

GENERIC · POWERTRAIN

P0006

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0006

Fuel Shutoff Valve 'A' Control Circuit Low

P0006 indicates that the powertrain control module (PCM) has detected a low-voltage condition on the control circuit for fuel shutoff valve 'A', which is used to stop fuel flow under certain conditions such as deceleration or safety shutdowns. The PCM commands the valve on or off and monitors the circuit for expected voltage; a low reading means the circuit is likely shorted to ground, has excessive resistance, or the valve itself has failed.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stalling when the valve fails to open or close properly
- Difficulty starting or a no-start condition if the valve remains closed
- A slight fuel smell or rich running if the valve sticks open
- Reduced engine performance or poor fuel economy in some cases

Common causes, most likely first

- 1 Faulty fuel shutoff valve 'A' with an internal short or open winding
- 2 Damaged or corroded wiring in the valve control circuit, especially at connectors
- 3 Short to ground in the control wire between the PCM and the valve
- 4 High resistance in the ground circuit for the valve
- 5 Corroded or loose PCM connector pins affecting the control signal
- 6 Failed PCM driver for the fuel shutoff valve circuit (less common)

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other systems
- 2 Inspect the fuel shutoff valve connector and wiring for corrosion, damage, or loose pins
- 3 Measure the resistance of the fuel shutoff valve and compare to the manufacturer's specification
- 4 Check for a short to ground or excessive resistance in the control wire from the PCM to the valve
- 5 Test the ground circuit for the valve to ensure it is clean and tight
- 6 If the circuit and valve test good, check the PCM connector and consider a PCM driver fault
- 7 Clear the code and perform a road test to confirm the repair



Don't overlook the simple wiring checks

- A low-voltage code often results from a simple chafed wire or corroded connector rather than a failed valve, so always inspect the harness before replacing parts.
- The fuel shutoff valve may be part of a larger fuel pump or injection assembly on some vehicles, making replacement more involved than expected.
- A weak battery or charging system can cause false low-voltage codes on multiple circuits, so verify battery and ground integrity first.
- The PCM may set this code intermittently if the valve is sticking mechanically, even when electrical tests pass; a live data check of the valve command can reveal this.
- Do not assume the valve is bad just because the code says 'low'—a shorted control wire can produce the same reading and is far cheaper to fix.

Can I keep driving with P0006?

If the vehicle runs normally, you can drive it to a repair shop, but avoid hard acceleration or towing until the fault is fixed. If the engine stalls, hesitates, or refuses to start, stop driving and have the vehicle towed to prevent safety risks.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the fuel shutoff valve circuit
- Basic hand tools for connector and harness inspection
- Test light or jumper wires for circuit testing

Reading P0006

- 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.
- 06** The exact fault within that area.

Often seen with

P0005 Fuel Shutoff Valve 'A' Control Circuit/Open · **P0007** Fuel Shutoff Valve 'A' Control Circuit High · **P0087** Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0090** Fuel Pressure Regulator 1 Control Circuit



See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0006/>

