

GENERIC · POWERTRAIN

P0734

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0734

Gear 4 Incorrect Ratio

P0734 means the transmission control module (TCM) commanded fourth gear but the actual gear ratio calculated from the input and output speed sensors did not match the expected value for fourth gear. The computer detected a mismatch between commanded and actual ratio, indicating the transmission is slipping or not engaging fourth gear properly.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Check engine light or transmission warning light illuminated
- Transmission may slip or flare when shifting into fourth gear
- Harsh or delayed engagement of fourth gear
- Transmission may stick in third gear or go into limp mode
- Poor fuel economy due to improper gear engagement
- Often no symptoms besides the warning light

Common causes, most likely first

- 1 Low or contaminated transmission fluid
- 2 Faulty input or output speed sensor
- 3 Solenoid pack or shift solenoid failure
- 4 Valve body wear or sticking valves
- 5 Internal transmission damage such as worn clutches or bands
- 6 Wiring or connector issues to the transmission
- 7 TCM software or hardware fault

How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or replace if needed
- 2 Scan for stored and pending codes; check freeze frame data for speed sensor readings
- 3 Inspect wiring and connectors at the transmission and TCM for damage or corrosion
- 4 Test input and output speed sensors with a multimeter or oscilloscope
- 5 Perform a transmission pressure test to check line pressure
- 6 Remove and inspect the valve body and solenoids for debris or sticking
- 7 If internal damage is suspected, perform a transmission teardown or replacement



Before you replace the transmission

- A low fluid level or a clogged filter can cause this code without any internal damage, so always check fluid first.
- The input and output speed sensors are often misdiagnosed as the cause when the real issue is a worn valve body or solenoid.
- Some vehicles set P0734 when the transmission is in limp mode due to another code, so check for related codes before condemning the transmission.
- Wiring harness chafing near the transmission is a common hidden cause that can mimic a failed solenoid.
- A relearn or adaptive reset may be required after repairs for the TCM to correctly interpret ratios.

Can I keep driving with P0734?

Driving with P0734 can lead to further transmission damage and unsafe driving conditions due to slipping or limp mode. It is best to avoid driving until the issue is diagnosed and repaired, especially under load or at highway speeds.

Tools that help

- OBD-II scanner with transmission capabilities
- Digital multimeter
- Transmission pressure gauge
- Oscilloscope
- Socket set and wrenches
- Fluid pump and drain pan

Reading P0734

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
7	Transmission.
34	The exact fault within that area.

Often seen with

P0730 Incorrect Gear Ratio · **P0731** Gear 1 Incorrect Ratio · **P0732** Gear 2 Incorrect Ratio · **P0733** Gear 3 Incorrect Ratio · **P0735** Gear 5 Incorrect Ratio



See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0734/>

