

GENERIC · CHASSIS

C0387

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0387

Transfer Case Position Sensor

C0387 indicates that the transfer case position sensor circuit has a fault, meaning the control module cannot reliably determine whether the transfer case is in two-wheel drive, four-wheel drive, or neutral. The computer detects an abnormal voltage or signal from the sensor that falls outside the expected range for the current operating conditions.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the vehicle remains in a default drive mode
- Four-wheel-drive or low-range indicator flashing or failing to illuminate when selected
- Transfer case refuses to shift into or out of four-wheel drive, or shifts unexpectedly
- Service four-wheel-drive or traction control warning message displayed on the dash
- Reduced engine power or disabled stability control in some vehicles as a fail-safe

Common causes, most likely first

- 1 Faulty transfer case position sensor or encoder ring
- 2 Damaged, corroded, or disconnected wiring harness at the transfer case
- 3 Poor electrical connection at the sensor or control module connector
- 4 Failed transfer case control module or four-wheel-drive control module
- 5 Mechanical binding or damage inside the transfer case preventing proper sensor movement
- 6 Water intrusion or debris contaminating the sensor connector



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to understand when the fault occurs
- 2 Inspect the transfer case position sensor connector and wiring for corrosion, chafing, or loose pins
- 3 Check sensor reference voltage and ground at the connector with a multimeter, comparing to manufacturer specifications
- 4 Test the sensor signal output through its full range of motion, either by shifting the transfer case or using a scan tool to command positions
- 5 Verify that the transfer case actually shifts mechanically and that the sensor linkage or encoder is not binding
- 6 If the sensor tests out of specification, replace it and clear codes, then perform a transfer case calibration or relearn if required
- 7 If the sensor and wiring are good, diagnose the control module and its power and ground feeds before condemning it

Before you replace the transfer case sensor

- A loose or corroded ground at the transfer case can mimic a failed sensor, so always load-test the ground circuit before condemning the sensor.
- On many vehicles, the transfer case position sensor is integrated into a motor actuator assembly, and a faulty actuator can set this code without any sensor problem.
- After replacing the sensor, some transfer case control modules require a relearn or calibration procedure; skipping it can leave the code active even with good parts.
- Intermittent faults often occur only when the transfer case is hot or after driving in wet conditions, so a cold static test may pass while the fault is still present.
- A weak battery or low charging voltage can cause the control module to misread the sensor signal, so check battery health before chasing the circuit.

Can I keep driving with C0387?

You can usually drive the vehicle in two-wheel drive without immediate risk, but avoid relying on four-wheel drive and do not tow or drive in low-traction conditions until the fault is repaired. If the transfer case is stuck in neutral or four-wheel drive, limit driving to low speeds and have it serviced promptly.

Tools that help

- OBD-II scan tool with transfer case and four-wheel-drive module capability
- Digital multimeter
- Wiring diagram and connector pinout for the specific vehicle
- Basic hand tools and socket set
- Jack and jack stands or a lift for under-vehicle access



Reading C0387

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 3** Brakes, steering and suspension.
- 87** The exact fault within that area.

Often seen with

C0388 Transfer Case High Range Switch Circuit Malfunction

See it working

Watch the animated explainer [How Drive-by-Wire Works: Electronic Throttle Body](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0387/>

