

GENERIC · POWERTRAIN

P0C0A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C0A

Drive Motor B Phase U-V-W Circuit High

P0C0A indicates that the inverter or motor control module has detected an abnormally high voltage or current on the U, V, or W phase circuit of drive motor B, which is the second electric motor in a hybrid or electric vehicle's propulsion system. The computer compares commanded phase outputs against actual feedback and flags this code when the circuit exceeds safe limits, often due to a short to voltage, a failing motor winding, or a damaged cable.

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/EV system warning lamp
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or limp-home mode with limited motor B operation
- Rough running or shuddering during electric-only propulsion
- Overheating of the inverter or motor, leading to power derating
- In rare cases, a sudden loss of propulsion or failure to start

Common causes, most likely first

- 1 Damaged or chafed phase cable between the inverter and motor B, causing a short to voltage or ground
- 2 Failed motor B stator winding with insulation breakdown or shorted turns
- 3 Faulty inverter assembly with internal shorted power transistors or driver circuit failure
- 4 Loose or corroded high-voltage connector pins at the motor or inverter
- 5 Coolant contamination or overheating of the inverter leading to component stress
- 6 Software calibration error in the motor control module (rare, often requires reflash)



How to diagnose and fix it

- 1 Perform a visual inspection of the high-voltage phase cables and connectors for chafing, corrosion, or loose pins
- 2 Use a scan tool to read live data and freeze-frame information for motor B phase voltage and current
- 3 Measure insulation resistance and continuity of the U, V, and W phase cables with a megohmmeter, following manufacturer safety procedures
- 4 Check motor B winding resistance and insulation to ground using a low-resistance ohmmeter and megohmmeter
- 5 Inspect inverter cooling system for leaks or blockages that could cause overheating
- 6 If cables and motor test good, substitute a known-good inverter or motor control module for diagnosis
- 7 After repair, clear codes and perform a road test to verify the fault does not return

High-voltage phase faults often misdiagnosed

- A chafed phase cable rubbing against a metal bracket is a common cause that many technicians overlook when they focus on the motor or inverter.
- The code can be set by a loose high-voltage connector pin that only loses contact during vibration, so a static inspection may not reveal the problem.
- Motor B phase faults sometimes appear after a coolant leak contaminates the inverter, so always check for dried coolant residue around connectors.
- Replacing the inverter without first testing the phase cables and motor windings can lead to a repeat failure if the root cause is external.
- Some vehicles set P0C0A as a companion code to other hybrid system faults, so diagnosing the primary code first may resolve this one.

Can I keep driving with P0C0A?

Do not continue driving with this code active, because a high-voltage phase fault can cause sudden loss of propulsion or further damage to the inverter and motor. Have the vehicle towed to a qualified hybrid/EV service facility for diagnosis.

Tools that help

- Hybrid/EV safety gloves and insulated tools
- Digital multimeter with high-voltage rating
- Megohmmeter (insulation tester)
- OBD-II scan tool with hybrid/EV capability
- Manufacturer service information for high-voltage disable procedure



Reading P0C0A

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A3F** Drive Motor A Position Sensor Circuit · **P0C00** Drive Motor A Current Low · **P0C09** Drive Motor B Phase U-V-W Circuit Low · **P0C0B** Drive Motor A Inverter Power Supply Circuit/Open

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/p0c0a/>

