

GENERIC · POWERTRAIN

P04B9

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04B9

Fuel Fill Door Position Sensor/Switch Circuit Low

P04B9 indicates that the powertrain control module has detected an abnormally low voltage signal on the fuel fill door position sensor circuit, which typically means the sensor is reporting the door as closed when it is open or the circuit is shorted to ground. The computer expects a voltage within a specific range as the door moves through its travel, and a reading below the minimum threshold for a calibrated time sets this code.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light, with the vehicle driving normally
- A fuel fill door that appears closed but the driver cannot open it using the release lever or button
- A fuel fill door that will not latch securely or pops open while driving
- A message on the driver information center stating the fuel door is open when it is closed
- Inability to release the fuel fill door from inside the cabin on vehicles with an electronic release

Common causes, most likely first

- 1 Fuel fill door position sensor internally shorted to ground or failed
- 2 Damaged or chafed wiring between the sensor and the body control module or powertrain control module
- 3 Corroded or loose electrical connector at the sensor or at the module
- 4 Water intrusion into the sensor or connector causing a low-resistance path to ground
- 5 Misadjusted or bent sensor actuator arm that keeps the sensor in a low-voltage position
- 6 Failed body control module or powertrain control module driver circuit (rare)



How to diagnose and fix it

- 1 Inspect the fuel fill door area for physical damage, debris, or water intrusion and verify the door opens and closes smoothly by hand.
- 2 Disconnect the sensor connector and check for corrosion, bent pins, or pushed-out terminals, then clean and reseat the connector.
- 3 Measure the sensor signal voltage at the connector with a digital multimeter while slowly opening and closing the door, comparing against the manufacturer's specified range.
- 4 Backprobe the signal wire at the module connector to rule out a short to ground in the harness between the sensor and the module.
- 5 Check the sensor ground circuit for excessive resistance and repair any chafed or broken wires found during a wiggle test.
- 6 Replace the fuel fill door position sensor if the signal voltage stays below the minimum specification with the door open and the wiring is confirmed good.
- 7 Clear the diagnostic trouble codes and perform a relearn or calibration procedure if required, then verify the code does not return after cycling the door several times.

Why a fuel door sensor sets a low code

- A common oversight is replacing the sensor when the real fault is a chafed signal wire inside the rubber boot that passes from the body into the fuel door hinge area, where flexing eventually breaks the conductor.
- This code does not always mean the sensor is dead; a poor ground connection at the sensor or at the module can pull the signal voltage below the threshold and mimic a failed sensor.
- On vehicles with an electronic fuel door release, a binding latch mechanism can hold the door partially open and keep the sensor in a low-voltage state, setting P04B9 without any electrical fault.
- Water and road salt collecting behind the fuel fill door can corrode the sensor connector pins, creating a low-resistance path to ground that sets this code intermittently in wet weather.
- Technicians sometimes chase this code as a fuel tank pressure or evaporative emissions fault because the fuel door area is involved, but P04B9 is strictly an electrical circuit code for the position sensor and does not indicate a leak.

Can I keep driving with P04B9?

The vehicle remains safe to drive because the fuel fill door position sensor does not affect engine operation, braking, or steering, but you should avoid forcing the fuel door open or closed and schedule diagnosis soon to prevent a stuck door or a no-start condition if the door release is electronic.



Tools that help

- Digital multimeter
- Trim removal tool set
- Test light
- Wiring diagram for the fuel fill door position sensor circuit
- Scan tool with live data capability

Reading P04B9

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
B9	The exact fault within that area.

Often seen with

P0455 EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak) · **P04B8** Fuel Fill Door Position Sensor/Switch Circuit · **P04BA** Fuel Fill Door Position Sensor/Switch Circuit High · **P04BB** Fuel Fill Door Lock Control Circuit/Open

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04b9/>

