

GENERIC · POWERTRAIN

P0829

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0829

5-6 Shift

P0829 is a generic transmission code that the transmission control module (TCM) sets when it detects an implausible or incorrect gear ratio during the 5-to-6 upshift sequence. The computer commands the shift, monitors engine speed versus output shaft speed, and flags the code when the calculated ratio does not match the expected value for sixth gear within a calibrated time window.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Check engine light or transmission warning light illuminated, often with no other noticeable symptoms
- Harsh, delayed, or slipping 5-to-6 upshift felt as a flare or bump during highway acceleration
- Transmission may enter limp mode and stay in a single gear or refuse to shift beyond fifth
- Increased engine RPM at highway speed because sixth gear is not engaging
- Poor fuel economy on the highway due to the missing overdrive ratio
- In some vehicles, a stored code with no drivability complaint until the next key cycle

Common causes, most likely first

- 1 Low or degraded automatic transmission fluid (ATF) causing poor hydraulic control during the 5-6 shift
- 2 Sticking or contaminated 5-6 shift solenoid or shift solenoid pack
- 3 Worn valve body bores or a sticking 5-6 shift valve in the valve body
- 4 Internal clutch pack wear or seal leakage in the 5-6 clutch assembly
- 5 Faulty transmission speed sensor (input or output) sending an erratic signal to the TCM
- 6 Damaged wiring or corroded connector at the transmission solenoid pack or speed sensors
- 7 TCM software calibration issue or adaptive learning that has drifted out of range



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data for P0829 before clearing anything
- 2 Check transmission fluid level, condition, and color; service the fluid and filter if degraded or overdue
- 3 Inspect the transmission wiring harness and solenoid pack connector for chafing, corrosion, or loose pins
- 4 Verify input and output speed sensor signals with a scan tool during a road test to confirm the ratio error
- 5 Perform the manufacturer's relearn or adaptive reset procedure after any fluid or solenoid service
- 6 Test the 5-6 shift solenoid resistance and compare to specification; replace the solenoid pack if out of range
- 7 If electrical and hydraulic checks pass, perform a valve body inspection or transmission teardown to inspect the 5-6 clutch pack

What the 5-6 shift code really tells you

- A P0829 can set from a momentary speed sensor glitch during the shift and may never return, so clearing the code and test-driving before replacing parts is a valid first step.
Many technicians replace the transmission when the real fault is a \$30 speed sensor or a chafed wire near the bellhousing, so always verify sensor signals before condemning hard parts.
- Adaptive learning can mask a worn 5-6 clutch for thousands of miles; after a fluid service or battery disconnect, the relearn may expose a shift quality problem that was already there.
- On some vehicles, a P0829 is stored alongside ratio codes for other gears, which points to a global hydraulic pressure issue rather than a single solenoid or clutch.
A restricted transmission filter can cause low line pressure that only shows up on the 5-6 shift because it is one of the higher-demand shifts in the sequence.

Can I keep driving with P0829?

You can usually drive the vehicle short distances at moderate speed to a repair shop, but avoid heavy acceleration, towing, or highway merging because the missing sixth gear and possible limp mode can leave you without full power. If the transmission slips badly or refuses to engage any forward gear, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with transmission module and live data capability
- Digital multimeter for solenoid and sensor circuit testing
- Transmission fluid level dipstick or scan-tool fluid temperature check
- Factory service information for shift solenoid resistance specs and relearn procedure
- Transmission jack and fluid catch pan for valve body or solenoid pack access



Reading P0829

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

Often seen with

P0715 Input/Turbine Speed Sensor Circuit Malfunction · **P0735** Gear 5 Incorrect Ratio · **P0826** Up and Down Shift Switch Circuit · **P0827** Up and Down Shift Switch Circuit Low · **P0828** Up and Down Shift Switch 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/p0829/>

