



P0EBB

A/C Compressor Motor Phase V Current Sensor Circuit Low

P0EBB indicates that the powertrain control module has detected an abnormally low current signal from the phase V current sensor circuit of the air conditioning compressor motor. This sensor monitors the electrical current drawn by one phase of the compressor's three-phase motor, and a low signal means the circuit is reporting less current than expected or the sensor output is below its valid range.

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

Symptoms you may notice

- The air conditioning may stop cooling entirely or blow warm air.
- The A/C compressor clutch may fail to engage or disengage erratically.
- A warning light on the dashboard, often the check engine light or a dedicated A/C system indicator.
- The compressor may run but with reduced performance or unusual noises.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Possible electrical burning smell if a wiring issue is present.

Common causes, most likely first

- 1 A faulty phase V current sensor inside the compressor motor assembly.
- 2 Damaged or corroded wiring in the sensor circuit, such as an open or high-resistance connection.
- 3 A poor electrical ground for the compressor motor or sensor circuit.
- 4 A blown fuse or relay that supplies power to the sensor circuit.
- 5 A failing A/C compressor motor that draws abnormally low current due to internal mechanical or electrical faults.
- 6 Corrosion or water intrusion in the connector at the compressor or control module.
- 7 A software glitch or faulty powertrain control module, though this is less common.



How to diagnose and fix it

- 1 Perform a visual inspection of the compressor wiring harness and connectors for damage, corrosion, or loose pins.
- 2 Check all fuses and relays related to the A/C compressor and sensor circuit, and replace any that are blown.
- 3 Measure the resistance and continuity of the sensor circuit wiring between the compressor and the control module, repairing opens or high resistance as needed.
- 4 Test the phase V current sensor output with a multimeter or oscilloscope to verify it is within specification, and replace the sensor if faulty.
- 5 Verify the compressor motor's current draw using a clamp meter; if it is abnormally low, the motor may need replacement.
- 6 Inspect and clean all ground connections for the A/C system and ensure they are tight and free of corrosion.
- 7 If all electrical checks pass, consult the manufacturer's diagnostic procedures for the specific vehicle, which may involve reprogramming or replacing the control module.

Don't Replace the Compressor Before These Checks

- A low current signal often results from a simple wiring problem, such as a chafed wire or corroded connector, rather than a failed compressor, so always inspect the harness first.
- The phase V current sensor is sometimes integrated into the compressor motor and not sold separately, but on many vehicles it can be replaced independently, so check parts availability before condemning the whole compressor.
- Intermittent low current codes can be caused by vibration or heat affecting a marginal connection, so wiggle-test the harness while monitoring live data to catch the fault.
- A weak battery or charging system issue can cause voltage drops that mimic sensor faults, so verify battery and charging system health before diving into the A/C circuit.
- This code can set alongside other phase current codes (P0EB8, P0EB9, P0EBA) if multiple sensors or shared wiring are affected, so address common causes first.

Can I keep driving with P0EBB?

You can generally continue driving with this code because the engine and transmission are not affected, but the air conditioning may not work and prolonged driving with a faulty compressor circuit could lead to further electrical damage. Avoid using the A/C system until the fault is diagnosed and repaired.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Clamp meter for current measurement
- Oscilloscope for sensor signal analysis
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and component access

Reading P0EBB

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

Often seen with

P0532 A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0EB8** A/C Compressor Motor Phase U Current Sensor Circuit Intermittent · **P0EB9** A/C Compressor Motor Phase V Current Sensor Circuit · **P0EBA** A/C Compressor Motor Phase V Current Sensor Circuit Range/Performance · **P0EBC** A/C Compressor Motor Phase V Current Sensor Circuit High

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0ebb/>

