



P05B5

Active Grille Air Shutter B Supply Voltage Circuit/Open

P05B5 indicates that the powertrain control module has detected an open circuit or supply voltage fault on the control circuit for the active grille air shutter 'B' motor, which is the second shutter assembly on vehicles with dual grille shutters. The computer monitors the voltage on the shutter motor's power feed and flags this code when the expected voltage is missing, typically because the circuit is open or shorted.

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 shutters may remain stuck in the open or closed position
- Aerodynamic efficiency and fuel economy may drop slightly if the shutters stay open at highway speeds
- Possible overheating risk if the shutters remain closed during demanding driving conditions
- A stored code in the body control module or powertrain control module that may disable other grille shutter functions
- On some vehicles, a message in the driver information center about reduced engine power or service required

Common causes, most likely first

- 1 Broken, chafed, or corroded wiring in the shutter 'B' motor supply circuit, especially near the front bumper where road debris and moisture are common
- 2 Failed active grille air shutter 'B' actuator motor with an open internal winding
- 3 Loose or corroded electrical connector at the shutter 'B' motor or at the control module
- 4 Blown fuse or faulty relay that feeds power to the shutter 'B' circuit
- 5 Water intrusion into the shutter motor connector or into the wiring harness loom
- 6 Faulty powertrain control module or body control module driver circuit, though this is less common
- 7 Physical damage to the shutter assembly from a minor impact or road hazard that has severed the supply wire



How to diagnose and fix it

- 1 Inspect the shutter 'B' assembly and its wiring for visible damage, corrosion, or loose connectors, and repair any obvious faults
- 2 Check the fuse and relay that supply power to the active grille shutter circuit, replacing them if blown or faulty
- 3 Disconnect the shutter 'B' motor connector and measure supply voltage with the key on; if voltage is missing, trace the circuit back toward the control module
- 4 Perform a continuity and resistance test on the supply wire from the shutter motor to the control module to confirm an open circuit
- 5 Command the shutter 'B' motor with a scan tool to verify actuator operation and listen for motor movement or binding
- 6 If the circuit tests good but the motor does not respond, replace the active grille air shutter 'B' assembly
- 7 Clear the code and perform a road test to confirm the repair, then verify the shutter cycles through its calibration routine

What the grille shutter supply code hides

- Many technicians replace the shutter motor first, but a chafed supply wire behind the front bumper is the most common cause of this code on high-mileage vehicles.
- The code can set intermittently after a car wash or heavy rain if water enters the connector, so always check for moisture before condemning the motor.
- A failed shutter 'B' motor can cause the shutters to default to the open position, which may not trigger any drivability complaint but will reduce fuel economy at highway speeds.
- Some vehicles use a shared power feed for both shutter 'A' and 'B' motors, so a fault in the shared circuit can set codes for both shutters even if only one motor is faulty.
- The active grille shutter system often runs a self-test at startup, so a shutter that does not cycle briefly when the key is turned on is a strong clue that the supply circuit is open.

Can I keep driving with P05B5?

You can generally drive the vehicle with this code, but avoid sustained high-speed driving or heavy load conditions if the shutters are stuck closed, as that can reduce cooling airflow and increase engine temperatures. Have the circuit inspected soon to prevent potential overheating or aerodynamic inefficiency.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Wire repair kit with crimp connectors and heat shrink
- Socket and wrench set for removing front bumper trim or shutter assembly fasteners



Reading P05B5

- 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.
- B5** The exact fault within that area.

Often seen with

P05A0 Active Grille Air Shutter A Stuck On · **P05B3** Active Grille Air Shutter B Control Circuit High · **P05B4** Active Grille Air Shutter B Control Circuit Low · **P05B6** Active Grille Air Shutter B Supply Voltage Circuit Low · **P05B7** Active Grille Air Shutter B Supply Voltage Circuit High

See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05b5/>

