

GENERIC · POWERTRAIN

P2D65

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2D65

Battery Charging System Negative Contactor C Control Circuit/Open

P2D65 indicates that the battery charging system's negative contactor control circuit is open, meaning the powertrain control module cannot complete the command path to the negative-side contactor coil. The computer detects an open circuit when the commanded state does not match the expected voltage or current feedback on the control wire.

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

Symptoms you may notice

- Illumination of the battery/charging system warning light or service vehicle soon message
- The high-voltage battery may fail to charge or discharge normally, leading to reduced electric range or power
- The vehicle may refuse to start or enter a ready-to-drive state
- Intermittent charging interruptions or a sudden loss of auxiliary power
- Often no symptoms besides the warning light, especially if the fault is stored but not active

Common causes, most likely first

- 1 Open or damaged wire in the negative contactor control circuit, such as a broken conductor or corroded terminal
- 2 Failed negative contactor coil inside the battery pack or power distribution unit
- 3 Loose or disconnected electrical connector at the contactor or control module
- 4 Faulty control module driver circuit that cannot supply the command signal
- 5 Blown fuse or open relay that feeds the contactor control circuit
- 6 High resistance in a ground connection shared by the contactor circuit



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data before clearing anything
- 2 Inspect the negative contactor control circuit wiring and connectors for obvious damage, corrosion, or looseness
- 3 Check the fuse and relay that supply power to the contactor control circuit
- 4 Measure resistance and voltage on the control wire from the module to the contactor to confirm an open circuit
- 5 Test the negative contactor coil resistance and compare it to the manufacturer's specification
- 6 If the circuit and coil test good, substitute a known-good control module or perform a bidirectional test to command the contactor
- 7 Repair or replace the faulty wire, connector, contactor, or module and clear codes to verify the repair

Contactor control circuit checks that save time

- A common oversight is assuming the contactor itself has failed when the actual problem is a chafed wire hidden behind a battery pack cover or under a harness loom.
The code can set intermittently from a connector that only loses contact under vibration or temperature swings, so a wiggle test while monitoring live data is often more revealing than a static resistance check.
- Some vehicles will set P2D65 when the 12-volt auxiliary battery is weak, because low system voltage can make the control module misread the contactor feedback circuit.
- Do not replace the high-voltage battery pack based solely on this code; the control circuit open is frequently external to the pack and far cheaper to repair.
A failed negative contactor can sometimes be commanded closed with a scan tool, but if the control circuit is open the command will have no effect, confirming the circuit rather than the contactor as the root cause.

Can I keep driving with P2D65?

Do not continue driving with an active P2D65 because the high-voltage battery may not charge or disconnect unexpectedly, which can cause a loss of power or strand the vehicle. Have the fault diagnosed before driving further, and avoid relying on the vehicle for long trips until repaired.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with resistance and voltage measurement
- Wiring diagram and connector pinout for the specific vehicle
- Insulation piercing probes or back-probe kit
- Fuse puller and test light



Reading P2D65

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- 65** 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
 · **P2D64** Battery Charging System Negative Contactor C Stuck Open · **P2D66** Battery Charging System Negative Contactor C Control Circuit · **U0111** Lost Communication With Battery Energy Control Module 'A'

See it working

Watch the animated explainer [How a Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2d65/>

