

GENERIC · POWERTRAIN

P097C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P097C

Shift Solenoid C Control Circuit/Open

P097C indicates that the transmission control module (TCM) has detected an open circuit or excessive resistance in the control circuit for shift solenoid C, which is responsible for controlling a specific gear shift. The TCM monitors the solenoid's electrical path and sets this code when the expected current flow is not present, often resulting in harsh shifting or a default limp mode.

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

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- Harsh or delayed shifts, especially when engaging the affected gear.
- The transmission may enter limp mode, limiting vehicle speed and gear selection.
- Slipping or flaring during gear changes controlled by solenoid C.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- A faulty shift solenoid C with an open internal coil or damaged connector.
- Corroded, loose, or damaged electrical connector at the solenoid or TCM.
- Broken or chafed wire in the solenoid control circuit, often due to vibration or heat.
- Transmission fluid contamination or low fluid level causing solenoid malfunction.
- A failed transmission control module (TCM) or internal circuit fault, though less common.
- Valve body issues that mechanically bind the solenoid, leading to circuit stress.

How to diagnose and fix it

- Check transmission fluid level and condition; top off or replace fluid if contaminated.
- Inspect the solenoid C electrical connector for corrosion, tightness, and damage; clean or repair as needed.
- Perform a resistance test on the solenoid C circuit using a multimeter to check for open or shorted windings.
- Check for continuity and voltage drop across the wiring harness from the TCM to the solenoid, repairing any breaks or high resistance.
- If the circuit tests good, remove and test the solenoid C directly; replace if out of specification.
- Clear the code and perform a road test to verify the repair, monitoring live data for solenoid operation.
- If the code persists, diagnose the TCM and valve body for internal faults, consulting factory service information for specific testing.



Don't overlook the wiring harness first

- A chafed wire inside the transmission pan or near the valve body often causes this code, and it can be easily missed if only the solenoid is replaced.
- The TCM may set P097C intermittently due to a loose connector pin that only loses contact when the transmission is hot or vibrating.
- Replacing the solenoid without checking the entire circuit can lead to a repeat failure if the root cause is a damaged wire or corroded ground.
- This code does not always mean the solenoid is bad; a faulty TCM driver or a shorted wire can mimic an open circuit.
- Some vehicles require a relearn procedure after solenoid replacement, and skipping it can cause harsh shifts that mimic a recurring fault.

Can I keep driving with P097C?

It is generally safe to drive with P097C if the transmission still shifts reasonably and the vehicle is not in limp mode, but avoid aggressive acceleration or heavy loads. If the transmission slips severely or enters limp mode, seek service promptly to prevent further damage.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Factory service information or wiring diagrams
- Transmission fluid level dipstick or scan tool for fluid temperature
- Basic hand tools for connector and pan removal

Reading P097C

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

Often seen with

P0700 Transmission Control System Malfunction · **P0750** Shift Solenoid 'A' · **P0755** Shift Solenoid 'B' · **P097B** Shift Solenoid B Control Circuit/Open · **P097D** Shift Solenoid D Control Circuit/Open



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/p097c/>

