

GENERIC · POWERTRAIN

P0770

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

### P0770

## Shift Solenoid 'E'

P0770 indicates that the transmission control module (TCM) has detected an electrical or performance fault with shift solenoid 'E', which is responsible for controlling a specific gear shift in the automatic transmission. The computer monitors the solenoid's circuit and the resulting gear ratio, and it sets this code when the commanded state does not match the actual transmission behavior.

|            |                     |          |                |              |
|------------|---------------------|----------|----------------|--------------|
| 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 fail to shift into certain gears, often feeling like it is stuck in one gear or neutrals out.
- Harsh or delayed shifts may be experienced, especially when the solenoid is commanded to change state.
- The transmission may enter limp mode, limiting vehicle speed and gear selection.
- In some cases, no drivability symptoms are noticed besides the warning light, especially if the fault is intermittent.

### Common causes, most likely first

- Faulty shift solenoid 'E' itself, such as a burned coil or mechanical sticking.
- Damaged or corroded wiring and connectors in the solenoid circuit, including the transmission harness.
- Low or contaminated transmission fluid, which can cause solenoid malfunction or hydraulic issues.
- A blocked or sticking valve body, preventing proper hydraulic pressure to the solenoid circuit.
- A failed transmission control module (TCM) or internal driver circuit for the solenoid.
- Internal transmission mechanical wear, such as a worn clutch pack or band, causing incorrect gear ratios that mimic a solenoid fault.



## How to diagnose and fix it

- 1 Check the transmission fluid level and condition; top off or replace fluid if it is low or dirty.
- 2 Perform a visual inspection of the solenoid 'E' wiring harness and connectors for damage, corrosion, or loose pins.
- 3 Use a scan tool to command the solenoid on and off and listen for a click, or measure resistance at the solenoid connector to compare with specifications.
- 4 Test the solenoid circuit with a multimeter to check for opens, shorts, or high resistance in the wiring between the TCM and solenoid.
- 5 If the solenoid tests faulty, replace shift solenoid 'E' and perform a transmission fluid service.
- 6 Inspect the valve body for sticking valves or debris, and clean or replace as necessary.
- 7 If all external checks pass, diagnose the TCM and internal transmission components, which may require professional transmission repair.

## What a P0770 code often hides

- A P0770 code is frequently set by a simple low-fluid condition or a dirty filter, so always verify fluid level and condition before condemning the solenoid.
- The solenoid may test good electrically but still stick mechanically due to varnish or debris, so a resistance check alone is not conclusive.
- In many vehicles, shift solenoid 'E' is part of a solenoid pack, and replacing the entire pack is more cost-effective than replacing a single solenoid.
- Intermittent wiring faults inside the transmission pan or near hot exhaust components can cause this code without any permanent solenoid failure.
- A faulty transmission control module (TCM) or a poor ground connection can mimic a solenoid fault, so circuit integrity must be verified before replacement.

## Can I keep driving with P0770?

You can usually drive the vehicle to a repair shop if the transmission still shifts and the vehicle is not in limp mode, but avoid heavy acceleration or towing. If the transmission slips, fails to engage gears, or enters limp mode, stop driving and have it towed to prevent further damage.

## Tools that help

- OBD-II scan tool with transmission diagnostic capability
- Digital multimeter
- Transmission fluid level dipstick or scan tool for fluid level
- Socket and wrench set for pan removal
- Solenoid testing tool or jumper wires



## Reading P0770

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| <b>P</b>  | Powertrain: engine, transmission and emissions.                      |
| <b>0</b>  | Generic (SAE) code: it means the same thing on every OBD-II vehicle. |
| <b>7</b>  | Transmission.                                                        |
| <b>70</b> | The exact fault within that area.                                    |

## Often seen with

**P0765** Shift Solenoid 'D' · **P0766** Shift Solenoid 'D' Performance or Stuck Off · **P0767** Shift Solenoid 'D' Stuck On · **P0768** Shift Solenoid 'D' Electrical · **P0771** Shift Solenoid 'E' Performance or Stuck Off

## 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/p0770/>

