



P07BD

Transmission Park Position Sensor/Switch B Circuit Intermittent/Erratic

P07BD indicates that the transmission control module (TCM) has detected an intermittent or erratic signal from the park position sensor or switch B circuit. This sensor confirms whether the transmission is mechanically locked in Park, and the TCM sets the code when the voltage or switch state jumps unpredictably instead of remaining steady.

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

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- The engine may not start because the TCM does not recognize Park, preventing the starter from engaging.
- The gear position indicator may flicker or show the wrong range, especially when the shifter is in Park.
- A warning message such as 'Shift to Park' may appear even when the lever is fully seated.
- In some vehicles, the transmission may refuse to release the shifter from Park or may not allow the key to be removed.
- Often no symptoms besides the warning light, because the fault is intermittent and does not yet affect operation.

Common causes, most likely first

- 1 A failing park position sensor or switch B, worn internally so its contacts open and close erratically.
- 2 Damaged, chafed, or corroded wiring in the sensor circuit, often near the transmission case or shifter assembly.
- 3 A loose or contaminated electrical connector at the sensor or at the TCM, causing an unstable signal.
- 4 Mechanical wear or misalignment in the shifter linkage or the park lock mechanism, so the sensor does not sit in a stable position.
- 5 Water or debris intrusion into the sensor housing, leading to intermittent shorts or resistance changes.
- 6 A TCM software issue or internal fault that misinterprets a valid sensor signal, though this is less common.



How to diagnose and fix it

- 1 Use a scan tool to read the P07BD freeze-frame data and check for other transmission codes that might share the same circuit.
- 2 Inspect the park position sensor and its connector for corrosion, loose pins, or physical damage, and clean or reseat as needed.
- 3 Check the sensor circuit wiring for continuity and shorts to ground or power, flexing the harness while watching the meter.
- 4 Verify the sensor signal with a multimeter or oscilloscope while moving the shifter through Park and other ranges to catch erratic behavior.
- 5 If the signal is erratic at the sensor, replace the park position sensor or switch B and clear the code.
- 6 If the sensor and wiring test good, check the TCM connector and grounds, and consider a software update or TCM replacement only after all other tests pass.
- 7 After repair, clear the code and perform a road test that includes several Park-to-Drive cycles to confirm the fault does not return.

Why an intermittent park sensor fools diagnosis

- A park position sensor can test perfectly when the transmission is cold and only act up after heat soak, so a single static test often misses the fault.
- The same code can be set by a shifter cable that is slightly out of adjustment, holding the sensor between detents and causing the TCM to see a bouncing signal.
- Technicians sometimes replace the sensor when the real problem is a worn ignition switch or a body control module issue that interrupts the park signal to the TCM.
- Because the fault is intermittent, the code may clear itself after several good drive cycles, leading owners to believe it is fixed when the underlying wear remains.
- On some vehicles, the park position signal is shared with the starting system, so a no-crank complaint can appear before any transmission symptom shows up.

Can I keep driving with P07BD?

You can usually drive the vehicle, but avoid relying on Park to hold the car and be prepared for a no-start condition if the TCM loses the park signal. Have the circuit inspected soon, especially if the shifter feels loose or the warning light stays on.

Tools that help

- OBD-II scan tool with transmission module support
- Digital multimeter
- Oscilloscope for capturing intermittent signals
- Wire terminal pick and contact cleaner
- Vehicle service information for circuit diagrams and sensor location



Reading P07BD

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

Often seen with

P07B8 Transmission Park Position Sensor/Switch B Circuit/Open · **P07B9** Transmission Park Position Sensor/Switch B Circuit Low · **P07BA** Transmission Park Position Sensor/Switch B Circuit High · **P07BB** Transmission Park Position Sensor/Switch B Circuit Performan · **P07BC** Transmission Park Position Sensor/Switch B Circuit Performan

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/p07bd/>

