

GENERIC · POWERTRAIN

P06C3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06C3

Cylinder 11 Glow Plug Circuit Range/Performance

P06C3 means the engine control module has detected that the glow plug circuit for cylinder 11 is not performing within its expected range, which usually points to a resistance or voltage problem in that circuit. The module monitors the glow plug's electrical behavior during the afterglow phase and flags the code when the feedback signal falls outside the calibrated window for too long.

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

Symptoms you may notice

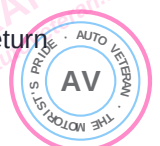
- Illuminated check engine light, often with no other noticeable symptoms
- Hard cold starting or extended cranking before the engine fires
- Rough idle and white smoke from the exhaust immediately after a cold start
- Reduced engine power or a limp-home mode in some vehicles
- A stored glow plug control module fault code alongside P06C3

Common causes, most likely first

- Failed or degraded glow plug on cylinder 11 with excessive resistance
- Damaged or corroded electrical connector at the cylinder 11 glow plug
- Open or shorted glow plug wiring harness between the control module and the plug
- Faulty glow plug control module not delivering correct voltage to cylinder 11
- Poor engine ground connection affecting the glow plug circuit return path
- Carbon buildup or mechanical damage at the glow plug tip altering its electrical characteristics

How to diagnose and fix it

- Clear the code and verify it returns after a cold-start cycle to confirm it is not a history code
- Inspect the cylinder 11 glow plug connector and harness for corrosion, chafing, or loose pins
- Measure glow plug resistance with a multimeter and compare it to the manufacturer's specification
- Check for battery voltage and ground continuity at the glow plug control module connector
- Test the glow plug control module output for cylinder 11 with a bidirectional scan tool or oscilloscope
- Replace the faulty glow plug or repair the damaged section of harness, then clear codes and retest
- Verify repair by performing a cold-start afterglow test and confirming no pending or stored codes return



What the glow plug code hides

- A glow plug that ohms out correctly when cold can still fail the range test once it heats and its resistance shifts, so a simple cold resistance check is not conclusive.
- The glow plug control module often stores P06C3 when the actual fault is a shared power or ground feed affecting several cylinders, not just cylinder 11.
- Carbon-fouled glow plug tips can change the circuit's electrical signature enough to set a range code without the plug being electrically open or shorted.
- Some vehicles run an afterglow strategy for several minutes after startup, so the code may only set during that phase and never appear during a quick key-on test.
- Replacing the glow plug without checking the control module connector pins often leads to a repeat code because a backed-out terminal mimics a failed plug.

Can I keep driving with P06C3?

The vehicle is generally safe to drive, but cold starting will be harder and prolonged driving with a failed glow plug can stress the battery and starter. Avoid repeated long cranking attempts and have the circuit diagnosed before winter temperatures make starting unreliable.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter with resistance and voltage measurement
- Oscilloscope for observing glow plug control signals
- Glow plug socket and torque wrench
- Electrical contact cleaner and dielectric grease
- Vehicle-specific wiring diagram

Reading P06C3

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.
C3	The exact fault within that area.

Often seen with

P0380 Glow Plug/Heater Circuit A Malfunction · **P0670** Glow Plug Module Control Circuit · **P067B** Cylinder 4 Glow Plug Control Circuit High · **P06C2** Cylinder 10 Glow Plug Circuit Range/Performance · **P06C4** Cylinder 12 Glow Plug Circuit Range/Performance



See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06c3/>

