

GENERIC · POWERTRAIN

# P0CD1

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P0CD1

### Charge Port Door A Unlock Control Circuit

P0CD1 indicates that the powertrain control module (PCM) or a dedicated charge port control module has detected an abnormal condition in the electrical circuit responsible for unlocking the charge port door on a plug-in hybrid or electric vehicle. The module monitors the unlock actuator's control wire for expected voltage or current feedback and sets this code when the signal falls outside the manufacturer's specified range, pointing to an open circuit, short to ground, short to power, or a faulty actuator.

| SYSTEM     | CODE TYPE           | SEVERITY | FIX DIFFICULTY | AREA              |
|------------|---------------------|----------|----------------|-------------------|
| Powertrain | Generic (all makes) | Medium   | Intermediate   | Hybrid propulsion |

### Symptoms you may notice

- The charge port door will not unlock when commanded, preventing the charging connector from being inserted or removed.
- A warning light or message on the instrument cluster indicating a charge port door fault.
- The charge port door may unlock intermittently or only after multiple attempts.
- Audible clicking from the charge port area without the door actually releasing.
- Often no symptoms besides the warning light if the mechanical release still functions.
- In some vehicles, the vehicle may refuse to start or enter ready mode because it cannot confirm the charge port door state.

### Common causes, most likely first

- Failed charge port door unlock actuator or solenoid, which is the most common cause due to mechanical wear and environmental exposure.
- Damaged or corroded wiring harness at the charge port door hinge or connector, often from repeated flexing or water intrusion.
- Blown fuse or faulty relay supplying power to the unlock control circuit.
- Poor ground connection at the charge port door actuator or body ground point.
- Faulty charge port door position or lock sensor sending an incorrect signal to the control module.
- Internal failure of the charge port control module or body control module that manages the unlock output.
- Aftermarket accessories or improper previous repairs that tapped into the charge port circuit.



## How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related body or charge port module codes before clearing anything.
- 2 Inspect the charge port door area for physical damage, debris, ice, or misalignment that could mechanically bind the door and mimic an electrical fault.
- 3 Check the fuse and relay for the charge port unlock circuit and replace any that are blown or suspect.
- 4 Disconnect the actuator connector and inspect terminals for corrosion, water intrusion, or pushed-out pins; clean and repair as needed.
- 5 Measure voltage and ground at the actuator connector while commanding the unlock function with a scan tool to confirm power and ground delivery.
- 6 Test the actuator directly with a known-good power and ground source to confirm whether it operates; replace the actuator if it does not.
- 7 If the actuator and wiring test good, check the control module output and signal return circuit for opens or shorts, repairing the harness as required.

## Charge port door unlock circuit traps

- A charge port door that is physically stuck due to ice, dirt, or a bent hinge will set this code even when every electrical component is healthy, so always check mechanical freedom first.
- The unlock actuator often shares a connector with the charge port illumination and position sensor, and water intrusion into that single connector can set multiple codes that mislead you toward replacing the module.
- Some vehicles use a latching mechanism that requires the vehicle to be unlocked with the key fob before the charge port door will release, and a weak fob battery can cause an intermittent no-unlock condition that stores P0CD1.
- A shorted or open unlock control wire can be caused by a previous repair that pinched the harness behind the charge port trim, which is easy to overlook when diagnosing from the scan tool alone.
- This code does not always mean the actuator has failed; a faulty body control module ground or a low battery voltage during a unlock command can set the same code without any defective part.

## Can I keep driving with P0CD1?

You can generally continue driving because the charge port door does not affect propulsion or safety, but you may be unable to charge the vehicle, so avoid long trips that depend on public charging until the fault is repaired. Do not force the door open, as that can damage the actuator and latch assembly.



### Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Trim removal tools
- Test light or power probe
- Service information for the specific vehicle's charge port circuit

### Reading P0CD1

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| <b>P</b>  | Powertrain: engine, transmission and emissions.                      |
| <b>0</b>  | Generic (SAE) code: it means the same thing on every OBD-II vehicle. |
| <b>C</b>  | Hybrid propulsion.                                                   |
| <b>D1</b> | The exact fault within that area.                                    |

### Often seen with

**P0CD0** AC Plug Voltage Sense Circuit · **P0CD2** Charge Port Door A Unlock Control Circuit Performance · **P0CD3** Charge Port Door A Unlock Control Circuit Low · **P0CD4** Charge Port Door A Unlock Control Circuit High · **P0CD5** Hybrid/EV Battery Pack Coolant Temperature Sensor B Circuit

### See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0cd1/>

