

GM · POWERTRAIN

P1764

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1764 · GM

Governor Pressure Sensor Voltage Too Low

P1764 on GM vehicles means the transmission control module (TCM) has detected that the governor pressure sensor signal voltage is lower than the expected range for the current operating conditions. The governor pressure sensor reports actual hydraulic pressure inside the transmission, so a low voltage indicates either a faulty sensor, a wiring problem, or an internal pressure issue that the TCM cannot trust.

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

Symptoms you may notice

- Illuminated check engine light or transmission warning light, often with no other noticeable symptoms
- Harsh or delayed shifts, especially when the transmission is cold
- Transmission stuck in limp mode or a single gear due to default pressure strategy
- Slipping or flaring during gear changes under acceleration
- Erratic shift points or torque converter clutch engagement
- Reduced fuel economy from improper shift scheduling

Common causes, most likely first

- 1 Faulty governor pressure sensor (internal transmission sensor) sending a low voltage signal
- 2 Damaged or corroded wiring harness or connector at the transmission pass-through
- 3 Poor electrical ground or reference voltage circuit issue to the sensor
- 4 Low transmission fluid level or degraded fluid causing low actual pressure
- 5 Sticking governor pressure solenoid or valve body issue affecting pressure regulation
- 6 Internal transmission mechanical wear causing low governor pressure
- 7 TCM software calibration or internal fault (less common)



How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or service if low or burnt
- 2 Inspect the governor pressure sensor connector and wiring for corrosion, chafing, or loose pins
- 3 Measure reference voltage and ground at the sensor connector with a multimeter; compare to GM specifications
- 4 Backprobe the sensor signal wire and compare voltage to a known-good sensor or scan tool pressure reading
- 5 Replace the governor pressure sensor if voltage remains low with good wiring and fluid level
- 6 Test governor pressure solenoid and valve body operation if the new sensor does not resolve the code
- 7 Clear codes and perform a relearn or adaptation drive cycle, then verify the code does not return

Governor pressure sensor voltage traps on GM

- A low voltage code often sets from a simple loose or corroded connector at the transmission, not a failed sensor, so always inspect the harness before condemning the sensor.
- Low transmission fluid level or a clogged filter can cause actual low governor pressure that mimics a sensor voltage fault, so fluid condition is a critical first check.
- The governor pressure sensor is inside the transmission pan on many GM units, making replacement a messy job that requires dropping the pan and replacing fluid and filter.
- A sticking governor pressure solenoid can hold pressure low and set P1764 even when the sensor itself is good, so solenoid testing is essential before parts replacement.
- This code can appear intermittently with no drivability symptoms, leading some technicians to clear it without diagnosing an underlying wiring issue that will return.

Can I keep driving with P1764?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long highway trips because the transmission may be in a default pressure strategy that can cause harsh shifts or slipping. If the transmission is stuck in limp mode or slipping severely, stop driving and arrange a tow to prevent internal damage.

Tools that help

- OBD-II scan tool with GM transmission data capabilities
- Digital multimeter
- Transmission fluid level dipstick or scan tool fluid level check
- Socket set and torque wrench for pan removal
- Wiring diagram and connector pinout for the specific GM transmission



Reading P1764

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

Often seen with

P1763 Shift Lock Open · **P1765** Hydraulic Pressure Sensor 2 Adaptation At Limit · **P1765** Linear Shift Solenoid Circuit Fault · **P1763** Low And Reverse Brake Pressure Switch Circuit · **P1765** Transmission 3-2 Timing Solenoid Valve · **P1763** Governor Pressure Sensor Voltage Too High · **P1765** Trans 12 Volt Supply Relay Control Circuit Open Or Shorted · **P1763** Governor Pressure Sensor Voltage Too High · **P1765** Trans 12 Volt Supply Relay Control Circuit Open Or Shorted · **P1765** CAN Throttle Valve · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0730** Incorrect Gear Ratio · **P0740** Torque Converter Clutch Circuit Malfunction

See it working

Watch the animated explainer [Four-Stroke Engine Notebook: The Otto Cycle Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1764/>

