



P1751 · BMW

Secondary Pressure Solenoid Open Circuit

P1751 on BMW vehicles means the transmission control module has detected an open circuit in the secondary pressure solenoid circuit, so no current can flow through the solenoid coil or its wiring. The computer commands a current to the solenoid and sees no expected voltage drop or current feedback, which flags the circuit as electrically open.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW specific	Medium	Professional	Transmission

Symptoms you may notice

- Transmission warning light or check engine light illuminated on the instrument cluster
- Harsh or delayed shifts, especially when the transmission is cold
- Transmission stuck in a default gear or limp-home mode with reduced power
- Slipping or flaring during upshifts and downshifts
- Often no symptoms besides the warning light if the fault is intermittent

Common causes, most likely first

- Broken or chafed wire in the secondary pressure solenoid circuit, often in the transmission harness near the valve body
- Corroded or loose electrical connector at the transmission case pass-through or solenoid plug
- Failed secondary pressure solenoid coil with an internal open winding
- Damaged transmission control module driver circuit or internal fault
- Contaminated or degraded transmission fluid causing solenoid coil damage over time
- Rodent damage or pinched wiring along the harness route

How to diagnose and fix it

- Scan all modules and record freeze-frame data to confirm P1751 is current and not a stored history code
- Inspect the transmission harness and connectors for chafing, corrosion, or loose pins before any parts are replaced
- Measure solenoid resistance at the transmission connector and compare with BMW specifications for the secondary pressure solenoid
- Check continuity and voltage drop on both solenoid circuit wires from the control module to the transmission connector
- If wiring checks pass, remove the transmission pan and valve body to test the solenoid directly and inspect for fluid contamination
- Replace the faulty solenoid or repair the open circuit, then clear codes and perform a transmission adaptation, reset and road test

Open circuit does not always mean bad solenoid

- A large share of P1751 cases on BMW vehicles are caused by a chafed or broken wire in the transmission harness rather than the solenoid itself, so always ohm the circuit end to end before condemning the valve body.
- Intermittent open circuits often set the code only when the transmission is hot or after a cold start, so a resistance test on a cold solenoid can pass while the fault is still present.
- A weak or failing battery or charging system can cause the control module to log false open-circuit codes, so verify supply voltage and grounds before deep electrical testing.
- Transmission fluid that has never been serviced can leave varnish on the solenoid coil and connector pins, creating high resistance that eventually reads as an open circuit.
- Replacing the secondary pressure solenoid without clearing and relearning transmission adaptations can leave the vehicle shifting poorly and make a correct repair look unsuccessful.

Can I keep driving with P1751?

You can usually drive the vehicle to a workshop, but expect harsh shifts or limp-home mode and avoid heavy acceleration or towing until the circuit is repaired. If the transmission slips badly or refuses to engage a gear, stop driving and arrange a tow to prevent internal damage.

Tools that help

- BMW-compatible scan tool with transmission module access
- Digital multimeter with resistance and continuity functions
- Wiring diagram and pinout for the transmission control module connector
- Transmission fluid drain pan and fluid level checking tools
- Torque wrench for valve body and pan bolts

Reading P1751

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

Often seen with

P1750 Power Supply Voltage Low · **P1752** Power Supply Malfunction · **P1750** Solenoid Assembly · **P1752** Transmission Shift Solenoid A Circuit Shorted · **P1750** Secondary Pressure Solenoid Circuit Range Performance · **P0700** Transmission Control System Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction



See it working

Watch the animated explainer [How Drive-by-Wire Works: Electronic Throttle Body](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1751/>

