

GENERIC · POWERTRAIN

P2C71

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C71

Drive Motor "A" Phase Z Current High

P2C71 indicates that the inverter controller for drive motor A has detected an excessively high current in phase Z, which is one of the three motor windings. The computer compares commanded current against measured phase current and flags this code when the Z-phase current exceeds the calibrated threshold, pointing to a short, a failing inverter, or a wiring fault.

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

Symptoms you may notice

- Illumination of the hybrid or electric vehicle warning light, often with a reduced power message
- The vehicle may enter limp mode or refuse to start in ready mode
- A noticeable loss of propulsion power or shuddering under acceleration
- Audible whining or clicking from the inverter or motor area during operation
- Often no symptoms besides the warning light if the fault is intermittent
- Possible high-voltage system shutdown with a service vehicle soon message

Common causes, most likely first

- 1 Damaged or shorted phase Z cable between the inverter and the drive motor
- 2 Internal short or insulation breakdown in the drive motor A phase Z winding
- 3 Failed current sensor or signal circuit inside the inverter controller
- 4 Faulty inverter power module causing uncontrolled current flow in phase Z
- 5 Corroded or loose high-voltage connector pins at the motor or inverter
- 6 Coolant contamination or overheating of the inverter leading to component failure
- 7 Software calibration error in the inverter control module (rare but possible)

How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P2C71
- 2 Visually inspect the high-voltage phase cables and connectors for chafing, corrosion, or loose pins
- 3 Measure insulation resistance and continuity of the phase Z cable between inverter and motor
- 4 Check the motor phase Z winding resistance and compare it to the other two phases
- 5 Verify the inverter current sensor signal with a scope or manufacturer-specific live data
- 6 Perform any available inverter software update or recalibration before replacing hardware
- 7 Replace the faulty inverter, motor, or cable only after electrical tests confirm the failed component



Phase Z current faults that fool technicians

- A loose high-voltage connector pin can mimic a failed inverter by causing intermittent phase Z current spikes that clear when the connector is reseated.
- Coolant leaks into the inverter housing often damage only the current sensor circuit, setting P2C71 without any motor winding fault.
- The code can be stored by a brief overcurrent event during hard acceleration and may never return, so always check for a recent software update before condemning parts.
- Phase Z is one of three motor phases, and a single shorted winding can still allow the vehicle to move slowly, leading owners to delay repair until the inverter is also damaged.
- A failing 12-volt battery or poor chassis ground can cause erratic current sensor readings that set this code, so verify supply voltage and grounds first.

Can I keep driving with P2C71?

Do not continue driving with P2C71 active because a phase current fault can escalate to a high-voltage inverter failure or sudden loss of propulsion. Have the vehicle towed to a qualified hybrid or electric vehicle technician if it will not enter ready mode or shows reduced power.

Tools that help

- Hybrid/EV-rated digital multimeter with insulation resistance function
- Oscilloscope with high-voltage differential probe
- Manufacturer-specific scan tool with live data and bidirectional controls
- High-voltage safety gloves and insulated tools
- Wiring diagram and service information for the specific vehicle

Reading P2C71

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

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0A78** Drive Motor A Inverter Performance · **P2C70** Drive Motor "A" Phase Z Current Low · **P2C72** Hybrid/EV Electronics Cooling System Performance



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/p2c71/>

