

GENERIC · POWERTRAIN

# P0C57

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P0C57

### Drive Motor B Position Sensor Circuit A Circuit Low

P0C57 indicates that the powertrain control module has detected a low voltage condition on the 'A' signal circuit of the position sensor for drive motor B, which is the second electric motor in a hybrid or electric vehicle's propulsion system. The sensor reports the rotor position of drive motor B, and a low signal means the circuit is shorted to ground, open, or the sensor's output is below the expected range. This can affect motor control and may trigger reduced power or a shutdown of the hybrid system.

| 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 hybrid system warning light
- Reduced engine power or limited vehicle speed, often entering limp mode
- The vehicle may refuse to start or move, especially in electric-only mode
- Rough running or shuddering during acceleration if the motor is still operating
- Often no symptoms besides the warning light, particularly if the fault is intermittent

### Common causes, most likely first

- 1 Damaged or chafed wiring in the drive motor B position sensor circuit, especially near connectors or where the harness bends
- 2 Corroded, loose, or water-intruded electrical connector at the position sensor or powertrain control module
- 3 Internal failure of the drive motor B position sensor, such as a shorted or open sensing element
- 4 Faulty powertrain control module, though this is less common and should be diagnosed last
- 5 Poor ground connection for the sensor or motor assembly, causing a reference voltage drop
- 6 Aftermarket or improper repairs that disturbed the sensor circuit, such as a poorly spliced wire



## How to diagnose and fix it

- 1 Perform a visual inspection of the drive motor B position sensor wiring and connectors for damage, corrosion, or loose pins
- 2 Use a scan tool to check for related codes and freeze-frame data, and verify the sensor signal with a live data stream if available
- 3 Measure resistance and voltage on the sensor circuit according to the manufacturer's service information, checking for shorts to ground or opens
- 4 Disconnect the sensor and check for the correct reference voltage and ground at the connector, then inspect the sensor's internal resistance
- 5 Repair or replace any damaged wiring, terminals, or connectors, and clear the codes to see if the fault returns
- 6 If the circuit tests good, replace the drive motor B position sensor, following the proper relearn or calibration procedure
- 7 As a last resort, diagnose the powertrain control module for internal faults after all other possibilities are eliminated

## Before you replace the drive motor B sensor

- A low signal code often results from a simple wiring problem, such as a pinched harness near the motor mount or a corroded connector, rather than a failed sensor.
- Intermittent faults can be caused by vibration or temperature changes, so wiggle-testing the harness while monitoring live data is a crucial step that many technicians skip.
- The position sensor shares its reference voltage or ground with other sensors in some designs, so a fault elsewhere can drag down the signal and set this code.
- After replacing the sensor, some vehicles require a position offset relearn or calibration procedure; failing to do so can cause drivability issues or a repeat code.
- This code does not always mean the motor itself is failing; the sensor circuit is a separate system, and misdiagnosing it as a motor fault leads to unnecessary and expensive repairs.

## Can I keep driving with P0C57?

If the vehicle enters limp mode or the hybrid system warning is illuminated, avoid driving at high speeds or under heavy load, and proceed cautiously to a repair facility. Continued driving with a low position sensor signal can cause the motor to operate inefficiently or shut down unexpectedly, so it is safest to have the fault diagnosed promptly.



## Tools that help

- OBD-II scan tool with live data and hybrid system capabilities
- Digital multimeter with back-probing pins
- Manufacturer-specific wiring diagrams and service information
- Insulation piercing probes or breakout box for circuit testing
- Basic hand tools for connector and sensor removal

## Reading P0C57

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| <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>57</b> | The exact fault within that area.                                    |

## Often seen with

**P0C55** Drive Motor B Position Sensor Circuit A Circuit · **P0C56** Drive Motor B Position Sensor Circuit A Range/Performance · **P0C58** Drive Motor B Position Sensor Circuit A Circuit High · **P0C59** Drive Motor B Position Sensor Circuit A Circuit Intermittent · **P0C5A** Drive Motor A Position Sensor Circuit B Circuit

## 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/p0c57/>

