

P0730: INCORRECT GEAR RATIO

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	\$200-\$500
Can I Still Drive?	:	No

What Does The P0730 Code Mean?

Modern vehicles equipped with automatic transmissions / transaxles use a torque converter between the engine and transmission to increase the engine torque output and drive the rear wheels.

This code can show up in vehicles with an automatic transmission when there is a problem shifting into or driving into any gear, this code is generic and does not specifically point to any particular gear ratio failure. The computer controlled automatic transmission uses multiple gear ratio's to increase vehicle speed while maximizing the power output from the engine.

Newer vehicles may have more than four gear ratios to improve fuel economy. The computer determines when to shift up or down between gears based on throttle position vs. vehicle speed.

The Engine Control Module (ECM), Powertrain Control Module (PCM) or Transmission Control Module (TCM) uses input from various sensors to verify the correct operation of the transmission and its components. Engine speed is often calculated against the transmission speed sensor to determine gear ratio and torque converter slip.

If the calculation does not match the desired value, the Diagnostic Trouble Code is set and the Check Engine Lamp is illuminated. Incorrect ratio codes typically require an advanced mechanical ability and diagnostic tools.

Note: This code is similar to [P0729](#), [P0731](#), [P0732](#), [P0733](#), [P0734](#), [P0735](#) and [P0736](#). If there are

other transmission codes, repair those problems first before proceeding with an incorrect gear ratio code.

What Are The Symptoms Of The P0730 Code?

Symptoms of a P0730 trouble code may include:

- Check Engine Light illuminated (Malfunction indicator lamp)
- Delayed shift or not shifting into correct gear
- Transmission slipping
- Loss of fuel economy

What Are The Potential Causes Of The P0730 Code?

Causes of this DTC may include:

- Low or dirty transmission fluid
- Worn pump or clogged fluid filter
- Torque converter clutch, solenoid, or internal blockage
- Mechanical failure inside transmission
- Internal blockage inside transmission main control
- Faulty shift solenoids or wiring
- Faulty transmission control module

How Can You Fix The P0730 Code?

Always be sure to check fluid level and condition before proceeding with further diagnosis. Improper fluid level or dirty fluid can cause shifting issues that affect multiple gears.

Torque converter stall speed test can be performed in accordance with manufacturers guidelines. Consult your service manual before proceeding with the test. If the engine stall speed is not within factory specifications, there may be an issue with the torque converter, or an internal transmission problem. This may be the cause if multiple incorrect ratio codes are displayed in addition to the P0730.

The torque converter clutch, internal clutches and bands are usually controlled by a solenoid using fluid pressure. If there is an electrical issue with the solenoid, a code specific to that fault should also be displayed. Correct the electrical issue before proceeding further.

Blocked fluid passage inside the transmission can also cause the P0730 to set, if there are multiple incorrect ratio codes but the transmission performs as expected, there could be a mechanical issue with the torque converter, transmission main control, or pressure problems.

It may be necessary to use an advanced diagnostics scan tool to determine which gear is being

commanded by the transmission, and to determine if the engine speed matches with the calculated output speed from the transmission sensor.

Advanced knowledge of transmission operation and overhaul is often required to repair this type of malfunction. Consult the factory service manual for vehicle specific diagnostic procedures.

Reference Sources

[P0730 Incorrect Gear Ratio](#), OBD-Codes.