

FORD · POWERTRAIN

P1710

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1710 · Ford

Transmission system problems

P1710 on Ford vehicles is a manufacturer-specific code that the transmission control module (TCM) sets when it detects an internal transmission system fault that does not fit a more specific diagnostic code. The TCM has logged a general performance or rationality failure within the transmission control system, meaning it cannot verify that shift scheduling, line pressure, or solenoid response is operating as programmed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Professional	Transmission

Symptoms you may notice

- Illumination of the transmission malfunction indicator or check engine light, often with no other symptoms besides the warning light
- Harsh or delayed shifts, particularly when the transmission is cold or under light throttle
- Transmission stuck in limp mode or a default gear with reduced power
- Slipping during acceleration or a flare between gear changes
- Erratic torque converter clutch engagement or shudder at steady cruise
- Unexpected downshifts or refusal to upshift at normal road speeds

Common causes, most likely first

- 1 Degraded or contaminated transmission fluid causing solenoid response and pressure control deviations
- 2 Faulty transmission range sensor or manual lever position sensor sending implausible gear selection data
- 3 Sticking or failing shift solenoid or line pressure solenoid inside the valve body
- 4 Internal valve body wear or a stuck valve causing pressure regulation errors
- 5 Wiring harness chafe, corrosion, or loose connector pins between the TCM and transmission solenoids
- 6 Low transmission fluid level from a slow leak at the pan gasket, cooler lines, or seals
- 7 TCM software calibration issue or internal TCM fault on older Ford units



How to diagnose and fix it

- 1 Connect a capable scan tool and read all transmission control module codes and freeze-frame data before clearing anything
- 2 Check transmission fluid level, condition, and smell; top off or schedule a fluid and filter service if degraded
- 3 Inspect the transmission wiring harness and connectors for chafe, corrosion, and pushed-out pins at the solenoid pack and range sensor
- 4 Test the transmission range sensor and shift solenoids with a multimeter for resistance and continuity against Ford specifications
- 5 Perform a road test with live data to compare commanded versus actual gear, line pressure, and solenoid duty cycle
- 6 Check for and install any available TCM calibration updates from Ford before condemning internal hardware
- 7 If electrical and fluid checks pass, remove the valve body for inspection of sticking valves and solenoid function, then repair or replace as needed

What P1710 hides behind a general code

- P1710 is a catch-all code, so the real fault often lives in a sub-code stored in the TCM that a basic OBD-II reader cannot display; use a Ford-capable scan tool to pull enhanced transmission codes.
- A marginal battery or charging system on Ford vehicles can cause the TCM to log P1710 during cranking, so check battery voltage and grounds before tearing into the transmission.
- Drivers often replace the transmission range sensor first, but a chafed harness near the bell housing or a corroded connector at the solenoid pack is a more common root cause on high-mileage Fords.
- Fresh fluid alone can clear P1710 when the cause is a sticking solenoid from varnish, but if the code returns within a few hundred miles the valve body or solenoid pack needs replacement.
- P1710 does not always mean the transmission is mechanically failing; a software calibration issue or a loose ground can set it with no internal damage at all.

Can I keep driving with P1710?

You can usually drive a Ford with P1710 to a shop if the transmission is not in limp mode and shifts reasonably, but avoid heavy throttle, towing, and long highway trips until it is diagnosed. If the vehicle is stuck in limp mode or slipping badly, stop driving and arrange a tow to prevent internal transmission damage.

Tools that help

- Ford-capable scan tool with transmission control module access
- Digital multimeter for solenoid and sensor testing
- Transmission fluid level dipstick or scan tool fluid temperature readout
- Socket and wrench set for pan and valve body access
- Inspection mirror and bright flashlight for harness and connector checks



Reading P1710

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 7** Transmission.
- 10** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0730** Incorrect Gear Ratio · **P0740** Torque Converter Clutch Circuit Malfunction

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/ford-p1710/>

