

GM · POWERTRAIN

P1816

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1816 · GM

TFP Valve Position Switch Park Neutral With Drive Ratio

P1816 on GM vehicles means the transmission control module (TCM) has detected a mismatch between the transmission fluid pressure (TFP) valve position switch reading and the actual drive ratio commanded. The TCM expects the switch to indicate Park or Neutral when the vehicle is in those ranges, but the switch signal instead matches a drive gear ratio, so the computer flags an implausible switch state.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Intermediate	Transmission

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent
- Harsh or delayed shifts as the TCM defaults to a limp or fixed shift strategy
- Transmission may stay in a single gear or refuse to downshift normally
- Speedometer or gear indicator may behave erratically or show the wrong range
- Garage shifts may feel clunky or the engine may flare when selecting Drive or Reverse

Common causes, most likely first

- 1 Faulty transmission fluid pressure (TFP) valve position switch, usually due to internal contact wear or fluid contamination
- 2 Damaged or chafed wiring harness between the TFP switch and the TCM, often near the transmission case connector
- 3 Corroded or loose electrical connector pins at the transmission pass-through or TCM
- 4 Low or degraded transmission fluid causing erratic switch operation and poor hydraulic pressure
- 5 Internal valve body wear or sticking valves that prevent the manual valve from matching the switch signal
- 6 TCM software calibration issue or internal TCM fault misreading the switch input
- 7 Contaminated fluid or debris lodged in the switch assembly after a prior repair



How to diagnose and fix it

- 1 Check transmission fluid level and condition first; top off or service fluid if it is low, dark, or smells burnt
- 2 Inspect the transmission case connector and TCM connectors for corrosion, pushed pins, or loose terminals
- 3 Perform a wiggle test on the harness while watching TFP switch data on a scan tool to catch intermittent wiring faults
- 4 Compare the TFP switch state on the scan tool with the actual gear selector position in each range to confirm the mismatch
- 5 Check for TCM software updates or technical service bulletins that address false P1816 setting
- 6 If wiring and fluid are good, remove and test or replace the TFP valve position switch, then clear codes and verify the fix
- 7 If the switch and wiring test good, inspect the valve body and manual valve for wear or sticking that could cause the ratio mismatch

What the TFP switch really tells the TCM

- A P1816 can set intermittently from a dirty connector that only acts up in wet weather, so a clean, dry plug-in often cures it without any parts.
- Technicians sometimes replace the TFP switch only to find the real problem is a chafed harness section rubbing against the transmission case or exhaust shield.
- The code does not always mean the transmission is mechanically failing; a simple switch signal error can trigger limp mode and mimic a serious internal fault.
- After a transmission rebuild or valve body service, trapped debris or a misaligned manual valve can cause P1816 even with a brand-new switch.
- Some GM models require a relearn or adaptive reset after switch replacement, and skipping it can leave the code stored or cause harsh shifts.

Can I keep driving with P1816?

You can usually drive the vehicle to a shop, but avoid heavy acceleration, towing, or long highway trips because the transmission may be in a limp or fixed-gear strategy. If shifts become severely harsh or the vehicle refuses to move, stop driving and arrange a tow.

Tools that help

- Scan tool with live transmission data and TFP switch status
- Digital multimeter for continuity and resistance checks
- Transmission fluid level dipstick or service tool
- Wire terminal pick and electrical contact cleaner
- Factory service information for connector pinouts and switch resistance specs



Reading P1816

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

Often seen with

P1815 Pressure Control Solenoid 1 Short To B+ · **P1815** Transmission Range Switch Start In Wrong Range · **P1817** TFP Valve Position Switch Reverse With Drive Ratio · **P1815** Transmission 4-Wheel Drive Mode Select Short Circuit To Grou · **P0705** Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0715** Input/Turbine Speed Sensor Circuit Malfunction

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1816/>

