

GENERIC · POWERTRAIN

P081F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P081F

Brake Transmission Shift Interlock (BTSI) Signal Correlation

P081F indicates that the powertrain control module (PCM) has detected a disagreement between the brake transmission shift interlock (BTSI) signal and other related inputs, such as the brake pedal position switch or the transmission range sensor. The BTSI system prevents the shifter from moving out of Park unless the brake pedal is pressed, and this code sets when the PCM sees conflicting information about the interlock's state.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The gear selector may be difficult or impossible to move out of Park even with the brake pedal depressed.
- The shift interlock may release without the brake pedal being pressed, allowing unintended movement.
- The warning light on the dashboard illuminates, often accompanied by a chime or message.
- In some cases, the vehicle may not start or may stall when shifting from Park.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty brake pedal position switch (also called brake light switch) that sends incorrect signals to the PCM.
- 2 Wiring issues such as open circuits, shorts, or corrosion in the BTSI circuit or brake switch wiring.
- 3 Defective BTSI solenoid or actuator that fails to move or report its position correctly.
- 4 Transmission range sensor (TRS) misalignment or failure, causing the PCM to see an invalid gear position.
- 5 PCM software glitch or internal fault, though this is less common.
- 6 Aftermarket accessories or modifications tapping into the brake or shift interlock circuits.



How to diagnose and fix it

- 1 Verify the brake lights operate correctly when the pedal is pressed; if not, inspect and replace the brake pedal position switch.
- 2 Check for any stored codes in other modules (e.g., body control module) that may affect the BTSI signal.
- 3 Inspect the wiring and connectors at the brake switch, BTSI solenoid, and transmission range sensor for damage or corrosion.
- 4 Test the BTSI solenoid for proper operation and resistance using a multimeter; replace if faulty.
- 5 Check the transmission range sensor alignment and signal; adjust or replace as needed.
- 6 Clear the codes and perform a road test to see if the code returns; if it does, follow the manufacturer's diagnostic flow chart for P081F.
- 7 If all else fails, consult a dealer or experienced technician for PCM reprogramming or replacement.

Common Oversights in BTSI Diagnostics

- A misadjusted or failing brake pedal position switch often causes P081F without setting a brake switch code, so always test its output signal.
- The BTSI system varies widely between makes; some use a solenoid in the shifter assembly, while others use a cable or electronic actuator, so consult the specific vehicle's service information.
- Intermittent faults may be caused by a chafed wire harness near the steering column or shifter, which can be missed during a quick visual inspection.
- P081F can be set by a weak battery or charging system issue that causes voltage spikes, so check battery health and grounds before replacing parts.
- Aftermarket remote starters or alarm systems that interface with the brake or shift circuits can introduce correlation errors; disconnect them temporarily during diagnosis.

Can I keep driving with P081F?

If the vehicle can be shifted out of Park and driven normally, you may drive it to a repair shop, but be aware that the interlock may fail to prevent unintended movement. Avoid parking on steep inclines and always set the parking brake. If the shifter is stuck in Park, do not force it; have the vehicle towed to avoid damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Vehicle-specific service information (wiring diagrams)
- Basic hand tools (screwdrivers, socket set)



Reading P081F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
8	Transmission.
1F	The exact fault within that area.

Often seen with

P0571 Brake Switch 'A' Circuit · **P0700** Transmission Control System Malfunction · **P081E** Excessive Clutch B Slippage · **P0820** Gear Lever X-Y Position Sensor Circuit · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p081f/>

