

BMW · POWERTRAIN

P1749

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1749 · BMW

Secondary Pressure Solenoid Communication Error

P1749 on a BMW indicates that the transmission control module (TCM) has lost reliable communication with the secondary pressure solenoid, which is responsible for regulating hydraulic pressure inside the automatic gearbox. The TCM monitors the solenoid's electrical circuit and expected pressure response, and it sets this code when the signal is missing, intermittent, or outside the expected range.

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

Symptoms you may notice

- Illumination of the transmission warning light or check engine light, often with no other noticeable symptoms at first
- Harsh or delayed gear shifts, particularly when the transmission is cold or under load
- The transmission may enter limp mode, sticking in a single gear or refusing to shift
- A noticeable clunk or jolt when selecting Drive or Reverse
- Reduced fuel economy and higher engine rpm at cruising speed due to improper shift points

Common causes, most likely first

- 1 Faulty secondary pressure solenoid, including a worn coil or stuck valve inside the solenoid
- 2 Damaged or corroded wiring harness between the TCM and the solenoid, often due to heat, oil contamination, or chafing
- 3 Loose or corroded electrical connector at the solenoid or at the transmission case pass-through
- 4 Low or contaminated transmission fluid causing pressure deviations that the TCM interprets as a communication fault
- 5 Internal transmission mechanical wear, such as a sticking valve body or worn seals, that prevents the solenoid from achieving commanded pressure
- 6 A failing TCM or a software issue in the transmission control module
- 7 Aftermarket or incorrect transmission fluid that alters hydraulic behavior and triggers the monitoring logic



How to diagnose and fix it

- 1 Scan all modules with a BMW-capable diagnostic tool to confirm P1749 is current and check for related transmission codes
- 2 Inspect the transmission fluid level and condition, looking for dark color, burnt smell, or metal debris
- 3 Visually inspect the solenoid wiring harness and connectors for chafing, corrosion, or oil intrusion, and perform a wiggle test while monitoring live data
- 4 Measure the resistance of the secondary pressure solenoid at the connector and compare it to the manufacturer's specification
- 5 Check the solenoid's electrical circuit for shorts to ground or power and for excessive voltage drop under load
- 6 If electrical checks pass, remove the transmission pan and inspect the solenoid and valve body for contamination or mechanical sticking
- 7 Replace the faulty solenoid or repair the wiring as needed, then clear the code and perform a transmission adaptation reset and road test

What the pressure solenoid code hides

- A communication error does not always mean the solenoid is dead; a poor ground or a voltage drop in the shared power feed can mimic a failed solenoid and fool a parts-swapping diagnosis.
- On many BMW transmissions, the secondary pressure solenoid shares a connector with other solenoids, so oil wicking through the harness can cause intermittent faults that only appear when the transmission is hot.
- Low fluid level from a slow leak often sets this code before the driver notices any shifting problem, so always check the fluid level and pan for seepage before condemning electrical parts.
- The TCM may set P1749 as a consequence of a mechanical pressure problem, such as a sticking valve body, even when the solenoid itself tests good on the bench.
- Clearing the code without performing the transmission adaptation reset can leave the TCM with old shift learning values, causing the code to return immediately after repair.

Can I keep driving with P1749?

You can usually drive the vehicle to a workshop if the transmission still shifts and the warning light is steady, but avoid heavy acceleration, towing, or long highway trips. If the transmission enters limp mode or shifts harshly, stop driving and arrange a diagnostic scan to prevent further internal damage.

Tools that help

- BMW-capable OBD-II scan tool with live transmission data
- Digital multimeter for resistance and voltage drop tests
- Transmission fluid level dipstick or scan tool fluid temperature readout
- Wiring diagram and connector pinout for the transmission harness
- Torque wrench and basic hand tools for pan removal if internal inspection is needed



Reading P1749

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

Often seen with

P1748 Transmission Control Unit Self-Check · **P1750** Power Supply Voltage Low · **P1750** Solenoid Assembly · **P1748** Pressure Control Solenoid A · **P1748** Pressure Regulator 5 · **P1748** EPC Malfunction · **P1748** Transmission Control Module Self Test · **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 Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1749/>

