

GENERIC · POWERTRAIN

P06F6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06F6

Glow Plug Control Module 2 Control Circuit/Open

P06F6 indicates that the powertrain control module (PCM) has detected an open circuit or control fault on the control circuit for glow plug module 2, which is the second glow plug control module on vehicles that use multiple modules to manage the glow plugs. The PCM commands the module to energize the glow plugs for cold starting and emissions control, and it monitors the control circuit for expected voltage or current feedback; when the feedback does not match the command, the PCM stores this code and may disable the affected glow plug circuit.

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 or a dedicated glow plug warning lamp on the dashboard.
- Hard cold starting or extended cranking before the engine fires, especially in low ambient temperatures.
- Rough idle and white smoke from the exhaust immediately after a cold start due to incomplete combustion.
- Reduced engine performance or power derate in some vehicles as the PCM limits operation to protect the engine.
- Often no symptoms besides the warning light when the fault affects only one of two glow plug modules and ambient temperatures are mild.

Common causes, most likely first

- 1 Open or damaged wire in the control circuit between the PCM and glow plug module 2, often from chafing, corrosion, or rodent damage.
- 2 Failed glow plug control module 2, where the internal switching circuit or feedback electronics have failed open.
- 3 Loose, corroded, or disconnected electrical connector at glow plug module 2 or at the PCM, causing intermittent or permanent open circuit.
- 4 Blown fuse or fusible link that supplies power to glow plug module 2, though this often sets additional codes.
- 5 PCM internal driver fault on the control circuit, which is less common but possible after other causes are ruled out.
- 6 High resistance in the ground circuit for glow plug module 2, which can mimic an open control circuit.



How to diagnose and fix it

- 1 Inspect the wiring harness and connectors at glow plug module 2 and the PCM for obvious damage, corrosion, or loose pins, and repair as needed.
- 2 Check the fuse and relay that supply power to glow plug module 2, and replace any blown fuse after confirming the circuit is not shorted.
- 3 Measure resistance and continuity of the control circuit between the PCM and glow plug module 2, comparing to the manufacturer's specification, and repair any open or high-resistance wire.
- 4 Test the ground circuit for glow plug module 2 to ensure it has low resistance to the battery negative terminal.
- 5 If the circuit tests good, substitute a known-good glow plug module 2 and clear the code to see if it returns.
- 6 Use a scan tool to command the glow plug module on and verify control circuit voltage and feedback at the PCM connector.
- 7 If all external circuits and the module are verified good, diagnose the PCM control driver and replace or reprogram the PCM only as a last resort.

What the control circuit test really shows

- A common misdiagnosis is replacing glow plug module 2 when the actual fault is a chafed control wire hidden inside the harness loom, so always perform a loaded continuity test rather than a simple visual check.
- The PCM may set P06F6 intermittently if the control circuit has high resistance that only appears when the engine is cold or vibrating, so wiggle-test the harness while monitoring live data.
- Some vehicles use a single glow plug module for all cylinders, and the 'module 2' designation refers to a second module on engines with two banks or two separate glow plug circuits, so confirm the configuration before ordering parts.
- A weak or failing battery can cause low voltage during glow plug operation, leading the PCM to misinterpret control circuit feedback and set this code, so load-test the battery first.
- This code does not always mean the glow plugs themselves are faulty; the glow plugs are on the output side of the module and are monitored separately, so avoid replacing them unless a related glow plug code is also present.

Can I keep driving with P06F6?

You can usually drive the vehicle with P06F6 stored, but cold starting may be difficult and the engine may run rough or produce smoke until it warms up. Avoid heavy load or long trips in cold weather until the fault is repaired, because continued operation with inoperative glow plugs can stress the starter and battery and may lead to misfire codes.



Tools that help

- OBD-II scan tool with live data and bidirectional control capability
- Digital multimeter with continuity and resistance measurement
- Test light or load probe for circuit testing
- Wiring diagram and connector pinout for the specific vehicle
- Basic hand tools for connector and harness access

Reading P06F6

- P** Powertrain: engine, transmission and emissions.
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- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 6** Computer and output circuits.
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- F6** 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 · **P06F5** Glow Plug Control Module 2 · **P06F7** Glow Plug Control Module 2 Control Circuit Low

See it working

Watch the animated explainer [How a Car Thermostat Works: Wax Pellet and Cooling Fan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06f6/>

