

GENERIC · POWERTRAIN

P05A4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05A4

Active Grille Air Shutter A Control Circuit High

P05A4 indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the control circuit for the active grille air shutter 'A' actuator. The computer commands the shutter to move, but the electrical feedback on that circuit is outside the expected range, typically because the circuit is open, shorted to power, or the actuator has failed internally.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	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
- A slight decrease in fuel economy if the shutter stays open at highway speeds
- Possible overheating tendency if the shutter remains closed during low-speed driving
- In some vehicles, a message on the driver information center about grille shutter service
- Rough or erratic operation of the shutter motor, sometimes accompanied by a buzzing or clicking noise

Common causes, most likely first

- 1 Open or high-resistance wiring in the shutter control circuit, such as a broken wire or corroded connector
- 2 Short to voltage on the control circuit, often from chafed insulation against a power wire
- 3 Failed active grille shutter actuator motor with an internal open circuit
- 4 Faulty shutter position sensor integrated into the actuator assembly
- 5 Corroded or loose electrical connector at the shutter assembly or PCM
- 6 PCM internal driver fault, though this is less common
- 7 Aftermarket or incorrect replacement shutter assembly that does not match the vehicle's calibration



How to diagnose and fix it

- 1 Inspect the shutter assembly and its wiring for obvious damage, debris, or obstruction, and clear any physical blockage
- 2 Disconnect the shutter actuator connector and check for corrosion, water intrusion, or loose pins; clean and reseat as needed
- 3 Use a digital multimeter to measure resistance and voltage on the control circuit between the PCM and actuator, comparing to manufacturer specifications
- 4 Perform a wiggle test on the harness while monitoring live data for the shutter position and control circuit voltage to catch intermittent faults
- 5 Command the shutter through a scan tool bidirectional test to verify actuator movement and observe feedback voltage
- 6 If the circuit tests good, substitute a known-good actuator or perform a resistance check on the motor windings to confirm actuator failure
- 7 After repair, clear codes and perform a shutter relearn or calibration procedure as required by the vehicle manufacturer

What a high circuit code really means

- A high voltage on the control circuit often indicates an open circuit rather than a short, because the PCM pulls the circuit up and sees high voltage when the actuator is disconnected or the wire is broken.
- Many technicians replace the shutter assembly only to find the real fault is a chafed wire near the front bumper or a corroded connector behind the grille that was overlooked during a quick visual inspection.
- The active grille shutter system often shares power and ground with other front-end components, so a fault in a related circuit can set this code even if the shutter itself is fine.
- On some vehicles, the shutter may default to a fixed position when a fault is detected, which can mask the original symptom and lead to misdiagnosis if the code is cleared without verifying actuator operation.
- A binding or physically stuck shutter can cause the motor to draw excessive current and set a high circuit code, so always check for mechanical freedom of movement before condemning electrical parts.

Can I keep driving with P05A4?

It is generally safe to continue driving with this code because the active grille shutter is an efficiency and cooling aid, not a safety system. Avoid sustained high-speed driving or heavy load conditions if the shutter is stuck closed, as this may reduce cooling airflow and increase engine temperature.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with back-probing pins
- Wire piercing probes or breakout box for circuit testing
- Service information with wiring diagrams and connector pinouts
- Basic hand tools for removing front bumper covers or grille components

Reading P05A4

- P** Powertrain: engine, transmission and emissions.
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- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 5** Vehicle speed, idle control and auxiliary inputs.
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- A4** The exact fault within that area.

Often seen with

P05A0 Active Grille Air Shutter A Stuck On · **P05A1** Active Grille Air Shutter A Position Sensor Minimum/Maximum · **P05A2** Active Grille Air Shutter A Control Circuit/Open · **P05A3** Active Grille Air Shutter A Control Circuit Range/Performanc · **P05A5** Active Grille Air Shutter A Control Circuit Low

See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05a4/>

