



## P0CDD

# Drive Motor A Position Sensor Circuit C Circuit High

P0CDD indicates that the computer has detected an abnormally high voltage on the signal circuit for 'C' of the position sensor that monitors the rotor position of drive motor 'A', which is the primary traction motor in a hybrid or electric vehicle. The motor controller expects the sensor's output to stay within a specific low-voltage range, and a sustained high reading tells it that the circuit is shorted to power or the sensor has failed.

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

## Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other noticeable symptoms.
- The vehicle may enter a reduced-power limp mode, limiting acceleration and speed.
- The hybrid or electric drive system may shut down entirely, preventing the vehicle from moving.
- A warning message on the dashboard indicating a fault with the hybrid or electric propulsion system.
- Rough operation or hesitation when the vehicle transitions between electric and engine power.
- In some cases, the vehicle may fail to start or engage the ready mode.

## Common causes, most likely first

- 1 A short to voltage in the sensor signal circuit, often caused by chafed or damaged wiring harness insulation.
- 2 A faulty motor position sensor, where the internal sensor element has failed and outputs a constant high signal.
- 3 Corrosion or water intrusion at the sensor connector or within the motor housing, bridging the signal circuit to a power source.
- 4 A defective motor control module (inverter) that incorrectly interprets or supplies voltage to the sensor circuit.
- 5 Loose or damaged pins in the sensor connector, creating an intermittent high-resistance or short condition.
- 6 A damaged resolver or sensor rotor inside the motor, though this is less common for a high-voltage signal fault.



## How to diagnose and fix it

- 1 Perform a visual inspection of the motor position sensor wiring and connector for signs of chafing, corrosion, or loose pins.
- 2 Use a digital multimeter to check for battery voltage on the sensor signal circuit with the key on and the sensor disconnected; any voltage indicates a short to power.
- 3 Disconnect the motor control module and check for continuity between the sensor signal circuit and ground or power circuits to isolate the short.
- 4 Inspect the sensor itself by measuring its resistance or output signal with a scope if specifications are available, comparing to the manufacturer's expected values.
- 5 Repair any damaged wiring or replace the sensor if it is found to be internally shorted, following the manufacturer's service procedure for motor disassembly if required.
- 6 Clear the diagnostic trouble codes and perform a road test to verify the repair, ensuring the code does not return.

## High Voltage Does Not Always Mean a Bad Sensor

- A shorted sensor signal wire can be caused by a pinched harness near the motor mount or where the wiring passes through the body, which is often overlooked when only the sensor is replaced.
- The motor position sensor is sometimes integrated into the resolver assembly, and a high signal code can be set by a failing resolver winding rather than the sensor itself.
- Water or oil intrusion into the motor connector can create a conductive path that mimics a short to voltage, so checking for fluid contamination is critical before replacing parts.
- In some vehicles, a low 12-volt battery or poor ground can cause the motor control module to misinterpret sensor signals and set this code erroneously, so always verify battery condition first.
- This code can be stored alongside other position sensor codes (like P0CDA or P0CDC) if multiple circuits are affected, which may point to a common power or ground fault rather than individual sensor failures.

## Can I keep driving with P0CDD?

Do not continue driving with this code active, as the vehicle may enter a reduced-power mode or shut down unexpectedly, increasing the risk of a collision. Have the vehicle towed to a qualified repair facility for diagnosis and repair.

## Tools that help

- Digital multimeter with voltage and resistance measurement
- Oscilloscope for signal waveform analysis
- Manufacturer-specific scan tool to read live data and clear codes
- Wiring diagram and service information for the specific vehicle
- Basic hand tools for connector and component access



## Reading P0CDD

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| <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>DD</b> | The exact fault within that area.                                    |

## Often seen with

**P0C00** Drive Motor A Current Low · **P0CDA** Drive Motor A Position Sensor Circuit C Circuit · **P0CDB** Drive Motor A Position Sensor Circuit C Range/Performance · **P0CDC** Drive Motor A Position Sensor Circuit C Circuit Low · **P0CDE** Drive Motor A Position Sensor Circuit C Circuit Intermittent

## See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0cdd/>

