

GM · POWERTRAIN

P1837

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1837 · GM

Kick-Down Switch Failed Short

P1837 on GM vehicles means the transmission control module (TCM) has detected a short circuit in the kick-down switch circuit, which is the switch that signals a request for forced downshifting when the accelerator is pressed fully. The TCM monitors the switch signal voltage and sets this code when the circuit is grounded or shorted to voltage for longer than expected.

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

Symptoms you may notice

- The malfunction indicator lamp (MIL) illuminates on the instrument cluster.
- The transmission may refuse to downshift when the accelerator is pressed to the floor, leaving the vehicle in a higher gear.
- Delayed or harsh downshifts during passing maneuvers or uphill driving.
- The transmission may stay in a default gear or shift pattern if the TCM enters limp mode.
- Often no symptoms besides the warning light, especially if the short is intermittent.

Common causes, most likely first

- Kick-down switch internally shorted due to wear or contamination.
- Wiring harness chafed or pinched between the switch and the TCM, causing a short to ground or power.
- Corroded or loose connector terminals at the kick-down switch or TCM.
- Moisture intrusion into the switch or connector causing a conductive path.
- Aftermarket accessories or poor previous repairs tapping into the kick-down circuit.
- Faulty TCM internal driver circuit (less common).



How to diagnose and fix it

- 1 Connect a scan tool and read all transmission codes to confirm P1837 is current and not history.
- 2 Inspect the kick-down switch connector and wiring for visible damage, corrosion, or chafing.
- 3 Disconnect the kick-down switch and check for a short to ground or power on the signal circuit using a digital multimeter.
- 4 Test the kick-down switch operation with a multimeter while pressing the accelerator pedal to verify it opens and closes correctly.
- 5 If the switch tests faulty, replace it and clear the code.
- 6 If the circuit tests shorted, trace the harness and repair the damaged section, then clear the code and verify.
- 7 If the circuit and switch are good, check TCM connectors and consult GM service information for TCM diagnostics.

Kick-down switch short-circuit diagnosis tips

- A shorted kick-down switch can cause the TCM to command downshifts at inappropriate times, leading to over-revving or harsh engagement that drivers may mistake for a mechanical transmission failure.
- The kick-down switch is often integrated into the accelerator pedal assembly on many GM vehicles, so a faulty pedal assembly can set this code even when the separate switch appears fine.
- Intermittent shorts from chafed wiring near the pedal or under the dash may only set the code during certain driving conditions, so wiggle-testing the harness while monitoring live data is essential.
- This code does not always mean the switch itself has failed; a short in the wiring or a poor ground can trigger it, and replacing the switch without testing the circuit often leads to a repeat repair.
- Some GM models use a kick-down switch signal that is shared with the cruise control or throttle position sensor circuits, so unrelated faults in those systems can sometimes cause misleading symptoms.

Can I keep driving with P1837?

You can usually drive the vehicle with this code, but avoid aggressive acceleration and passing maneuvers because the transmission may not downshift when needed, reducing acceleration response. If the transmission enters limp mode or shifts erratically, have it diagnosed promptly to prevent further damage.

Tools that help

- OBD-II scan tool with transmission code capability
- Digital multimeter
- Wire piercing probes or backprobe pins
- Service information for wiring diagrams and TCM pinouts
- Basic hand tools for trim and pedal removal



Reading P1837

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

Often seen with

P1836 Kick-Down Switch Failed Open · **P1838** Transmission Transfer Case Shift Motor Circuit Failure · **P0700** Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction

See it working

Watch the animated explainer [Master the Four-Stroke Engine Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1837/>

