

GENERIC · POWERTRAIN

P0678

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0678

Cylinder 8 Glow Plug Circuit

P0678 means the engine control module (ECM) has detected a fault in the electrical circuit for the glow plug on cylinder 8 of a diesel engine. The ECM monitors the glow plug circuit for expected current flow and resistance, and this code sets when the readings fall outside the normal range for that specific cylinder.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Hard starting or extended cranking when the engine is cold
- Rough idle or misfire immediately after a cold start
- Excessive white smoke from the exhaust during cold running
- Reduced fuel economy and increased emissions during warm-up
- In severe cases, a misfire code for cylinder 8 may also be stored

Common causes, most likely first

- 1 Failed glow plug on cylinder 8 (open or shorted element)
- 2 Damaged or corroded electrical connector at the cylinder 8 glow plug
- 3 Broken or chafed wiring in the glow plug circuit for cylinder 8
- 4 Faulty glow plug control module (GPCM) or relay affecting only cylinder 8
- 5 Poor ground connection for the glow plug circuit
- 6 ECM internal driver fault for the cylinder 8 glow plug circuit (rare)

How to diagnose and fix it

- 1 Inspect the glow plug connector and wiring for cylinder 8 for corrosion, damage, or looseness
- 2 Measure the resistance of the cylinder 8 glow plug and compare it to the manufacturer's specification
- 3 Check for battery voltage at the glow plug connector during the glow plug pre-heat cycle
- 4 Test the glow plug control module or relay for proper operation on the cylinder 8 circuit
- 5 Perform a voltage drop test on the ground circuit for the glow plug
- 6 Replace the faulty glow plug if resistance is out of specification
- 7 Repair or replace damaged wiring or connectors, then clear the code and verify the repair



Don't assume the glow plug is bad

- A corroded connector or chafed wire often mimics a failed glow plug, so always inspect the circuit before replacing parts.
- The glow plug control module may fail on a single channel, causing a cylinder-specific code even when all glow plugs are good.
- P0678 can set intermittently due to a poor ground connection that only acts up in cold or damp conditions.
- On some vehicles, a faulty glow plug can cause a misfire code for the same cylinder, leading to misdiagnosis as a fuel or compression issue.
- Always verify the glow plug part number and voltage rating match the vehicle's original specification, as incorrect plugs can cause repeat failures.

Can I keep driving with P0678?

You can generally continue driving with P0678, but cold starting may be difficult and the engine may run rough until warm. Avoid prolonged driving with a known misfire, and address the issue before winter to prevent starting problems.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Glow plug socket set
- Wire brush and electrical contact cleaner
- Factory service information for resistance specifications

Reading P0678

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

Often seen with

P0670 Glow Plug Module Control Circuit · **P0671** Cylinder 1 Glow Plug Circuit · **P0672** Cylinder 2 Glow Plug Circuit · **P0673** Cylinder 3 Glow Plug Circuit · **P0674** Cylinder 4 Glow Plug Circuit



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/p0678/>

