

GENERIC · POWERTRAIN

P2074

OBD-II TROUBLE CODE

P2074

Manifold Absolute Pressure / Mass Air Flow - Throttle Position Correlation at Higher Load

P2074 indicates that the engine computer detected a mismatch between the manifold absolute pressure (MAP) sensor or mass air flow (MAF) sensor readings and the throttle position sensor (TPS) during higher engine load conditions. The powertrain control module (PCM) expects these signals to correlate closely, and when they deviate beyond a calibrated threshold, it sets this code and illuminates the check engine light.

SYSTEM Powertrain	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Intermediate	AREA Fuel and air metering and auxiliary emission controls
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Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode during acceleration or under load
- Hesitation, stumble, or surging when climbing hills or merging onto highways
- Poor fuel economy or rich/lean fuel mixture symptoms
- Rough idle or misfire-like behavior, though less common
- Delayed or harsh transmission shifts due to engine load signal errors

Common causes, most likely first

- 1 Faulty or contaminated mass air flow (MAF) sensor
- 2 Faulty or clogged manifold absolute pressure (MAP) sensor
- 3 Vacuum leaks or intake air leaks between the MAF sensor and throttle body
- 4 Wiring issues such as chafed, corroded, or loose connections at the MAF, MAP, or TPS sensors
- 5 Faulty throttle position sensor (TPS) or dirty throttle body
- 6 Exhaust restrictions or EGR valve problems affecting pressure readings
- 7 PCM software issues or rare internal PCM faults



How to diagnose and fix it

- 1 Perform a visual inspection of the intake system for leaks, loose clamps, or damaged hoses
- 2 Use a scan tool to check live data for MAF, MAP, and TPS sensors during idle and under load, comparing actual values to expected specifications
- 3 Clean the MAF sensor with approved cleaner and inspect the throttle body for carbon buildup
- 4 Check wiring and connectors at the MAF, MAP, and TPS sensors for corrosion, chafing, or loose pins
- 5 Test the MAP sensor with a vacuum pump and multimeter, or compare its readings to a known-good sensor
- 6 Test the TPS for smooth voltage sweep and correct idle and wide-open throttle values
- 7 Repair or replace the faulty sensor or wiring as needed, then clear codes and verify the repair with a test drive

Common Misdiagnosis Traps for P2074

- A dirty MAF sensor is frequently the root cause, but many technicians replace it without first checking for intake leaks that skew the readings.
- The code can be set by a failing MAP sensor even when the MAF sensor is functioning correctly, so both sensors must be tested.
- Wiring harness damage near the throttle body or intake manifold often mimics sensor failure, so always perform a wiggle test and voltage drop check.
- A restricted exhaust or a sticking EGR valve can alter pressure dynamics and trigger this code without any sensor being faulty.
- Some vehicles require a relearn or calibration procedure after sensor replacement, and skipping it can cause the code to return.

Can I keep driving with P2074?

You can usually drive the vehicle with this code, but avoid heavy acceleration or towing until it is diagnosed. Prolonged driving with a faulty sensor can lead to poor fuel economy, increased emissions, or catalytic converter damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Vacuum pump and gauge
- MAF sensor cleaner
- Basic hand tools (screwdrivers, socket set)
- Wiring diagram for the specific vehicle



Reading P2074

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

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0171** System Too Lean (Bank 1) · **P2135** Throttle/Pedal Position Sensor A/B 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/p2074/>

