

GENERIC · POWERTRAIN

P07F6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07F6

Gear 9 Incorrect Ratio

P07F6 indicates that the transmission control module (TCM) has detected an incorrect gear ratio for ninth gear, meaning the actual engine speed versus output shaft speed does not match the expected ratio when ninth gear is commanded. The computer compares input and output speed sensors to calculate the ratio and sets this code when the discrepancy exceeds a calibrated threshold for a set time.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Malfunction indicator lamp (MIL) illuminated on the dashboard
- Transmission may slip or flare when shifting into ninth gear
- Harsh or delayed engagement of ninth gear
- Transmission may enter limp mode and stay in a lower gear
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Low or degraded transmission fluid level
- 2 Faulty input or output speed sensor
- 3 Valve body solenoid sticking or failing, particularly the shift solenoid for ninth gear
- 4 Internal transmission mechanical wear, such as clutch pack or band damage
- 5 Wiring or connector issue at the transmission speed sensors or solenoid pack
- 6 TCM software calibration issue or faulty TCM

How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or replace fluid if necessary
- 2 Perform a visual inspection of speed sensor wiring and connectors for damage or corrosion
- 3 Use a scan tool to monitor live input and output speed sensor data and compare to commanded gear
- 4 Test the shift solenoid for ninth gear for proper resistance and operation
- 5 Inspect the valve body for debris or sticking valves; clean or replace as needed
- 6 Perform a transmission adaptive relearn procedure after repairs
- 7 If internal damage is suspected, remove and disassemble the transmission for inspection and repair



Before you replace the transmission

- A low fluid level or a clogged filter can cause ratio errors that mimic internal transmission failure, so always verify fluid condition first.
- Intermittent speed sensor signals due to chafed wiring often set this code without any drivability complaint, so wiggle-test the harness while monitoring live data.
- A sticking solenoid can command ninth gear but fail to apply it, creating a ratio mismatch that looks like a mechanical failure but is electrically or hydraulically caused.
- The TCM may set this code after a battery replacement or low voltage event if adaptive learning is lost, so check for related low-voltage codes before condemning hardware.
- Some transmissions use a calculated ratio from multiple sensors, so a fault in a related sensor like the turbine speed sensor can also trigger P07F6.

Can I keep driving with P07F6?

If the vehicle drives normally and the code is intermittent, you can drive cautiously to a repair shop, but avoid heavy acceleration or towing. If the transmission is slipping, flaring, or in limp mode, stop driving and seek professional diagnosis to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Transmission fluid level dipstick or scan tool for fluid level
- Socket set and wrenches for sensor and pan removal
- Transmission jack and stands for internal inspection

Reading P07F6

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
7	Transmission.
F6	The exact fault within that area.

Often seen with

P0715 Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0730** Incorrect Gear Ratio · **P07F5** Transmission Range Control Module System Voltage Low · **P07F7** Gear 10 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/p07f6/>

