



P2BEB

Hybrid/EV Battery Precharge Contactor Control Circuit B High

P2BEB indicates that the hybrid or electric vehicle's battery management system has detected an abnormally high voltage on the control circuit for precharge contactor B, which is used to safely connect the high-voltage battery to the rest of the system. The computer monitors this circuit and sets the code when the signal exceeds the expected range, often indicating a short to voltage or a faulty component.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or check engine light
- Vehicle may refuse to start or enter 'Ready' mode
- Reduced power or limp mode operation
- Audible click from the battery pack area when attempting to start
- Often no symptoms besides the warning light

Common causes, most likely first

- 1 Faulty precharge contactor B (internal coil or mechanical failure)
- 2 Short to voltage in the control circuit wiring
- 3 Poor electrical connection or corrosion at the contactor or control module
- 4 Failed battery management system (BMS) or control module
- 5 Damaged wiring harness due to chafing or rodent damage

How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear codes and test-drive to see if P2BEB returns
- 2 Visually inspect the precharge contactor B and its wiring for obvious damage, corrosion, or loose connections
- 3 Measure resistance of the contactor coil and compare to manufacturer specifications
- 4 Check for short to voltage on the control circuit using a multimeter, with the circuit isolated
- 5 Test the control module output signal with an oscilloscope or appropriate tester
- 6 If wiring and contactor test good, suspect the control module and perform pinpoint tests as per service information
- 7 Replace the faulty component (contactor, wiring, or module) and verify the repair with a test drive



Don't overlook the simple checks first

- A loose or corroded ground connection at the battery pack can cause erratic voltage signals that mimic a contactor failure.
- The precharge contactor may test fine statically but fail under load; a dynamic voltage drop test is often necessary.
- Aftermarket alarm or remote start installations can backfeed voltage into the control circuit, triggering this code.
- The code can be set by a low 12-volt battery causing the control module to misread the circuit voltage.
- Always check for technical service bulletins (TSBs) for your specific vehicle; some manufacturers have updated software to address false P2BEB codes.

Can I keep driving with P2BEB?

Do not continue driving with this code present, as the high-voltage system may not be functioning correctly, leading to a loss of power or potential safety hazard. Have the vehicle inspected by a qualified hybrid technician before further use.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter (DMM)
- Oscilloscope
- Insulation tester (megohmmeter)
- Service information for pinpoint tests

Reading P2BEB

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A0E** High Voltage System Interlock Circuit A Intermittent · **P0A1F** Battery Energy Control Module A Performance · **P2BEA** Hybrid/EV Battery Precharge Contactor Control Circuit B Low · **P2BEC** Fuel Control System A Too Lean Bank 1



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/p2beb/>

