

GENERIC · POWERTRAIN

P07B2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07B2

Transmission Park Position Sensor/Switch A Circuit/Open

P07B2 indicates that the transmission control module (TCM) has detected an open circuit in the park position sensor or switch A circuit, meaning the signal voltage is outside the expected range when the shifter is in Park. The TCM uses this input to confirm park engagement for starting, shift scheduling, and safe vehicle operation, so an open circuit prevents reliable park status detection.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The engine may not crank or start when the shifter is in Park, requiring a shift to Neutral to start.
- The gear position indicator on the dashboard may not show 'P' or may flash erratically.
- A warning light or message such as 'Transmission Range Sensor' or 'Service Transmission' appears.
- The vehicle may roll or not be recognized as parked, potentially affecting the shift lock system.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Remote start or keyless entry features may fail to operate because the vehicle does not confirm park status.

Common causes, most likely first

- 1 A damaged or disconnected wire in the park position sensor circuit, often due to chafing or corrosion.
- 2 A faulty park position sensor or switch itself, causing an open internal contact.
- 3 Loose or corroded electrical connector at the sensor or transmission harness.
- 4 A blown fuse or poor ground connection shared with the sensor circuit.
- 5 Transmission fluid contamination or debris interfering with the sensor's internal mechanism.
- 6 A failed transmission control module (TCM) or internal circuit fault, though less common.
- 7 Physical damage to the sensor or wiring from road debris or improper service procedures.



How to diagnose and fix it

- 1 Inspect the park position sensor connector and wiring for obvious damage, corrosion, or looseness, and clean or secure as needed.
- 2 Check the sensor circuit fuse and ground connections using a wiring diagram, and replace any blown fuse.
- 3 Use a multimeter to measure resistance and voltage on the sensor circuit while moving the shifter through Park to confirm an open circuit.
- 4 Test the park position sensor with a scan tool to view live data for park status and compare with actual shifter position.
- 5 If the sensor is faulty, replace it following the manufacturer's procedure, which may require transmission pan removal or calibration.
- 6 Clear the diagnostic trouble codes (DTCs) and perform a road test to verify the repair and ensure no pending codes return.
- 7 If the fault persists after sensor replacement, inspect the TCM and wiring harness for internal opens or shorts.

Park sensor faults that mimic other issues

- A weak or failing battery can cause voltage drops that set P07B2 intermittently, so always check battery health and charging system first.
- The park position sensor is sometimes integrated into the transmission range sensor, and a faulty range sensor can set multiple codes including P07B2.
- After replacing the sensor, some vehicles require a relearn or calibration procedure with a scan tool to avoid persistent park status errors.
- Corrosion inside the connector pins is a common cause that visual inspection alone may miss; a voltage drop test under load is more reliable.
- This code does not always mean the sensor is bad; a shorted or open wire in the harness between the sensor and TCM is equally likely.

Can I keep driving with P07B2?

If the vehicle starts and drives normally, you can drive cautiously to a repair shop, but avoid relying on Park engagement for safety and use the parking brake. If the engine will not start in Park or the vehicle rolls when parked, stop driving and have it towed to prevent accidents.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Jack and jack stands or ramps for under-vehicle access



Reading P07B2

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 7** Transmission.
- B2** 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 · **P0708** Transmission Range Sensor Circuit High · **P07B3** Transmission Park Position Sensor/Switch A Circuit Low

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/p07b2/>

