

GENERIC · POWERTRAIN

P04C0

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04C0

Fuel Fill Door Unlock Control Range/Performance

P04C0 indicates that the powertrain control module (PCM) has detected an out-of-range or performance fault in the fuel fill door unlock control circuit, which typically commands a small actuator to release the fuel door when the vehicle is unlocked. The computer monitors the circuit for expected voltage or current feedback and sets this code when the signal does not match the commanded state within a calibrated time window.

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

Symptoms you may notice

- The fuel fill door fails to unlock when the vehicle doors are unlocked, making refueling impossible without manual override.
- The fuel fill door may unlock unexpectedly or remain unlocked at all times, creating a security or fuel theft concern.
- A warning light on the instrument cluster, often accompanied by a chime or message to check the fuel door system.
- In some vehicles, the remote keyless entry or central locking may exhibit erratic behavior if the fuel door actuator shares a circuit.
- Often no symptoms besides the warning light, especially if the actuator still functions intermittently or the fault is stored but not currently active.

Common causes, most likely first

- A faulty fuel fill door unlock actuator, such as a stuck solenoid or worn internal motor, is the most common cause.
- Damaged, corroded, or disconnected wiring or connector at the fuel door actuator or along the harness routing.
- A blown fuse or relay that supplies power to the fuel door unlock circuit, though this often affects other functions as well.
- A malfunctioning body control module (BCM) or PCM that fails to command the actuator correctly, though this is less common.
- Mechanical binding or obstruction in the fuel door latch mechanism that prevents the actuator from moving through its full range.
- Water intrusion or corrosion inside the actuator connector, particularly on vehicles driven in harsh climates.



How to diagnose and fix it

- 1 Verify the fault is current by clearing the code and operating the fuel door unlock function several times; if the code returns, proceed with diagnosis.
- 2 Inspect the fuel fill door actuator connector and wiring for corrosion, damage, or loose pins, and repair as needed.
- 3 Check the fuse and relay that supply power to the fuel door unlock circuit, replacing any failed components.
- 4 Test the actuator directly by applying power and ground to its terminals; if it does not move, replace the actuator.
- 5 Measure resistance and voltage on the control circuit from the BCM or PCM to the actuator to rule out an open or shorted wire.
- 6 If the circuit and actuator test good, check for mechanical binding in the fuel door latch and lubricate or repair as necessary.
- 7 As a last step, verify the BCM or PCM is commanding the actuator correctly using a scan tool with bidirectional controls; replace the module only if confirmed faulty.

What most technicians overlook on P04C0

- A fuel fill door that works perfectly when manually operated can still set P04C0 if the actuator's internal feedback circuit is degraded, so always test the electrical feedback rather than just the mechanical movement.
- The code can be set by a momentary glitch during cold weather when grease in the actuator thickens, and it may not return after clearing, leading to unnecessary parts replacement.
- On some vehicles, the fuel door unlock actuator shares a ground with the rear lighting or central locking system, so a bad ground can cause this code along with unrelated symptoms.
- A binding fuel door hinge or misaligned latch can cause the actuator to draw excessive current, setting a performance code without any visible damage to the actuator itself.
- After replacing the actuator, the code may persist if the new part is not calibrated or if the BCM requires a relearn procedure, which many DIYers miss.

Can I keep driving with P04C0?

The vehicle remains safe to drive because the fuel fill door unlock function does not affect engine operation or safety systems, but you should avoid situations where refueling is urgent until the fault is repaired. If the fuel door cannot be opened manually, keep the fuel level above a quarter tank and plan refueling at a station where you can access the manual release.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Trim removal tools
- Socket set and screwdrivers

Reading P04C0

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
C0	The exact fault within that area.

Often seen with

P04BF Fuel Fill Door Unlock Control Circuit/Open · **P04C1** Fuel Fill Door Unlock Control Circuit Low · **P04C2** Fuel Fill Door Unlock Control Circuit High

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04c0/>

