

GENERIC · CHASSIS

C0092

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0092

4WD/AWD Power Transfer Unit Position Sensor B

C0092 indicates that the all-wheel-drive or four-wheel-drive controller has detected an implausible or out-of-range signal from the position sensor that monitors the power transfer unit, which is the component that engages or varies torque to the secondary axle. The computer compares this sensor's voltage or pulse-width against expected values for the current commanded state and sets the code when the signal does not match, leaving the system unable to confirm the transfer unit's actual position.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- The all-wheel-drive or four-wheel-drive warning light or message illuminates on the dashboard.
- The vehicle may remain in front-wheel drive only, with no power sent to the rear wheels when traction is lost.
- A noticeable delay or clunk when the transfer unit attempts to engage or disengage during low-speed maneuvers.
- The driver may feel inconsistent handling or reduced grip on slippery surfaces, especially during acceleration from a stop.
- Often no symptoms besides the warning light, with normal driving behavior in dry conditions.
- In some vehicles, the transfer unit may stay engaged, causing binding or chirping tires during tight turns.

Common causes, most likely first

- 1 A faulty position sensor on the power transfer unit, worn or contaminated internally, sending an erratic signal.
- 2 Damaged or corroded wiring and connectors between the sensor and the all-wheel-drive control module, often from road debris or moisture intrusion.
- 3 A mechanical problem inside the transfer unit, such as a sticking actuator or worn shift fork, preventing the sensor from reading the commanded position.
- 4 Low or degraded transfer case fluid, causing sluggish actuator response and a sensor signal that falls outside the expected range.
- 5 A software calibration issue or faulty control module that misinterprets a valid sensor signal.
- 6 A blown fuse or poor ground connection shared by the sensor and actuator circuit.
- 7 Aftermarket modifications or improper previous repairs that disturbed the sensor mounting or air gap.



How to diagnose and fix it

- 1 Connect a scan tool capable of reading all-wheel-drive data and record the live position sensor voltage or percentage while commanding the transfer unit through its range.
- 2 Visually inspect the sensor, its connector, and the wiring harness for chafing, corrosion, or loose pins, and repair any damage found.
- 3 Check the transfer case fluid level and condition, and top up or replace the fluid if it is low or contaminated.
- 4 Perform a resistance and voltage-drop test on the sensor circuit to rule out high resistance in the wiring before condemning the sensor.
- 5 If the live data is erratic or out of specification, remove and replace the position sensor, then clear the code and verify the reading matches the commanded position.
- 6 If the sensor and wiring test good, inspect the transfer unit actuator and internal components for binding or wear, repairing or replacing as needed.
- 7 After any repair, perform a relearn or calibration procedure with the scan tool and test-drive the vehicle in all drive modes to confirm the code does not return.

What the transfer unit sensor hides

- A sticking transfer unit actuator can mimic a failed position sensor, so technicians who replace the sensor without checking actuator travel often see the code return within a few drive cycles.
- The position sensor on many transfer units is a simple potentiometer that wears a dead spot over time, and the code may only set when the unit passes through that specific position during engagement.
- Moisture intrusion into the sensor connector is a common cause that a visual inspection misses, so a pin-fit and voltage-drop test is more reliable than a simple unplug-and-look check.
- Some vehicles set C0092 when the transfer unit is commanded to engage but the sensor reports no movement, which can be caused by a blown fuse feeding the actuator rather than the sensor itself.
- A battery that is weak or a charging system that drops voltage during cranking can cause the control module to log a false position sensor code, so always check system voltage before replacing parts.

Can I keep driving with C0092?

You can usually drive the vehicle with C0092 set, but the all-wheel-drive system may be disabled, reducing traction in rain, snow, or loose surfaces. Avoid aggressive acceleration or cornering on slippery roads until the fault is repaired, and do not ignore a transfer unit that stays engaged, as that can cause driveline binding and tire wear.



Tools that help

- Scan tool with all-wheel-drive live data and bidirectional control capability
- Digital multimeter with back-probing pins
- Socket and wrench set for sensor and actuator removal
- Transfer case fluid pump or funnel
- Vehicle service information for relearn and calibration procedures

Reading C0092

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

Often seen with

C0093 4WD/AWD Power Transfer Unit Temperature Sensor · **C0094** 4WD/AWD Rear Differential Unit Temperature Sensor · **C0095** 4WD/AWD Rear Differential Unit Actuator A · **C0096** 4WD/AWD Rear Differential Unit Actuator A Data · **C0097** 4WD/AWD Rear Differential Unit Actuator B

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0092/>

