

GENERIC · POWERTRAIN

P0680

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0680

Cylinder 10 Glow Plug Circuit

P0680 indicates that the engine control module (ECM) has detected a fault in the electrical circuit for the glow plug in cylinder 10 of a diesel engine. The ECM monitors the circuit for expected resistance and current flow, and when the values fall outside the programmed range, it sets this code and illuminates the check engine 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 check engine light (malfunction indicator lamp).
- Often no symptoms besides the warning light, especially in warm weather.
- Hard starting or rough idle when the engine is cold.
- Excessive white smoke from the exhaust after a cold start.
- Decreased fuel economy and increased emissions during warm-up.
- Misfire or rough running until the engine reaches operating temperature.

Common causes, most likely first

- 1 Failed glow plug in cylinder 10 (open or shorted element).
- 2 Damaged or corroded electrical connector at the glow plug.
- 3 Open or shorted wire in the glow plug circuit (including chafed insulation or broken conductor).
- 4 Faulty glow plug control module (GPCM) or relay that supplies power to the glow plug.
- 5 Poor ground connection for the glow plug circuit.
- 6 ECM internal fault (rare, but possible).

How to diagnose and fix it

- 1 Perform a visual inspection of the glow plug, connector, and wiring for damage, corrosion, or looseness.
- 2 Use a scan tool to command the glow plug on and verify power and ground at the glow plug connector with a multimeter.
- 3 Measure the resistance of the glow plug and compare to the manufacturer's specification; replace if out of range.
- 4 Check the glow plug control module and its connectors for proper operation and signs of damage.
- 5 Inspect the wiring harness for continuity and shorts to ground or power, repairing as needed.
- 6 Clear the diagnostic trouble codes and verify the repair by performing a cold start and monitoring for code return.



Glow Plug Circuit Diagnostics Beyond the Plug

- A glow plug that tests good on resistance can still be faulty under load; a voltage drop test while the circuit is energized often reveals the true culprit.
- Corrosion inside the glow plug connector is a frequent cause that is easily overlooked during visual inspection.
- The glow plug control module may set this code even when the glow plug itself is fine, so always test the module's output before replacing parts.
- On some vehicles, a single failed glow plug can cause the entire glow plug system to shut down, leading to multiple glow plug codes.
- The ECM may set P0680 if the glow plug circuit's current draw is slightly out of specification, even if the plug still functions, due to a marginal connection.

Can I keep driving with P0680?

You can generally drive the vehicle with this code, but cold starting may be difficult and the engine may run rough until warm. Avoid prolonged driving with a known glow plug fault, as unburned fuel can damage the catalytic converter and increase emissions.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Glow plug socket set
- Wire terminal removal tools
- Service information for resistance specifications

Reading P0680

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.
80	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 an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0680/>

