

GENERIC · POWERTRAIN

P2666

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2666

Fuel Shutoff Valve 'B' Control Circuit Low

P2666 indicates that the powertrain control module (PCM) has detected a low-voltage condition on the control circuit for fuel shutoff valve 'B', which is used to stop fuel flow in certain conditions such as during a crash or when the ignition is turned off. The PCM monitors the circuit and sets this code when the voltage on the control side is below the expected threshold, indicating a short to ground or an open circuit.

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

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) on the dashboard.
- Often no symptoms besides the warning light, especially if the valve is not actively used during normal driving.
- Rough idle or stalling if the valve fails to open when required.
- Difficulty starting or a no-start condition if the valve remains closed.
- A noticeable fuel odor or fuel leak in some cases if the valve is stuck open.
- Reduced engine performance or poor fuel economy if the valve operation is compromised.

Common causes, most likely first

- 1 Damaged or corroded wiring harness to the fuel shutoff valve 'B' control circuit, such as a short to ground or an open circuit.
- 2 Failed fuel shutoff valve 'B' solenoid or actuator, causing abnormal resistance or a short internally.
- 3 Loose or corroded electrical connector at the fuel shutoff valve or PCM.
- 4 Faulty powertrain control module (PCM) driver circuit for the valve, though this is less common.
- 5 Blown fuse or damaged relay that supplies power to the fuel shutoff valve circuit.
- 6 Aftermarket accessories or improper wiring repairs that interfere with the circuit.
- 7 Environmental factors such as water intrusion or debris causing corrosion in the circuit.



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 wiring harness and connectors at the fuel shutoff valve for visible damage, corrosion, or loose pins.
- 3 Test the fuel shutoff valve 'B' solenoid resistance with a multimeter and compare to the manufacturer's specification.
- 4 Check for continuity and short to ground on the control circuit between the PCM and the valve, repairing any faults found.
- 5 Inspect the fuse and relay for the fuel shutoff valve circuit and replace if faulty.
- 6 If the circuit and valve test good, diagnose the PCM driver circuit or substitute a known-good PCM for testing.
- 7 Clear the code and perform a road test to confirm the repair, ensuring the code does not return.

Before replacing the fuel shutoff valve

- A low voltage code on the control circuit often points to a short to ground in the wiring rather than a failed valve, so always inspect the harness first.
The fuel shutoff valve may only be commanded during specific conditions such as a crash signal or ignition off, so the valve might test fine statically but fail under load.
- Corrosion inside a connector can cause intermittent low voltage codes that do not appear during a simple resistance check, so wiggle-test the harness while monitoring live data.
- Aftermarket remote starters or alarm systems tapped into the fuel pump circuit can backfeed and set this code, so check for non-factory wiring.
This code does not always mean the valve itself is defective; a poor ground connection at the PCM or chassis can also cause a low voltage reading on the control circuit.

Can I keep driving with P2666?

If the vehicle is running normally and the only symptom is the check engine light, you can drive cautiously to a repair shop, but avoid hard acceleration or towing. If you experience stalling, difficulty starting, or a fuel smell, stop driving and have the vehicle towed to prevent safety hazards.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket and ratchet set
- Electrical contact cleaner and dielectric grease



Reading P2666

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Computer and output circuits.
- 66** 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 · **P2665** Fuel Shutoff Valve 'B' Control Circuit/Open · **P2667** Fuel Shutoff Valve 'B' Control Circuit High

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/p2666/>

