

BMW · POWERTRAIN

P1738

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1738 · BMW

Pressure Control Solenoid C Electrical

P1738 on a BMW indicates that the transmission control module (TCM) has detected an electrical fault in the circuit for pressure control solenoid C, which is one of the electro-hydraulic valves that regulates clutch apply pressure inside the automatic gearbox. The TCM monitors the solenoid's electrical current and voltage and sets this code when the measured values fall outside the expected range, pointing to an open circuit, short to ground, short to power, or a failed solenoid coil. This is an electrical fault, not a hydraulic or mechanical fault, so diagnosis should focus on wiring, connectors, and the solenoid itself before condemning the transmission.

SYSTEM

Powertrain

CODE TYPE

BMW specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Illumination of the transmission malfunction warning light or the check engine light, often with a message in the iDrive display
- Harsh or delayed gear engagements, especially when selecting Drive or Reverse from a stop
- Transmission stuck in a limp-home mode with a single fixed gear or restricted shift pattern
- Erratic or slipping shifts as the TCM loses the ability to regulate clutch pressure precisely
- Sometimes no symptoms besides the warning light, particularly if the fault is intermittent and the TCM has not yet defaulted to a safe mode

Common causes, most likely first

- 1 Failed pressure control solenoid C inside the transmission valve body, with an open or shorted coil winding
- 2 Damaged or chafed wiring harness between the TCM and the transmission connector, often near the bellhousing or along the gearbox casing
- 3 Corroded, oil-contaminated, or loose electrical connector at the transmission pass-through or valve body plug
- 4 Internal valve body fault such as a stuck valve or worn bore that mechanically loads the solenoid and causes an electrical signature the TCM interprets as a circuit fault
- 5 Low or degraded transmission fluid causing poor solenoid operation and secondary electrical symptoms
- 6 TCM software or internal driver fault, though this is less common than wiring or solenoid failure



How to diagnose and fix it

- 1 Scan all modules with a BMW-capable diagnostic tool and record the freeze-frame data and any accompanying transmission codes before clearing anything
- 2 Inspect the transmission wiring harness and connectors for chafing, corrosion, oil ingress, and loose pins, repairing any damage found
- 3 Measure the resistance of pressure control solenoid C at the transmission connector and compare it with the BMW specification for the fitted gearbox
- 4 Check the solenoid circuit for shorts to ground and shorts to power with a multimeter, isolating the TCM if necessary
- 5 If electrical values are within specification, remove the valve body and test the solenoid directly, replacing it if the coil is out of tolerance
- 6 After repair, clear the fault memory, perform the transmission adaptation reset with the diagnostic tool, and road-test through all gears to confirm the code does not return

What BMW technicians check before replacing a solenoid

- A chafed harness section behind the transmission bellhousing or near the exhaust heat shield is a frequent cause of P1738 on BMW models, and it can mimic a failed solenoid perfectly.
- Oil contamination at the transmission pass-through connector can create intermittent resistance changes that set the code only when the gearbox is hot, so always test the circuit both cold and at operating temperature.
- A mechanically sticking valve in the valve body can load the solenoid and produce an electrical fault code even when the solenoid coil itself tests good, so a resistance check alone is not conclusive.
- Replacing the solenoid without resetting and relearning the transmission adaptations often leaves the gearbox shifting poorly, which owners then misread as a failed repair.
- P1738 can be stored alongside pressure control codes for other solenoids when the root cause is a shared ground or power feed in the transmission harness, so always check the common circuit before condemning multiple solenoids.

Can I keep driving with P1738?

You can usually drive the car to a workshop if the transmission still engages gears and the warning light is steady, but avoid heavy acceleration, towing, and long trips because limp-home mode can engage without warning. If the gearbox slips, refuses to engage a gear, or the warning light flashes, stop driving and arrange recovery to prevent internal transmission damage.



Tools that help

- BMW-capable diagnostic scan tool with transmission module access
- Digital multimeter with resistance and continuity functions
- Transmission fluid level and condition check kit
- Socket and Torx set for valve body and pan removal
- Wiring diagram and pinout for the specific BMW transmission
- Torque wrench for valve body and pan bolts

Reading P1738

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

Often seen with

P1739 Tiptronic Switch Up Circuit Short To Ground · **P1739** Automatic Transmission System Malfunction · **P1737** Lockup Solenoid · **P1739** Slip Solenoid · **P1740** Torque Converter Clutch Solenoid Mechanical Fault · **P1739** Automatic Transmission System Malfunction · **P1740** Torque Control/Management Request Circuit · **P1740** Transmission system problems · **P1740** TCC Or OD Solenoid Performance · **P0700** Transmission Control System Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction

See it working

Watch the animated explainer [How the EVAP System Works: Fuel Vapour and Leak Test](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1738/>

