

GM · POWERTRAIN

P1600

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1600 · GM

PCM Battery Loss / TCM Communication Loss

P1600 on GM vehicles indicates that the powertrain control module (PCM) has detected a loss of battery power to its own memory circuit or a communication failure with the transmission control module (TCM). The PCM sets this code when it either loses its keep-alive memory voltage or cannot exchange data with the TCM over the controller area network (CAN) or serial data bus.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illuminated check engine light or service vehicle soon message
- Often no symptoms besides the warning light
- Transmission may shift harshly or enter limp mode
- Engine may crank but not start or stall intermittently
- Erratic electrical behavior such as flickering dash lights or radio resets
- Loss of stored radio presets or clock reset indicating battery drain

Common causes, most likely first

- 1 Weak or failing vehicle battery with low voltage
- 2 Corroded or loose battery terminals and ground connections
- 3 Blown fuse or faulty wiring in the PCM battery feed circuit
- 4 Faulty ignition switch not supplying proper voltage to the PCM
- 5 Damaged or shorted CAN bus wiring between PCM and TCM
- 6 Failed TCM or PCM internal communication circuit
- 7 Aftermarket accessories improperly wired causing voltage drops



How to diagnose and fix it

- 1 Perform a battery load test and replace if voltage drops below 9.6 volts during cranking
- 2 Clean and tighten all battery terminals and engine ground straps
- 3 Check all fuses related to the PCM and TCM power circuits
- 4 Measure voltage at the PCM battery feed terminal with key off and key on
- 5 Inspect CAN bus wiring for chafing, corrosion, or loose connectors between PCM and TCM
- 6 Use a scan tool to check for communication with the TCM and perform a bidirectional test if possible
- 7 If all wiring and power checks pass, substitute a known-good TCM or PCM for testing

When P1600 is not a dead PCM

- A weak battery that still starts the engine can set P1600 because the PCM sees a voltage dip during cranking that drops below its memory threshold.
- Corroded ground connections on the engine block or chassis often mimic a failed PCM and are frequently overlooked during diagnosis.
- Aftermarket remote starters or alarm systems tapped into the ignition circuit can cause intermittent voltage drops that set P1600 without any hard fault.
- The TCM on many GM models is internal to the transmission and a communication loss can be caused by a failing transmission harness rather than the module itself.
- P1600 can be stored as a history code after a battery replacement or jump start and may not indicate an active fault if the light is off.

Can I keep driving with P1600?

If the check engine light is on but the vehicle runs and shifts normally, you can drive cautiously to a repair shop, but avoid long trips and heavy electrical loads. If the transmission is in limp mode or the engine stalls, stop driving and have the vehicle towed to prevent damage.

Tools that help

- Digital multimeter
- Battery load tester
- OBD-II scan tool with bidirectional controls
- Test light
- Wiring diagram for the specific GM model



Reading P1600

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (GM): its meaning depends on the make.
- 6** Computer and output circuits.
- 00** The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0601** Internal Control Module Memory Checksum Error · **P0700** Transmission Control System Malfunction · **U0100** Lost Communication With ECM/PCM A · **U0101** Lost Communication with TCM

See it working

Watch the animated explainer [How an Elevator Works: Traction Lift in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1600/>

