

GENERIC · POWERTRAIN

P0676

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0676

Cylinder 6 Glow Plug Circuit

P0676 indicates that the engine control module (ECM) has detected an electrical fault in the glow plug circuit for cylinder 6 of a diesel engine. The ECM monitors the circuit for expected resistance and current draw; when the values fall outside the programmed range, it sets this code and may illuminate the glow plug warning light.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the glow plug or check engine light, often with no other noticeable symptoms
- Extended cranking time before the engine starts, especially in cold weather
- Rough idle or misfire immediately after a cold start that may improve as the engine warms
- White smoke from the exhaust during cold starts due to incomplete combustion
- Reduced fuel economy or increased emissions during warm-up
- Hard starting or no-start condition in very cold temperatures

Common causes, most likely first

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



How to diagnose and fix it

- 1 Inspect the cylinder 6 glow plug connector and wiring for corrosion, damage, or looseness; clean or repair as needed
- 2 Measure the resistance of the cylinder 6 glow plug with a multimeter and compare to the manufacturer's specification; replace if out of range
- 3 Check for battery voltage at the glow plug connector during the glow plug pre-heat cycle using a multimeter or test light
- 4 Test the glow plug control module or relay for proper operation and replace if faulty
- 5 Perform a voltage drop test on the ground circuit for the cylinder 6 glow plug to ensure a good connection
- 6 If all electrical components test good, diagnose the ECM driver circuit for the cylinder 6 glow plug and repair or replace the ECM as necessary
- 7 Clear the diagnostic trouble codes and verify the repair by performing a cold start and checking that the code does not return

Glow plug circuit faults often misdiagnosed

- A glow plug that tests good on a bench may still fail under load; always test the circuit under operating conditions.
- Corroded connectors are a common cause of this code, especially in areas with road salt or high humidity.
- The glow plug control module may fail in a way that affects only one cylinder, mimicking a bad glow plug.
- P0676 can be set by a poor engine ground even if the glow plug and wiring appear intact.
- Some vehicles require a relearn procedure after glow plug replacement to avoid false codes.

Can I keep driving with P0676?

You can usually drive with this code, but cold starting may be difficult and prolonged driving with a faulty glow plug can lead to carbon buildup or damage to the engine. Avoid heavy loads and cold starts until the fault is repaired.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Test light
- Socket set and extensions
- Glow plug removal tool (if applicable)



Reading P0676

- 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.
- 76** 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 [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0676/>

