

GENERIC · POWERTRAIN

P078F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P078F

Transmission Mode Switch C Circuit

P078F indicates that the transmission control module has detected an abnormal condition in the electrical circuit for Transmission Mode Switch C, which is typically a driver-selectable mode button or a range sensor input. The computer monitors the circuit for expected voltage or resistance and sets the code when the signal falls outside the programmed parameters, often due to an open, short, or erratic connection.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The warning light (malfunction indicator lamp) illuminates, often with no other noticeable symptoms.
- The transmission may fail to respond when selecting a different driving mode, such as sport or tow/haul.
- The current mode indicator on the dashboard may flash, stay dark, or show an incorrect mode.
- The transmission may default to a single mode (often normal) and ignore switch inputs.
- In some cases, the transmission may shift harshly or hold gears longer than usual as a failsafe.
- Cruise control or other features tied to the mode switch may become inoperative.

Common causes, most likely first

- 1 Faulty transmission mode switch C itself, worn or contaminated internally.
- 2 Damaged, corroded, or disconnected wiring or connector at the switch or transmission.
- 3 Open or short circuit in the signal or ground circuit between the switch and the control module.
- 4 Failed transmission control module (TCM) or a software glitch requiring reflash.
- 5 Water intrusion or debris in the switch connector causing intermittent contact.
- 6 Aftermarket accessories or poor previous repairs tapping into the circuit.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data, then clear codes and test-drive to see if P078F returns.
- 2 Inspect the transmission mode switch and its connector for physical damage, corrosion, or loose pins; clean and reseat as needed.
- 3 Use a digital multimeter to check for continuity and resistance across the switch in each position, comparing to manufacturer specifications.
- 4 Backprobe the signal and ground wires at the TCM while operating the switch to verify the voltage changes correctly.
- 5 Check for continuity and shorts to ground or power on the relevant wires between the switch and TCM; repair any damaged harness sections.
- 6 If the circuit and switch test good, substitute a known-good switch or perform a TCM software update per technical service bulletins.
- 7 After repairs, clear codes and verify the mode switch functions correctly with no return of the code during a road test.

Mode switch circuit faults often misdiagnosed

- A common mistake is replacing the transmission mode switch without first checking the connector for water intrusion, which can mimic a failed switch.
- The code can be set by a momentary glitch, so always clear it and verify it returns before condemning any part.
- On some vehicles, the mode switch shares a ground with other sensors, so a bad ground elsewhere can trigger P078F.
- A weak or failing battery can cause voltage spikes that confuse the TCM and set this code intermittently.
- Aftermarket remote starters or alarm systems tapped into the mode switch wiring are a frequent hidden cause.

Can I keep driving with P078F?

The vehicle is generally safe to drive because the transmission defaults to a safe mode, but you may lose the ability to select different driving modes. Avoid towing or heavy loads until the fault is repaired, as the default mode may not be optimal for those conditions.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set or backprobe pins
- Vehicle-specific wiring diagram
- Basic hand tools for trim and connector removal



Reading P078F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
7	Transmission.
8F	The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P078E** Shift Timing Solenoid B Intermittent · **P0790** Normal/Performance Switch Circuit · **U0101** Lost Communication with TCM

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/p078f/>

