

FORD · POWERTRAIN

P1846

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1846 · Ford

Transmission Transfer Case Contact Plate A Circuit Failure

P1846 on Ford vehicles means the transmission control module (TCM) has detected an electrical fault in the contact plate A circuit inside the transfer case. The contact plate uses Hall-effect sensors to tell the TCM which range the transfer case is in, and this code sets when the signal from plate A is missing, erratic, or out of expected range.

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

Symptoms you may notice

- The four-wheel-drive or range selector warning light flashes or stays on steadily.
- The transfer case refuses to shift between 2H, 4H, and 4L, or shifts with a harsh clunk. The vehicle may default to a single range, often 2H, and ignore selector inputs.
- A drivetrain malfunction or service four-wheel-drive message appears in the instrument cluster.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- In some cases the transmission may enter limp mode with harsh or delayed shifts.

Common causes, most likely first

- Corroded, chafed, or disconnected wiring between the contact plate and the transfer case control module.
- Failed contact plate A sensor inside the transfer case, often due to fluid contamination or mechanical wear.
- Water or debris intrusion into the contact plate connector or the transfer case housing.
- A faulty transfer case shift motor that fails to move the contact plate through its full travel.
- A defective transfer case control module (TCCM) that misreads a good sensor signal.
- Loose or damaged pins in the contact plate electrical connector.
- Internal transfer case mechanical damage that prevents the contact plate from rotating correctly.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1846 is active and not a historical ghost code.
- 2 Visually inspect the contact plate connector and wiring harness for corrosion, chafing, or loose pins, and repair as needed.
- 3 Measure resistance and voltage on the contact plate A circuit at the connector and compare with Ford service specifications.
- 4 Command the transfer case shift motor through its ranges with a scan tool and watch contact plate A feedback for dropouts.
- 5 Remove and inspect the contact plate for contamination, worn contacts, or fluid intrusion, and replace it if faulty.
- 6 Check the transfer case shift motor for proper operation and replace it if it fails to move the contact plate smoothly.
- 7 If all external circuits and components test good, substitute a known-good TCCM to rule out an internal module fault.

What Ford techs check before replacing the plate

- A weak or failing battery can cause the TCCM to log P1846 intermittently because low voltage disrupts the contact plate signal during cranking.
- The contact plate is often misdiagnosed as the shift motor, but a motor that runs without moving the plate points to a stripped gear or a stuck plate, not a bad motor.
- Water intrusion from a damaged transfer case vent or a missing connector seal is a common hidden cause that only shows up after off-road driving or deep water crossings.
- P1846 can be set by a poor ground connection at the transfer case or chassis, so always load-test grounds before condemning the contact plate.
- On some Ford models the contact plate is serviceable separately from the transfer case, but on others it is part of an assembly, so verify the parts breakdown before quoting the job.

Can I keep driving with P1846?

You can usually drive the vehicle in two-wheel drive, but avoid relying on four-wheel drive because the transfer case may not engage or may shift unexpectedly. If the transmission is in limp mode or the vehicle will not move, stop driving and have it towed.



Tools that help

- OBD-II scan tool with Ford-specific bidirectional control and live data
- Digital multimeter with back-probe pins
- Ford service information for connector pinouts and resistance specifications
- Basic hand tools including socket set and trim removal tools
- Transfer case fluid drain pan and pump
- Inspection mirror and flashlight for connector and housing checks

Reading P1846

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

Often seen with

P1847 Check DTC Memory Of Brake System ECU · **P1866** Data Bus Powertrain Missing Messages · **P1845** Transmission Gear Ratio Output Circuit · **P1847** 2-3 Shift Solenoid Circuit High Voltage · **P1870** Transmission Component Slipping · **P1866** Transmission Transfer Case System Concern Servicing Required · **P1867** Transmission Transfer Case Contact Plate General Circuit Fai

See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1846/>

