

GENERIC · POWERTRAIN

P0C01

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C01

Drive Motor A Current High

P0C01 means the hybrid or electric vehicle control module has detected that the current flowing through drive motor A exceeds the safe limit for the operating conditions. The computer monitors current sensors and compares the actual draw against expected values, and when the measured current stays too high for a calibrated time, it logs this code and may reduce power or disable the motor.

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

Symptoms you may notice

- Illumination of the hybrid system or check engine light, often with no other noticeable symptoms
- Reduced power or a limp-home mode that limits vehicle speed
- The vehicle may refuse to start or shift into drive if the fault is severe
- A burning smell or unusual heat from the motor or inverter area in advanced cases
- Intermittent stalling or sudden loss of propulsion while driving

Common causes, most likely first

- 1 A failing current sensor inside the motor or inverter assembly that reports falsely high current
- 2 Damaged or corroded wiring and connectors between the motor, inverter, and control module
- 3 A short circuit or insulation breakdown in the motor windings or cables
- 4 A faulty inverter or power control unit that misreads or misapplies current
- 5 Mechanical binding or drag in the drive motor or connected drivetrain that forces higher current draw
- 6 Low or contaminated motor coolant causing overheating and increased current
- 7 A software calibration issue in the motor control module that requires an update



How to diagnose and fix it

- 1 Use a scan tool to read all hybrid and motor control codes and freeze-frame data to confirm when the high current was detected
- 2 Visually inspect the motor, inverter, and their wiring for chafing, corrosion, loose connectors, or coolant leaks
- 3 Measure the actual current with a clamp meter during a controlled test and compare it to the scan tool reading to verify sensor accuracy
- 4 Check motor coolant level and condition, and verify that the cooling system is operating correctly
- 5 Perform a insulation resistance test on the motor windings and cables to rule out a short to ground
- 6 If the current sensor or inverter is suspect, follow the manufacturer's diagnostic flow to test or replace the affected component
- 7 After repairs, clear the codes and perform a road test to confirm the current stays within normal limits and the code does not return

What a high current code really tells you

- A false high-current reading from a degraded sensor is more common than an actual motor failure, so always verify the current with an external meter before condemning the motor.
- Mechanical drag from a worn bearing or a binding brake can force the motor to draw excessive current without any electrical fault, so check for abnormal resistance in the drivetrain.
- This code can be set by a low 12-volt battery or a weak hybrid battery pack that causes the motor to compensate with higher current, so inspect the low-voltage system first.
- In many vehicles, P0C01 is accompanied by other hybrid codes that point to the root cause, so reading all modules is essential before replacing parts.
- After any repair involving the high-voltage system, the code may remain stored until a specific drive cycle is completed, so do not assume the fix failed if the light stays on briefly.

Can I keep driving with P0C01?

Do not continue driving with this code because excessive motor current can lead to overheating, sudden loss of power, or damage to expensive hybrid components. Have the vehicle towed to a qualified technician if it is not already in a safe location.

Tools that help

- Hybrid-capable scan tool
- Digital multimeter
- Clamp-on current meter
- Insulation resistance tester
- Basic hand tools for connector and component access



Reading P0C01

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

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0A3F** Drive Motor A Position Sensor Circuit · **P0A94** DC/DC Converter A Performance · **P0C00** Drive Motor A Current Low · **P0C02** Drive Motor B Current

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/p0c01/>

