

GENERIC · POWERTRAIN

P0E27

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0E27

Drive Motor Inverter Temperature Sensor G Circuit Intermittent/Erratic

P0E27 indicates that the powertrain control module (PCM) has detected an intermittent or erratic signal from the temperature sensor circuit for the drive motor inverter, specifically sensor G. The inverter converts direct current (DC) from the battery to alternating current (AC) for the drive motor, and this sensor monitors its temperature to prevent overheating; the PCM sets this code when the signal momentarily drops out or jumps erratically.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power output or limp mode in some vehicles as a protective measure
- Inconsistent or fluctuating temperature readings on a scan tool data stream
- Possible overheating warning if the intermittent signal causes the cooling system to misbehave

Common causes, most likely first

- 1 Faulty inverter temperature sensor G
- 2 Damaged or chafed wiring in the sensor circuit (open, short, or intermittent connection)
- 3 Corroded or loose electrical connectors at the sensor or PCM
- 4 Poor ground connection for the sensor circuit
- 5 Internal fault in the inverter assembly affecting sensor signal
- 6 PCM software glitch or internal fault (less common)



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, and record live sensor readings to confirm the erratic signal
- 2 Visually inspect the sensor wiring and connectors for damage, corrosion, or loose pins, and repair as needed
- 3 Perform a wiggle test on the harness while monitoring sensor data to identify intermittent connections
- 4 Check the sensor's resistance and voltage against manufacturer specifications, and replace the sensor if out of range
- 5 Verify the integrity of the ground circuit for the sensor and repair any high resistance
- 6 If the sensor and wiring are good, consult factory service information for pinpoint tests of the PCM and inverter assembly
- 7 Clear codes and road test to confirm the repair, ensuring the code does not return

Intermittent Sensor G Faults Often Misdiagnosed

- A common oversight is replacing the inverter assembly when the actual fault is a chafed wire in the harness, so always perform a thorough wiggle test before condemning expensive components.
- The code can be set by a poor ground connection at the inverter housing, which is often overlooked because the sensor itself tests fine.
- In some vehicles, a low 12-volt battery or charging system issue can cause erratic sensor signals, so check battery health and grounds before diving into the inverter circuit.
- Intermittent faults may not store a freeze-frame, so capturing live data during a test drive is crucial to catch the glitch.
- After repairing the circuit, some vehicles require a relearn or calibration procedure for the inverter temperature sensor to prevent the code from reappearing.

Can I keep driving with P0E27?

If the only symptom is a warning light and the vehicle drives normally, you can continue driving but should schedule a diagnosis soon; avoid aggressive driving or heavy loads that could cause overheating if the sensor signal is erratic, and stop immediately if an overheating warning appears.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram and factory service information
- Insulation piercing probes or back probe pins
- Heat gun and freeze spray for temperature testing



Reading P0E27

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

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0A78** Drive Motor A Inverter Performance · **P0C76** Hybrid/EV Battery System Discharge Time Too Long · **P0E26** Drive Motor Inverter Temperature Sensor G Circuit High · **P0E28** Drive Motor Inverter Temperature Sensor H Circuit

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/p0e27/>

