

GENERIC · POWERTRAIN

P2BE9

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2BE9

Hybrid/EV Battery Precharge Contactor Control Circuit B Range/Performance

P2BE9 indicates that the hybrid or electric vehicle battery precharge contactor control circuit B has a range or performance fault, meaning the battery control module detected an abnormal voltage or current signature on the control circuit for contactor B during precharge. The precharge contactor is a relay that limits inrush current when connecting the high-voltage battery to the inverter, and this code sets when the control circuit does not behave as expected during the precharge sequence.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- The vehicle may refuse to start or enter ready mode, leaving you stranded
- A noticeable delay or failure when attempting to power on the high-voltage system
- Intermittent loss of hybrid functionality, with the engine running alone in a hybrid vehicle
- Often no symptoms besides the warning light if the fault is stored but not currently active
- Possible audible click from the battery pack area when the contactor attempts to close

Common causes, most likely first

- 1 Faulty precharge contactor B coil or mechanical wear inside the contactor assembly
- 2 Damaged or corroded wiring in the control circuit between the battery control module and contactor B
- 3 Poor electrical connection at the contactor or control module connector, including loose pins or terminal fretting
- 4 Failed battery control module or hybrid vehicle control module driver for the contactor circuit
- 5 Low 12-volt auxiliary battery voltage causing erratic contactor operation during precharge
- 6 Internal short or open in the contactor control circuit due to chafed harness or moisture intrusion



How to diagnose and fix it

- 1 Verify the 12-volt auxiliary battery is fully charged and in good condition, as low voltage can set false contactor codes
- 2 Inspect the precharge contactor B and its control circuit connectors for corrosion, loose pins, or damage
- 3 Measure resistance across the contactor B coil and compare to the manufacturer's specification
- 4 Check for voltage and ground signals at the contactor control circuit during the precharge command using a scan tool and multimeter
- 5 Perform a wiggle test on the harness while monitoring the circuit to reveal intermittent faults
- 6 If the circuit and coil test good, follow the manufacturer's diagnostic flow for the battery control module or contactor assembly replacement
- 7 After repair, clear the code and verify the precharge sequence completes normally with no recurring fault

Precharge contactor faults that fool technicians

- A weak 12-volt battery often causes this code because the contactor coil does not receive enough current to close reliably during precharge, yet the battery may still crank the engine fine.
- The precharge contactor B control circuit is often shared with other contactors in the pack, so a single failed driver in the control module can set multiple contactor codes that point away from the true root cause.
- Contactor coil resistance can test within specification at room temperature but fail when hot, so a cold ohm check alone may miss an intermittent fault.
- Some vehicles set P2BE9 after a low-voltage event such as a jump start or battery replacement, and the code may be a historical artifact rather than a live failure.
- The precharge sequence is brief and may not repeat on every key cycle, so a fault that only occurs during a cold start can be difficult to reproduce in the shop.

Can I keep driving with P2BE9?

Do not continue driving with this code active, because a failed precharge contactor can prevent the high-voltage system from energizing safely or cause damage to the inverter. Have the vehicle inspected by a qualified hybrid technician before attempting further operation.

Tools that help

- Hybrid/EV-capable scan tool with live data and bidirectional controls
- Digital multimeter with min/max recording
- Insulation tester or megohmmeter for high-voltage circuit checks
- Fused test leads and back-probe kit
- Manufacturer service information for precharge circuit specifications



Reading P2BE9

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- B** Hybrid propulsion.
- E9** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AA6** Hybrid/EV Battery Voltage System Isolation Fault
· **P2BE8** Hybrid/EV Battery Precharge Contactor Control Circuit B Open · **P2BEA** Hybrid/EV Battery Precharge Contactor Control Circuit B Low

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/p2be9/>

