

GENERIC · POWERTRAIN

P05BD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05BD

Stop-Start Mode Switch Circuit Range/Performance

P05BD indicates that the powertrain control module has detected an out-of-range or performance fault in the stop-start mode switch circuit, which is the driver-operated input that enables or disables the automatic engine stop-start function. The computer compares the switch signal against expected voltage or state thresholds and flags the code when the signal falls outside the valid range or does not change as expected during a key cycle.

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 stop-start system may be completely inoperative, with the engine never shutting off at traffic stops.
- A stop-start warning light or message may appear on the dashboard, sometimes accompanied by the check engine light.
- The stop-start system may engage and disengage erratically without the driver touching the switch.
- The switch may feel loose, sticky, or unresponsive when pressed, or the indicator light on the switch may not illuminate.
- Often no symptoms besides the warning light, especially if the driver never uses the stop-start feature.
- In some vehicles, other functions tied to the same switch panel, such as traction control or parking assist, may also behave oddly.

Common causes, most likely first

- A faulty stop-start mode switch that has worn contacts or internal failure.
- Damaged or corroded wiring and connectors between the switch and the control module.
- A blown fuse or poor ground connection serving the switch circuit.
- Water intrusion or contamination in the switch or connector, common in vehicles with spills or leaks near the center console.
- A software glitch or outdated calibration in the control module that misinterprets the switch signal.
- A failing body control module or powertrain control module that cannot correctly read the switch input.
- Aftermarket accessories or improper electrical repairs tapped into the switch circuit.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other modules before replacing parts.
- 2 Inspect the stop-start switch and its connector for physical damage, corrosion, or loose pins, and clean or repair as needed.
- 3 Check the fuse and ground for the switch circuit using a wiring diagram, and test for voltage and continuity at the switch connector.
- 4 Use a scan tool to view live data for the stop-start switch status while pressing the button, confirming whether the signal changes correctly.
- 5 If the switch signal is erratic or absent, test the switch with a multimeter and replace it if it does not meet specifications.
- 6 If the switch and wiring test good, check for technical service bulletins or software updates for the control module before condemning it.
- 7 Clear the code after repairs and perform a relearn or initialization procedure if required by the manufacturer, then verify the stop-start system operates correctly.

Stop-start switch faults that fool technicians

- A weak or failing battery is a very common cause of stop-start system complaints, and although it usually sets different codes, low voltage can cause the mode switch circuit to log a range or performance fault.
- The stop-start mode switch often shares a ground or signal wire with other console switches, so a fault in a neighboring switch can corrupt the signal and set P05BD without the stop-start button itself being defective.
- Many drivers never use the stop-start disable button, so the switch contacts can oxidize from lack of use, leading to intermittent high resistance that only appears after the button is finally pressed.
- On some vehicles, the stop-start system is disabled by a low state of charge in the auxiliary battery, and the mode switch code may be a secondary effect rather than a true switch failure.
- After replacing the switch or control module, some manufacturers require a configuration or adaptation reset; skipping this step can leave the code stored even though the repair was successful.

Can I keep driving with P05BD?

The vehicle remains safe to drive because the stop-start feature is a convenience system, but you should avoid relying on it until the fault is repaired. If the check engine light is flashing or other performance issues appear, have the vehicle inspected promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Trim removal tools
- Wiring diagram for the stop-start circuit
- Contact cleaner and dielectric grease



Reading P05BD

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

Often seen with

P0562 System Voltage Low · **P05B0** Active Grille Air Shutter B Position Sensor Minimum/Maximum · **P05B1** Active Grille Air Shutter B Control Circuit/Open · **P05BE** Stop-Start Mode Switch Circuit Low · **P05BF** Stop-Start Mode Switch Circuit High

See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05bd/>

