

GENERIC · POWERTRAIN

P04DC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04DC

Fuel Fill Door Position Sensor/Switch Circuit Range/Performance

P04DC indicates that the powertrain control module has detected an out-of-range or performance fault in the fuel fill door position sensor or switch circuit. The computer expects a specific voltage or state change when the fuel fill door opens or closes, and the signal it received did not match that expectation during the monitored self-test.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light or service vehicle soon message on the dashboard
- Often no symptoms besides the warning light, because the fuel fill door has no effect on engine operation
- Fuel fill door may appear closed but the cluster or fuel door ajar indicator stays on
- Remote or central locking may fail to release or secure the fuel fill door on vehicles with an electronic latch
- Intermittent warning light that appears after fueling and clears after several drive cycles
- Fuel door may not sit flush or may pop open unexpectedly while driving

Common causes, most likely first

- 1 Fuel fill door position sensor or switch has failed internally and no longer changes state
- 2 Wiring harness to the fuel fill door is chafed, pinched, or corroded at the door hinge area
- 3 Loose, backed-out, or corroded connector terminal at the sensor or at the body control module
- 4 Fuel fill door mechanical binding or misalignment prevents the sensor from reaching its expected position
- 5 Body control module or fuel door control module software calibration issue causing false range errors
- 6 Aftermarket fuel door or fuel cap assembly installed without the correct sensor provision
- 7 Water intrusion into the fuel fill door sensor connector causing intermittent short or open circuits



How to diagnose and fix it

- 1 Verify the fuel fill door opens and closes smoothly and sits flush, then inspect the door hinge and latch for binding or damage
- 2 Check for technical service bulletins and software updates for the fuel fill door position sensor circuit before replacing parts
- 3 Disconnect the sensor connector and inspect terminals for corrosion, water intrusion, or backed-out pins, then clean and reseat
- 4 Backprobe the sensor signal and ground wires with a multimeter and watch the voltage or switch state change as the door is opened and closed
- 5 Perform a wiggle test on the harness while monitoring the sensor signal to expose intermittent wiring faults near the door hinge
- 6 If the signal does not change correctly, remove the sensor and bench-test it or substitute a known-good sensor to confirm the fault
- 7 Clear the code and complete several drive cycles with the fuel door opened and closed to confirm the repair before returning the vehicle

Fuel door sensor faults that fool technicians

- A fuel fill door that looks perfectly closed can still set P04DC because the sensor reads position, not just the latch state, and a worn hinge can leave the sensor just outside its expected range.
- Technicians often replace the sensor first, but chafed wiring at the door hinge is a very common cause on vehicles with a swinging fuel door and should be checked before any part is ordered.
- This code does not mean the fuel system is leaking or that the evaporative emissions system has failed, so do not replace the fuel cap or purge valve based on P04DC alone.
- On vehicles with a central locking fuel door, a failing door actuator motor can drag the sensor signal out of range and set P04DC without any obvious door malfunction.
- A weak or failing body control module ground can cause a range error on the fuel door sensor circuit even when the sensor and wiring test good at the door.

Can I keep driving with P04DC?

P04DC is safe to drive with in most cases because the fuel fill door position does not affect engine operation, braking, or steering. Avoid forcing the fuel door closed if it binds, and have the circuit inspected soon so a simple wiring repair does not become a body control module fault.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or piercing probes
- Trim removal tools
- Torx or hex driver set
- Electrical contact cleaner

Reading P04DC

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

Often seen with

P0455 EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak) · **P04DA** Closed Loop EGR Control At Limit - Flow Too High · **P04DB** Crankcase Ventilation System Disconnected · **P04DD** Cold Start EGR A Flow Insufficient Detected

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04dc/>

