent or only sets under specific conditions.
- Rough idle or unstable idle quality, sometimes with slight surging or stalling when coming to a stop.
- Poor fuel economy or rich/lean running complaints because the computer is using an incorrect load signal.
- Hesitation or weak acceleration, particularly at low engine speeds or during light throttle transitions.
- A noticeable lack of power or sluggish response when climbing hills or merging onto a highway.
- In some vehicles, a default or limp-home strategy that limits engine power or alters transmission shift feel.

Common causes, most likely first

- 1 A dirty, clogged, or restricted MAP sensor vacuum port or sensing passage, which is very common on high-mileage engines.
- 2 A vacuum leak between the intake manifold and the MAP sensor, including cracked or disconnected hoses and leaking intake gaskets.
- 3 A failing MAP sensor that drifts out of calibration or responds slowly without setting a circuit code.
- 4 Wiring problems such as chafed insulation, corroded terminals, or loose pins at the MAP sensor connector or PCM.
- 5 A restricted or dirty air filter or intake tract that skews the pressure reading under load.
- 6 An exhaust restriction or engine mechanical issue, such as a clogged catalytic converter or worn camshaft, that changes manifold vacuum.
- 7 A faulty barometric pressure sensor integrated into the MAP sensor or PCM on some vehicles, though this is less common.



How to diagnose and fix it

- 1 Inspect the MAP sensor vacuum hose and intake port for cracks, disconnection, or blockage, and clean or replace the hose as needed.
- 2 Remove the MAP sensor and check the sensing port for carbon or oil sludge, then clean it carefully with electronics-safe cleaner.
- 3 Use a scan tool to compare MAP sensor readings in key-on-engine-off and idle conditions against expected barometric pressure and manifold vacuum values.
- 4 Check the MAP sensor reference voltage, ground, and signal wire at the connector with a multimeter, looking for opens, shorts, or excessive resistance.
- 5 Perform a vacuum leak test with propane or smoke around the intake manifold, throttle body, and vacuum lines to rule out unmetered air.
- 6 Verify the air filter and intake system are clean and unrestricted, and confirm the engine has good mechanical condition if readings remain implausible.
- 7 Replace the MAP sensor only after electrical and vacuum checks pass, then clear the code and verify the repair with a road test under varying loads.

What a MAP code really tells you

- A P0106 is often set by a perfectly good MAP sensor that is reporting accurately but receiving a distorted pressure signal because of a hidden vacuum leak or a partially clogged sensing port.
- Technicians frequently replace the MAP sensor first and later find the real problem was a corroded connector pin or a cracked vacuum hose that only leaked when the engine was cold.
- On some vehicles the barometric pressure reading is derived from the MAP sensor at key-on, so a slow or lazy MAP sensor can set P0106 without ever failing a simple resistance check.
- An exhaust restriction or a worn camshaft can alter manifold vacuum enough to make the MAP signal implausible, so the code does not always mean the sensor circuit itself is at fault.
- A dirty throttle body or a misadjusted throttle stop can change idle manifold pressure and trigger P0106 on vehicles with tight plausibility thresholds.

Can I keep driving with P0106?

You can usually drive the vehicle with P0106, but expect reduced fuel economy, poor throttle response, or rough running, and avoid heavy towing or sustained high-load driving until it is diagnosed. If the engine idles poorly, stalls, or enters limp mode, have it checked promptly rather than continuing to drive.



Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with back-probing pins
- Hand vacuum pump with gauge
- Propane enrichment tool or smoke machine for vacuum leak testing
- Electronics-safe cleaner and soft brushes
- Basic hand tools for hose and sensor removal

Reading P0106

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
1	Fuel and air metering.
06	The exact fault within that area.

Often seen with

P0105 MAP/Barometric Pressure Circuit Malfunction · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input · **P0171** System Too Lean (Bank 1) · **P0505** Idle Control System Malfunction

See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0106/>

