

GENERIC · POWERTRAIN

P0816

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0816

Downshift Switch Circuit

P0816 indicates that the powertrain control module (PCM) has detected an unexpected signal from the downshift switch circuit, which is part of the automatic transmission's manual shift control system. The PCM monitors the voltage or state of the downshift switch and sets this code when the signal does not match the expected pattern for the current gear and driving conditions.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The malfunction indicator lamp (MIL) illuminates on the dashboard.
- The transmission may fail to downshift when the driver presses the downshift button or moves the selector.
- The transmission may shift harshly or at incorrect points.
- The downshift switch may feel unresponsive or stick.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty downshift switch (internal contact wear or contamination).
- 2 Damaged or corroded wiring harness or connector at the switch or PCM.
- 3 Open or short circuit in the downshift switch circuit.
- 4 Poor ground connection for the switch or PCM.
- 5 Failed PCM (rare, but possible if all other causes are ruled out).
- 6 Debris or obstruction preventing proper switch operation.

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the transmission control module.
- 2 Inspect the downshift switch and its connector for physical damage, corrosion, or loose pins.
- 3 Test the downshift switch operation using a multimeter to check for continuity or voltage changes when activated.
- 4 Check the wiring harness for opens, shorts, or chafing between the switch and the PCM.
- 5 Measure resistance to ground on the switch ground circuit to ensure a good ground.
- 6 If the switch tests faulty, replace it and clear the code.
- 7 If the circuit and switch are good, diagnose the PCM and replace if necessary.



Downshift Switch Circuit Quirks and Checks

- A downshift switch that tests fine on the bench can still set P0816 intermittently due to a poor ground that only fails under vibration or temperature changes.
- The PCM may set P0816 if the switch signal is plausible but inconsistent with vehicle speed and throttle position, so a sticky switch that still clicks can be the culprit.
- Corrosion inside the connector, not the switch itself, is a frequent cause on vehicles exposed to road salt or humidity.
- Some vehicles use a momentary contact switch while others use a resistive multiplexed signal, so testing procedures must match the specific system design.
- P0816 can be set by a low battery or charging system issue that causes voltage spikes, so check battery health before replacing parts.

Can I keep driving with P0816?

You can usually continue driving with P0816, but the transmission may not downshift as expected, which can affect acceleration and engine braking. Avoid aggressive driving or towing until the fault is repaired, and have the circuit inspected promptly to prevent potential transmission damage.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools (screwdrivers, socket set)
- Contact cleaner and dielectric grease

Reading P0816

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

Often seen with

P0700 Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0815** Upshift Switch Circuit · **P0817** Starter Disable Circuit



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/p0816/>

