

GENERIC · POWERTRAIN

P2D60

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2D60

Battery Charging System Positive Contactor C Control Circuit Low

P2D60 indicates that the battery charging system's positive contactor control circuit is reporting a low-voltage condition, meaning the control module has detected a short to ground or an abnormally low signal on the wire that commands the positive contactor to close. The positive contactor is a high-current relay that connects the battery pack to the charging system in electrified vehicles, so this fault prevents the charging path from being enabled and typically disables charging.

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

Symptoms you may notice

- Charging system warning light or service vehicle soon message illuminated
- Vehicle fails to begin charging when plugged in, or charging stops immediately
- No charging session started even though the charge port and cable are connected
- Reduced electric driving range or battery state of charge that does not increase
- Often no symptoms besides the warning light if the contactor is normally open and the vehicle still drives
- Possible inability to start or enter ready mode in some implementations

Common causes, most likely first

- Damaged or chafed control wire between the control module and the positive contactor coil, shorting to ground
- Faulty positive contactor coil with an internal short to its ground path
- Corroded, loose, or water-intruded connector at the contactor or control module
- Failed control module driver circuit that cannot supply the correct command voltage
- Poor ground connection shared by the contactor or module, causing a low reference reading
- Aftermarket accessories or previous repairs that tapped into the contactor control circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P2D60 before clearing any codes
- 2 Inspect the positive contactor control circuit wiring and connectors for chafing, corrosion, or water intrusion
- 3 Measure resistance and voltage on the control circuit at the contactor connector with the key on and compare to the manufacturer's specification
- 4 Test the contactor coil for internal short to ground and compare coil resistance to specification
- 5 Check the control module ground and power feeds, then verify the module's command output with a scope or bidirectional scan tool
- 6 Repair or replace the faulty wiring, connector, contactor, or control module as indicated by the test results
- 7 Clear codes and perform a charging system functional test to confirm the contactor closes and charging begins

What the low circuit reading really means

- A low control circuit code does not automatically mean the contactor is bad; a shorted wire or a failed module driver can produce the same reading, so always test the circuit before replacing the contactor.
- Water intrusion into the contactor connector or module housing is a common cause on vehicles that see road spray or car washes, and the corrosion often hides inside the connector body.
- Some vehicles will still drive normally with this code because the positive contactor is only needed for charging, which leads owners to postpone repair until the battery is depleted.
- A shared ground point for the contactor and other high-current components can pull the control circuit low and set this code even when the contactor itself is healthy.
- Aftermarket alarm or telematics installations that splice into the charging circuit are a frequent source of intermittent low-circuit faults that appear only under vibration.

Can I keep driving with P2D60?

You can usually drive the vehicle if it starts and moves, but charging will likely be disabled, so plan to diagnose it before the battery is depleted. Avoid repeated charging attempts and do not continue driving once the state of charge is low, because the vehicle may not restart or may enter a reduced-power mode.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with resistance and voltage measurement
- Oscilloscope for capturing the contactor command signal
- Manufacturer service information and wiring diagrams
- Insulated hand tools and connector pin removal kit



Reading P2D60

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

Often seen with

P0AA6 Hybrid/EV Battery Voltage System Isolation Fault · **P2D5F** Battery Charging System Positive Contactor C Control Circuit · **P2D61** Battery Charging System Positive Contactor C Control Circuit · **U0111** Lost Communication With Battery Energy Control Module 'A'

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2d60/>

