

GENERIC · POWERTRAIN

P0CAB

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CAB

Hybrid/EV Battery Temperature Sensor M Circuit High

P0CAB indicates that the hybrid or electric vehicle battery pack's temperature sensor circuit, designated 'M', is reporting a voltage higher than the manufacturer's expected range. The battery energy control module sets this code when the sensor signal wire shows an abnormally high voltage, which usually means the circuit is open or the sensor's internal resistance has shifted out of specification.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Often no symptoms besides the warning light, especially in mild weather
- Reduced electric-only driving range or forced engine operation in hybrids
- A noticeable drop in battery charging performance or disabled fast charging
- Possible limp-home mode or refusal to start in some vehicles
- In rare cases, a burning smell or hot battery area if the sensor is misreporting a real overheating event

Common causes, most likely first

- 1 Open or damaged wire in the sensor signal circuit, often from rodent damage or chafing
- 2 Corroded or loose connector pins at the temperature sensor or battery control module
- 3 Failed temperature sensor 'M' with an internal open circuit or resistance drift
- 4 Faulty battery energy control module or hybrid control module interpreting the signal incorrectly
- 5 High-resistance ground connection shared by the sensor circuit
- 6 Physical damage to the sensor harness from road debris or improper previous repairs



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P0CAB is active and not a history code
- 2 Visually inspect the sensor harness and connectors for chafing, corrosion, or rodent damage
- 3 Measure resistance of sensor 'M' at the connector and compare to the manufacturer's temperature-resistance chart
- 4 Back-probe the signal circuit with the key on to check for the expected reference voltage and verify the ground circuit
- 5 Perform a wiggle test on the harness while watching live temperature data to catch intermittent opens
- 6 If the circuit checks good, substitute a known-good sensor or simulate the signal with a resistor box to confirm the module's response
- 7 Replace the faulty sensor or repair the wiring, clear the code, and verify the temperature reading tracks ambient and operating conditions

What the high-voltage battery hides

- A high-voltage battery temperature sensor can fail intermittently, so the code may only set after a long soak or during aggressive driving when the pack heats up.
- Many technicians replace the sensor first, but an open signal wire from a chewed harness or a backed-out terminal is just as common and far cheaper to fix.
- The code does not always mean the battery is overheating; it means the circuit voltage is high, which often happens when the sensor is disconnected or open.
- On some platforms, a weak 12-volt auxiliary battery can cause the hybrid control module to misread sensor voltages, so check system voltage before condemning parts.
- Clearing the code without checking live temperature data can lead to a comeback, because a sensor that reads plausibly at room temperature may still go open when hot.

Can I keep driving with P0CAB?

You can usually drive the vehicle to a workshop, but avoid heavy acceleration, sustained high speeds, and fast charging until the fault is repaired. If the hybrid system warning turns red or the vehicle enters limp mode, stop driving and have it towed.

Tools that help

- OBD-II scan tool with hybrid module access and live data
- Digital multimeter with resistance and voltage measurement
- Manufacturer service information with temperature-resistance charts
- Back-probe kit and terminal test leads
- Insulated hand tools and personal protective equipment for high-voltage safety



Reading P0CAB

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0CA9** Hybrid/EV Battery Temperature Sensor M Range/Performance · **P0CAA** Hybrid/EV Battery Temperature Sensor M Circuit Low · **P0CAC** Hybrid/EV Battery Temperature Sensor M Circuit Intermittent/

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/p0cab/>

