

GENERIC · POWERTRAIN

P06E3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06E3

Cylinder 12 Glow Plug Control Circuit High

P06E3 means the engine control module (ECM) has detected an abnormally high voltage on the control circuit for cylinder 12's glow plug, which usually indicates an open circuit or a short to voltage rather than a failed glow plug itself. The ECM commands the glow plug on and expects the circuit to pull the control line low; when it stays high, the module flags the circuit as faulty.

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 lamp, often with no other noticeable symptoms
- Hard cold starting or extended cranking before the engine fires, especially in low ambient temperatures
- Rough idle and white exhaust smoke immediately after a cold start
- Reduced engine power or a limp-home mode on some vehicles that protect the aftertreatment system
- A stored pending or history code that returns immediately after clearing if the circuit fault is hard

Common causes, most likely first

- 1 Open circuit in the glow plug control wire between the ECM and the glow plug, often from a broken wire or corroded terminal
- 2 Failed glow plug control module or glow plug relay that no longer pulls the control line low
- 3 Short to voltage on the control circuit, such as a chafed wire contacting a power feed
- 4 Loose, backed-out, or corroded connector pin at the glow plug or at the control module
- 5 Internal driver failure inside the ECM for that specific cylinder circuit
- 6 High-resistance glow plug that draws too little current, which the module interprets as an open control circuit



How to diagnose and fix it

- 1 Clear the code and verify whether it returns immediately; a hard return confirms an active circuit fault rather than a history code.
- 2 Inspect the glow plug connector and the control module connector for corrosion, backed-out pins, or loose terminals, and repair as needed.
- 3 Measure resistance of the cylinder 12 glow plug and compare it to the manufacturer's specification and to a known-good cylinder.
- 4 Check the control wire for continuity from the ECM or control module to the glow plug, and check for short to voltage with the circuit isolated.
- 5 Command the glow plug on with a scan tool and measure control circuit voltage to confirm whether the module is actually driving the circuit.
- 6 If the control wire and glow plug test good but the circuit stays high, substitute a known-good control module or test the ECM driver before condemning the ECM.
- 7 After repair, clear codes, run a cold-start glow plug self-test, and verify the code does not reset over several drive cycles.

Why cylinder 12 glow plug codes mislead

- A high control circuit code almost never means the glow plug itself is bad; the ECM is reporting that the control line did not respond as expected, so replacing the glow plug first often wastes money.
- Many glow plug control modules are smart units that report per-cylinder faults, and a single open control wire can set this code even when every glow plug tests good with an ohmmeter.
- Corrosion inside the glow plug connector is a frequent hidden cause because it raises resistance without breaking the circuit completely, and it can mimic a failed control module.
- On engines with a separate glow plug control module, a shorted or open control wire can damage the module driver, so always repair the wiring before installing a new module.
- This code can be set by a low battery or poor ground during cold cranking, so check battery health and engine ground straps before chasing the glow plug circuit.

Can I keep driving with P06E3?

You can usually drive the vehicle, but cold starting will be harder and prolonged cranking can stress the starter and battery, so avoid repeated cold starts until the circuit is repaired. Do not ignore the code on a diesel with a particulate filter, because unburned fuel from a cold cylinder can damage the aftertreatment system.



Tools that help

- OBD-II scan tool with bidirectional glow plug control capability
- Digital multimeter with resistance and voltage measurement
- Wiring diagram for the glow plug control circuit
- Back probe pins or breakout leads
- Terminal pick and contact cleaner

Reading P06E3

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.
E3	The exact fault within that area.

Often seen with

P0380 Glow Plug/Heater Circuit A Malfunction · **P0670** Glow Plug Module Control Circuit · **P067C** Cylinder 5 Glow Plug Control Circuit Low · **P06E2** Cylinder 12 Glow Plug Control Circuit Low · **P06E4** Control Module Wake-up Circuit Performance

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06e3/>

