

GENERIC · POWERTRAIN

P0EB8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P0EB8

# A/C Compressor Motor Phase U Current Sensor Circuit Intermittent/Erratic

P0EB8 means the electric air conditioning compressor's motor controller has detected an intermittent or erratic signal from the current sensor that monitors phase U of the three-phase motor. The computer sets this code when the sensor's feedback voltage momentarily drops out, spikes, or becomes noisy rather than failing completely, so the fault is not present at every key cycle.

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

## Symptoms you may notice

- Often no symptoms besides the warning light, because the fault is intermittent and the compressor may still run normally most of the time.
- Air conditioning that blows cold intermittently, cutting out for seconds or minutes before recovering on its own.
- A/C compressor that refuses to engage on some drives but works perfectly on others, especially after bumps or temperature changes.
- Reduced cooling performance or warmer vent temperatures during the intermittent dropout periods.
- A stored P0EB8 with a history of repeated clearing and returning, sometimes accompanied by a brief A/C clutch or compressor shutdown.
- In rare cases, the hybrid or high-voltage system may log a related fault and limit A/C operation to protect the compressor inverter.

## Common causes, most likely first

- A failing phase U current sensor inside the compressor motor controller, often due to heat cycling or internal solder fatigue.
- Damaged, chafed, or intermittently shorted wiring between the current sensor and the compressor control module, commonly at harness flex points or near hot components.
- Corroded or loose pins in the compressor connector or the controller connector, causing a signal that drops out over bumps or with vibration.
- Electrical interference from a failing inverter component or a poor ground connection shared with the compressor controller.
- Low or fluctuating high-voltage supply to the compressor, which can make the current sensor signal erratic without the sensor itself being faulty.
- Moisture intrusion into the compressor controller housing, leading to intermittent sensor behavior before a hard failure occurs.



## How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0EB8, then clear the code and road-test with the A/C on to see whether it returns under load, vibration, or heat.
- 2 Inspect the compressor harness and connectors for chafing, corrosion, loose pins, and heat damage, wiggling the harness while watching live current-sensor data.
- 3 Check the compressor controller ground and high-voltage supply connections for tightness and cleanliness, since a poor ground can mimic a sensor fault.
- 4 Use a scan tool to graph the phase U current sensor signal while tapping or flexing the harness near the compressor to catch an intermittent dropout.
- 5 If the signal is erratic at the sensor connector with the harness stable, replace the compressor controller or current sensor assembly according to the manufacturer's service procedure.
- 6 After repair, clear codes and run the A/C through several full cold cycles, including a bumpy road test, to confirm the intermittent fault is gone before returning the vehicle.

## Why this code often is not the sensor

- A loose or corroded compressor ground is a frequent culprit that sets P0EB8 because the controller misreads current when its reference voltage shifts.
- Technicians sometimes replace the entire compressor when only the controller board or a connector pigtail is at fault, so always prove the sensor signal is erratic at the source.
- This code can appear after a low-voltage or jump-start event because the controller logs a momentary sensor glitch during voltage transients, and it may not return.
- High-voltage cable routing near the current sensor wiring can induce noise that looks like an intermittent sensor failure, especially if a harness clip is missing.
- A failing phase U current sensor often precedes a hard compressor inverter fault, so an intermittent P0EB8 should be treated as an early warning rather than ignored.

## Can I keep driving with P0EB8?

You can usually keep driving because the fault is intermittent and the A/C may still work, but avoid long trips in hot weather where loss of cooling could become a safety or comfort issue. Have it diagnosed soon, since an intermittent current sensor can progress to a hard compressor failure that disables the A/C entirely.

## Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with min/max recording
- Back probe pins or breakout leads
- Insulated gloves and high-voltage safety equipment
- Vehicle-specific service information for compressor controller testing



### Reading P0EB8

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- E** Hybrid propulsion.
- B8** The exact fault within that area.

### Often seen with

**P0EB9** A/C Compressor Motor Phase V Current Sensor Circuit · **P0EBA** A/C Compressor Motor Phase V Current Sensor Circuit Range/Pe · **P0EBB** A/C Compressor Motor Phase V Current Sensor Circuit Low · **P0EBC** A/C Compressor Motor Phase V Current Sensor Circuit High · **P0EBD** A/C Compressor Motor Phase V Current Sensor Circuit Intermit

### See it working

Watch the animated explainer [Car Won't Start? Step-by-Step No-Start Diagnosis](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0eb8/>

