

FORD · POWERTRAIN

P1806

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1806 · Ford

Transmission 4-Wheel Drive High Indicator Short Circuit To Battery

P1806 on Ford vehicles means the four-wheel drive (4WD) control module has detected a short to battery voltage on the circuit that feeds the 4WD High indicator lamp in the instrument cluster. The module expects that circuit to be pulled low when the lamp is commanded on, but it is seeing continuous battery voltage, so it flags the circuit as shorted to power.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The 4WD High indicator lamp may stay illuminated constantly, even when four-wheel drive is not engaged.
- The 4WD High lamp may fail to turn on when you select 4WD High, because the module detects a fault and may inhibit the output.
- The 4WD selector switch or dashboard display may show an error or flash the 4WD lamps.
- The vehicle may remain in two-wheel drive (2WD) or fail to shift into 4WD High, depending on fail-safe strategy.
- Often no symptoms besides the warning light, with normal driveability and no other warning lamps.
- In some cases, other 4WD modes (4WD Low or Auto) may also be unavailable if the module disables the system.

Common causes, most likely first

- 1 A chafed or pinched wire in the 4WD High indicator circuit shorting to a battery-positive wire in the harness.
- 2 A faulty 4WD control module internally shorted, feeding battery voltage onto the indicator output.
- 3 Corrosion or water intrusion in the connector at the 4WD control module or instrument cluster causing a short to power.
- 4 A shorted indicator bulb or lamp socket in the instrument cluster that bridges battery voltage to the control circuit.
- 5 Aftermarket accessories or wiring repairs that accidentally tapped into the 4WD indicator circuit and applied battery voltage.
- 6 A damaged instrument cluster printed circuit board or internal short in the cluster on Ford models where the lamp is cluster-mounted.



How to diagnose and fix it

- 1 Verify the code with a Ford-compatible scan tool and check for any related 4WD codes before touching wiring.
- 2 Inspect the 4WD control module connectors and the instrument cluster connector for corrosion, water intrusion, or pushed-out pins.
- 3 Disconnect the 4WD control module and the instrument cluster, then use a digital multimeter (DMM) to check the indicator circuit for continuity to battery voltage with the key on.
- 4 Wiggle-test the harness while watching the meter or scan tool data to locate intermittent shorts, especially near body seams and steering column.
- 5 Repair any chafed wire by soldering and sealing with heat-shrink tubing, routing it away from sharp edges and heat sources.
- 6 If the circuit tests good, substitute a known-good 4WD control module or instrument cluster to isolate an internal short.
- 7 Clear the code and perform a road test in all 4WD modes to confirm the indicator operates correctly and the code does not return.

What Ford 4WD Indicator Shorts Hide

- A short to battery on the indicator circuit can be caused by a failed instrument cluster bulb that has melted and bridged contacts, which many technicians overlook while chasing harness faults.
- The 4WD control module may set P1806 even when the indicator lamp works normally, because the module monitors the circuit voltage with the lamp off and detects battery voltage present when it should be low.
- Aftermarket remote start or alarm installations frequently tap into the 4WD indicator wire for status feedback, creating a short to battery that only appears when the accessory is active.
- On some Ford trucks, water leaking past the cowl or third brake light runs down the harness and corrodes the 4WD module connector, producing this code without any visible harness damage.
- P1806 does not always mean the 4WD system cannot engage; the module may still command the transfer case while only the indicator circuit is faulty, so verify actual 4WD operation before condemning the module.

Can I keep driving with P1806?

You can usually continue driving in two-wheel drive, but avoid relying on four-wheel drive until the fault is repaired because the system may not engage or may disengage unexpectedly. If the vehicle is stuck in 4WD or the indicator behaves erratically, have it checked promptly to prevent drivetrain binding.

Tools that help

- Ford-compatible OBD-II scan tool with 4WD module access
- Digital multimeter (DMM) with back-probing pins
- Wiring diagram for the specific Ford model and year
- Trim removal tools for instrument cluster access
- Heat-shrink tubing and soldering iron for wire repair



Reading P1806

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

Often seen with

P1866 Data Bus Powertrain Missing Messages · **P1804** Ground Control Relay · **P1804** Transmission 4-Wheel Drive High Indicator Circuit Failure · **P1808** Transmission 4-Wheel Drive Low Indicator Circuit Failure · **P1866** Transmission Transfer Case System Concern Servicing Required · **P1867** Transmission Transfer Case Contact Plate General Circuit Fai · **P1876** Transmission Transfer Case 2-Wheel Drive Solenoid Circuit Fa

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-p1806/>

