

GENERIC · POWERTRAIN

P2E0E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E0E

Gear Lever Position Sensor D Circuit Low

P2E0E indicates that the powertrain control module has detected an abnormally low voltage signal on the circuit for the gear lever position sensor designated as 'D'. This sensor reports the physical position of the gear selector to the computer, and a low signal means the circuit is likely shorted to ground or the sensor has failed.

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

Symptoms you may notice

- The check engine light or service transmission message illuminates on the dashboard.
- The vehicle may start in the wrong gear or refuse to start unless the shifter is wiggled.
- Gear position indicators on the instrument cluster may flash, show the wrong gear, or remain blank.
- The transmission may shift erratically, hold a gear too long, or enter limp mode.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- A short to ground in the signal wire between the sensor and the control module.
- A failed gear lever position sensor internally shorted, pulling the signal voltage low.
- Corroded, loose, or damaged electrical connector pins at the sensor or module.
- Rodent damage or chafing of the wiring harness causing the signal wire to contact ground.
- A faulty transmission control module or powertrain control module not supplying the proper reference voltage.
- Water intrusion into the sensor or connector, creating a conductive path to ground.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear codes and test-drive to see if P2E0E returns.
- 2 Visually inspect the sensor connector and wiring for corrosion, loose pins, or obvious damage, and repair as needed.
- 3 Disconnect the sensor and measure reference voltage and ground at the harness connector with a digital multimeter to verify the circuit integrity.
- 4 Check the signal wire for continuity to ground with the sensor disconnected; any continuity indicates a short that must be located and repaired.
- 5 If the circuit tests good, remove the sensor and check its resistance or voltage output against the manufacturer's specification.
- 6 Replace the gear lever position sensor if it fails the electrical test, then clear codes and verify the signal voltage is within range during a road test.
- 7 If the code persists after sensor replacement, diagnose the control module and its power and ground supplies before condemning it.

What a low signal really means

- A low signal code almost always points to a short to ground rather than an open circuit, so chasing a broken wire will waste time; focus on chafed insulation or internal sensor shorts.
- The sensor may share a ground with other components, and a bad ground elsewhere can pull the signal low without any fault in the sensor itself.
- Intermittent P2E0E codes often appear after driving over bumps or in wet weather, which points to a harness routing issue rather than a failed sensor.
- Some vehicles use a range sensor integrated into the transmission, and replacing it requires relearning the gear positions with a scan tool; skipping the relearn will set the code again.
- A weak battery or charging system fault can cause reference voltage to drop, mimicking a sensor circuit low code, so always verify battery condition first.

Can I keep driving with P2E0E?

You can usually drive the vehicle to a repair shop, but avoid aggressive acceleration or towing, and be prepared for the transmission to enter limp mode or refuse to shift. If the vehicle will not start or move, do not continue driving and have it towed.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket and ratchet set
- Electrical contact cleaner and dielectric grease

Reading P2E0E

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
E	Hybrid propulsion.
0E	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 · **P2E0D** Gear Lever Position Sensor D Range/Performance · **P2E0F** Gear Lever Position Sensor D 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/p2e0e/>

