

GENERIC · POWERTRAIN

P07BA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07BA

Transmission Park Position Sensor/Switch B Circuit High

P07BA indicates that the transmission control module (TCM) has detected an abnormally high voltage on the signal circuit for the park position sensor or switch B. This sensor tells the TCM whether the transmission is mechanically in Park, and a high-voltage reading usually means the circuit is open, shorted to power, or the sensor's internal contact has failed.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

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 starter engagement.
- The gear selector may feel loose or fail to display the correct range on the instrument cluster.
- The vehicle may not allow the key to be removed from the ignition or may not release the shift lock.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- In some vehicles, the transmission may default to a limp mode or refuse to shift out of Park.

Common causes, most likely first

- 1 A faulty park position sensor or switch B, often due to internal wear or contamination.
- 2 An open or damaged wire in the sensor's signal circuit, commonly from chafing or corrosion.
- 3 A short to voltage on the signal circuit, which can be caused by a pinched wire or faulty connector.
- 4 Corroded or loose electrical connectors at the sensor or TCM, leading to high resistance or intermittent contact.
- 5 A failed transmission control module (TCM) that misinterprets the sensor signal, though this is less common.
- 6 Improper adjustment or mechanical binding of the sensor or shift linkage, causing the sensor to read out of range.



How to diagnose and fix it

- 1 Use an OBD-II scanner to read the freeze-frame data and confirm P07BA is the only transmission-related code.
- 2 Visually inspect the park position sensor, its connectors, and the wiring harness for damage, corrosion, or loose pins.
- 3 Check the sensor's signal circuit voltage with a digital multimeter (DMM) while moving the gear selector through all ranges, comparing to the manufacturer's specification.
- 4 Test the sensor's resistance or continuity according to the service manual, and replace the sensor if it is out of specification.
- 5 Repair any open, shorted, or corroded wiring and connectors, then clear the code and verify the fix with a test drive.
- 6 If the sensor and wiring are good, check the TCM for proper power, ground, and communication, and reflash or replace it only as a last resort.
- 7 After repairs, perform a relearn or calibration procedure if required by the manufacturer, and confirm the code does not return.

What the park sensor code hides

- A high-voltage reading on the park sensor circuit often comes from a simple unplugged connector or a broken wire, not a failed sensor, so always inspect the harness before replacing parts.
- The park position sensor is sometimes integrated into the transmission range sensor or neutral safety switch, and a fault in that assembly can set P07BA along with other range codes.
- Intermittent P07BA codes can be caused by a worn ignition switch or shift linkage that fails to fully engage Park, making the sensor read out of range only under certain conditions.
- A weak or failing battery can cause voltage spikes that confuse the TCM and set a high-voltage code, so check charging system health before condemning the sensor.
- Some vehicles use a separate park switch B for a redundant signal, and a failure there may not affect driveability but will prevent remote start or key removal.

Can I keep driving with P07BA?

If the vehicle starts and drives normally, you can drive it to a repair shop, but avoid relying on remote start or keyless entry features. If the engine will not start or the transmission will not shift out of Park, do not force anything and have the vehicle towed to prevent further damage.



Tools that help

- OBD-II scanner with live data capability
- Digital multimeter (DMM)
- Service manual or wiring diagram for the specific vehicle
- Basic hand tools (sockets, screwdrivers, trim tools)
- Contact cleaner and dielectric grease
- Jack and jack stands or ramps for under-vehicle access

Reading P07BA

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

Often seen with

P0705 Transmission Range Sensor Circuit Malfunction · **P07B9** Transmission Park Position Sensor/Switch B Circuit Low · **P07BB** Transmission Park Position Sensor/Switch B Circuit Performan · **P07BC** Transmission Park Position Sensor/Switch B Circuit Performan · **P0850** Park/Neutral Switch Input 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/p07ba/>

