

GENERIC · POWERTRAIN

P04B4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04B4

Refueling Vapor Control Valve Stuck Closed

P04B4 indicates that the powertrain control module (PCM) has commanded the refueling vapor control valve to open, but the valve remains stuck closed, preventing fuel vapor from flowing to the charcoal canister during refueling. The PCM detects this by monitoring the fuel tank pressure or vapor flow and seeing no expected change when the valve is actuated.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other symptoms
- Fuel filler neck may spit fuel or shut off the pump repeatedly during refueling
- A slight fuel odor around the rear of the vehicle after refueling
- Difficulty adding fuel at normal flow rate, requiring slow pumping
- In some cases, a hiss when removing the fuel cap due to pressure buildup

Common causes, most likely first

- 1 Refueling vapor control valve mechanically stuck closed due to carbon buildup or corrosion
- 2 Failed valve actuator or solenoid winding open circuit
- 3 Damaged or disconnected electrical connector at the valve
- 4 Blocked or kinked vapor hose between the valve and the canister
- 5 PCM software fault or faulty output driver for the valve circuit
- 6 Contamination or debris lodged in the valve seat

How to diagnose and fix it

- 1 Verify the stored code and check for any related evaporative emission (EVAP) codes before proceeding
- 2 Inspect the refueling vapor control valve connector and wiring for corrosion, damage, or loose pins
- 3 Command the valve open and closed with a scan tool and listen for an audible click; no click suggests an electrical or mechanical fault
- 4 Measure resistance across the valve solenoid and compare to the manufacturer's specification
- 5 Disconnect the vapor hose at the valve and check for blockage or kinks; clean or replace as needed
- 6 Remove the valve and bench-test it by applying vacuum or voltage to confirm it moves freely; replace if stuck
- 7 After repair, clear codes and perform a drive cycle to confirm the valve operates and the code does not return

Why a stuck refueling valve mimics other EVAP faults

- A refueling vapor control valve stuck closed often sets no drivability symptoms, so technicians may overlook it when diagnosing a fuel smell or refueling issue.
- The valve can be stuck closed mechanically even when the solenoid coil tests good, so an electrical pass does not rule out replacement.
- A blocked vapor hose or a failed canister purge valve can cause similar pressure symptoms, leading to misdiagnosis of the refueling valve.
- Some vehicles use the same valve for both refueling and purge functions, so a fault may also trigger codes for the purge system.
- After replacing the valve, a stuck-closed code may persist if the PCM adaptive memory is not cleared and a relearn procedure is not performed.

Can I keep driving with P04B4?

The vehicle remains safe to drive because the fault affects only the refueling vapor recovery system, but avoid topping off the fuel tank and refuel slowly to prevent fuel spitback. Have the valve inspected soon to prevent fuel vapor leaks and potential EVAP system damage.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Hand vacuum pump
- Socket and wrench set
- Wiring diagram for the specific vehicle

Reading P04B4

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
B4	The exact fault within that area.

Often seen with

P0442 EVAP System Leak Detected (Small) · **P0455** EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak) · **P04B5** Fuel Fill Door Stuck Open · **P04B6** Fuel Fill Door Stuck Closed



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/p04b4/>

