

GENERIC · POWERTRAIN

P06BC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06BC

Cylinder 4 Glow Plug Circuit Range/Performance

P06BC indicates that the engine control module (ECM) has detected a range or performance fault in the glow plug circuit for cylinder 4, meaning the circuit's electrical behavior is outside the expected parameters during the glow plug's operation. The ECM monitors voltage and current on the glow plug control circuit and sets this code when the signal does not match the commanded state, which can affect cold-start performance and emissions.

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

Symptoms you may notice

- Illumination of the check engine light or glow plug warning light, often with no other noticeable symptoms.
- Hard starting or rough idle when the engine is cold, especially in low ambient temperatures.
- Extended cranking time before the engine fires, particularly on the first start of the day.
- White smoke from the exhaust after a cold start due to incomplete combustion.
- Slightly reduced fuel economy or increased emissions during warm-up.
- In rare cases, a misfire or stumble shortly after cold start if the glow plug fails to heat.

Common causes, most likely first

- 1 Faulty glow plug on cylinder 4, such as an open heating element or excessive resistance.
- 2 Damaged or corroded electrical connector at the cylinder 4 glow plug.
- 3 Wiring harness damage (open, short, or high resistance) between the glow plug control module and the cylinder 4 glow plug.
- 4 Failed glow plug control module, which may affect one or multiple cylinders.
- 5 Poor ground connection for the glow plug circuit, leading to voltage drops.
- 6 ECM software or internal fault incorrectly interpreting the glow plug circuit signal (less common).



How to diagnose and fix it

- 1 Inspect the cylinder 4 glow plug connector and wiring for corrosion, looseness, or physical damage; clean or repair as needed.
- 2 Measure the resistance of the cylinder 4 glow plug with a multimeter and compare it to the manufacturer's specification; replace the plug if out of range.
- 3 Check the glow plug control module for proper power, ground, and control signals using a wiring diagram and scan tool bidirectional controls.
- 4 Perform a voltage drop test on the glow plug circuit while activated to identify excessive resistance in the wiring or connections.
- 5 Verify the ECM is commanding the glow plug on and that the feedback signal matches the command; diagnose any communication or control faults.
- 6 If all electrical checks pass, consult factory service information for specific pinpoint tests and consider reprogramming or replacing the ECM only as a last resort.

Glow Plug Circuit Diagnostics Beyond the Plug

- A glow plug that tests good on resistance can still cause this code if the control module's current monitoring circuit is faulty, so always verify the module's output with a scope or current clamp.
- Corrosion inside the glow plug connector boot is a frequent hidden cause that visual inspection alone may miss; disconnecting and inspecting the terminals is essential.
- The code can be set by a poor engine ground that affects the glow plug control module's reference voltage, so check ground straps and battery connections before replacing parts.
- On some vehicles, the glow plug control module is integrated into the engine control module, making diagnosis more complex and requiring thorough circuit testing before condemning either unit.
- P06BC may appear intermittently due to temperature-related resistance changes in the glow plug, so testing when the engine is cold often reveals the fault.

Can I keep driving with P06BC?

The vehicle is generally safe to drive with this code, but cold-start performance and emissions may be affected, and prolonged driving with a faulty glow plug can lead to harder starting in cold weather. Avoid extended driving in very low temperatures until the fault is repaired, and address the issue promptly to prevent secondary damage to the glow plug control module.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Clamp-on current meter or oscilloscope
- Factory service information or wiring diagrams
- Basic hand tools (socket set, screwdrivers, pliers)



Reading P06BC

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.
BC	The exact fault within that area.

Often seen with

P06B9 Cylinder 1 Glow Plug Circuit Range/Performance · **P06BA** Cylinder 2 Glow Plug Circuit Range/Performance · **P06BB** Cylinder 3 Glow Plug Circuit Range/Performance · **P06BD** Cylinder 5 Glow Plug Circuit Range/Performance · **P06BE** Cylinder 6 Glow Plug Circuit Range/Performance

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06bc/>

