

JAGUAR · POWERTRAIN

P1746

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1746 · Jaguar

Pressure Regulator 2

P1746 on Jaguar vehicles indicates that the transmission control module (TCM) has detected an electrical fault in the pressure regulator solenoid valve 2 circuit, which is responsible for controlling hydraulic pressure inside the automatic gearbox. The TCM monitors the solenoid's current draw and expected response, and when the signal falls outside the programmed limits, it stores this code and typically illuminates the warning light.

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

Symptoms you may notice

- Illumination of the transmission warning light or check engine light on the instrument cluster
- Harsh or delayed gear shifts, especially when engaging drive or reverse
- Transmission may enter limp mode, limiting operation to a single gear or fixed shift pattern
- Slipping or flaring during acceleration as line pressure control is compromised
- Often no symptoms besides the warning light, particularly if the fault is intermittent

Common causes, most likely first

- 1 Faulty pressure regulator solenoid valve 2, either electrically open or shorted internally
- 2 Damaged or corroded wiring harness connector at the solenoid or TCM
- 3 Chafed or broken wires between the TCM and the transmission solenoid pack
- 4 Contaminated transmission fluid causing solenoid valve sticking or poor electrical contact
- 5 Internal transmission mechanical wear affecting hydraulic pressure regulation
- 6 TCM software glitch or internal fault, though less common than solenoid or wiring issues



How to diagnose and fix it

- 1 Perform a visual inspection of the transmission wiring harness and connectors for damage, corrosion, or loose pins
- 2 Check transmission fluid level and condition; top up or replace fluid if contaminated or burnt
- 3 Use a diagnostic scan tool to command the solenoid on and off and observe current draw and pressure changes
- 4 Measure resistance of the pressure regulator solenoid 2 and compare to Jaguar specifications
- 5 Inspect the solenoid pack for debris or sticking valves; clean or replace as necessary
- 6 Repair or replace damaged wiring and connectors, then clear the code and verify the fault is resolved
- 7 If the fault persists, reprogram the TCM with the latest software or replace the solenoid pack or TCM as a last resort

Before you replace the solenoid pack

- A low battery or poor charging system can cause voltage spikes that mimic solenoid faults, so always check battery health and ground connections first.
- Transmission fluid that is overdue for a change often causes solenoid valves to stick, setting P1746 without any electrical failure; a fluid service may resolve the issue.
- The TCM may store P1746 intermittently due to a loose connector pin that only loses contact under vibration, so wiggle-test the harness while monitoring live data.
- On some Jaguar models, the pressure regulator solenoids share a common power feed, so a fault in one can affect others and set related codes; check for multiple codes before condemning a single solenoid.
- After repairs, the TCM may require a relearn procedure or adaptation reset to restore smooth shifting, which many DIYers overlook.

Can I keep driving with P1746?

You can drive the vehicle to a workshop if the transmission is not in limp mode and shifts reasonably, but avoid heavy acceleration or towing until the fault is repaired. If the transmission is stuck in limp mode or slipping severely, stop driving and arrange a tow to prevent further damage.

Tools that help

- OBD-II scan tool with Jaguar-specific software
- Digital multimeter
- Transmission fluid level dipstick or scan tool for fluid level check
- Socket set and trim removal tools for accessing solenoid pack
- Wiring diagram and pinout for the TCM and solenoid connectors



Reading P1746

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

Often seen with

P1745 Transmission Control Unit Relay Short To B+ · **P1747** Transmission Control Unit Relay Open Short To Ground · **P1748** Transmission Control Unit Self-Check · **P1745** Line Pressure Solenoid · **P1747** Electronic Pressure Control Solenoid Circuit · **P1748** Pressure Control Solenoid A · **P1745** Pressure Regulator 1 · **P1747** Pressure Regulator 3 · **P1748** Pressure Regulator 5 · **P1745** Transmission system problems · **P1747** Electronic Pressure Control Solenoid A Short Circuit · **P1748** EPC Malfunction · **P1747** CAN Bus Monitoring · **P1748** Transmission Control Module Self Test · **P0700** Transmission Control System Malfunction · **P0730** Incorrect Gear Ratio

See it working

Watch the animated explainer [How Crank and Cam Position Sensors Work](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/jaguar-p1746/>

