

GENERIC · POWERTRAIN

P0E04

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0E04

Generator Phase V Current Sensor Circuit

P0E04 indicates that the powertrain control module has detected an abnormal signal from the current sensor that monitors the phase V (fifth) winding of the generator, which is often part of a high-voltage hybrid system. The computer compares the sensor's reported current against expected values and sets this code when the signal falls outside a calibrated range, indicating a circuit fault rather than a confirmed generator failure.

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

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other symptoms
- Reduced generator output leading to a battery warning light or slow battery drain
- In hybrid vehicles, a transition to limp-home mode or reduced electric assist
- Intermittent electrical accessories or dimming lights if the generator cannot maintain charge
- Possible stalling or no-start condition if the battery becomes depleted

Common causes, most likely first

- 1 Faulty generator phase V current sensor
- 2 Damaged or corroded wiring or connector at the sensor or generator
- 3 Open or short circuit in the sensor signal or reference circuit
- 4 Failed generator component affecting the phase V winding
- 5 Powertrain control module software issue or internal fault
- 6 Loose or damaged generator mounting causing vibration stress on wiring

How to diagnose and fix it

- 1 Perform a visual inspection of the generator, sensor, and all related wiring for damage, corrosion, or loose connections
- 2 Use a scan tool to check for other stored codes and freeze-frame data related to the generator system
- 3 Measure resistance and voltage on the sensor signal circuit and compare to manufacturer specifications
- 4 Test the current sensor output with an oscilloscope or multimeter while the generator is operating
- 5 Check the generator phase V winding for continuity and shorts if accessible
- 6 Repair or replace damaged wiring or connectors as needed
- 7 Replace the current sensor or generator assembly if testing confirms an internal fault



What the phase V sensor code really means

- This code often sets due to a poor connection at the generator connector rather than a failed sensor, so always inspect the pins and terminals before condemning parts.
- On hybrid vehicles, the phase V current sensor is part of the high-voltage system and requires proper safety procedures; do not attempt diagnosis without high-voltage training and equipment.
- A weak or failing 12-volt battery can cause erratic sensor readings and set this code, so load-test the battery before diving into circuit tests.
- The code does not always indicate a generator failure; the sensor itself or its wiring is a more common culprit, and replacing the generator unnecessarily is a frequent misdiagnosis.
- After repairs, clear the code and perform a drive cycle that includes generator load changes to verify the fix, as the code may not reset immediately.

Can I keep driving with P0E04?

You can usually drive the vehicle short distances to a repair shop, but avoid long trips or heavy electrical loads because the generator may not charge properly. If the battery warning light is on or the vehicle enters limp mode, stop driving and seek professional assistance.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope
- Wire repair kit with crimpers and terminals
- Manufacturer service information for circuit specifications

Reading P0E04

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

Often seen with

P0562 System Voltage Low · **P0A78** Drive Motor A Inverter Performance · **P0A7A** Generator Inverter Performance · **P0E03** Generator Phase U Current Sensor Circuit High · **P0E05** Generator Phase V Current Sensor Circuit Range/Performance



See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0e04/>

