



P1703 · Ford

Brake On Off Switch Out of Self-Test Range

P1703 on Ford vehicles means the Brake On Off (BOO) switch input to the Powertrain Control Module (PCM) is outside the expected self-test range during the module's key-on or continuous self-check. The PCM expects a specific voltage pattern from the brake pedal switch when the pedal is released and pressed, and this code sets when that signal does not toggle or sits outside the valid window.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Transmission

Symptoms you may notice

- The red brake warning light or yellow ABS light may illuminate on the dashboard
- The transmission may stay locked in Park or refuse to shift out of gear when the brake pedal is pressed
- Cruise control may not disengage when you tap the brake pedal, or may fail to engage at all
- The engine may idle erratically or stall when coming to a stop if the PCM misreads brake status
- Torque converter clutch (TCC) lockup may behave abnormally, causing shudder or poor fuel economy
- Often no symptoms besides the warning light, especially if the switch still works mechanically

Common causes, most likely first

- 1 Failed or misadjusted Brake On Off (BOO) switch on the brake pedal bracket
- 2 Blown fuse or corroded connector at the BOO switch circuit
- 3 Damaged or chafed wiring between the BOO switch and the PCM
- 4 Brake pedal position not returning fully due to a binding pedal or missing return spring
- 5 Water intrusion or contamination inside the BOO switch connector
- 6 PCM software calibration issue or internal driver fault (less common)

How to diagnose and fix it

- 1 Verify the brake lights work normally and check the BOO switch adjustment at the pedal bracket
- 2 Inspect the BOO switch fuse and connector for corrosion, tightness, and clean terminals
- 3 Use a scan tool to watch the BOO switch PID while pressing and releasing the brake pedal
- 4 Backprobe the BOO switch connector and measure voltage with the pedal released and pressed
- 5 Check continuity and resistance on the signal wire from the BOO switch to the PCM
- 6 Replace the BOO switch if it fails the voltage or continuity test, then clear the code and retest
- 7 If the circuit and switch test good, check for PCM calibration updates or internal faults before replacement



Before you replace the brake switch

- A brake pedal that does not fully return to rest can keep the BOO switch out of range and set P1703 even when the switch itself is good.
- The BOO switch often shares a circuit with the brake lights and shift interlock, so a blown fuse for the brake lights can trigger this code.
- On some Ford models the BOO switch is a dual-contact design, and only one contact may fail, leaving brake lights working while the PCM input is wrong.
- Aftermarket floor mats or debris under the pedal can prevent full release and cause an intermittent P1703 that never appears in the shop.
- P1703 can be stored by a low battery or voltage spike during cranking, so check for other low-voltage codes before condemning the switch.

Can I keep driving with P1703?

You can usually drive the vehicle, but the transmission may not shift out of Park and cruise control may not disengage correctly, so avoid relying on those systems and have the switch circuit checked promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Trim removal tool
- Factory service information for BOO switch adjustment

Reading P1703

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Ford): its meaning depends on the make.
7	Transmission.
03	The exact fault within that area.

Often seen with

P1704 Kick Down Switch Malfunction · **P1702** Auto Trans Diagnosis Input Signal Circuit · **P1704** 2-4 Brake Timing Solenoid Valve Circuit Malfunction · **P1702** Transmission Range Sensor Circuit Intermittent · **P1702** Transmission system problems · **P1704** Transmission system problems · **P0504** Brake Switch 'A'/'B' Correlation · **P0571** Brake Switch 'A' Circuit · **P0705** Transmission Range Sensor Circuit Malfunction



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/ford-p1703/>

