



P0C11

Drive Motor A Inverter Phase U Over Temperature

P0C11 indicates that the inverter responsible for converting direct current (DC) to alternating current (AC) for drive motor A has reported an excessively high temperature on its phase U output. The computer monitors a temperature sensor inside the inverter and sets this code when the phase U temperature exceeds a calibrated threshold, typically due to excessive current flow, cooling system problems, or a failing inverter component.

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 a dedicated hybrid/EV warning lamp.
- Reduced power output or limp-home mode, often accompanied by a message to pull over safely.
- In some cases, the vehicle may refuse to start or enter a 'ready' state.
- Intermittent loss of drive power during acceleration or under heavy load.
- Often no symptoms besides the warning light, especially if the fault is stored but not currently active.

Common causes, most likely first

- 1 Low or contaminated inverter coolant, or a blockage in the cooling circuit.
- 2 A failing coolant pump that supplies the inverter cooling loop.
- 3 High resistance or loose connections in the phase U motor cable or inverter terminals.
- 4 Internal inverter fault, such as a degraded insulated-gate bipolar transistor (IGBT) or temperature sensor.
- 5 A shorted or partially shorted drive motor winding on phase U.
- 6 Overloading the vehicle beyond its rated towing or payload capacity, causing excessive current draw.
- 7 Software calibration issues in the inverter control module that misjudge temperature thresholds.



How to diagnose and fix it

- 1 Check the inverter coolant level and condition; top up or replace coolant as needed and pressure-test the system for leaks.
- 2 Verify operation of the inverter coolant pump and confirm coolant flow through the inverter.
- 3 Inspect the phase U cable and connectors for corrosion, tightness, and signs of overheating or arcing.
- 4 Use a scan tool to monitor inverter temperature sensor readings and compare them with actual temperatures to rule out sensor drift.
- 5 Perform a resistance and insulation test on the phase U motor winding and cable to detect shorts or grounds.
- 6 If all external checks pass, follow the manufacturer's diagnostic flow for inverter internal faults, which may require replacement or reprogramming.
- 7 After repairs, clear the code and perform a road test under load to confirm the temperature stays within normal limits.

Inverter Cooling and Phase U Checks

- A common oversight is assuming the inverter itself is faulty when the real problem is a clogged or air-locked coolant circuit that only affects the inverter loop, not the engine radiator.
- The phase U temperature sensor can fail in a way that reports high temperatures even when the inverter is cool, leading to unnecessary inverter replacement if the sensor signal is not verified.
- Intermittent code setting often occurs during repeated hard accelerations or long uphill climbs, so a simple around-the-block test drive may not reproduce the fault.
- High ambient temperatures and a dirty condenser or radiator can reduce overall cooling efficiency and contribute to inverter overheating, especially in hybrid vehicles where the inverter shares a cooling circuit.
- Some vehicles set this code as a history code after a low-voltage event or a jump start, and it may not indicate a current overheating condition.

Can I keep driving with P0C11?

If the warning light is accompanied by reduced power or a message to stop safely, pull over and shut off the vehicle to prevent inverter damage. Do not continue driving under heavy load or at high speeds until the fault is diagnosed and repaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with temperature probe
- Insulation resistance tester (megohmmeter)
- Coolant pressure tester
- Infrared thermometer
- Manufacturer-specific diagnostic software



Reading P0C11

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

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0C0E** Drive Motor B Inverter Power Supply Circuit/Open · **P0C0F** Drive Motor B Inverter Power Supply Circuit Low · **P0C10** Drive Motor B Inverter Power Supply Circuit High · **P0C12** Drive Motor A Inverter Phase V Over Temperature

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/p0c11/>

