



P1747 · Ford

Electronic Pressure Control Solenoid A Short Circuit

P1747 on Ford vehicles indicates that the powertrain control module has detected a short circuit in the electronic pressure control solenoid A circuit, which is used to regulate hydraulic line pressure inside the automatic transmission. The computer monitors the solenoid's electrical current and flags this code when the circuit draws excessive current or is shorted to ground or power.

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

Symptoms you may notice

- Illuminated check engine light or transmission control indicator lamp
- Harsh or delayed transmission shifts, especially when engaging drive or reverse
- Transmission may enter limp mode and stay in a single gear
- Slipping or flaring during gear changes
- Often no symptoms besides the warning light, especially if the short is intermittent

Common causes, most likely first

- 1 Faulty electronic pressure control solenoid A, with an internally shorted coil
- 2 Damaged or chafed wiring harness between the solenoid and the powertrain control module
- 3 Corroded or loose electrical connector at the solenoid or transmission bulkhead
- 4 Transmission fluid contamination or debris causing solenoid malfunction
- 5 Internal transmission mechanical wear that overloads the solenoid circuit
- 6 Powertrain control module driver circuit failure, though this is less common



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to confirm the fault conditions
- 2 Inspect the transmission wiring harness and connectors for chafing, corrosion, or loose pins, and repair as needed
- 3 Measure the resistance of the electronic pressure control solenoid A and compare it to the Ford specification for your transmission
- 4 Check the solenoid circuit for shorts to ground or power using a multimeter and a wiring diagram
- 5 If the solenoid is out of specification, replace it and perform a transmission fluid service
- 6 Clear the codes and road test the vehicle through all gears to verify the repair
- 7 If the code returns, perform a pinpoint test for the powertrain control module driver circuit and replace the module only if proven faulty

What Ford technicians check before replacing the solenoid

- A shorted solenoid coil often tests fine when cold but fails when the transmission reaches operating temperature, so resistance checks should be done both cold and hot.
- The wiring harness inside the transmission pan can rub against the valve body, causing an intermittent short that only appears during certain driving conditions.
- A contaminated transmission fluid from a failing torque converter or cooler can coat the solenoid and cause a short circuit that mimics an electrical failure.
- Some aftermarket solenoids have different resistance values than the Ford original, so always verify the replacement part meets the factory specification.
- The powertrain control module rarely fails, but a shorted solenoid can damage its driver circuit, so always repair the solenoid before installing a new module.

Can I keep driving with P1747?

You can drive the vehicle to a repair shop if the transmission still shifts and the warning light is the only symptom, but avoid heavy acceleration or towing. If the transmission is in limp mode or slipping, stop driving and have it towed to prevent further damage.

Tools that help

- OBD-II scan tool with Ford-specific software
- Digital multimeter
- Transmission fluid pressure gauge
- Wiring diagram for the specific Ford model
- Socket set and torque wrench
- Fluid pump and drain pan



Reading P1747

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

Often seen with

P1746 Transmission Control Unit Relay Malfunction · **P1748** Transmission Control Unit Self-Check · **P1746** Electronic Pressure Control Solenoid Circuit Open · **P1748** Pressure Control Solenoid A · **P1746** Pressure Regulator 2 · **P1748** Pressure Regulator 5 · **P1746** Electronic Pressure Control Solenoid A Open Circuit · **P1748** EPC Malfunction · **P1746** Transmission Control Module Output Stage · **P1748** Transmission Control Module Self Test · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0741** Torque Converter Clutch Circuit Performance or Stuck Off

See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1747/>

