

GENERIC · POWERTRAIN

P008A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P008A

Low Pressure Fuel System Pressure - Too Low

P008A indicates that the powertrain control module has detected the low-pressure fuel system pressure falling below the manufacturer's expected threshold for the current operating conditions. This is the supply side of the fuel system, upstream of the high-pressure pump on direct-injection engines, and low pressure here can starve the engine of fuel under load.

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 symptoms besides the warning light
- Engine hesitation, stumble, or a momentary loss of power during acceleration
- Extended cranking before the engine starts, or a hard start when the fuel system has bled down
- Rough idle or intermittent misfiring under load
- Reduced engine power or limp mode on vehicles that protect the high-pressure fuel system
- Stalling at low speed or when the throttle is opened quickly

Common causes, most likely first

- 1 A weak or failing low-pressure fuel pump that cannot maintain volume and pressure under demand
- 2 A clogged or restricted fuel filter, or a blocked in-tank strainer sock
- 3 A leaking or sticking fuel pressure regulator or mechanical bypass valve on the low-pressure circuit
- 4 A faulty fuel pressure sensor or its wiring, sending an inaccurate low reading to the control module
- 5 Restricted fuel lines, a kinked supply hose, or a blocked pickup in the tank
- 6 Low fuel level or a fuel level sensor fault causing the pump to run dry or the module to misjudge supply
- 7 A poor electrical connection, relay, or ground at the fuel pump control module reducing pump voltage



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P008A, then verify low-pressure fuel pressure with a mechanical gauge against the manufacturer's specification
- 2 Inspect the fuel filter and in-tank strainer for restriction, and replace the filter if it is due or suspect
- 3 Check fuel pump electrical supply, relay, fuse, and ground connections, and measure voltage drop at the pump under load
- 4 Compare the fuel pressure sensor reading on a scan tool with the mechanical gauge reading to confirm sensor accuracy
- 5 Test the fuel pressure regulator or bypass valve for leakage or sticking, and replace if it fails the pressure-hold test
- 6 Perform a fuel volume and pressure test under load, and replace the low-pressure fuel pump if it cannot meet specification
- 7 Clear the code, road-test under the conditions recorded in freeze-frame, and confirm the repair with a full drive cycle

What a low-pressure reading really tells you

- A P008A can be set by a fuel pressure sensor that reads low while the actual mechanical pressure is correct, so always confirm with a gauge before condemning the pump.
- On direct-injection engines this code refers to the supply pump in the tank, not the high-pressure pump on the engine, and technicians sometimes replace the wrong pump.
- A restricted fuel filter can cause low pressure only under high demand, so a static idle pressure test may pass while the fault is still present during acceleration.
- Electrical resistance in the pump circuit, such as a corroded connector or failing relay, can drop pump voltage and mimic a failing pump without any pump fault code.
- Low fuel level combined with a faulty fuel level sensor can cause the pump to cavitate and set P008A even though the pump itself is healthy.

Can I keep driving with P008A?

You can usually drive cautiously to a repair shop, but avoid hard acceleration, towing, and sustained high-speed driving because low fuel pressure can cause stalling or leave you stranded. If the engine is misfiring badly or entering limp mode, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Fuel pressure test gauge kit with appropriate adapters
- Digital multimeter for voltage drop and resistance checks
- Fuel line disconnect tools
- Service information for fuel pressure specifications and test procedures



Reading P008A

- 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.
- 8A** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0090** Fuel Pressure Regulator 1 Control Circuit · **P0171** System Too Lean (Bank 1) · **P0230** Fuel Pump Primary Circuit Malfunction

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/p008a/>

