

GENERIC · POWERTRAIN

P06FD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06FD

Glow Plug Control Module 2 to PCM Communication Circuit Range/Performance

P06FD indicates that the powertrain control module (PCM) has detected an out-of-range or performance fault on the communication circuit linking glow plug control module 2 to the PCM. This circuit is a dedicated data line that carries control and status messages between the two modules, and the PCM sets the code when the signal voltage, timing, or message integrity falls outside the expected window.

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

Symptoms you may notice

- Illumination of the check engine light or a dedicated glow plug warning lamp
- Hard cold starting or extended cranking before the engine fires
- Rough idle and white smoke immediately after a cold start
- Reduced engine power or a limp-home mode in some vehicles
- Often no symptoms besides the warning light, especially in warm weather

Common causes, most likely first

- 1 Damaged, chafed, or corroded wiring in the communication circuit between glow plug control module 2 and the PCM
- 2 Loose or contaminated connector pins at either the control module or PCM harness
- 3 Failed glow plug control module 2, often due to internal electronics or water intrusion
- 4 Faulty PCM driver or receiver on the communication port
- 5 Voltage supply or ground fault to glow plug control module 2 that disrupts its ability to communicate
- 6 Aftermarket electrical accessories or poor previous repairs splicing into the harness



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to confirm the fault conditions
- 2 Visually inspect the communication circuit wiring and connectors between glow plug control module 2 and the PCM for damage, corrosion, or loose pins
- 3 Measure resistance and check for shorts to ground or power on the communication line with a digital multimeter, referring to the factory wiring diagram
- 4 Verify that glow plug control module 2 has good power and ground supplies, and that the PCM is properly grounded
- 5 Perform a wiggle test on the harness while monitoring live data or the code status to expose intermittent faults
- 6 If the circuit tests good, substitute a known-good glow plug control module 2 and clear the code to see if it returns
- 7 If the fault persists after module replacement, diagnose the PCM communication port and repair or replace the PCM as needed

Communication faults are rarely just the module

- A common misdiagnosis is replacing glow plug control module 2 immediately, when a chafed wire or corroded connector pin is the real cause of the communication fault.
- The code can be set by a low or weak battery or charging system issue that causes the control module to drop offline intermittently, so always check system voltage first.
- On some vehicles, glow plug control module 2 is mounted in a location exposed to road splash or engine heat, and water intrusion into the module connector is a frequent hidden cause.
- This code does not always mean the glow plugs themselves are faulty; the communication circuit can fail while the glow plugs and module power stages remain functional.
- Aftermarket remote starters or alarm systems spliced into the data bus can corrupt communication and set this code without any fault in the factory glow plug circuit.

Can I keep driving with P06FD?

The vehicle may be safe to drive, but cold-start performance and emissions can suffer, and some vehicles may enter a reduced-power mode. Avoid heavy load or long trips until the fault is repaired, and address hard-starting symptoms promptly to prevent further damage.

Tools that help

- OBD-II scan tool with live data and module communication capabilities
- Digital multimeter with back-probing pins
- Factory wiring diagram for the communication circuit
- Terminal pick and contact cleaner for connector repair
- Oscilloscope for waveform analysis of the communication line



Reading P06FD

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.
FD	The exact fault within that area.

Often seen with

P0380 Glow Plug/Heater Circuit A Malfunction · **P0670** Glow Plug Module Control Circuit · **P06FC** Glow Plug Control Module 2 to PCM Communication Circuit · **P06FE** Cold Start Diesel Intake Air Flow Control Performance · **U0106** Lost Communication With Glow Plug Control Module

See it working

Watch the animated explainer [Four-Stroke Engine Notebook: The Otto Cycle Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06fd/>

