

GENERIC · POWERTRAIN

P008C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P008C

Fuel Cooler Pump Control Circuit/Open

P008C indicates that the powertrain control module (PCM) has detected an open circuit or abnormal voltage on the control circuit for the fuel cooler pump, which is used on some diesel and direct-injection gasoline engines to manage fuel temperature. The PCM monitors the circuit and sets this code when the commanded state does not match the expected electrical feedback, typically indicating a break in the wiring or a failed component.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine performance or power derate in some vehicles
- Increased fuel temperature leading to potential vapor lock or hard starting in extreme cases
- Fuel odor or visible fuel leaks if the cooler pump is seized and causing overheating
- In rare cases, the engine may enter limp mode to protect the fuel system

Common causes, most likely first

- 1 Open or damaged wire in the fuel cooler pump control circuit
- 2 Failed fuel cooler pump (open winding or seized motor)
- 3 Corroded or disconnected electrical connector at the pump or PCM
- 4 Blown fuse or faulty relay supplying power to the pump
- 5 PCM internal fault (rare but possible)
- 6 Poor ground connection for the pump circuit



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for related codes in other modules
- 2 Inspect the fuel cooler pump fuse and relay, replacing if blown or faulty
- 3 Visually inspect the wiring harness and connectors for damage, corrosion, or looseness
- 4 Disconnect the pump connector and measure resistance across the pump terminals to check for an open winding
- 5 Check for power and ground at the pump connector with the key on and during commanded activation
- 6 Perform a voltage drop test on the control circuit to locate high resistance
- 7 If all electrical checks pass, suspect the PCM and perform pinpoint tests according to the service manual

Don't overlook the fuel cooler pump relay

- A failed fuel cooler pump relay is a common cause that is often overlooked because the relay may test good statically but fail under load.
- The fuel cooler pump may only run under specific conditions such as high fuel temperature or engine load, so a static test may not reveal the fault.
- Corrosion inside the pump connector can create an open circuit that only appears when the connector is disturbed, leading to intermittent codes.
- On some vehicles, the fuel cooler pump shares a power circuit with other components, so a fault in a related system can set P008C.
- Always check for technical service bulletins (TSBs) for the specific vehicle, as some manufacturers have known issues with the fuel cooler pump circuit.

Can I keep driving with P008C?

If the only symptom is the check engine light and the engine runs normally, you can drive the vehicle short distances to a repair shop, but avoid heavy loads or sustained high-speed driving. If the engine enters limp mode or you notice fuel odors or leaks, stop driving and have the vehicle towed to prevent damage or safety hazards.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools (screwdrivers, pliers, socket set)
- Test light or power probe



Reading P008C

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 8C** The exact fault within that area.

Often seen with

P008D Fuel Cooler Pump Control Circuit Low · **P008E** Fuel Cooler Pump Control Circuit High · **P008F** Engine Coolant Temperature/Fuel Temperature Correlation · **P0090** Fuel Pressure Regulator 1 Control Circuit · **P0091** Fuel Pressure Regulator 1 Control Circuit Low

See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p008c/>

