

FORD · POWERTRAIN

P1196

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1196 · Ford

Key Off Voltage High

P1196 on Ford vehicles means the powertrain control module (PCM) measured a battery voltage that was too high during the key-off period, when the engine is not running and the module is monitoring its keep-alive memory circuit. The PCM expects the key-off voltage to sit near battery voltage but within a calibrated upper limit, and this code sets when that reading climbs above the threshold, usually because of a charging system fault, a bad voltage reference, or a wiring problem.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, because the fault is logged during the key-off period and may not affect driveability.
- Battery warning light or charging system light illuminated on the dashboard.
- Headlights or interior bulbs burning out prematurely from sustained overvoltage.
- Battery case swelling, electrolyte smell, or a battery that gets hot after driving.
- Intermittent electrical glitches such as flickering dash lights or accessories behaving erratically.
- Hard starting or a no-start condition if the battery has been damaged by overcharging.

Common causes, most likely first

- Voltage regulator failure inside the alternator, allowing charging voltage to run above the normal 13.5 to 14.8 volt range.
- Corroded, loose, or damaged battery positive or ground cables creating a voltage reference error at the PCM.
- A failing battery that will not hold a stable key-off voltage and skews the PCM's voltage reading.
- PCM keep-alive memory circuit fault, including internal PCM voltage sensing errors or a bad power feed to the module.
- Aftermarket accessories or a faulty charging system component wired incorrectly and feeding voltage back into the key-off circuit.
- Water intrusion or chafed wiring in the harness between the battery, alternator, and PCM causing intermittent high-voltage readings.



How to diagnose and fix it

- 1 Perform a key-off battery voltage test with a digital multimeter and compare it to the PCM's reported voltage using a scan tool to confirm the fault is real.
- 2 Inspect and clean the battery terminals, ground straps, and the positive cable at the alternator and starter, checking for corrosion or looseness.
- 3 Load-test the battery and replace it if it fails, since a weak battery can produce misleading key-off voltage readings.
- 4 Run the engine and measure charging voltage at the battery; if it exceeds roughly 14.8 volts, diagnose the alternator voltage regulator.
- 5 Check for aftermarket wiring or accessories tied into the battery feed and disconnect them temporarily to see if the code returns.
- 6 Inspect the PCM power and ground circuits for chafed wires, water intrusion, or loose connectors, repairing as needed.
- 7 Clear the code and perform a key-off soak test, then recheck for P1196 after a full drive cycle to confirm the repair.

Key-off voltage faults that fool technicians

- A common misdiagnosis is replacing the PCM when the real problem is a failing alternator voltage regulator that only overcharges intermittently at higher rpm.
- This code can set from a battery that reads normal at rest but spikes during the key-off transition because of a bad ground, so always check grounds before condemning the module.
- Aftermarket remote starters, alarm systems, or dash cams wired to constant power can backfeed the key-off circuit and trigger P1196 without any charging system fault.
- Ford PCMs on some models log P1196 as a history code after a jump start or battery charger was left connected, so clear it and verify it returns before authorizing repairs.
- A corroded battery positive cable can cause the PCM to see a higher voltage than the battery actually has, making the charging system look healthy when the cable is the culprit.

Can I keep driving with P1196?

You can usually drive the vehicle short distances to a repair shop, but avoid long trips and heavy electrical loads until the charging voltage is checked, because sustained overvoltage can damage the battery and electronic modules. If the battery warning light is on or you smell sulfur from the battery, stop driving and have it serviced immediately.



Tools that help

- Digital multimeter
- OBD-II scan tool with live data capability
- Battery load tester
- Basic hand tools for terminal and cable inspection
- Wiring diagram for the charging and PCM circuits

Reading P1196

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
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- 1** Fuel and air metering.
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- 96** The exact fault within that area.

Often seen with

P1195 EGR Boost Sensor Circuit · **P1195** EGR Boost Or Pressure Sensor Circuit Fault · **P1195** O2 Sensor Heater Circuit Low Resistance Fault 1 · **P1195** O2 Sensor 1/1 (Bank 1 Sensor 1) Slow During Catalyst Monitor · **P1195** SCP HBCC Failed To Initialize · **P1195** O2 Sensor 1/1 (Bank 1 Sensor 1) Slow During Catalyst Monitor · **P0562** System Voltage Low · **P0563** System Voltage High · **P0620** Generator Control Circuit Malfunction · **P0650** Malfunction Indicator Lamp (MIL) Control Circuit Malfunction

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1196/>

