

GENERIC · POWERTRAIN

P2E0B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E0B

Gear Lever Position Sensor C Circuit High

P2E0B means the transmission control module (TCM) has detected an abnormally high voltage on the signal circuit for the gear lever position sensor C, which is one of the internal position sensors that reports the selector lever's physical position. The TCM expects a voltage within a calibrated range for each lever position, and a reading above the upper limit for the current gear indicates an open circuit, a short to power, or a sensor fault.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- The gear position indicator on the instrument cluster may show the wrong range or flash.
- The transmission may default to a limp-home mode, holding a single gear or refusing to shift.
- Engine starting may be inhibited or require the brake pedal to be pressed even in Park or Neutral.
- Shifting between ranges may feel harsh or delayed, or the vehicle may not engage Drive or Reverse.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 A faulty gear lever position sensor C, worn internally or contaminated with debris.
- 2 An open or high-resistance connection in the sensor C signal circuit, often at a connector terminal.
- 3 A short to voltage on the sensor C signal wire, chafed against a metal edge or another harness.
- 4 Corroded, loose, or water-intruded connectors at the sensor or the transmission control module.
- 5 A damaged or misrouted wiring harness near the gear selector assembly or under the console.
- 6 A failed transmission control module, though this is less common than wiring and sensor faults.
- 7 A misadjusted selector cable or linkage that holds the sensor outside its expected voltage window.



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to see the conditions when P2E0B set.
- 2 Inspect the gear lever position sensor C connector and the TCM connector for corrosion, loose pins, or water intrusion.
- 3 Back-probe the sensor C signal circuit and compare the measured voltage against the manufacturer's specification for each lever position.
- 4 Check the sensor C signal wire for continuity to ground and for a short to battery voltage with the ignition on.
- 5 Verify the selector cable and linkage adjustment so the sensor sits in its calibrated range for each detent.
- 6 If the circuit tests good, substitute a known-good sensor C and clear the code to see whether it returns.
- 7 After repair, clear codes, perform any required relearn or adaptation procedure, and road-test through all gear ranges.

What the voltage reading really tells you

- A high-voltage code on a position sensor often comes from a poor ground reference rather than the signal wire itself, so check the sensor ground circuit before condemning the sensor.
- Intermittent P2E0B that appears only after rain or a car wash points to water ingress at a connector or a chafed harness under the console, not a failed sensor.
- A misadjusted selector cable can push the sensor past its expected voltage range and set this code even though the sensor and wiring are healthy.
- Some vehicles use multiple internal position sensors for redundancy, and a single high-voltage fault may not disable the transmission until the TCM sees a disagreement between sensors.
- Clearing the code without checking freeze-frame data can hide an intermittent fault that only occurs at a specific temperature or lever position.

Can I keep driving with P2E0B?

You can usually drive the vehicle to a repair shop if it still selects gears and moves, but avoid highway speeds and heavy loads because the transmission may enter limp-home mode without warning. If the vehicle will not engage Drive or Reverse, or the indicator shows the wrong range, stop driving and have it towed.

Tools that help

- OBD-II scan tool with transmission module capability and live data
- Digital multimeter with back-probe pins
- Manufacturer service information for sensor voltage specifications
- Wire terminal pick and contact cleaner
- Jack and jack stands or ramps for under-vehicle connector access



Reading P2E0B

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

Often seen with

P0705 Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0707** Transmission Range Sensor Circuit Low · **P2E0A** Gear Lever Position Sensor C Circuit Low · **P2E0C** Gear Lever Position Sensor D 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/p2e0b/>

