



P05AB

Active Grille Air Shutter B Position Sensor Circuit High

P05AB indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the signal circuit of the active grille air shutter B position sensor. This sensor reports the physical position of the shutter, and a high voltage typically means the signal wire is shorted to power, the sensor ground is open, or the sensor itself has failed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- The active grille shutter may remain stuck in the open or closed position, affecting engine cooling and aerodynamics.
- Possible reduction in fuel economy due to improper shutter positioning.
- In some vehicles, a message on the driver information center indicating a grille shutter fault.
- Overheating may occur if the shutter fails to open when required, though this is less common.
- The remote start feature may be disabled as a protective measure.

Common causes, most likely first

- 1 A short to voltage on the signal circuit between the shutter position sensor and the PCM.
- 2 An open or high-resistance ground circuit for the position sensor.
- 3 A failed active grille air shutter B position sensor.
- 4 Corroded, damaged, or disconnected electrical connectors at the shutter assembly or PCM.
- 5 A faulty active grille shutter actuator that is binding and causing an implausible signal.
- 6 Rarely, a PCM internal fault causing incorrect voltage interpretation.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other modules.
- 2 Visually inspect the active grille shutter assembly for physical damage, debris, or obstruction.
- 3 Disconnect the shutter position sensor connector and inspect for corrosion, water intrusion, or loose pins.
- 4 Measure the reference voltage and ground at the sensor connector with the key on, engine off, using a digital multimeter.
- 5 Check the signal circuit for a short to voltage by measuring voltage with the sensor disconnected; it should be near zero volts.
- 6 If the circuits test good, replace the active grille air shutter assembly and clear the code.
- 7 After repair, perform a shutter calibration or relearn procedure as required by the vehicle manufacturer.

Don't overlook the shutter linkage

- A binding or jammed shutter linkage can cause the position sensor to report an out-of-range voltage, setting this code even when the sensor itself is good.
The active grille shutter system often shares power and ground with other sensors; a fault in a shared circuit can set P05AB along with other codes.
- Some vehicles require a scan tool to command the shutter through its full range of motion during diagnosis, as the fault may only appear when the shutter moves.
- After replacing the shutter assembly, a calibration procedure is often necessary; skipping it can lead to a repeat code.
- P05AB is sometimes misdiagnosed as a cooling system problem when the root cause is simply a corroded connector at the shutter.

Can I keep driving with P05AB?

You can generally drive with this code, but avoid heavy loads or sustained high-speed driving that could cause overheating if the shutter is stuck closed. If the engine temperature gauge rises above normal, pull over and shut off the engine.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set
- Socket and ratchet set
- Trim removal tools



Reading P05AB

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Vehicle speed, idle control and auxiliary inputs.
AB	The exact fault within that area.

Often seen with

P05A9 Active Grille Air Shutter B Position Sensor Circuit · **P05AA** Active Grille Air Shutter B Position Sensor Circuit Range/Pe · **P05AC** Active Grille Air Shutter B Position Sensor Circuit Low · **P05AD** Active Grille Air Shutter B Position Sensor Circuit Intermit · **P05AE** Active Grille Air Shutter B Performance/Stuck Off

See it working

Watch the animated explainer [How a Refrigerator Works: The Cooling Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05ab/>

