

GENERIC · POWERTRAIN

P082E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P082E

Gear Lever Y Position Sensor 1 Circuit Low

P082E indicates that the transmission control module (TCM) has detected a low voltage signal on the circuit for the gear lever Y position sensor, which is one of the sensors that reports the physical position of the shift lever. The TCM expects a voltage within a specific range for each gear position, and a sustained low reading means the signal is below the minimum threshold, so the module cannot reliably determine the lever's position.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- Illumination of the check engine light or transmission warning light, often with no other noticeable symptoms
- The gear indicator on the instrument cluster may display the wrong gear or flash
- Harsh or delayed shifting because the TCM cannot correctly identify the selected gear
- The vehicle may fail to start or may not recognize that the transmission is in Park or Neutral
- In some cases, the transmission may enter limp mode and stay in a single gear
- The shifter may feel normal, but the vehicle may not move when a gear is selected

Common causes, most likely first

- 1 A faulty gear lever Y position sensor that has failed internally and is outputting a low voltage
- 2 Damaged or corroded wiring in the sensor circuit, such as a short to ground or an open circuit
- 3 A poor electrical connection at the sensor connector or at the TCM, often due to water intrusion or loose pins
- 4 A misadjusted or mechanically binding shift lever mechanism that prevents the sensor from reaching the correct position
- 5 A failed TCM that is unable to process the sensor signal correctly, though this is less common
- 6 A low battery or charging system issue that causes reference voltage to drop below normal



How to diagnose and fix it

- 1 Use a scan tool to read the live data for the gear lever Y position sensor and compare the voltage in each gear to the manufacturer's specifications
- 2 Visually inspect the sensor, its connector, and the wiring harness for damage, corrosion, or loose pins, and repair as needed
- 3 Check the sensor's reference voltage and ground circuits with a multimeter to confirm the TCM is supplying the correct voltage
- 4 Perform a resistance test on the sensor itself, if specified, and replace it if it is out of range
- 5 Check the shift lever mechanism for proper alignment and adjustment, and correct any binding or misalignment
- 6 Clear the diagnostic trouble codes and test-drive the vehicle to verify the repair and ensure the code does not return
- 7 If the sensor and wiring are good, follow the manufacturer's diagnostic flow chart for the TCM, which may include software updates or module replacement

When the sensor is not the real culprit

- A low voltage reading at the sensor can be caused by a short to ground in the wiring, so replacing the sensor without checking the harness often leads to a repeat failure.
- The gear lever Y position sensor is sometimes part of a larger assembly that includes the shift lever mechanism, and a worn bushing or bent linkage can cause the sensor to read low even when the sensor itself is fine.
- On some vehicles, the TCM uses two position sensors for redundancy, and a low signal on one sensor may be accompanied by a code for the other sensor if the fault is in the shared reference or ground circuit.
- A weak battery or a failing alternator can cause the sensor reference voltage to drop, setting this code along with other low-voltage codes, so always check the charging system before condemning the sensor.
- The code may set intermittently due to a poor connection that only acts up when the vehicle is cold or when driving over bumps, so a wiggle test of the harness while watching live data can reveal the problem.

Can I keep driving with P082E?

If the vehicle drives and shifts normally, you can drive it to a repair shop, but avoid aggressive acceleration or heavy loads. If the transmission is in limp mode or the vehicle will not move, stop driving and have it towed to prevent further damage.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set or back probe pins
- Vehicle-specific service information for wiring diagrams and voltage specifications
- Basic hand tools for trim and connector removal

Reading P082E

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

Often seen with

P0705 Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P082C** Gear Lever X Position Sensor 1 Circuit High · **P082D** Gear Lever Y Position Sensor 1 Circuit Range/Performance · **P082F** Gear Lever Y Position Sensor 1 Circuit High

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/p082e/>

