

GENERIC · POWERTRAIN

P01B2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P01B2

Alternative Fuel Tank A Level Sensor Circuit High

P01B2 indicates the powertrain control module has detected an abnormally high voltage on the fuel level sensor circuit for alternative fuel tank A, which usually means the sensor signal wire is shorted to voltage or the sensor's internal resistance has gone open. The computer expects the sensor to return a voltage within a calibrated range as the tank level changes, and a sustained high reading falls outside that range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light or a dedicated service warning for the alternative fuel system
- An incorrect or frozen fuel level reading on the dashboard gauge for the alternative fuel tank
- A fuel gauge that reads full or above full regardless of the actual tank level
- Driver information messages warning of a fuel level sensor fault or reduced alternative fuel range
- Often no symptoms besides the warning light, with the vehicle continuing to run normally on both fuels
- Possible default to gasoline operation if the control module cannot trust the alternative fuel level signal

Common causes, most likely first

- 1 A short to voltage on the signal wire between the fuel level sensor and the control module
- 2 An open circuit inside the fuel level sensor, causing the signal voltage to be pulled high
- 3 A poor or corroded ground connection at the sensor or at the control module
- 4 A faulty fuel level sensor assembly with worn or contaminated electrical contacts
- 5 A damaged or chafed wiring harness near the alternative fuel tank
- 6 A failed or internally shorted control module, though this is the least likely cause



How to diagnose and fix it

- 1 Connect a scan tool and record the fuel level sensor voltage and any freeze-frame data to confirm the high-voltage condition
- 2 Visually inspect the sensor wiring and connector at the alternative fuel tank for chafing, corrosion, or loose pins
- 3 Disconnect the sensor and measure the signal circuit voltage with the key on to see if the high voltage remains, which isolates a wiring short from a sensor fault
- 4 Check the sensor ground circuit for excessive resistance using a voltage drop test while the circuit is loaded
- 5 Measure the resistance of the fuel level sensor across its full sweep and compare it with the manufacturer's specification
- 6 Repair or replace the affected wiring, connector, or fuel level sensor as indicated by the test results
- 7 Clear the diagnostic trouble code and verify the fuel level PID reads correctly through a full sweep of the tank level

What a high fuel level signal really means

- A high voltage on this circuit most often indicates an open sensor element or a broken ground, not a short to power, because the pull-up resistor inside the control module drives the signal high when the circuit is broken.
- Technicians sometimes replace the fuel level sensor only to find the real fault is a corroded ground splice shared with other tank sensors, so always voltage-drop test the ground side before condemning parts.
- The code can set intermittently on rough roads when a chafed signal wire briefly contacts a power wire, leaving no stored fault during a static inspection.
- On bi-fuel vehicles, the alternative fuel tank level sensor may share a connector or harness with the gasoline tank sensor, and corrosion in that shared connector can set P01B2 without any fault in the alternative tank sensor itself.
- A failed fuel level sensor does not affect engine performance or fuel delivery, so a vehicle that runs perfectly with this code is pointing to an electrical or gauge problem rather than a fuel supply problem.

Can I keep driving with P01B2?

The vehicle remains safe to drive because this fault affects only fuel level reporting and does not impair engine operation, but you should refuel the alternative tank conservatively until the gauge is repaired to avoid running out unexpectedly. Avoid towing or long trips on the alternative fuel until the level indication is trustworthy.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with resistance and voltage measurement
- Wiring diagram for the alternative fuel tank level sensor circuit
- Test light or jumper wire for circuit isolation
- Basic hand tools for connector and sensor access



Reading P01B2

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- B2** The exact fault within that area.

Often seen with

P01B1 Alternative Fuel Tank A Level Sensor Circuit Low · **P01B3** Alternative Fuel Tank A Level Sensor Circuit Intermittent/Er · **P0462** Fuel Level Sensor Circuit Low Input · **P0463** Fuel Level Sensor Circuit High Input · **P2068** Fuel Level Sensor 'B' Circuit High

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01b2/>

