

GENERIC · POWERTRAIN

P05A3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05A3

Active Grille Air Shutter A Control Circuit Range/Performance

P05A3 indicates that the powertrain control module (PCM) has detected an out-of-range condition in the control circuit for the active grille air shutter 'A' actuator, which is the motor that opens and closes the front grille louvers to improve aerodynamics and engine cooling. The PCM monitors the commanded position versus the actual position or the electrical current through the circuit, and it sets this code when the signal does not match the expected range for the commanded state.

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

Symptoms you may notice

- The check engine light (malfunction indicator lamp) illuminates on the dashboard.
- Often no symptoms besides the warning light, especially if the shutters remain in a fixed position.
- The active grille shutters may stay closed or open continuously, or they may not move at all.
- Possible slight decrease in fuel economy due to improper aerodynamics.
- In some cases, the engine may run slightly warmer than normal if the shutters fail to open when needed.
- A noticeable whirring or clicking noise from the front grille area when the vehicle is turned on or off.

Common causes, most likely first

- A binding or physically damaged active grille shutter assembly, such as broken vanes or debris obstruction.
- A faulty active grille shutter actuator motor that has failed electrically or mechanically.
- Wiring harness damage (opens, shorts, or corrosion) between the PCM and the shutter actuator.
- A poor electrical connection at the actuator or PCM connector, often due to water intrusion or loose pins.
- A failed PCM driver for the shutter control circuit, though this is less common.
- Software calibration issues in the PCM that misinterpret shutter position feedback.



How to diagnose and fix it

- 1 Inspect the active grille shutter assembly for physical damage, debris, or binding, and clean or replace components as needed.
- 2 Check the wiring harness and connectors at the shutter actuator and PCM for corrosion, loose pins, or chafed wires, and repair any faults.
- 3 Use a scan tool to command the shutter through its full range and observe the actual position feedback to confirm whether the actuator responds correctly.
- 4 Measure resistance and voltage on the control circuit wires to verify continuity and check for shorts to ground or power.
- 5 If the actuator is accessible, test it directly with a known-good power source to see if it operates smoothly through its range.
- 6 Replace the active grille shutter actuator or the entire shutter assembly if electrical and mechanical tests indicate a failed component.
- 7 After repair, clear the diagnostic trouble codes and perform a relearn or calibration procedure if required by the manufacturer, then verify the code does not return.

Before you replace the shutter assembly

- A common oversight is failing to check for debris or ice buildup in the grille that prevents shutter movement, which can set this code without any electrical fault.
- The code can be set by a momentary glitch or low battery voltage, so always check for related power supply codes and ensure the battery is fully charged before condemning parts.
- Some vehicles require a scan tool to perform an active grille shutter calibration after any repair or battery replacement, and skipping this step can cause the code to reappear.
- A misaligned or improperly installed shutter assembly after collision repair is a frequent cause that is often missed during visual inspection.
- The PCM may set P05A3 even when the shutter motor is functional if the position sensor inside the actuator is faulty, so testing the feedback signal is crucial.

Can I keep driving with P05A3?

It is generally safe to continue driving with this code because the active grille shutters are an efficiency and cooling aid, not a safety system. However, avoid prolonged heavy loading or high-temperature operation, and have the fault diagnosed soon to prevent potential overheating in extreme conditions.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Service manual or wiring diagram for the specific vehicle
- Basic hand tools (sockets, screwdrivers, trim removal tools)
- Test light or power probe

Reading P05A3

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.
A3	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 · **P05A4** Active Grille Air Shutter A Control Circuit High · **P05A5** Active Grille Air Shutter A Control Circuit Low

See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05a3/>

