



P0C15

Drive Motor B Inverter Phase V Over Temperature

P0C15 means the inverter that drives the electric motor on the B side of a hybrid or electric drivetrain has reported an over-temperature condition on its V phase output. The computer compares the phase temperature sensor reading against a calibrated limit and sets the code when that limit is exceeded, usually to protect the power transistors from thermal damage.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon light, often with no other noticeable symptoms.
- Reduced power or a limp-home mode that limits motor output once the inverter temperature rises.
- A message on the dash advising the driver to stop the vehicle or that hybrid performance is limited.
- Intermittent loss of drive or a sudden shutdown after sustained high-load driving such as long uphill grades.
- Audible cooling fan running constantly or more aggressively than usual as the system tries to shed heat.
- In rare cases, a burning or hot electrical smell from the inverter area under the hood or rear cargo floor.

Common causes, most likely first

- 1 Low or contaminated inverter coolant, or air trapped in the cooling circuit after recent service.
- 2 A failed or weak inverter coolant pump that cannot maintain flow under load.
- 3 A restricted or clogged inverter radiator, heat exchanger, or cooling fins packed with debris.
- 4 A faulty V phase temperature sensor or damaged sensor wiring giving a false high reading.
- 5 Poor electrical connection or corrosion at the inverter harness connector causing resistance heating.
- 6 An actual failing inverter power module or insulated-gate bipolar transistor (IGBT) that is generating excess heat.
- 7 A software calibration issue in the inverter control module that sets the threshold too aggressively.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0C15, then verify the reported phase temperature against ambient and coolant temperature with the key on and the engine off.
- 2 Inspect the inverter coolant level, condition, and flow; bleed the cooling system if air is suspected and confirm the pump runs with a commanded activation test.
- 3 Clean the inverter radiator and heat exchanger fins and confirm the cooling fan operates correctly under commanded load.
- 4 Back-probe the V phase temperature sensor signal and compare it with a known-good phase sensor or a resistance chart to rule out a false reading.
- 5 Inspect the inverter harness connectors for corrosion, pushed pins, or chafed wiring, and perform a voltage drop test on the power and ground circuits.
- 6 If the sensor and cooling system check out, perform the manufacturer's inverter diagnostic routine and replace the inverter assembly only after confirming the power module is the heat source.
- 7 After repair, clear codes, run a road test under load, and verify that phase temperatures remain within the normal range and the code does not return.

Why inverter phase V overheats without a hard failure

- A partially blocked inverter coolant passage or a failing pump often sets P0C15 long before the driver notices any performance change, so cooling system health is the first thing to verify.
- The V phase temperature sensor can drift high without failing completely, producing a code that looks like an inverter fault but is actually a sensor calibration issue.
- Technicians sometimes replace the entire inverter when the real cause is a corroded connector pin that adds resistance and local heat at the phase terminal.
- This code can be set by a software update that changes the temperature threshold, so check for applicable calibration bulletins before condemning hardware.
- Repeated short trips in hot ambient temperatures can trigger P0C15 on a marginal cooling system even when the vehicle performs normally on longer drives.

Can I keep driving with P0C15?

Do not continue driving under heavy load once P0C15 is set, because continued operation can overheat and destroy the inverter power module. Limp the vehicle to a safe location or a repair shop at low speed and avoid sustained uphill grades or aggressive acceleration until the fault is repaired.



Tools that help

- Hybrid/EV-capable scan tool with live data and bidirectional controls
- Digital multimeter with temperature probe
- Infrared thermometer
- Cooling system pressure tester and bleed kit
- Back-probe kit and wiring repair tools
- Manufacturer service information for inverter cooling and diagnostics

Reading P0C15

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

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0A93** Inverter A Cooling System Performance · **P0C00** Drive Motor A Current Low · **P0C14** Drive Motor B Inverter Phase U Over Temperature · **P0C16** Drive Motor B Inverter Phase W 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/p0c15/>

