

GENERIC · POWERTRAIN

P07B3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07B3

Transmission Park Position Sensor/Switch A Circuit Low

P07B3 means the transmission control module (TCM) has detected an abnormally low voltage on the signal circuit for the park position sensor or switch, often called switch A. The sensor reports whether the transmission is mechanically in Park, and a low signal tells the computer the circuit is shorted to ground or the sensor has failed.

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 vehicle may refuse to start because the computer does not recognize Park as a valid position.
- The gear indicator may not show Park, or may flash or show the wrong range.
- A no-crank condition when the key is turned or the start button is pressed.
- The transmission may not shift out of Park, or may engage harshly when a gear is selected.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- A faulty park position sensor or switch A that has failed internally and is pulling the signal low.
- A short to ground in the signal wire between the sensor and the TCM, often from chafed insulation or pinched harness.
- Corroded, loose, or backed-out terminals at the sensor connector or the TCM connector.
- Water intrusion into the sensor connector or the transmission range switch housing.
- A defective transmission control module (TCM) that misreads a correct signal, though this is less common.
- A poor ground connection for the sensor or TCM that skews the reference voltage.



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to see when the fault occurred.
- 2 Inspect the park position sensor connector and harness for corrosion, damage, or loose pins, and repair as needed.
- 3 Check the sensor's ground and reference voltage with a multimeter to confirm the circuit is receiving proper power and ground.
- 4 Backprobe the signal wire at the TCM and compare voltage in Park and out of Park to verify the sensor output.
- 5 Disconnect the sensor and check for a short to ground on the signal wire; repair any chafed or pinched section of harness.
- 6 If the circuit tests good, replace the park position sensor or switch A and clear the codes.
- 7 After repair, clear codes and perform a road test through all gear ranges to confirm the code does not return.

Park sensor faults that fool good technicians

- A low signal code often comes from a chafed wire where the harness flexes near the transmission, not from the sensor itself, so always inspect the loom before replacing parts.
- The park position sensor shares its ground with other transmission sensors on many vehicles, so a bad ground can set P07B3 along with unrelated codes.
- Intermittent P07B3 can be caused by water entering the connector after a car wash or heavy rain, leaving no visible damage once it dries out.
- A weak or failing battery can cause a low signal voltage at the sensor during cranking, setting this code even though the sensor is fine.
- Do not assume the TCM is bad because the code persists after sensor replacement; check for a short to ground on the signal wire first.

Can I keep driving with P07B3?

If the vehicle starts and drives normally, you can drive cautiously to a repair shop, but avoid relying on the park position for safety. If the car will not start or will not shift out of Park, do not force it; have it towed to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or piercing probes
- Wire repair kit with heat-shrink tubing
- Vehicle-specific service information for connector pinouts



Reading P07B3

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 7** Transmission.
- B3** The exact fault within that area.

Often seen with

P0705 Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P07B4** Transmission Park Position Sensor/Switch A Circuit High · **P07B5** Transmission Park Position Sensor/Switch A Circuit Performan · **P07B6** Transmission Park Position Sensor/Switch A 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/p07b3/>

