

GENERIC · POWERTRAIN

P05C1

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05C1

Active Grille Air Shutter Module B Over Temperature

P05C1 indicates that the active grille air shutter module B has reported an internal over-temperature condition to the powertrain control module. The computer has detected that the module's internal temperature sensor has exceeded a calibrated threshold, typically because the shutter motor is binding or the module is failing.

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.
- A noticeable decrease in fuel economy if the shutters stay open at highway speeds.
- Possible overheating tendency in slow traffic if the shutters stay closed.
- In some cases, a message on the driver information center indicating a grille shutter fault.

Common causes, most likely first

- 1 A binding or jammed active grille shutter assembly, causing the motor to overwork and overheat the module.
- 2 A failing active grille air shutter module B, where the internal temperature sensor or control circuitry degrades.
- 3 Damage to the shutter linkage or vanes from road debris or impact, increasing motor load.
- 4 Corrosion or water intrusion into the module connector, leading to increased resistance and heat.
- 5 A short circuit or excessive current draw in the shutter motor circuit, overheating the module.
- 6 Software or calibration issues in the module that cause it to run the motor excessively.



How to diagnose and fix it

- 1 Inspect the active grille shutter assembly for physical damage, debris, or binding, and clean or repair as needed.
- 2 Check the module connector and wiring for corrosion, water intrusion, or loose pins, and repair the harness if necessary.
- 3 Command the shutter motor through a scan tool to verify smooth operation and monitor for excessive current draw.
- 4 Measure the resistance of the shutter motor and compare to specifications to rule out a shorted or open motor.
- 5 If the motor and linkage are free, replace the active grille air shutter module B and clear the code.
- 6 After repair, perform a relearn or calibration procedure for the active grille shutter system using a scan tool.
- 7 Verify the repair by test-driving the vehicle and confirming the code does not return.

Common Misdiagnosis of Grille Shutter Overheat Codes

- A binding shutter assembly is frequently overlooked, and technicians replace the module only to have the new module overheat again due to the same mechanical drag.
- The over-temperature condition can be intermittent and may only set after extended driving or in high ambient temperatures, so a simple key-on test may not reveal the fault.
- Water intrusion into the module connector is a common cause that is easily missed if the connector is not carefully inspected for green corrosion or moisture.
- Some vehicles require a software update to the module to correct overly aggressive motor operation that leads to overheating, so always check for technical service bulletins before replacing parts.
- The code does not always mean the module is permanently damaged; a temporary overheat from a one-time jam may clear after the obstruction is removed and the code is cleared.

Can I keep driving with P05C1?

It is generally safe to continue driving with this code, but avoid prolonged idling or heavy traffic if the shutters are stuck closed, as engine cooling may be affected. If the shutters are stuck open, fuel economy may suffer, but driving is not dangerous. Have the fault inspected soon to prevent potential overheating or further module damage.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter for circuit and resistance testing
- Visual inspection mirror and flashlight
- Basic hand tools for trim and component removal
- Service information for active grille shutter calibration procedures



Reading P05C1

- 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.
- C1** 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 · **P05C0** Active Grille Air Shutter Module A Over Temperature · **P05C2** Engine Coolant Pressure Sensor Circuit

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05c1/>

