

GENERIC · POWERTRAIN

P06E2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06E2

Cylinder 12 Glow Plug Control Circuit Low

P06E2 means the engine control module (ECM) has detected an abnormally low voltage on the control circuit for cylinder 12's glow plug, indicating a short to ground, an open circuit, or a failed glow plug. The ECM commands the glow plug on and monitors the circuit's electrical behavior; when the feedback signal stays below the expected threshold, it stores this code and may disable glow plug operation for that cylinder.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Hard cold starting or extended cranking before the engine fires
- Rough idle and white smoke from the exhaust immediately after a cold start
- Misfire or hesitation during the first few minutes of engine operation
- Increased fuel consumption during warm-up
- In severe cases, a no-start condition in cold weather

Common causes, most likely first

- Failed glow plug on cylinder 12 (open heating element or internal short)
- Damaged or corroded glow plug electrical connector at cylinder 12
- Chafed, pinched, or broken wire in the glow plug control circuit to cylinder 12
- Faulty glow plug control module (GPCM) or relay output for that cylinder
- Poor ground connection shared by the glow plug circuit
- Corrosion or water intrusion in the glow plug harness connector
- Rarely, an internal ECM driver fault on the glow plug control circuit

How to diagnose and fix it

- Scan all modules and record freeze-frame data to confirm P06E2 is the only glow plug code present
- Visually inspect the cylinder 12 glow plug connector and harness for corrosion, chafing, or looseness
- Measure the glow plug resistance at the connector and compare it to the manufacturer's specification
- Check the control circuit for a short to ground and for continuity from the GPCM to the glow plug
- Test the glow plug control module output for cylinder 12 with a suitable load or oscilloscope
- Replace the faulty glow plug or repair the damaged wiring as indicated by test results
- Clear the code, perform a cold-start relearn if required, and verify the repair with a road test



Glow Plug Circuit Low-Voltage Traps

- A glow plug that tests good on a bench can still set this code if the connector terminal has spread or corroded, creating resistance that the ECM interprets as a low-voltage fault.
- Technicians often replace the glow plug first, but a shorted glow plug control module output can mimic a failed plug and will destroy a new plug if not diagnosed.
- This code can be set by a poor engine ground even when the glow plug and its wiring test perfectly, so ground integrity must be verified before condemning parts.
- On engines with a glow plug control module, a single low circuit code for one cylinder does not always mean the plug is bad; the module's internal driver for that channel can fail independently.
- P06E2 is often accompanied by other glow plug codes, and diagnosing only the first code stored can lead to repeat repairs if the shared harness or module is the real cause.

Can I keep driving with P06E2?

You can generally drive the vehicle, but cold starting will be harder and the engine may run rough or smoke until warm; avoid heavy load or long idling until the fault is repaired, and do not rely on the vehicle for cold-weather starts.

Tools that help

- OBD-II scan tool with bidirectional control and freeze-frame capability
- Digital multimeter with resistance and voltage measurement
- Test light or load probe for circuit testing
- Oscilloscope for glow plug control signal analysis
- Socket set and glow plug removal tool
- Wiring diagram for the glow plug circuit

Reading P06E2

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.
E2	The exact fault within that area.

Often seen with

P0380 Glow Plug/Heater Circuit A Malfunction · **P0670** Glow Plug Module Control Circuit · **P0671** Cylinder 1 Glow Plug Circuit · **P06E1** Cylinder 11 Glow Plug Control Circuit High · **P06E3** Cylinder 12 Glow Plug Control Circuit High



See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06e2/>

