



C00A8

4WD/AWD Transfer Case Unit Actuator Position Sensor B

C00A8 indicates that the transfer case control module has detected an abnormal signal from the position sensor for actuator B, which is used to confirm the engagement of a specific four-wheel-drive or all-wheel-drive mode. The computer compares the expected actuator position with the sensor's reported voltage or signal and sets this code when the two do not agree within a calibrated range.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Chassis	Generic (all makes)	Medium	Intermediate	Brakes, steering and suspension

Symptoms you may notice

- The four-wheel-drive or all-wheel-drive system may fail to engage or disengage when selected.
- A warning light or message on the dashboard indicating a drivetrain or 4WD/AWD fault.
- The vehicle may default to two-wheel drive or a locked mode, depending on the failure strategy.
- Unusual noises or clunks from the transfer case during mode changes.
- Often no symptoms besides the warning light, with normal driving behavior in most conditions.

Common causes, most likely first

- 1 Faulty actuator position sensor B or its internal circuitry.
- 2 Damaged, corroded, or shorted wiring in the sensor circuit, including the connector and pins.
- 3 Poor electrical connection at the transfer case control module or the sensor harness.
- 4 Mechanical binding or wear in the actuator or shift mechanism preventing the sensor from reaching the expected position.
- 5 Failed transfer case control module or a software calibration issue.
- 6 Contamination or fluid intrusion into the sensor or actuator assembly.
- 7 Low or incorrect transfer case fluid level causing actuator performance issues.



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 Visually inspect the sensor B connector, wiring harness, and ground points for damage, corrosion, or loose pins.
- 3 Measure the sensor reference voltage and signal voltage with a multimeter, comparing against the manufacturer's specification.
- 4 Check transfer case fluid level and condition, and inspect for leaks or contamination.
- 5 Command the actuator through its full range with a bidirectional scan tool while monitoring sensor B response for smoothness and consistency.
- 6 If the signal is erratic or out of range, replace the sensor B and clear codes, then re-test the system.
- 7 If the sensor and wiring test good, follow the manufacturer's diagnostic flow for the transfer case control module and actuator mechanical operation.

What the transfer case sensor hides

- A common oversight is replacing the sensor without checking the actuator's mechanical travel; a binding shift rail or worn actuator can mimic a sensor failure and set the code again immediately.
- The code can be set intermittently by a poor ground connection at the transfer case, which corrupts the sensor signal only under certain vibration or temperature conditions.
- Some vehicles use a shared reference voltage for multiple sensors; a short in another sensor on the same circuit can pull down the reference and trigger C00A8 without any fault in sensor B itself.
- After repairs, a relearn or calibration procedure for the transfer case actuator is often required, and skipping it can leave the code stored or cause harsh engagement.
- The code does not always mean the sensor is dead; a low transfer case fluid level or a slipping clutch pack can cause the actuator to not reach its commanded position, setting the code indirectly.

Can I keep driving with C00A8?

You can usually continue driving if the vehicle remains in two-wheel drive and there are no unusual noises, but avoid relying on four-wheel drive or all-wheel drive until the fault is repaired. If the transfer case is stuck in a locked mode or you hear grinding, stop driving and seek professional service.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter
- Wire piercing probes or back-probe kit
- Service information for the specific vehicle's transfer case circuit
- Basic hand tools for connector and sensor access



Reading C00A8

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Brakes, steering and suspension.
- A8** The exact fault within that area.

Often seen with

P1870 Transmission Component Slipping · **C00A7** 4WD/AWD Transfer Case Unit Actuator Position Sensor A · **U0102** Lost Communication with Transfer Case Control Module

See it working

Watch the animated explainer [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c00a8/>

