

FORD · POWERTRAIN

P1838

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1838 · Ford

Transmission Transfer Case Shift Motor Circuit Failure

P1838 on Ford vehicles indicates that the transmission control module (TCM) or four-wheel-drive control module has detected a fault in the electrical circuit that operates the transfer case shift motor. The computer monitors the motor's power, ground, and feedback signals and sets this code when the circuit does not respond as expected during a shift command or self-test.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The four-wheel-drive or transfer case warning light illuminates on the dashboard.
- The transfer case may fail to shift between two-wheel drive, four-wheel drive high, and four-wheel drive low.
- A grinding or clunking noise may be heard when attempting to engage four-wheel drive.
- The vehicle may remain stuck in one drive mode, often defaulting to two-wheel drive.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Damaged or corroded wiring harness to the transfer case shift motor, including chafed wires or broken connectors.
- 2 Failed transfer case shift motor, often due to water intrusion or worn brushes inside the motor.
- 3 Blown fuse or faulty relay in the transfer case shift motor power circuit.
- 4 Poor ground connection at the chassis or transfer case.
- 5 Faulty transfer case control module (TCCM) or four-wheel-drive control module.
- 6 Sticking or binding transfer case shift mechanism, causing the motor to draw excessive current.



How to diagnose and fix it

- 1 Inspect the transfer case shift motor fuse and relay, and replace any that are blown or faulty.
- 2 Visually inspect the wiring harness and connectors at the shift motor for corrosion, chafing, or loose pins; repair as needed.
- 3 Measure resistance and voltage at the shift motor connector to verify power, ground, and signal integrity.
- 4 Command the shift motor through the scan tool to check for movement and listen for motor operation.
- 5 Remove the shift motor and check for mechanical binding in the transfer case shift mechanism; repair or replace components as necessary.
- 6 If the motor fails electrical tests, replace the transfer case shift motor.
- 7 If all circuits and the motor test good, diagnose or replace the transfer case control module.

Before replacing the transfer case shift motor

- A common oversight is assuming the shift motor is bad when the real problem is a corroded connector or chafed wire hidden behind the transfer case, so always perform a thorough circuit test first.
The code can be set by a mechanical bind in the transfer case shift linkage that prevents the motor from reaching its commanded position, which mimics an electrical failure.
- Intermittent faults often occur due to water intrusion into the shift motor connector after off-road driving or car washes, so check for moisture and dielectric grease condition.
- A weak battery or charging system can cause low voltage to the shift motor, setting this code without any hard failure in the motor or wiring.
Some Ford models require a relearn or calibration procedure after replacing the shift motor or control module, which if skipped can leave the code stored even with good parts.

Can I keep driving with P1838?

You can usually continue driving in two-wheel drive if the transfer case remains engaged, but avoid attempting to use four-wheel drive until the fault is repaired to prevent further damage. If the vehicle is stuck in four-wheel drive or exhibits strange handling, have it inspected promptly.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wire probe set and jumper wires
- Socket and ratchet set
- Service manual or wiring diagram for the specific Ford model



Reading P1838

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

Often seen with

P1815 Pressure Control Solenoid 1 Short To B+ · **P1860** Kick Down Switch Error Message From Engine Control
 · **P1815** Transmission Range Switch Start In Wrong Range · **P1860** TCC PWM Solenoid Circuit Electrical ·
P1870 Transmission Component Slipping · **P1815** Transmission 4-Wheel Drive Mode Select Short Circuit To
 Grou · **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-p1838/>

