

GENERIC · POWERTRAIN

P2D6C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2D6C

Battery Charging System Positive Contactor D Control Circuit/Open

P2D6C indicates that the powertrain control module has detected an open circuit or loss of control on the positive contactor circuit for the battery charging system, specifically for contactor D. This contactor is a high-current relay that connects the battery to the charging system, and an open circuit means the control wire is broken, disconnected, or the contactor coil has failed.

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

Symptoms you may notice

- Illumination of the battery/charging system warning light or service vehicle soon light
- The vehicle may fail to start or experience a no-crank condition if the contactor does not close
- Electrical accessories may dim or operate erratically while driving
- The charging system may not charge the battery, leading to a discharged battery over time
- Often no symptoms besides the warning light, especially if the contactor is not essential for basic operation

Common causes, most likely first

- 1 Open or damaged control wire between the PCM and the positive contactor D
- 2 Failed positive contactor D coil (open winding)
- 3 Corroded or loose electrical connector at the contactor or PCM
- 4 Blown fuse or fusible link protecting the contactor control circuit
- 5 Faulty powertrain control module driver for the contactor circuit
- 6 Rodent damage or chafed wiring harness causing an open circuit



How to diagnose and fix it

- 1 Perform a visual inspection of the contactor, its connectors, and the wiring harness for obvious damage or corrosion
- 2 Check the fuse or fusible link that supplies power to the contactor control circuit and replace if blown
- 3 Disconnect the contactor and measure the resistance of its coil; compare to specification to confirm an open winding
- 4 Backprobe the control wire at the PCM and at the contactor to check for continuity and identify where the open circuit exists
- 5 Inspect the PCM connector for loose terminals or corrosion and repair as needed
- 6 If the control wire is intact and the contactor coil is good, test the PCM output with a test light or oscilloscope to verify the driver is functioning
- 7 Replace the faulty contactor, repair the wiring, or reprogram/replace the PCM as diagnosed

Contactor D open circuit pitfalls

- A common mistake is replacing the contactor without checking the control wire for continuity, which often has a hidden break under the insulation or at a connector.
- The code can be set by a loose ground connection at the contactor body, which mimics an open control circuit but is actually a ground fault.
- Some vehicles use a smart contactor with an internal driver; in those cases, the PCM may set this code even when the control wire is good, pointing to the contactor itself.
- This code does not always mean the contactor is bad; a faulty PCM driver or a blown fuse in the control circuit can set the same code.
- After repairs, the code may require a drive cycle or a scan tool relearn procedure to clear and confirm the fix.

Can I keep driving with P2D6C?

If the warning light is on but the vehicle starts and runs normally, you can drive cautiously to a repair shop, but avoid long trips and heavy electrical loads. If the vehicle fails to start or the charging system is not working, do not drive and seek immediate assistance.

Tools that help

- Digital multimeter
- Test light
- OBD-II scan tool
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools



Reading P2D6C

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- 6C** The exact fault within that area.

Often seen with

P0560 System Voltage Malfunction · **P0562** System Voltage Low · **P0563** System Voltage High · **P2D6B** Battery Charging System Positive Contactor D Stuck Open · **P2D6D** Battery Charging System Positive Contactor D Control Circuit

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2d6c/>

