

GENERIC · POWERTRAIN

P06BE

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06BE

Cylinder 6 Glow Plug Circuit Range/Performance

P06BE indicates that the engine control module (ECM) has detected an out-of-range condition in the electrical circuit for the number 6 cylinder glow plug, which is used to warm the combustion chamber for reliable cold starts in diesel engines. The ECM monitors the glow plug circuit for expected current draw and response time, and this code sets when the circuit's performance falls outside the manufacturer's specified parameters.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illuminated check engine light or glow plug warning light, often with no other symptoms
- Hard starting or extended cranking when the engine is cold
- Rough idle or misfire immediately after a cold start
- White smoke from the exhaust during cold running
- Reduced fuel economy or increased emissions during warm-up
- In severe cases, the engine may enter limp mode or fail to start in very cold weather

Common causes, most likely first

- 1 Faulty glow plug on cylinder 6 (open or shorted element)
- 2 Damaged or corroded electrical connector at the glow plug
- 3 Wiring harness damage (open, chafed, or shorted wire) between the glow plug and control module
- 4 Failed glow plug control module or relay
- 5 Poor ground connection for the glow plug circuit
- 6 ECM software issue or internal fault (less common)



How to diagnose and fix it

- 1 Inspect the glow plug connector and wiring for corrosion, looseness, or damage; clean and secure as needed
- 2 Test the glow plug resistance with a multimeter and compare to specification; replace if out of range
- 3 Check for voltage and ground at the glow plug connector during the glow plug activation period
- 4 Test the glow plug control module and its power/ground circuits according to the service manual
- 5 Repair or replace damaged wiring harness sections between the glow plug and control module
- 6 Clear the diagnostic trouble codes and verify the repair by performing a cold start and monitoring glow plug operation with a scan tool

Glow Plug Circuit Checks That Often Get Overlooked

- A glow plug can test good on a resistance check but still fail under load due to a weak internal connection, so a current ramp test with an oscilloscope or a known-good glow plug swap is more reliable.
- Corrosion inside the glow plug connector boot is a frequent cause that is easily missed because the outside looks fine; always pull the boot back and inspect the terminals.
The glow plug control module often fails intermittently when hot, so testing it only when cold may not reveal the fault; perform tests both cold and after the engine has warmed up.
- This code can be set by a poor engine ground even if the glow plug and module are healthy, so check ground straps and battery terminals before replacing parts.
- On some vehicles, a weak battery or charging system can cause glow plug performance codes because the module cannot deliver the expected current during the glow phase.

Can I keep driving with P06BE?

You can generally drive the vehicle with this code, but cold starting may be difficult and prolonged cranking can strain the starter and battery. Avoid extended driving without addressing the issue, especially in cold weather, and have it diagnosed soon to prevent further electrical damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Glow plug socket and ratchet
- Oscilloscope (optional for current ramp testing)
- Service manual or wiring diagram for the specific vehicle



Reading P06BE

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

Often seen with

P0380 Glow Plug/Heater Circuit A Malfunction · **P0676** Cylinder 6 Glow Plug Circuit · **P0677** Cylinder 7 Glow Plug Circuit · **P06BD** Cylinder 5 Glow Plug Circuit Range/Performance · **P06BF** Cylinder 7 Glow Plug Circuit Range/Performance

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06be/>

