

FORD · POWERTRAIN

P1788

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1788 · Ford

Pressure Control Solenoid B Open Circuit

P1788 on Ford vehicles means the transmission control module (TCM) has detected an open circuit in the pressure control solenoid B circuit, so no current can flow through the solenoid coil. The TCM commands a specific pressure but sees no electrical load on that circuit, which usually forces the transmission into a default or limp mode.

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

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- The transmission may shift harshly or fail to shift into certain gears.
- The vehicle may enter limp mode and stay in a single gear or neutral.
- A noticeable delay or slip when engaging drive or reverse.
- Often no symptoms besides the warning light if the fault is intermittent.
- Poor fuel economy or elevated engine RPM at highway speed due to limited gear selection.

Common causes, most likely first

- Broken or chafed wire in the pressure control solenoid B circuit, often near the transmission connector or along the harness.
- Corroded, loose, or pushed-back terminal at the transmission bulkhead connector or the TCM connector.
- Failed pressure control solenoid B with an open internal coil.
- Damaged or contaminated transmission fluid causing solenoid failure or circuit damage.
- Internal transmission harness damage from heat, vibration, or fluid intrusion.
- A faulty TCM driver circuit that cannot supply current to the solenoid.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1788 is current and not a stale history code.
- 2 Inspect the transmission harness and connectors for chafing, corrosion, or loose pins, especially at the bulkhead pass-through.
- 3 Measure resistance across pressure control solenoid B at the transmission connector and compare to the Ford specification for your transmission.
- 4 Check for battery voltage and ground continuity on the solenoid B circuit with the key on and the TCM commanding the solenoid.
- 5 If the circuit tests good, remove the transmission pan and inspect the solenoid, internal harness, and fluid condition.
- 6 Replace the faulty solenoid or damaged harness section, clear the codes, and verify the circuit with a bidirectional scan tool.
- 7 Perform a relearn or adaptive reset if required, then road test through all gears to confirm the code does not return.

What Ford techs check before replacing the solenoid

- A corroded terminal at the transmission bulkhead connector is a far more common cause of P1788 than a failed solenoid, and it often looks fine until you wiggle the harness with the key on.
- The TCM may set P1788 only when the transmission is hot, so a cold resistance check can pass and still leave you chasing an intermittent open circuit.
- Low or burnt transmission fluid can cause solenoid coil damage that sets this code, so always check fluid level and condition before condemning the solenoid.
- On some Ford transmissions, the pressure control solenoid B shares a ground path with other solenoids, so a single bad ground can set multiple solenoid codes including P1788.
- A scan tool that can command the solenoid on and off is the fastest way to confirm an open circuit without removing the pan.

Can I keep driving with P1788?

You can usually drive the vehicle to a shop if it stays in limp mode, but avoid highway speeds and heavy loads because the transmission may not shift properly. If the vehicle slips badly, refuses to move, or the warning light flashes, stop driving and have it towed.

Tools that help

- OBD-II scan tool with bidirectional control and transmission data
- Digital multimeter with back-probe pins
- Ford service information for connector pinouts and solenoid resistance specifications
- Transmission fluid drain pan and hand tools for pan removal
- Wire terminal pick and crimping tools for connector repair



Reading P1788

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

Often seen with

P1787 Reversing Light Circuit Short To Ground · **P1789** Idle Speed Intervention Circuit Error Message From Engine Co · **P1789** Pressure Control Solenoid B Circuit Shorted · **P1789** Pressure Control Solenoid B Circuit Shorted · **P1789** Ignition Supply Malfunction · **P1787** 2-1 Downshift Error · **P1789** Pressure Control Solenoid B Short Circuit · **P0740** Torque Converter Clutch Circuit Malfunction · **P0750** Shift Solenoid 'A' · **P0755** Shift Solenoid 'B'

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1788/>

