

GENERIC · POWERTRAIN

P0B35

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B35

High Voltage Service Disconnect Circuit Low

P0B35 indicates that the high-voltage service disconnect circuit has been detected as having a low voltage condition when it should be at a higher level, typically when the service disconnect plug is removed or the interlock circuit is open. The computer monitors the voltage on the service disconnect detection circuit and sets this code when the voltage falls below the expected threshold, signaling a potential safety issue with the high-voltage system.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- High-voltage system warning light illuminated on the dashboard
- Vehicle may fail to start or enter ready mode
- Reduced power or complete shutdown of hybrid/electric propulsion
- Service disconnect plug may appear loose or improperly seated
- Often no symptoms besides the warning light if the fault is intermittent
- Possible inability to charge the high-voltage battery

Common causes, most likely first

- 1 Service disconnect plug not fully seated or latched
- 2 Damaged or corroded terminals in the service disconnect circuit
- 3 Open or shorted wiring in the service disconnect detection circuit
- 4 Faulty service disconnect switch or interlock mechanism
- 5 Failed high-voltage battery pack assembly (internal disconnect fault)
- 6 Corrosion or water intrusion in the service disconnect connector
- 7 Control module software error or internal fault in the battery energy control module



How to diagnose and fix it

- 1 Verify the service disconnect plug is fully inserted and the locking mechanism is engaged
- 2 Inspect the service disconnect connector and terminals for corrosion, damage, or loose pins
- 3 Check the service disconnect circuit wiring for continuity and shorts using a multimeter
- 4 Test the service disconnect switch for proper open/closed continuity
- 5 Inspect the high-voltage battery pack for internal disconnect faults or damaged components
- 6 Reprogram or update the battery energy control module if applicable
- 7 Replace the service disconnect plug, switch, or high-voltage battery pack as needed

Service disconnect plug often the culprit

- A service disconnect plug that is not fully latched is the most common cause of this code, and simply reseating it can resolve the issue without any parts replacement.
- The code can set intermittently due to vibration or temperature changes affecting a marginal connection, so a wiggle test of the connector while monitoring live data can reveal the fault.
- Technicians sometimes overlook the service disconnect interlock circuit when diagnosing no-start conditions, focusing instead on the high-voltage battery itself.
- This code does not always indicate a failed high-voltage battery; the fault may lie in the low-voltage detection circuit or the service disconnect switch.
- After any repair involving the service disconnect, the high-voltage system must be properly reinitialized and the code cleared to confirm the fix.

Can I keep driving with P0B35?

Do not drive the vehicle with this code present, as the high-voltage system may be disabled or in a unsafe state. Have the vehicle inspected by a qualified high-voltage technician before attempting to drive.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Insulated gloves and safety equipment for high-voltage work
- Service manual with wiring diagrams
- Terminal pick and electrical contact cleaner



Reading P0B35

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A0F** Engine Failed to Start · **P0AA6** Hybrid/EV Battery Voltage System Isolation Fault · **P0B36** High Voltage Service Disconnect Circuit High · **P0B37** High Voltage Service Disconnect Open

See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0b35/>

