



P1701 · Ford

Reverse Engagement Error

P1701 on Ford vehicles indicates the transmission control module (TCM) has detected an error in the reverse engagement process, typically when the commanded gear does not match the actual gear within an expected time. The computer monitors inputs from the transmission range sensor and internal pressure switches to verify that reverse is achieved when requested.

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

Symptoms you may notice

- Illuminated check engine light or transmission warning light
- Transmission may fail to engage reverse gear when selected
- Harsh or delayed engagement when shifting into reverse
- Transmission may slip or shudder in reverse
- Vehicle may default to limp mode or fail-safe mode
- Often no symptoms besides the warning light

Common causes, most likely first

- 1 Faulty transmission range sensor (TRS) or digital transmission range (DTR) sensor
- 2 Low or contaminated transmission fluid
- 3 Sticking or faulty reverse engagement solenoid or valve body issues
- 4 Internal transmission mechanical failure (e.g., reverse clutch or band)
- 5 Wiring harness damage or corroded connectors at the transmission
- 6 Faulty transmission control module (TCM) or PCM
- 7 Improperly adjusted or damaged manual lever cable

How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or replace if necessary
- 2 Inspect and test the transmission range sensor (TRS) for proper alignment and operation
- 3 Scan for stored codes and freeze frame data to identify related faults
- 4 Perform a visual inspection of wiring and connectors at the transmission and TCM
- 5 Test the reverse engagement solenoid and valve body for proper operation
- 6 Conduct a line pressure test to check for internal hydraulic issues
- 7 If internal mechanical failure is suspected, remove and disassemble transmission for inspection



Before you replace the transmission

- A misadjusted transmission range sensor is a common cause that is often overlooked and can be corrected without major repairs.
- Low fluid level due to a leak can trigger P1701 even if the transmission otherwise operates normally.
- The code may set intermittently due to a loose connector or chafed wire that only acts up under certain conditions.
- Some aftermarket tuning or incorrect tire sizes can affect shift timing and cause false engagement errors.
- Always verify the TCM has the latest calibration before condemning internal components.

Can I keep driving with P1701?

If the vehicle drives and shifts normally in forward gears, you can drive cautiously to a repair shop, but avoid using reverse gear if possible. If reverse is completely inoperative or the transmission is in limp mode, stop driving and seek professional diagnosis to prevent further damage.

Tools that help

- OBD-II scanner with transmission capabilities
- Digital multimeter
- Transmission fluid level dipstick or scan tool
- Jack and jack stands or lift
- Socket and wrench set

Reading P1701

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

Often seen with

P1702 Auto Trans Diagnosis Input Signal Circuit · **P1703** Low Clutch Timing Control Solenoid Valve Circuit Malfunction · **P1702** Transmission Range Sensor Circuit Intermittent · **P1703** Brake On Off Switch Out Of Self Test Range · **P1702** Transmission system problems · **P1703** Brake On Off Switch Out of Self-Test Range · **P0705** Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0708** Transmission Range Sensor Circuit High



See it working

Watch the animated explainer [How a Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1701/>

