



P010D

Mass or Volume Air Flow Sensor B Circuit High

P010D indicates that the engine control module has detected an abnormally high signal voltage on the circuit for Mass Air Flow Sensor B, which is the second air flow sensor on engines equipped with two. The high voltage tells the computer that the sensor is reporting more air entering the engine than is physically possible, so the module sets this code and may substitute a calculated airflow value.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stalling immediately after startup
- Hesitation or stumble during acceleration
- Reduced engine power or limp mode
- Poor fuel economy or black smoke from the tailpipe
- A noticeable rich-running condition with a fuel smell

Common causes, most likely first

- 1 A short to voltage on the sensor signal wire, often from chafed insulation or a pinched harness
- 2 A failed Mass Air Flow Sensor B that is internally shorted and outputs a fixed high voltage
- 3 Contamination or physical damage to the sensor element causing an incorrect high reading
- 4 A poor ground connection at the sensor or engine block, which can skew the signal voltage high
- 5 Water intrusion into the sensor connector or wiring harness
- 6 A faulty engine control module driver circuit, though this is rare



How to diagnose and fix it

- 1 Use a scan tool to read live data from Mass Air Flow Sensor B and compare it with Sensor A and with expected values for engine speed and load
- 2 Visually inspect the sensor, its connector, and the wiring harness for damage, corrosion, or water intrusion
- 3 Check the sensor ground circuit for excessive resistance using a multimeter and a wiring diagram
- 4 Back-probe the signal wire at the sensor connector and measure voltage with the key on and engine off; a reading near reference voltage indicates a short
- 5 Disconnect the sensor and observe the scan tool reading; if the voltage drops to a normal default, the sensor is likely internally shorted
- 6 Repair any damaged wiring or connector terminals, then clear the code and verify the repair with a test drive
- 7 If wiring and grounds are good, replace Mass Air Flow Sensor B with a quality part and recheck live data

What a high airflow signal really means

- A high signal voltage does not always mean the sensor is bad; a shorted signal wire or a bad ground can produce the same reading, so circuit testing must come before parts replacement.
- On engines with two mass air flow sensors, a failure of Sensor B can cause the computer to rely on Sensor A alone, masking driveability symptoms until the fault becomes severe.
- Contamination from an oiled aftermarket air filter or a cracked air intake tube can damage the sensor element and cause a high reading that looks like an electrical fault.
- Technicians sometimes replace the mass air flow sensor only to find the code returns because the real problem is a chafed wire in the harness near the engine mount or battery tray.
- A weak battery or charging system fault can cause erratic sensor voltages that set this code intermittently, so checking system voltage is a worthwhile first step.

Can I keep driving with P010D?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration and towing because the engine may run rich and lack power. If the engine stalls or enters limp mode, stop driving and have the vehicle towed to prevent unsafe conditions.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the mass air flow sensor circuit
- Basic hand tools for connector and sensor removal
- Electrical contact cleaner



Reading P010D

- 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.
- 0D** 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 · **P010B** Mass or Volume Air Flow Sensor B Circuit Range/Performance · **P010C** Mass or Volume Air Flow Sensor B Circuit Low

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p010d/>

