

GENERIC · POWERTRAIN

P0EB0

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0EB0

A/C Compressor Motor Current Sensor Circuit Range/Performance

P0EB0 indicates that the air conditioning (A/C) compressor motor current sensor circuit is reporting a value outside its expected range or performance window. The powertrain control module (PCM) monitors this sensor to ensure the compressor motor is drawing the correct current, and it sets the code when the signal is implausible, erratic, or stuck.

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

Symptoms you may notice

- The A/C compressor may not engage at all, resulting in no cold air from the vents.
- The A/C may blow warm or inconsistent cold air, especially at idle or under load.
- The climate control system may default to a fixed setting or disable certain functions.
- A warning light (check engine or A/C system light) illuminates on the dashboard.
- In some vehicles, the engine cooling fan may run continuously or not at all due to shared control logic.
- Often no symptoms besides the warning light, especially if the A/C still functions normally.

Common causes, most likely first

- Faulty A/C compressor motor current sensor or its internal circuitry.
- Damaged, corroded, or loose wiring or connector at the current sensor or compressor.
- Open or short circuit in the sensor signal or ground circuit.
- Failed A/C compressor motor or clutch causing abnormal current draw.
- PCM software issue or internal driver fault for the current sensor circuit.
- Low refrigerant charge or mechanical compressor issue that indirectly affects current draw.
- Aftermarket electrical accessories or improper previous repairs interfering with the circuit.



How to diagnose and fix it

- 1 Perform a visual inspection of the A/C compressor, current sensor, and related wiring for damage or corrosion.
- 2 Use a scan tool to read live data from the A/C compressor current sensor and compare to expected values.
- 3 Check the sensor reference voltage and ground at the sensor connector with a multimeter.
- 4 Inspect and test the wiring harness for continuity, shorts, and resistance between the sensor and PCM.
- 5 If wiring is good, test the current sensor with a known-good unit or follow manufacturer diagnostics.
- 6 Verify the A/C compressor motor and clutch operation and current draw with a clamp meter.
- 7 Repair or replace faulty components as needed, then clear codes and verify the repair with a road test.

Current sensor faults often misdiagnosed

- A weak battery or charging system issue can cause erratic sensor readings and set this code without a true sensor failure.
- The current sensor is sometimes integrated into the compressor control module, so replacing just the sensor may not be possible.
- A/C system pressure problems can alter compressor load and current draw, triggering the code even when the sensor is accurate.
- Aftermarket remote starters or alarm systems tapped into the A/C circuit can introduce noise and cause false current sensor codes.
- The PCM may set this code if the A/C compressor clutch is slipping or worn, changing the current profile the sensor monitors.

Can I keep driving with P0EB0?

You can generally drive the vehicle with this code, but the A/C may not function properly, which could affect defogging and cabin comfort. Avoid long trips in hot weather or conditions requiring defrost until the fault is repaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Clamp meter for current measurement
- Wiring diagram for the A/C system
- Basic hand tools for connector and component access



Reading P0EB0

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- E** Hybrid propulsion.
- B0** The exact fault within that area.

Often seen with

P0532 A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0533** A/C Refrigerant Pressure Sensor 'A' Circuit High
 · **P0645** A/C Clutch Relay Control Circuit · **P0EB1** A/C Compressor Motor Current Sensor Circuit Low · **P0EB2** A/C Compressor Motor Current Sensor Circuit High

See it working

Watch the animated explainer [How an Elevator Works: Traction Lift in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0eb0/>

