

GENERIC · POWERTRAIN

P082D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P082D

Gear Lever Y Position Sensor 1 Circuit Range/Performance

P082D indicates that the transmission control module (TCM) has detected an out-of-range or erratic signal from the gear lever Y position sensor, which is part of the internal transmission range sensor. The TCM compares this signal against expected values for the selected gear and sets the code when the voltage or position reading falls outside the valid range or does not correlate with other gear position inputs.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) on the dashboard.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Harsh or delayed gear engagements when shifting from park or neutral.
- Transmission may enter limp mode, limiting operation to a single gear or reverse.
- Incorrect or flashing gear position indicator on the instrument cluster.
- Unexpected downshifts or upshifts without driver input.

Common causes, most likely first

- 1 Faulty gear lever Y position sensor or internal transmission range sensor.
- 2 Worn or damaged wiring harness between the sensor and the TCM.
- 3 Corroded or loose electrical connectors at the sensor or TCM.
- 4 Contamination or debris interfering with the sensor's magnetic or mechanical operation.
- 5 Internal transmission mechanical wear affecting the sensor's reading.
- 6 Software glitch or outdated calibration in the TCM.



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, wiring, and connectors for damage or corrosion.
- 2 Use a scan tool to read live data from the gear lever Y position sensor and compare with expected values.
- 3 Check the sensor's resistance and voltage output with a multimeter according to the manufacturer's specifications.
- 4 Inspect the transmission fluid level and condition for signs of contamination or wear.
- 5 Repair or replace damaged wiring and connectors as needed.
- 6 Replace the gear lever Y position sensor or transmission range sensor if faulty.
- 7 Reprogram or update the TCM software if a known calibration issue exists.

Before replacing the transmission range sensor

- A common oversight is assuming the sensor itself is faulty when the real problem is a chafed wire in the harness near the transmission, which can short intermittently and mimic a sensor failure.
- The gear lever Y position sensor is often integrated into the transmission range sensor, so replacing just the sensor may not be possible on some vehicles; the entire assembly might need replacement.
- Low or contaminated transmission fluid can cause erratic sensor readings due to debris interfering with the sensor's internal components, so always check fluid condition first.
- This code can be set by a weak battery or charging system issue that causes voltage spikes, leading to false sensor readings; verify battery health before condemning the sensor.
- After repairs, the TCM may require a relearn procedure or calibration to correctly interpret the new sensor's signals, which is often missed by DIYers.

Can I keep driving with P082D?

If the vehicle drives normally, you can proceed to a repair shop, but avoid aggressive acceleration or heavy loads. If the transmission is in limp mode or shifting erratically, limit driving to a short distance to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Vehicle service manual or online diagnostic resource
- Socket and wrench set
- Jack and jack stands or ramps



Reading P082D

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 8** Transmission.
- 2D** The exact fault within that area.

Often seen with

P0705 Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P082E** Gear Lever Y Position Sensor 1 Circuit Low · **P082F** Gear Lever Y Position Sensor 1 Circuit High · **P0830** Clutch Pedal Switch 'A' Circuit

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/p082d/>

