

GENERIC · POWERTRAIN

P057F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P057F

Battery A State of Charge Performance

P057F indicates that the engine control module has detected a problem with the battery state of charge performance, meaning the battery's actual charge level does not match what the system expects based on charging voltage and current flow. The computer monitors battery voltage and current during charging and discharging cycles and sets this code when the calculated state of charge deviates from the expected value beyond a calibrated threshold.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the battery warning light or check engine light on the dashboard
- The engine may crank slowly or hesitate during startup, especially in cold weather
- Electrical accessories such as lights, radio, or climate control may dim or operate erratically
- The vehicle may enter a reduced power mode or disable non-essential electrical loads to conserve energy
- Often no symptoms besides the warning light, with the vehicle driving normally

Common causes, most likely first

- 1 Aged or failing battery that can no longer hold a proper state of charge
- 2 Loose, corroded, or damaged battery cables and terminals causing high resistance
- 3 Faulty battery current sensor providing inaccurate current flow readings to the control module
- 4 Charging system issues such as a weak alternator or faulty voltage regulator
- 5 Software calibration error in the battery monitoring system requiring a reset or update
- 6 Parasitic draw on the battery from a module that stays awake after the ignition is off

How to diagnose and fix it

- 1 Perform a visual inspection of the battery, terminals, and cables for corrosion, tightness, and damage
- 2 Test the battery with a conductance tester to verify its state of health and state of charge
- 3 Check the charging system output with a voltmeter and load tester to confirm the alternator is working correctly
- 4 Inspect and test the battery current sensor and its wiring for proper signal and connection
- 5 Clear the code and perform a battery registration or reset procedure if required by the vehicle manufacturer
- 6 Check for parasitic draws by measuring current with a multimeter after the vehicle has gone to sleep
- 7 Repair or replace any faulty components found during diagnosis and verify the code does not return



Battery State of Charge Misdiagnosis Traps

- A battery that passes a simple voltage test can still fail a conductance test and cause this code, so proper load testing is essential.
- The battery current sensor is often overlooked; a dirty or failing sensor can report incorrect current flow and trigger P057F even with a good battery.
- Many vehicles require a battery registration or reset after replacement, and skipping this step can cause the new battery to be undercharged and set the code again.
- Intermittent parasitic draws from aftermarket accessories or faulty modules can drain the battery overnight and mimic a failing battery.
- This code does not always mean the battery is bad; it can also be set by a charging system fault or a software glitch in the battery monitoring system.

Can I keep driving with P057F?

You can usually continue driving to a repair shop, but avoid long trips or leaving the vehicle parked for extended periods because a weak battery may leave you stranded. Turn off unnecessary electrical accessories to reduce the load on the charging system until the fault is repaired.

Tools that help

- Digital multimeter
- Battery conductance tester
- OBD-II scan tool
- Battery terminal cleaner and wrench set
- Clamp-on current meter

Reading P057F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Vehicle speed, idle control and auxiliary inputs.
7F	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0620** Generator Control Circuit Malfunction · **P0621** Generator Lamp/L Terminal Circuit · **P0622** Generator Field F Terminal Circuit



See it working

Watch the animated explainer [How a Car Thermostat Works: Wax Pellet and Cooling Fan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p057f/>

