

GENERIC · POWERTRAIN

P0930

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0930

Gear Shift Lock Solenoid Control Circuit Low

P0930 indicates that the powertrain control module (PCM) has detected an abnormally low voltage or current on the control circuit for the gear shift lock solenoid, which prevents the shifter from moving out of Park unless the brake pedal is pressed. The PCM monitors the circuit and sets this code when the signal falls below the expected threshold, often due to a short to ground, an open circuit, or a faulty solenoid.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The gear shift lever cannot be moved out of Park even with the brake pedal depressed.
- The shift lock solenoid does not click or actuate when the brake is pressed.
- The brake-shift interlock override may be needed to move the vehicle.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- In some vehicles, the engine may not start because the shifter is not recognized in Park.
- A buzzing or clicking noise from the shift lock actuator area may be heard.

Common causes, most likely first

- 1 Faulty gear shift lock solenoid (open winding or internal short).
- 2 Damaged or corroded wiring harness or connector at the shift lock solenoid.
- 3 Blown fuse or poor ground connection for the shift lock circuit.
- 4 Brake pedal position sensor (switch) failure, preventing the PCM from commanding the solenoid.
- 5 PCM internal driver failure or software issue (rare).
- 6 Aftermarket alarm or remote start system improperly wired into the shift lock circuit.



How to diagnose and fix it

- 1 Verify the battery is fully charged and check the shift lock fuse; replace if blown.
- 2 Inspect the wiring and connector at the shift lock solenoid for damage, corrosion, or loose pins.
- 3 Measure resistance across the solenoid; compare to manufacturer specification (typically 20–40 ohms) and replace if out of range.
- 4 Check for voltage at the solenoid connector with the brake pedal pressed; if absent, trace the circuit back to the PCM and brake switch.
- 5 Test the brake pedal position sensor (switch) for proper operation and continuity.
- 6 If all circuits test good, suspect the PCM; perform a continuity test from the PCM to the solenoid and check for shorts to ground.
- 7 Clear the code and test drive; if it returns, re-evaluate the circuit and consider a known-good PCM for diagnosis.

Shift Lock Solenoid Circuit Pitfalls

- A common oversight is replacing the shift lock solenoid without checking the brake pedal switch, which often fails and prevents solenoid activation.
- The code can be set by a simple blown fuse that also powers other circuits, so always check fuses before condemning the solenoid.
- Aftermarket remote start or alarm systems frequently tap into the shift lock circuit and can cause low voltage codes if not installed correctly.
- In some vehicles, the shift lock solenoid is part of the shifter assembly and cannot be replaced separately, requiring a costly assembly replacement.
- A shorted solenoid can draw excessive current and damage the PCM driver, so always check solenoid resistance before installing a new PCM.

Can I keep driving with P0930?

If the vehicle can be shifted out of Park using the manual override, you may drive it to a repair shop, but avoid parking on steep hills where the override is difficult. If the shifter cannot be moved at all, do not force it; have the vehicle towed to prevent damage to the shifter mechanism.

Tools that help

- Digital multimeter
- Test light
- Socket set
- Trim removal tool
- Vehicle service manual (for wiring diagrams and torque specs)



Reading P0930

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

Often seen with

P0931 Gear Shift Lock Solenoid Control Circuit High · **P0932** Hydraulic Pressure Sensor Circuit · **P0933** Hydraulic Pressure Sensor Range/Performance · **P0934** Hydraulic Pressure Sensor Circuit Low · **P0935** Hydraulic Pressure Sensor Circuit High

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/p0930/>

