

GENERIC · POWERTRAIN

P02E5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P02E5

Diesel Intake Air Flow A Control Stuck Closed

P02E5 indicates that the engine control module has commanded the diesel intake air flow control valve to close, but the valve position sensor reports it is stuck closed or not moving as commanded. The computer detects a mismatch between the commanded position and the actual position of the intake air flow control valve, which is used to regulate air entering the engine for optimal combustion and emissions control.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode during acceleration
- Rough idle or stumbling when the engine is cold
- Excessive black smoke from the exhaust under load
- Poor fuel economy or increased regeneration frequency
- In some cases, the engine may stall or hesitate when coming to a stop

Common causes, most likely first

- 1 Carbon buildup or soot accumulation on the intake air flow control valve, causing it to stick closed
- 2 Faulty intake air flow control valve actuator or motor
- 3 Damaged or disconnected wiring to the valve actuator or position sensor
- 4 Failed intake air flow control valve position sensor
- 5 Restricted or blocked intake air passage due to debris or foreign object
- 6 Corroded electrical connector at the valve
- 7 Engine control module software issue or internal fault (less common)



How to diagnose and fix it

- 1 Inspect the intake air flow control valve and its connector for visible damage, corrosion, or loose pins
- 2 Remove the valve and clean it thoroughly with intake cleaner to remove carbon and soot deposits
- 3 Test the valve actuator with a scan tool to command it open and closed while observing the position sensor reading
- 4 Check the wiring harness for continuity and shorts between the valve, sensor, and engine control module
- 5 Replace the intake air flow control valve if cleaning and electrical checks do not resolve the issue
- 6 Perform a relearn or adaptation procedure for the new valve using a scan tool
- 7 Clear the diagnostic trouble codes and verify the repair with a test drive

Carbon Buildup Often Mimics Valve Failure

- A sticking valve due to carbon is far more common than a failed actuator, so cleaning should always be attempted before replacement.
- The code can set intermittently if the valve only sticks under certain temperature or load conditions, leading to misdiagnosis as a wiring fault.
- Some vehicles use the intake air flow control valve for both swirl control and throttle functions, so a stuck closed valve may cause symptoms similar to a throttle body failure.
- A faulty position sensor can report a stuck closed condition even when the valve moves freely, so always verify actual valve movement versus sensor signal.
- After replacing the valve, a relearn procedure is often required; skipping it can cause the code to return immediately.

Can I keep driving with P02E5?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration or towing, as the engine may enter limp mode and performance will be reduced. Prolonged driving with this code can lead to excessive soot accumulation and potential damage to other emissions components.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Basic hand tools (sockets, wrenches, screwdrivers)
- Intake cleaner and shop rags
- Compressed air (optional for cleaning)



Reading P02E5

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 2** Fuel and air metering (injector circuits).
- E5** The exact fault within that area.

Often seen with

P02E6 Diesel Intake Air Flow A Position Sensor Circuit · **P02E7** Diesel Intake Air Flow A Position Sensor Circuit Range/Perfo · **P02E8** Diesel Intake Air Flow A Position Sensor Circuit Low · **P02E9** Diesel Intake Air Flow A Position Sensor Circuit High · **P2015** Intake Manifold Runner Position Sensor/Switch Circuit Range/

See it working

Watch the animated explainer [Readiness Monitors and the OBD-II Drive Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p02e5/>

