

GENERIC · POWERTRAIN

P0972

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0972

Shift Solenoid 'A' Control Circuit Range/Performance

P0972 indicates that the transmission control module has detected an abnormal electrical condition in the control circuit for shift solenoid 'A', which is responsible for managing hydraulic pressure during gear changes. The computer compares expected solenoid performance against actual feedback and sets this code when the circuit's resistance or response falls outside the manufacturer's specified range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Illumination of the check engine light or transmission warning light, often with no other noticeable symptoms
- Harsh or delayed gear shifts, particularly when engaging drive or reverse
- Transmission stuck in a single gear or failing to downshift during acceleration
- Slipping sensation or intermittent loss of power delivery to the wheels
- Reduced fuel economy due to improper shift timing
- Transmission may enter limp mode, limiting vehicle speed and gear selection

Common causes, most likely first

- 1 Faulty shift solenoid 'A' with internal electrical failure or mechanical sticking
- 2 Damaged, chafed, or corroded wiring in the solenoid control circuit
- 3 Loose or contaminated electrical connector at the solenoid or transmission case
- 4 Transmission fluid degradation or contamination causing solenoid malfunction
- 5 Valve body issues, such as stuck valves or worn bores, affecting solenoid operation
- 6 Transmission control module software glitch or internal fault
- 7 Poor ground connection for the solenoid circuit



How to diagnose and fix it

- 1 Verify battery voltage and inspect the solenoid circuit fuse, as low voltage can trigger false codes
- 2 Perform a visual inspection of the solenoid wiring harness and connectors for damage, corrosion, or looseness
- 3 Check transmission fluid level and condition; service if fluid is dark or contaminated
- 4 Use a scan tool to command the solenoid on and off while monitoring circuit feedback to confirm electrical integrity
- 5 Measure resistance across the solenoid terminals and compare to manufacturer specifications
- 6 If resistance is out of spec, replace shift solenoid 'A' and inspect the valve body for debris or wear
- 7 Clear the code and perform a relearn or adaptation drive cycle to verify the repair

What the code does not always mean

- A P0972 code can be set by a momentary voltage spike or low battery condition, so always check the charging system before condemning the solenoid.
The solenoid itself is often not the root cause; worn valve body bores or contaminated fluid can cause the solenoid to perform out of range even when electrically sound.
- Some vehicles use a single solenoid for multiple functions, so a failure may affect several gears and mimic other transmission codes.
- After replacing a solenoid, a transmission control module relearn procedure is often required to prevent repeat codes and ensure smooth shifting.
Intermittent wiring faults that only appear when the transmission is hot or vibrating are common and may not show up during a cold static test.

Can I keep driving with P0972?

You can usually drive the vehicle to a repair shop, but avoid aggressive acceleration or heavy loads because the transmission may shift unpredictably or enter limp mode. If the vehicle is stuck in a single gear or slipping severely, stop driving and arrange a tow to prevent further damage.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter for resistance and voltage measurements
- Transmission fluid pressure gauge
- Factory service information for circuit specifications and relearn procedures
- Basic hand tools and socket set for connector and pan access



Reading P0972

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

Often seen with

P0700 Transmission Control System Malfunction · **P0750** Shift Solenoid 'A' · **P0755** Shift Solenoid 'B' · **P0973** Shift Solenoid 'A' Control Circuit Low · **P0974** Shift Solenoid 'A' Control 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/p0972/>

