

GENERIC · POWERTRAIN

P010F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P010F

Mass or Volume Air Flow Sensor A/B Correlation

P010F indicates that the engine control module has detected a disagreement between the signals from two mass or volume air flow sensors, typically sensor A and sensor B, that exceeds the calibrated tolerance. The computer compares the two readings under specific operating conditions and sets this code when the correlation between them falls outside the expected range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

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 stumbling during acceleration due to incorrect air mass measurement
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy or rich/lean fuel mixture symptoms
- Hesitation or surging while driving under light throttle
- In rare cases, the engine may stall or have difficulty starting

Common causes, most likely first

- 1 Contaminated or dirty mass air flow sensor elements
- 2 Intake air leaks between the two sensors or upstream of the sensors
- 3 Wiring issues such as chafed wires, poor connections, or corrosion at the sensor connectors
- 4 Failed mass air flow sensor (either sensor A or sensor B)
- 5 Obstruction in the intake tract, such as a collapsed hose or foreign object
- 6 Engine control module software calibration issues or internal fault



How to diagnose and fix it

- 1 Inspect the intake system for leaks, loose clamps, or damaged hoses between the sensors and the throttle body
- 2 Clean both mass air flow sensor elements with a dedicated MAF cleaner and recheck
- 3 Check the wiring and connectors at both sensors for corrosion, tightness, and continuity
- 4 Compare live data from both sensors with a scan tool to identify which sensor is reporting incorrectly
- 5 Perform a voltage drop test on the sensor ground and power circuits to rule out resistance issues
- 6 Replace the faulty mass air flow sensor after confirming the fault follows that sensor
- 7 Clear the code and verify the repair by test-driving under conditions that previously set the code

What most technicians overlook with P010F

- A dirty sensor is often the culprit, but cleaning may not restore correlation if the sensing element is physically damaged or the housing is cracked.
- Intake leaks downstream of the sensors can cause both sensors to read differently because unmetered air enters at different points, so a smoke test is essential.
- Some vehicles use a single mass air flow sensor with two sensing elements; a failure of one element can set P010F without any driveability complaint.
- The code can be set by a faulty barometric pressure sensor or manifold absolute pressure sensor that skews the correlation calculation, so check those readings as well.
- After replacing a sensor, a relearn or adaptation reset may be required on some models to prevent the code from returning immediately.

Can I keep driving with P010F?

You can usually drive the vehicle with this code, but avoid heavy acceleration and towing until it is diagnosed, as incorrect air measurement can cause poor performance and increased emissions. If the engine runs rough or enters limp mode, seek service promptly to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Mass air flow sensor cleaner
- Smoke machine for intake leak detection
- Basic hand tools for connector and hose inspection



Reading P010F

- 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.
- 0F** The exact fault within that area.

Often seen with

P0100 Mass/Volume Air Flow Circuit Malfunction · **P0101** Mass/Volume Air Flow Circuit Range/Performance · **P0102** Mass/Volume Air Flow Circuit Low Input · **P0103** Mass/Volume Air Flow Circuit High Input · **P0104** Mass/Volume Air Flow Circuit Intermittent

See it working

Watch the animated explainer [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p010f/>

