

FORD · POWERTRAIN

P1705

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1705 · Ford

Manual Lever Position Sensor Out of Self-Test Range

P1705 on Ford vehicles means the transmission control module (TCM) or powertrain control module (PCM) detected that the manual lever position (MLP) sensor, also called the transmission range sensor, is reporting a voltage outside the expected self-test window during key-on or shift lever movement. The computer expects a specific voltage for each gear selector position, and an out-of-range reading indicates a faulty sensor, wiring issue, or mechanical misalignment.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Harsh or delayed shifting because the PCM cannot determine the selected gear accurately.
- Transmission may default to a limp-home mode, staying in one gear or refusing to shift.
- Incorrect or flashing gear indicator on the instrument cluster.
- Engine may crank but not start if the PCM misreads the park or neutral signal.
- Possible speedometer inaccuracy or erratic operation if the sensor also provides a vehicle speed signal.

Common causes, most likely first

- 1 Faulty manual lever position sensor (transmission range sensor) due to internal wear or contamination.
- 2 Corroded, chafed, or loose wiring in the sensor circuit, especially at the connector.
- 3 Mechanical misalignment of the sensor or the shift cable, preventing the sensor from reaching the correct position.
- 4 Damaged or dirty electrical connector pins at the sensor or PCM.
- 5 PCM or TCM internal fault, though this is less common.
- 6 Aftermarket or incorrect sensor installed previously, leading to voltage mismatch.



How to diagnose and fix it

- 1 Check for other stored codes and freeze-frame data to confirm the fault is isolated to the MLP sensor circuit.
- 2 Inspect the sensor connector and wiring for corrosion, chafing, or loose pins; clean and repair as needed.
- 3 Verify sensor alignment by checking that the shift lever moves smoothly through all detents and the sensor is properly indexed.
- 4 Measure sensor resistance or voltage across the range of lever positions and compare to Ford specifications.
- 5 Perform a continuity and short-to-ground test on each wire from the sensor to the PCM.
- 6 Replace the MLP sensor if electrical and mechanical checks pass but the signal remains out of range.
- 7 Clear codes and perform a relearn or self-test procedure as required for the vehicle model.

Before you replace the range sensor

- A loose or misadjusted shift cable can mimic a failed sensor by preventing the lever from reaching the correct detent, so always check cable adjustment first.
- Corrosion inside the sensor connector is a frequent cause on older Ford trucks and vans, and cleaning the pins often resolves the code without parts replacement.
- The MLP sensor shares wiring with the reverse lamps and starter circuit on many models, so a code may appear alongside inoperative reverse lights or a no-crank condition.
- After replacing the sensor, some Ford models require a transmission range sensor relearn procedure using a scan tool; skipping this step can leave the code stored.
- A weak or failing battery can cause erratic sensor voltages during self-test, so verify battery and charging system health before condemning the sensor.

Can I keep driving with P1705?

You can usually drive the vehicle short distances to a repair shop, but avoid sustained highway speeds or heavy loads because the transmission may shift harshly or enter limp mode. If the vehicle fails to start or the transmission slips severely, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with Ford-specific software
- Digital multimeter
- Jack and jack stands or ramps
- Socket and wrench set
- Wire terminal cleaning tools
- Ford service information for sensor voltage specifications



Reading P1705

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

Often seen with

P1702 Auto Trans Diagnosis Input Signal Circuit · **P1702** Transmission Range Sensor Circuit Intermittent · **P1702** Transmission system problems · **P0705** Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0707** Transmission Range Sensor Circuit Low · **P0708** Transmission Range Sensor Circuit High

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/ford-p1705/>

