

GM · POWERTRAIN

P1893

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1893 · GM

Engine Torque Signal Low Voltage

P1893 on GM vehicles means the transmission control module (TCM) is seeing a low-voltage signal on the engine torque data circuit, so it cannot reliably tell how much torque the engine is producing. The TCM monitors this signal from the engine control module (ECM) and sets the code when the voltage stays below the expected range for a calibrated time.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent
- Harsh or delayed shifts because the TCM defaults to a reduced-torque shift strategy
- The transmission may hold a gear longer or refuse to downshift smoothly under load
- A noticeable loss of power or sluggish acceleration when the TCM limits engine torque
- The check engine light or transmission warning light illuminated on the dash

Common causes, most likely first

- 1 Damaged, chafed, or corroded wiring in the engine torque signal circuit between the ECM and TCM
- 2 A poor ground connection at the ECM, TCM, or chassis ground point causing a voltage drop
- 3 A faulty engine control module (ECM) not outputting the correct torque signal voltage
- 4 A failing transmission control module (TCM) with an internal fault on the signal input
- 5 Water intrusion or terminal corrosion at the ECM or TCM connectors
- 6 An intermittent open circuit that only acts up under vibration or temperature change

How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P1893 before clearing anything
- 2 Inspect the ECM-to-TCM harness for chafing, corrosion, and loose pins, and perform a wiggle test while watching live torque signal voltage
- 3 Measure the engine torque signal voltage at the TCM connector with a digital multimeter and compare it to the GM service information specification
- 4 Check and clean all grounds shared by the ECM and TCM, then retest the signal voltage under load
- 5 If the signal is low at the ECM output but the wiring is good, substitute a known-good ECM and recheck
- 6 If the signal arrives correctly at the TCM but the code persists, diagnose or replace the TCM and perform the required relearn procedure
- 7 Clear codes and road test through several shift cycles to confirm the repair before returning the vehicle

What the torque signal code hides

- A low-voltage torque signal often traces to a bad ground rather than a failed module, so check ground straps and battery negative connections before condemning the ECM or TCM.
- The code can set intermittently from vibration or heat, so a static multimeter check may pass while the fault only appears during a wiggle test or a hot soak.
- P1893 does not always mean the transmission is failing; the TCM may simply be protecting the driveline by limiting torque when the signal is unreliable.
- Aftermarket electrical accessories tapped into the harness near the ECM or TCM can introduce voltage drops that mimic a failed module.
- A weak or failing battery can cause low signal voltage on GM communication circuits, so load-test the battery before chasing wiring.

Can I keep driving with P1893?

You can usually drive the vehicle to a shop, but expect harsh shifts and reduced power because the TCM is limiting torque for protection. Avoid heavy towing or aggressive acceleration until the fault is repaired, and stop driving if the transmission enters limp mode.

Tools that help

- OBD-II scan tool with GM manufacturer-specific live data capability
- Digital multimeter with back-probe pins
- GM service information wiring diagrams for the ECM-to-TCM circuit
- Terminal pick and contact cleaner for connector inspection
- Battery load tester

Reading P1893

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

Often seen with

P1892 Throttle Position Sensor PWM Signal High · **P1894** Engine Torque Signal High Voltage · **P0700** Transmission Control System Malfunction · **P0729** Gear 6 Incorrect Ratio · **U0100** Lost Communication With ECM/PCM A



See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1893/>

