

GENERIC · POWERTRAIN

P00BF

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00BF

Mass or Volume Air Flow B Circuit Range/Performance - Air Flow Too High

P00BF is a generic powertrain code indicating that the mass or volume air flow sensor B circuit is reporting a range or performance problem, specifically that the measured air flow is higher than the engine computer expects for the current operating conditions. The powertrain control module (PCM) compares the sensor B signal against its internal model of expected airflow and sets this code when the signal stays above the acceptable threshold for a calibrated time.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or unstable engine speed when the airflow reading is implausibly high
- Black smoke from the exhaust or a strong fuel smell due to over-fueling
- Reduced fuel economy and poor engine performance under load
- Hesitation or stumble during acceleration as the PCM struggles to balance fuel delivery
- In some cases, the engine may enter limp mode or limit power to protect the powertrain

Common causes, most likely first

- 1 Contaminated or damaged mass air flow (MAF) sensor sensing element
- 2 Intake air leaks between the MAF sensor and the throttle body, allowing unmetered air to enter
- 3 Wiring faults such as chafed, shorted, or corroded conductors in the sensor B circuit
- 4 Poor electrical connections at the MAF sensor connector or PCM pins
- 5 A failing MAF sensor that produces a skewed high output signal
- 6 Restrictions in the intake tract or a clogged air filter that alter the airflow pattern
- 7 Rarely, a PCM calibration issue or internal fault affecting the airflow interpretation



How to diagnose and fix it

- 1 Inspect the intake system for cracks, loose clamps, or disconnected hoses between the MAF sensor and throttle body
- 2 Check the MAF sensor connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 3 Clean the MAF sensor element with a dedicated MAF cleaner following the manufacturer's procedure
- 4 Use a scan tool to compare live MAF sensor B data with expected values and check for other stored codes
- 5 Perform a voltage drop or resistance test on the sensor B signal and ground circuits to rule out wiring faults
- 6 Replace the MAF sensor if cleaning and wiring checks do not resolve the high airflow reading
- 7 Clear the code and verify the repair by test-driving the vehicle under various load conditions

What a high airflow reading really means

- A high airflow reading often results from unmetered air entering after the sensor, so a smoke test of the intake is more reliable than replacing parts.
- Some technicians replace the MAF sensor only to find a corroded connector pin or a rubbed-through wire was the true cause of the high signal.
- The code can be set by a dirty sensor element that reports a falsely high flow, so cleaning before replacement is a cost-effective first step.
- On vehicles with multiple airflow sensors, sensor B may be a separate circuit or a calculated value, so consult the specific service information for the correct test procedure.
- A restricted air filter or an intake resonator that has come loose can disturb airflow and cause the sensor to report out-of-range values.

Can I keep driving with P00BF?

You can usually drive the vehicle with this code, but avoid heavy acceleration and long trips until it is diagnosed, because the incorrect airflow reading can cause rich running, poor fuel economy, and potential damage to the catalytic converter over time. If the engine runs rough or enters limp mode, seek service promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- MAF sensor cleaner
- Basic hand tools for intake and connector access
- Smoke machine for intake leak testing



Reading P00BF

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- BF** 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 · **P0172** System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2)

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/p00bf/>

