

GENERIC · POWERTRAIN

P07D4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07D4

Transmission Mode Switch F Circuit

P07D4 indicates that the transmission control module (TCM) has detected an abnormal condition in the electrical circuit for Transmission Mode Switch 'F', which is one of several inputs used to select different driving modes such as sport, economy, or manual shift. The TCM monitors the voltage or signal on this circuit and sets the code when the reading falls outside the expected range for the current mode, often due to an open circuit, short to ground, or short to power.

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. The transmission may remain in a single default mode and refuse to switch between modes when the driver presses the mode button.
- Harsh or delayed shifting as the TCM substitutes a default shift strategy.
- The current mode indicator on the instrument cluster may flash or show an incorrect mode.
- In some vehicles, the transmission may enter limp mode and limit engine power or vehicle speed.

Common causes, most likely first

- 1 A faulty transmission mode switch 'F' that has worn contacts or internal failure.
- 2 Damaged, corroded, or disconnected wiring in the circuit between the switch and the TCM.
- 3 A poor electrical connection at the switch connector or TCM connector, often due to water intrusion or loose pins.
- 4 A short to ground or short to power in the signal wire, sometimes caused by chafed insulation against metal components.
- 5 A failed TCM that is unable to correctly read the switch input, though this is less common.
- 6 Aftermarket accessories or improper previous repairs that tapped into the circuit and altered its resistance.



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear the code and test-drive to see if it returns immediately.
- 2 Inspect the transmission mode switch and its connector for physical damage, corrosion, or loose pins, and clean or repair as needed.
- 3 Check the wiring harness between the switch and the TCM for continuity, shorts to ground, and shorts to power using a multimeter.
- 4 Test the switch itself with a multimeter to verify it opens and closes correctly in each mode position, comparing to manufacturer specifications.
- 5 If the switch tests bad, replace it and clear the code; if wiring is faulty, repair the affected section and retest.
- 6 If the switch and wiring are good, check TCM power and ground connections, and consult factory diagnostics for TCM testing or reprogramming.
- 7 After repairs, clear codes and perform a thorough test drive to confirm the mode switch functions correctly and the code does not reset.

What the mode switch code really means

- A transmission mode switch often shares a common ground or reference voltage with other switches, so a fault in a different switch can set this code even if switch 'F' itself is fine.
- The TCM may set this code intermittently if the switch contacts are dirty but still functional, so a code that clears after clearing may still indicate a developing problem.
- On some vehicles, the mode switch is integrated into the gear selector assembly, making replacement more involved than a simple standalone switch.
- A weak or failing battery or charging system can cause voltage spikes that confuse the TCM and set false mode switch codes, so always check battery health first.
- After replacing a switch or TCM, some vehicles require a relearn or calibration procedure for the transmission to recognize the new component properly.

Can I keep driving with P07D4?

You can usually continue driving with this code, but the transmission may not shift optimally or may stay in a default mode, which can affect performance and fuel economy. Avoid aggressive driving or towing until the fault is repaired, and if the transmission enters limp mode, seek service promptly.

Tools that help

- OBD-II scan tool with transmission code capability
- Digital multimeter
- Wire probe set or back-probe pins
- Service manual or wiring diagram for the specific vehicle
- Basic hand tools for trim and connector removal



Reading P07D4

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 7** Transmission.
- D4** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P07D3** Transmission Mode Switch E Circuit High · **P07D5** Transmission Mode Switch F Circuit Low · **P07D6** Transmission Mode Switch F Circuit High

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/p07d4/>

