

GENERIC · POWERTRAIN

P0B0A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B0A

Electric/Auxiliary Transmission Fluid Pump A Motor Supply Voltage Circuit Low

P0B0A indicates that the powertrain control module (PCM) has detected a low voltage condition on the motor supply circuit for the electric or auxiliary transmission fluid pump A. This pump is used in some hybrid and automatic transmissions to maintain fluid pressure when the engine is off or during stop-start events, and the code sets when the PCM sees the supply voltage below the expected threshold.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service transmission warning.
- The vehicle may enter limp mode or fail to engage drive/reverse smoothly.
- Harsh or delayed shifting, especially when the engine restarts from a stop.
- The transmission may not provide pressure during engine auto-stop, causing a stall or hesitation.
- Often no symptoms besides the warning light, especially if the pump is only used under specific conditions.

Common causes, most likely first

- 1 A weak or failing 12-volt battery, causing low system voltage.
- 2 Corroded, loose, or damaged wiring or connectors in the pump motor supply circuit.
- 3 A faulty transmission fluid pump motor (internal short or high resistance).
- 4 A blown fuse or faulty relay that supplies power to the pump motor.
- 5 A poor ground connection for the pump motor or control module.
- 6 A malfunctioning transmission control module (TCM) or PCM driver circuit.
- 7 Aftermarket accessories or improper wiring causing voltage drops.



How to diagnose and fix it

- 1 Perform a battery and charging system test to ensure the battery is fully charged and the alternator is working correctly.
- 2 Inspect the pump motor supply circuit wiring and connectors for corrosion, looseness, or damage; repair as needed.
- 3 Check the fuse and relay for the transmission fluid pump motor and replace if faulty.
- 4 Measure voltage at the pump motor connector while the circuit is active; compare to battery voltage to identify excessive voltage drop.
- 5 Perform a resistance test on the pump motor and compare to manufacturer specifications; replace the pump if out of range.
- 6 Check ground connections for the pump motor and control module; clean and tighten as necessary.
- 7 If all electrical checks pass, diagnose the TCM/PCM and consider reprogramming or replacement following manufacturer procedures.

Low voltage doesn't always mean a bad pump

- A weak battery is a very common cause of this code because the pump motor draws high current, and a marginal battery may not supply enough voltage during pump operation.
- Corroded ground connections, especially at the transmission case or chassis, can cause a low voltage code even when the power wire and pump are good.
- The code can be set by a faulty relay that has high internal resistance, which is often overlooked because the relay still clicks.
- Aftermarket electrical accessories tapped into the pump circuit can cause voltage drops that trigger this code without any component failure.
- Some vehicles set this code only during specific conditions like engine auto-stop, so a test drive that replicates those conditions may be needed to confirm the repair.

Can I keep driving with P0B0A?

If the vehicle drives normally, you can drive it to a repair shop, but avoid heavy loads or long trips until the fault is fixed. If the transmission slips, hesitates, or enters limp mode, stop driving and have the vehicle towed to prevent further damage.

Tools that help

- Digital multimeter
- OBD-II scan tool
- Battery load tester
- Wiring diagram for the specific vehicle
- Basic hand tools (sockets, wrenches, screwdrivers)



Reading P0B0A

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

Often seen with

P0B0B Electric/Auxiliary Transmission Fluid Pump A Motor Supply Vo · **P0B0C** Electric/Auxiliary Transmission Fluid Pump A Hydraulic Leaka · **P0B0D** Electric/Auxiliary Transmission Fluid Pump Motor Control Mod · **P0B0E** Hybrid/EV Battery Pack Current Sensor B Circuit · **P0B0F** Hybrid/EV Battery Pack Current Sensor B Circuit Range/Perfor

See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0b0a/>

