

GENERIC · POWERTRAIN

P06BD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06BD

Cylinder 5 Glow Plug Circuit Range/Performance

P06BD indicates that the engine control module (ECM) has detected a range or performance fault in the glow plug circuit for cylinder 5, meaning the electrical current or voltage behavior is outside the expected window during the glow plug's operation. The ECM typically monitors the circuit during the initial glow phase and may also perform a post-glow check to verify the plug's integrity. This code is specific to diesel engines equipped with a glow plug system and does not indicate a misfire or combustion fault directly.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light or a dedicated glow plug warning lamp on the dashboard.
- Hard cold starting or extended cranking before the engine fires, especially in low ambient temperatures.
- Rough idle or white smoke immediately after a cold start due to incomplete combustion in cylinder 5.
- Often no symptoms besides the warning light, particularly in warmer weather when glow plugs are less critical.
- Possible reduced fuel economy or slight hesitation during the warm-up phase if the plug remains inactive.
- In some vehicles, a message indicating that the glow plug system requires service appears in the driver information center.

Common causes, most likely first

- 1 Failed glow plug on cylinder 5, where the internal heating element has burned out or degraded, causing an open or out-of-range circuit.
- 2 Damaged or corroded electrical connector at the cylinder 5 glow plug, leading to high resistance or intermittent contact.
- 3 Chafed, broken, or shorted wiring in the glow plug harness between the glow plug control module and cylinder 5.
- 4 Faulty glow plug control module that fails to supply the correct current or voltage to cylinder 5 specifically.
- 5 Poor ground connection for the glow plug circuit, often at the engine block or chassis, affecting current flow.
- 6 Contamination or carbon buildup on the glow plug tip, altering its electrical characteristics and performance.
- 7 In rare cases, a software calibration issue in the ECM that misinterprets normal glow plug feedback as a fault.



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 5 glow plug, its connector, and the surrounding wiring for obvious damage, corrosion, or disconnection.
- 2 Use a scan tool to command the glow plug on and measure the current draw with a clamp meter; compare it to the expected specification for the plug type.
- 3 Measure the resistance of the cylinder 5 glow plug with a multimeter and compare it to the resistance of a known-good glow plug or the manufacturer's specification.
- 4 Check for voltage drop across the glow plug circuit, including the ground path, to identify excessive resistance in the wiring or connectors.
- 5 If the glow plug itself is out of specification, replace it and clear the code to see if it returns.
- 6 If the glow plug and wiring test good, test the glow plug control module outputs and inputs according to the service information, and replace the module if faulty.
- 7 After repairs, clear the diagnostic trouble codes and perform a cold-start test to verify the glow plug system operates correctly and the code does not reset.

Glow plug code misdiagnosis traps to avoid

- A glow plug that tests good on a bench may still set P06BD if the glow plug control module's current feedback circuit is faulty, so always verify the module's output under load.
- Corrosion inside the glow plug connector boot is a frequent hidden cause that can mimic a failed glow plug, and it often goes unnoticed during a quick visual check.
- The ECM may set P06BD only after a cold start cycle, so a warm engine test drive might not reproduce the fault; always allow the engine to cool completely before testing.
- On some vehicles, a weak battery or charging system can cause glow plug voltage to drop below the expected range during the glow phase, triggering a false range/performance code.
- Replacing all glow plugs when only one is faulty is not necessary for this code, but if one plug has failed, the others may be near the end of their service life, so consider a preventive check.

Can I keep driving with P06BD?

You can generally drive the vehicle with P06BD, but expect harder cold starts and possible rough running until the engine warms up. Avoid extended driving with a known misfire or heavy white smoke, and address the fault before cold weather arrives to prevent starting problems.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with resistance and voltage measurement functions
- Clamp meter for measuring glow plug current draw
- Socket set and extensions for glow plug removal
- Torque wrench for proper glow plug installation
- Service information or wiring diagrams for the specific vehicle

Reading P06BD

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
6	Computer and output circuits.
BD	The exact fault within that area.

Often seen with

P0380 Glow Plug/Heater Circuit A Malfunction · **P0675** Cylinder 5 Glow Plug Circuit · **P06BC** Cylinder 4 Glow Plug Circuit Range/Performance · **P06BE** Cylinder 6 Glow Plug Circuit Range/Performance · **P06BF** Cylinder 7 Glow Plug Circuit Range/Performance

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06bd/>

