

GM · POWERTRAIN

P1760

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1760 · GM

TCM Supply Voltage Interrupted

P1760 on a GM vehicle means the Transmission Control Module (TCM) has detected that its supply voltage was interrupted or dropped below a usable threshold during operation. The TCM logs this code when the ignition voltage feed to the module momentarily falls out of range, which can reset the module or cause it to lose adaptive memory and shift control.

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

Symptoms you may notice

- Transmission may default to a limp or fail-safe mode with harsh or delayed shifts
- The check engine light or transmission warning light illuminates on the dash
- Erratic or inconsistent shift points that change from drive to drive
- The transmission may slip or feel like it is in neutral briefly during acceleration
- Often no symptoms besides the warning light if the voltage interruption was brief
- Loss of adaptive shift memory causing firm or soft shifts after a battery service

Common causes, most likely first

- Corroded, loose, or damaged battery terminals and cables causing intermittent voltage drop
- A failing or weak vehicle battery that drops below threshold during cranking or load
- A faulty ignition switch or ignition relay that interrupts power to the TCM circuit
- Blown or intermittent fuse in the TCM supply circuit, or a poor fuse box connection
- Chafed or broken wiring in the TCM power feed, especially near harness bends or connectors
- A failing TCM itself with an internal voltage regulator fault
- A poor ground connection at the TCM or engine block causing reference voltage instability

How to diagnose and fix it

- Perform a battery and charging system test, including a load test and check for voltage drop during cranking
- Inspect and clean battery terminals, ground straps, and the TCM ground connection for corrosion or looseness
- Check the TCM supply fuse and relay, and verify voltage at the TCM power pin with the key on and during cranking
- Wiggle-test the TCM harness and connectors while monitoring supply voltage to locate intermittent opens
- Repair any chafed wires or replace damaged connectors in the TCM power feed circuit
- If voltage supply is confirmed good, test the TCM for internal faults and replace if necessary
- Clear the code and perform a relearn or adaptive drive cycle to confirm the repair



Voltage drops you will miss on a scan tool

- A battery that passes a static voltage test can still drop below the TCM threshold during cranking, so a load test and cranking voltage check are essential before condemning the module.
- The TCM supply circuit often shares a fuse or relay with other modules, so a blown fuse may be caused by a short elsewhere rather than a TCM fault.
- Intermittent voltage interruptions from a loose ground can set P1760 without ever storing a battery or charging system code, leading to misdiagnosis of the transmission itself.
- After repairing the voltage supply, the TCM may need an adaptive relearn because the interruption can wipe shift adapts, and the customer may still complain of harsh shifts until the relearn completes.
- A failing ignition switch can interrupt TCM power only over bumps or at certain key positions, so road testing while monitoring TCM voltage is often the only way to catch it.

Can I keep driving with P1760?

You can usually drive the vehicle to a shop, but avoid heavy acceleration and towing because the transmission may enter limp mode or shift unpredictably. If the transmission is stuck in a single gear or the warning light is flashing, stop driving and have it towed to prevent internal damage.

Tools that help

- Digital multimeter with min/max recording
- Battery load tester
- OBD-II scan tool with live data and transmission module access
- Fuse puller and test light
- Wiring diagram for the TCM power and ground circuits

Reading P1760

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

Often seen with

P1761 Shift Lock Short To Ground · **P1761** Transmission Shift Solenoid 3 Mechanical Fault · **P1761** Shift Solenoid C Performance · **P1761** Shift Solenoid Malfunction · **P0562** System Voltage Low · **P0563** System Voltage High · **P0700** Transmission Control System Malfunction · **U0100** Lost Communication With ECM/PCM A



See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1760/>

