



P08A0

Gear Lever Y Position Sensor 2 Circuit Range/Performance

P08A0 indicates that the powertrain control module (PCM) has detected an out-of-range or erratic signal from the gear lever Y position sensor 2, which is a secondary sensor used to confirm the lever's position in a shift-by-wire or electronic gear selection system. The PCM compares this signal against expected values and other sensor inputs, and when the voltage or rationality check fails, it stores this code and may illuminate the malfunction indicator lamp (MIL).

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

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) on the dashboard, often with no other noticeable symptoms.
- The gear indicator on the instrument cluster may flash, show an incorrect gear, or display a warning message.
- Difficulty selecting a gear or the transmission not engaging the requested range.
- The vehicle may refuse to start or may not allow shifting out of Park.
- Intermittent or harsh engagement of gears, or the transmission entering a limp-home mode.
- Unusual noises or resistance when moving the gear lever.

Common causes, most likely first

- 1 Faulty gear lever Y position sensor 2, including internal wear or contamination.
- 2 Damaged, corroded, or loose electrical connector at the sensor or PCM.
- 3 Wiring harness issues such as open circuits, short circuits, or chafed wires between the sensor and PCM.
- 4 Mechanical binding or misalignment in the gear lever mechanism or shift linkage.
- 5 Low or contaminated transmission fluid affecting sensor readings (in some designs).
- 6 PCM software glitch or internal fault, though less common.
- 7 Aftermarket accessories or improper previous repairs interfering with the sensor circuit.



How to diagnose and fix it

- 1 Perform a visual inspection of the gear lever sensor, connector, and wiring for obvious damage, corrosion, or loose connections.
- 2 Use an OBD-II scanner to retrieve all stored codes and freeze-frame data, and check for related codes in other modules.
- 3 Test the sensor's reference voltage, ground, and signal voltage with a digital multimeter (DMM) according to the manufacturer's specifications.
- 4 Check the sensor's mechanical alignment and the gear lever mechanism for binding or wear.
- 5 If the sensor signal is out of range, replace the sensor and clear the codes to verify the repair.
- 6 Repair or replace any damaged wiring or connectors, then retest the circuit.
- 7 If the fault persists, consult a factory service manual for advanced diagnostics, including PCM reprogramming or replacement.

Before replacing the gear lever sensor

- A loose or corroded connector at the sensor is a frequent cause of this code and can often be fixed without replacing any parts.
- The gear lever Y position sensor 2 is often a redundant sensor, so the vehicle may drive normally until the fault affects the primary sensor circuit.
- Aftermarket floor mats or objects obstructing the gear lever can cause mechanical binding that sets this code.
- In some vehicles, a weak battery or charging system issue can cause voltage spikes that trigger false sensor codes.
- Always check for technical service bulletins (TSBs) for your specific make and model, as some vehicles have known issues with the shifter assembly.

Can I keep driving with P08A0?

If the vehicle drives and shifts normally, you can drive cautiously to a repair shop, but avoid aggressive acceleration or towing. If the transmission is in limp mode or gears cannot be selected, stop driving and have the vehicle towed to prevent damage or unsafe conditions.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter (DMM)
- Factory service manual or wiring diagrams
- Basic hand tools (screwdrivers, socket set)
- Contact cleaner and dielectric grease



Reading P08A0

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 8** Transmission.
- A0** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P08A1** Gear Lever Y Position Sensor 2 Circuit Low · **P08A2** Gear Lever Y Position Sensor 2 Circuit High · **P08A3** Gear Lever Y Position Sensor 2 Circuit Intermittent/Erratic

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/p08a0/>

