

GENERIC · POWERTRAIN

P2BE8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2BE8

Hybrid/EV Battery Precharge Contactor Control Circuit B Open

P2BE8 indicates that the hybrid or electric vehicle battery pack's precharge contactor control circuit B is open, meaning the battery energy control module has detected an interruption in the electrical path that commands the precharge contactor to close. The precharge contactor is a relay that temporarily limits inrush current when connecting the high-voltage battery to the inverter, and an open circuit prevents it from functioning, so the module sets this code and typically disables high-voltage operation.

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

Symptoms you may notice

- The hybrid or EV system warning light illuminates, and the vehicle may refuse to start or enter Ready mode.
- A message such as 'Check Hybrid System' or 'High Voltage System Fault' appears on the dashboard display.
- The vehicle may run in a reduced-power limp mode or shut down completely after the fault is detected.
- Often no symptoms besides the warning light, especially if the fault is intermittent or stored without an active failure.
- The high-voltage battery contactors may not close, preventing the traction battery from supplying power to the inverter.
- In some cases, the 12-volt auxiliary battery may drain if the vehicle repeatedly attempts to start without success.

Common causes, most likely first

- 1 A broken, corroded, or disconnected wire in the precharge contactor control circuit B, including the harness and connectors.
- 2 A failed precharge contactor coil or internal contactor assembly that creates an open circuit.
- 3 A faulty battery energy control module (BECM) or hybrid vehicle control module that cannot command the contactor.
- 4 Loose or damaged pins in the connector at the precharge contactor or at the control module.
- 5 An open fuse or relay in the contactor control power supply circuit.
- 6 High resistance or an open circuit in the ground path for the precharge contactor coil.
- 7 Damage to the wiring harness from rodents, chafing, or heat exposure.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data, then clear the code and verify whether it returns immediately.
- 2 Inspect the precharge contactor control circuit B wiring and connectors for obvious damage, corrosion, or loose pins.
- 3 Check the fuse and relay that supply power to the precharge contactor control circuit, replacing any that are open.
- 4 Measure resistance across the precharge contactor coil and compare to the manufacturer's specification to rule out an open coil.
- 5 Perform a voltage drop test on the control circuit while commanding the contactor on with a scan tool to confirm the module is sending the signal.
- 6 If the circuit and contactor test good, substitute a known-good control module or perform a module relearn procedure as required.
- 7 After repair, clear codes, cycle the ignition, and verify the precharge contactor operates correctly with no recurring fault.

What the precharge contactor code hides

- A common oversight is assuming the contactor itself has failed when the actual problem is a corroded connector pin or a chafed wire in the control circuit, which costs far less to fix.
- The code can be set by a momentary open circuit during a rough road event, so an intermittent fault may not reappear during a short test drive and requires wiggle testing of the harness.
- Some vehicles set P2BE8 when the 12-volt battery is weak because the control module may not have enough voltage to reliably command the contactor, so always check battery condition first.
- The precharge contactor is distinct from the main positive and negative contactors, and a failure in the precharge circuit can prevent the main contactors from closing, leading to a no-start condition that mimics a main contactor fault.
- A scan tool that can command the precharge contactor on and off is essential for proper diagnosis, as static resistance checks alone may not reveal an intermittent open circuit.

Can I keep driving with P2BE8?

Do not continue driving with this code active, because the high-voltage system may be disabled and the vehicle can lose power unexpectedly. Have the vehicle towed to a qualified hybrid or EV service facility for diagnosis and repair.



Tools that help

- Scan tool with hybrid/EV capability and bidirectional control
- Digital multimeter with min/max recording
- Wiring diagram and service information for the specific vehicle
- Insulation resistance tester (megohmmeter) for high-voltage circuits
- Test light or logic probe
- Terminal pick and connector release tools

Reading P2BE8

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
E8	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
 · **P2BE7** Hybrid/EV Battery Pack Current Sensor C High · **P2BE9** Hybrid/EV Battery Precharge Contactor Control Circuit B Rang

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/p2be8/>

