

GENERIC · POWERTRAIN

P05A6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05A6

Active Grille Air Shutter A Supply Voltage Circuit/Open

P05A6 indicates that the powertrain control module (PCM) has detected an open circuit or supply voltage fault in the electrical path that powers the active grille air shutter actuator for bank 1. The PCM monitors the voltage on the shutter's power feed and sets this code when the expected voltage is missing, typically because the circuit is broken, shorted, or the actuator itself has failed.

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 shutters may remain stuck in the open position, reducing aerodynamic efficiency and fuel economy.
- The shutters may fail to perform their self-test or calibration sweep when the engine starts.
- In some vehicles, a message on the driver information center indicates a grille shutter fault or reduced engine performance.
- Potential overheating in extreme conditions if the shutters are stuck closed, though this is less common with a supply voltage open circuit.
- No change in driveability or engine performance in most cases, as the fault is limited to the shutter system.

Common causes, most likely first

- 1 Broken, chafed, or corroded wiring in the power supply circuit to the active grille shutter actuator.
- 2 Failed active grille shutter actuator motor or its internal electronics.
- 3 Blown fuse or faulty relay that supplies power to the shutter system.
- 4 Loose or damaged electrical connector at the actuator or along the harness.
- 5 Corrosion or water intrusion in the connector or wiring, especially in areas exposed to road splash.
- 6 Faulty PCM or body control module (BCM) driver circuit, though this is rare.
- 7 Aftermarket or accidental damage to the front-end wiring during repairs or collision work.



How to diagnose and fix it

- 1 Perform a visual inspection of the grille shutter assembly and its wiring for obvious damage, debris, or disconnected connectors.
- 2 Check the fuse and relay that supply power to the active grille shutter circuit, replacing any that are blown or faulty.
- 3 Disconnect the actuator connector and inspect for corrosion, bent pins, or water intrusion; clean or repair as needed.
- 4 Use a digital multimeter to check for battery voltage at the actuator power supply terminal with the key on, and check the ground circuit for continuity.
- 5 If voltage is missing, trace the circuit back to the fuse box and PCM, checking for opens or shorts in the harness.
- 6 If power and ground are good, command the shutter actuator with a scan tool to verify operation; if it fails to move, replace the actuator.
- 7 Clear the diagnostic trouble codes (DTCs) and perform a relearn or calibration procedure if required by the manufacturer, then verify the repair.

What Most Techs Miss on P05A6

- A common oversight is assuming the actuator is defective when the real problem is a blown fuse that also powers other components, so always check related fuses first.
- The active grille shutter system often shares power with other low-current circuits, so a fault elsewhere can cause this code without any shutter-specific issue.
- After a front-end repair or bumper replacement, the shutter wiring is frequently pinched or left disconnected, setting this code even though the actuator is fine.
- Some vehicles require a scan tool to command the shutters open for inspection; manually forcing them can damage the actuator and create a new fault.
- The code can set intermittently due to vibration or temperature changes, so a wiggle test of the harness while monitoring voltage is a valuable diagnostic step.

Can I keep driving with P05A6?

You can generally continue driving with this code because the active grille shutters are an efficiency aid and do not affect engine safety or driveability in most conditions. Avoid towing or heavy loads in hot weather until repaired, as stuck-closed shutters could contribute to higher engine temperatures.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter (DMM)
- Test light
- Wire probe set
- Fuse puller and replacement fuses
- Service information for wiring diagrams and calibration procedures

Reading P05A6

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.
A6	The exact fault within that area.

Often seen with

P05A5 Active Grille Air Shutter A Control Circuit Low · **P05A7** Active Grille Air Shutter A Supply Voltage Circuit Low · **P05A8** Active Grille Air Shutter A Supply Voltage Circuit High · **P05A9** Active Grille Air Shutter B Position Sensor Circuit · **P05AA** Active Grille Air Shutter B Position Sensor Circuit Range/Pe

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05a6/>

