

GENERIC · POWERTRAIN

P07E1

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07E1

Incorrect Shift from Gear 6

P07E1 is a generic transmission code that sets when the transmission control module (TCM) commands a shift from sixth gear but the actual gear ratio or engine speed does not match the expected value for sixth gear within a calibrated time window. The computer has detected an incorrect or incomplete shift out of gear 6, meaning the transmission either stayed in sixth too long, slipped, or failed to engage the next gear as commanded.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Transmission

Symptoms you may notice

- The malfunction indicator lamp (MIL) illuminates, often with no other noticeable symptoms besides the warning light
- Harsh or delayed shifts when the transmission attempts to leave sixth gear
- The transmission may feel like it is slipping or flaring during the 6-to-5 or 6-to-4 downshift
- Unexpected engine speed flare or surge during highway passing maneuvers
- The transmission may enter limp mode, holding a single gear and limiting vehicle speed
- Poor fuel economy or unusual engine RPM at highway cruising speeds

Common causes, most likely first

- Low or degraded automatic transmission fluid (ATF) causing poor hydraulic pressure and delayed shift response
- A sticking or faulty shift solenoid valve responsible for sixth gear or the associated shift sequence
- Wear or damage inside the valve body, such as a stuck spool valve or worn bore, preventing proper hydraulic routing
- Internal transmission mechanical wear, including clutch pack or band degradation that reduces holding capacity in sixth gear
- A faulty transmission control module (TCM) or corrupted adaptive shift learning values
- Wiring harness damage, corroded connectors, or poor grounds between the TCM and transmission solenoids
- A malfunctioning transmission range sensor or output speed sensor providing incorrect feedback to the TCM



How to diagnose and fix it

- 1 Check the automatic transmission fluid level and condition; top off or replace fluid if it is low, dark, or burnt-smelling
- 2 Use a scan tool to read transmission adaptive values and clear the code to see if it returns immediately or only under specific driving conditions
- 3 Inspect the wiring harness and connectors at the transmission and TCM for chafing, corrosion, or loose pins
- 4 Test the shift solenoids with a multimeter and, if accessible, perform a resistance and functional check according to the manufacturer's specification
- 5 Perform a transmission adaptive relearn procedure after any repair or fluid service to reset shift pressure learning
- 6 Remove and inspect the valve body for stuck valves or debris if fluid and electrical checks pass but the code persists
- 7 If internal mechanical wear is confirmed, recommend a professional transmission inspection or rebuild rather than further external parts swapping

Why P07E1 often misleads diyers

- A low fluid level or a fluid that has never been serviced is one of the most common causes of an incorrect shift from sixth gear, yet many owners replace solenoids before checking the dipstick.
- The code can set intermittently from adaptive learning values that have drifted over time, and a simple relearn procedure may resolve it without any parts replacement.
- A failing output speed sensor or range sensor can mimic a shift solenoid fault because the TCM compares commanded gear to actual ratio, so always verify sensor signals before condemning the solenoid.
- P07E1 does not always mean the transmission is mechanically failing; electrical connector corrosion at the transmission case is a frequent culprit that a visual inspection can reveal.
- After any repair, failing to perform the manufacturer's adaptive relearn can cause the code to return immediately even though the physical fault is fixed.

Can I keep driving with P07E1?

You can usually drive the vehicle to a repair shop, but avoid aggressive acceleration, towing, or highway merging that forces hard downshifts from sixth gear. If the transmission enters limp mode or you notice slipping, stop driving and have it towed to prevent further internal damage.

Tools that help

- OBD-II scan tool with transmission module capability
- Digital multimeter
- Transmission fluid level dipstick or service tool
- Socket and wrench set
- Factory service information or wiring diagram



Reading P07E1

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 7** Transmission.
- E1** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0730** Incorrect Gear Ratio · **P07E0** Incorrect Shift from Gear 5 · **P07E2** Incorrect Shift from Gear 7

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/p07e1/>

