

GENERIC · POWERTRAIN

P0C36

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C36

Hybrid/EV Battery Temperature Sensor F Circuit High

P0C36 means the hybrid or electric vehicle battery pack's temperature sensor F circuit is reporting a voltage higher than the manufacturer expects, which the battery energy control module interprets as an open or short-to-power condition. The computer has detected an out-of-range high signal on that specific sensor's circuit, not necessarily a failed sensor itself. This code can affect battery charging and cooling strategy even when the vehicle seems to drive normally.

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

Symptoms you may notice

- Illuminated check engine or hybrid system warning light, often with no other noticeable symptoms
- Reduced or disabled battery cooling fan operation, leading to slower charging or limited electric-only range
- A message on the dash advising that hybrid or EV service is required
- Reduced power output or a limp-home mode in some vehicles when the battery management system derates the pack
- Inconsistent state-of-charge readings or unexpected engine starts in a plug-in hybrid
- No symptoms besides the warning light in many cases, especially when the fault is intermittent

Common causes, most likely first

- 1 Damaged or corroded wiring harness between sensor F and the battery energy control module
- 2 Loose, backed-out, or corroded terminal pins at the sensor connector or module connector
- 3 Open circuit inside the temperature sensor F itself, such as a broken internal element
- 4 Short to voltage on the sensor signal wire from chafing against a metal body panel or another harness
- 5 Failed battery energy control module driver circuit for that sensor input
- 6 Moisture intrusion into the battery pack connector or sensor cavity causing high resistance
- 7 Aftermarket or improper prior repair work that disturbed the battery pack wiring



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0C36, then verify the sensor F voltage reading on a live data stream against ambient and pack temperature
- 2 Inspect the sensor F connector and the battery energy control module connector for corrosion, loose pins, and pushed-back terminals
- 3 Measure resistance across sensor F at the connector and compare it to the manufacturer's temperature-resistance chart for the current pack temperature
- 4 Check the sensor signal wire for a short to voltage and the ground circuit for excessive resistance using a multimeter with the connectors disconnected
- 5 Perform a wiggle test on the harness while watching live sensor F data to catch intermittent opens or shorts
- 6 If wiring and connectors pass, substitute a known-good sensor or simulate the correct resistance at the connector to confirm whether the sensor or the module is at fault
- 7 Replace the failed sensor or repair the harness, clear the code, and verify sensor F reads correctly through a full ignition cycle and a short drive

What a high sensor F reading really means

- A high voltage on a temperature sensor circuit almost always indicates an open circuit or a short to voltage rather than a genuinely hot battery, so replacing the sensor before checking the harness wastes money.
- Many vehicles set P0C36 only after a plausibility check compares sensor F against the other pack temperature sensors, meaning a single skewed sensor can trigger the code even when the pack is thermally fine.
- Intermittent P0C36 that appears after rain or a car wash often points to moisture in a connector rather than a failed sensor, and the fault may disappear once the connector dries out.
- The battery energy control module may command reduced fast-charging or disable the cooling fan as a protective strategy when this code is active, so ignoring it can accelerate pack degradation over time.
- A weak 12-volt auxiliary battery can cause erratic sensor readings and false temperature codes on some hybrids, so check system voltage before condemning battery pack components.

Can I keep driving with P0C36?

You can usually drive the vehicle short distances to a repair shop, but avoid fast charging and heavy electrical loads until the fault is repaired. If the dash displays a reduced power or stop-driving message, park safely and arrange a tow rather than continuing.



Tools that help

- OBD-II scan tool with hybrid/EV module access and live data capability
- Digital multimeter with resistance and voltage measurement
- Manufacturer service information with temperature-resistance charts and wiring diagrams
- Back-probe kit or breakout leads for connector testing
- Insulated hand tools and personal protective equipment rated for high-voltage work

Reading P0C36

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0C33** Hybrid/EV Battery Temperature Sensor F Circuit
 · **P0C34** Hybrid/EV Battery Temperature Sensor F Circuit Range/Perform · **P0C35** Hybrid/EV Battery
 Temperature Sensor F Circuit Low · **P0C37** Hybrid/EV Battery Temperature Sensor F 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/p0c36/>

