

GENERIC · POWERTRAIN

# P097E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P097E

### Shift Solenoid E Control Circuit/Open

P097E indicates that the transmission control module (TCM) has detected an open circuit or excessive resistance in the electrical path for shift solenoid E, which is one of the solenoids that controls hydraulic pressure for gear shifting. The TCM monitors the solenoid's control circuit and sets this code when the expected current flow is absent or out of range, meaning the solenoid may not receive the command to actuate.

| SYSTEM     | CODE TYPE           | SEVERITY | FIX DIFFICULTY | AREA         |
|------------|---------------------|----------|----------------|--------------|
| Powertrain | Generic (all makes) | Medium   | Intermediate   | 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, especially when the transmission attempts to engage the gear controlled by solenoid E
- Transmission may enter limp mode, limiting vehicle speed and available gears
- Slipping or flaring during shifts, where engine speed rises without corresponding vehicle acceleration
- In some cases, the transmission may fail to shift into certain gears altogether

### Common causes, most likely first

- 1 Open or damaged wire in the shift solenoid E control circuit, such as a broken conductor or corroded connector
- 2 Faulty shift solenoid E itself, with an open internal coil or failed electrical connection
- 3 Poor electrical connection at the solenoid or transmission harness connector, often due to contamination or loose pins
- 4 Transmission control module (TCM) internal fault affecting the solenoid driver circuit
- 5 Damaged or chafed wiring harness between the TCM and transmission, often from heat or vibration
- 6 Low transmission fluid level or contaminated fluid causing solenoid malfunction, though less likely to set an open-circuit code directly



## How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related transmission codes before proceeding
- 2 Inspect the transmission fluid level and condition, and top off or service as needed
- 3 Visually inspect the solenoid E wiring harness and connectors for damage, corrosion, or loose pins
- 4 Measure the resistance of shift solenoid E at the transmission connector and compare to the manufacturer's specification
- 5 Check for continuity and voltage on the control circuit between the TCM and solenoid to identify an open or short
- 6 If the circuit tests good, replace shift solenoid E and clear the code to see if it returns
- 7 If the code persists after solenoid replacement, diagnose the TCM and its programming or consider internal transmission damage

## What a P097E open circuit really means

- An open circuit code does not always mean the solenoid is dead; a corroded connector or chafed wire often causes the same symptom and is far cheaper to fix.
- Some vehicles use a single solenoid for multiple gears, so a failure may only affect one shift while other gears operate normally, masking the problem.
- Transmission fluid that is low or contaminated can cause solenoid performance issues, but an open-circuit code typically points to an electrical fault rather than a hydraulic one.
- After replacing a solenoid, always clear the adaptive learning memory; otherwise the TCM may continue to shift harshly and mimic a recurring fault.
- A faulty TCM driver circuit can set this code even when the solenoid and wiring test good, so don't overlook the module itself in persistent cases.

## Can I keep driving with P097E?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the transmission may enter limp mode or shift unpredictably. If the vehicle is already in limp mode or shifts harshly, limit driving to essential trips only.

## Tools that help

- OBD-II scan tool with transmission code capability
- Digital multimeter for resistance and continuity testing
- Vehicle-specific service information for solenoid resistance specifications and wiring diagrams
- Socket set and trim removal tools for accessing the transmission connector
- Transmission fluid level gauge and fluid pump if servicing is needed



## Reading P097E

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| <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>9</b>  | Transmission.                                                        |
| <b>7E</b> | The exact fault within that area.                                    |

## Often seen with

**P0700** Transmission Control System Malfunction · **P0750** Shift Solenoid 'A' · **P0760** Shift Solenoid 'C' · **P097D** Shift Solenoid D Control Circuit/Open · **P097F** Shift Solenoid F 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/p097e/>

