

GENERIC · POWERTRAIN

P0993

OBD-II TROUBLE CODE

P0993

Transmission Fluid Pressure Sensor/Switch 'F' Circuit Range/Performance

P0993 indicates that the transmission control module has detected an out-of-range or performance fault in the electrical circuit for transmission fluid pressure sensor or switch 'F'. The computer compares the sensor's signal against expected values for the current operating conditions and flags the circuit when the voltage or pressure reading falls outside the acceptable window.

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 transmission shifts, especially when the fluid is cold or under light throttle
- The transmission may enter limp mode, sticking in a single gear or refusing to shift
- Slipping or flaring during gear changes, with engine speed rising without corresponding vehicle acceleration
- Erratic shift points or torque converter clutch engagement that feels inconsistent
- A stored code alone with no drivability complaint, particularly on vehicles that use this switch only for monitoring

Common causes, most likely first

- 1 A faulty transmission fluid pressure sensor or switch 'F' that has drifted or failed internally
- 2 Damaged, chafed, or corroded wiring in the sensor circuit, often near heat sources or transmission connectors
- 3 A poor electrical connection at the sensor pigtail or the transmission control module harness
- 4 Low or contaminated transmission fluid that causes actual pressure deviations the sensor correctly reports
- 5 A sticking or worn pressure regulator valve or solenoid that produces abnormal hydraulic pressure
- 6 Internal transmission wear causing pressure readings outside the expected range for the commanded gear
- 7 A transmission control module with corrupted adaptive memory or, rarely, an internal driver fault



How to diagnose and fix it

- 1 Verify transmission fluid level and condition, then inspect the sensor connector and wiring for corrosion, chafing, or loose pins
- 2 Use a scan tool to read live pressure sensor data and compare it against the commanded pressure and the manufacturer's expected values
- 3 Perform a resistance and voltage drop test on the sensor circuit from the sensor connector back to the transmission control module
- 4 Check for related codes in the transmission control module and review freeze-frame data to understand the conditions when the fault set
- 5 If the circuit tests good, replace the transmission fluid pressure sensor or switch 'F' and clear the code to see if it returns
- 6 If the code persists after sensor replacement, inspect the valve body for sticking valves or debris that could cause real pressure deviations
- 7 As a last step, verify the transmission control module software is current and reflash or replace only after all hydraulic and electrical checks pass

What the pressure switch really monitors

- Many vehicles use switch 'F' only as a plausibility check against other pressure sensors, so a failed switch can set this code without any change in shift feel or drivability.
- A low fluid level or a clogged transmission filter can cause genuine pressure deviations that trigger P0993 even when the sensor and wiring are perfectly healthy.
- Technicians often replace the sensor first and later find a chafed wire in the harness near the transmission mount or exhaust, so a thorough circuit test saves repeat repairs.
- This code does not always mean the transmission is failing; on some platforms it is a monitoring circuit that has no effect on shift strategy until the fault is confirmed twice.
- After any repair, the transmission control module may need an adaptive relearn or a clear-and-recheck drive cycle before the code will stay off, so do not assume the fix failed if the light returns immediately.

Can I keep driving with P0993?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy throttle, towing, or long highway trips because the transmission may enter limp mode or shift harshly without warning. If the transmission slips badly or refuses to engage a gear, stop driving and arrange a tow to prevent internal damage.



Tools that help

- OBD-II scan tool with transmission live data capability
- Digital multimeter for circuit resistance and voltage drop testing
- Transmission fluid level dipstick or scan tool fluid temperature check
- Wire terminal pick and electrical contact cleaner
- Vehicle-specific service information for pressure sensor circuit specs

Reading P0993

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

Often seen with

P0711 Transmission Fluid Temperature Sensor 'A' Circuit Range/Perf · **P0712** Transmission Fluid Temperature Sensor 'A' Circuit Low · **P0713** Transmission Fluid Temperature Sensor 'A' Circuit High · **P0992** Transmission Fluid Pressure Sensor/Switch 'F' Circuit · **P0994** Transmission Fluid Pressure Sensor/Switch 'F' Circuit Low

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/p0993/>

