

GENERIC · POWERTRAIN

P0973

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0973

Shift Solenoid 'A' Control Circuit Low

P0973 means the transmission control module (TCM) has detected an abnormally low voltage on the control circuit for shift solenoid 'A', which is the solenoid that controls fluid pressure for one of the forward gear shifts. The TCM commands the solenoid on and off, but the circuit's voltage stays below the expected threshold, so the computer sets this code and usually defaults to a limp-home shift strategy.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Transmission

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- The transmission may shift harshly or flare between gears, especially on the 1-2 or 2-3 shift.
- The vehicle may stay in a single gear or enter limp-home mode with reduced power.
- Delayed engagement when shifting from Park or Neutral into Drive or Reverse.
- Often no symptoms besides the warning light, particularly if the fault is intermittent.
- Poor fuel economy or elevated engine rpm at highway speed due to improper shift timing.

Common causes, most likely first

- A damaged, chafed, or corroded wire in the shift solenoid 'A' control circuit, often where it passes near heat or moving components.
- A loose or contaminated electrical connector at the solenoid or at the transmission case pass-through.
- A failed shift solenoid 'A' with an internally shorted or open coil that drags the control voltage low.
- Low or degraded transmission fluid causing poor solenoid operation and erratic circuit feedback.
- A faulty transmission control module (TCM) or a poor ground connection shared with the solenoid circuit.
- Debris or sludge in the valve body restricting solenoid movement and altering circuit current draw.
- Aftermarket electrical accessories or poor prior repairs that tapped into the transmission harness.



How to diagnose and fix it

- 1 Check the transmission fluid level and condition first, since low or burnt fluid can mimic solenoid circuit faults.
- 2 Inspect the solenoid 'A' connector and the transmission case pass-through for corrosion, looseness, or fluid intrusion.
- 3 Disconnect the TCM and the solenoid, then measure resistance and continuity of the control wire to rule out an open or short to ground.
- 4 Verify the solenoid coil resistance against the manufacturer's specification and compare it with a known-good solenoid.
- 5 Apply a test light or scope to the control circuit while commanding the solenoid with a scan tool to confirm the TCM is actually driving the circuit.
- 6 If the circuit checks good, remove the valve body and inspect the solenoid for debris, sticking, or a cracked coil housing.
- 7 Replace the faulty solenoid or repair the damaged harness section, clear the code, and perform a relearn or adaptation drive cycle.

What a low solenoid circuit really means

- A low-voltage code does not automatically mean the solenoid is bad; a short to ground anywhere in the wire, a pinched harness, or a bad TCM ground can pull the control circuit low and set P0973.
- Technicians often replace the solenoid only to find the real fault is a corroded connector pin or a wire rubbed through near the transmission mount, so always inspect the harness before condemning parts.
- Intermittent P0973 codes that appear only when hot or after rain frequently trace to fluid wicking into a connector or a harness chafed against a hot exhaust component.
- A weak battery or charging system can cause the TCM to misread solenoid circuit voltage, so check system voltage and grounds before deep transmission diagnosis.
- Some vehicles set P0973 alongside other shift solenoid codes when the shared power or ground circuit fails, which points to a common feed rather than multiple failed solenoids.

Can I keep driving with P0973?

You can usually drive the vehicle to a repair shop, but expect harsh shifting or limp-home mode and avoid heavy acceleration or towing until the fault is repaired. Continuing to drive with a faulty shift solenoid can cause internal transmission damage over time, so schedule diagnosis promptly.

Tools that help

- OBD-II scan tool with transmission live data and bidirectional control capability
- Digital multimeter with resistance and voltage measurement
- Test light or automotive oscilloscope for circuit verification
- Factory service information for wiring diagrams and solenoid resistance specifications
- Basic hand tools and a transmission fluid catch pan for connector and solenoid access



Reading P0973

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

Often seen with

P0700 Transmission Control System Malfunction · **P0750** Shift Solenoid 'A' · **P0974** Shift Solenoid 'A' Control Circuit High · **P0975** Shift Solenoid 'B' Control Circuit Range/Performance · **P0976** Shift Solenoid 'B' Control Circuit Low

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/p0973/>

