

GENERIC · CHASSIS

C0094

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0094

4WD/AWD Rear Differential Unit Temperature Sensor

C0094 indicates that the four-wheel-drive or all-wheel-drive control module has detected an abnormal signal from the rear differential temperature sensor, which monitors the fluid temperature inside the rear axle assembly. The computer sets this code when the sensor voltage falls outside the expected range for the current conditions, often indicating an open circuit, short, or sensor failure.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- Illumination of the 4WD or AWD warning light on the dashboard
- The system may default to two-wheel drive, reducing traction in slippery conditions
- Often no symptoms besides the warning light, with normal driving behavior
- In rare cases, a message on the driver information center indicating 4WD service required
- Potential intermittent activation of the warning light during wet or rough road conditions
- No noticeable performance issues unless the vehicle is driven in demanding off-road situations

Common causes, most likely first

- 1 Failed rear differential temperature sensor
- 2 Damaged or corroded wiring harness or connector at the sensor
- 3 Open or short circuit in the sensor signal circuit
- 4 Poor electrical connection at the 4WD control module
- 5 Internal fault in the 4WD control module
- 6 Contaminated or degraded differential fluid causing sensor readings out of range
- 7 Physical damage to the sensor or its wiring from road debris or off-road use



How to diagnose and fix it

- 1 Use a scan tool to retrieve the code and check for any related codes in the 4WD control module
- 2 Visually inspect the sensor and its wiring for damage, corrosion, or loose connections
- 3 Measure the resistance of the temperature sensor and compare it to the manufacturer's specification
- 4 Check the sensor signal voltage at the control module connector to verify circuit integrity
- 5 Repair or replace any damaged wiring or connectors as needed
- 6 Replace the rear differential temperature sensor if it fails testing
- 7 Clear the code and verify the repair by test-driving the vehicle and confirming the light stays off

What the rear differential sensor code hides

- A loose or corroded connector at the sensor is a frequent cause that is often overlooked during diagnosis, so always inspect the pins and seals before condemning the sensor.
- The code can be set by a temporary short to ground when the wiring harness rubs against the frame or exhaust, especially after off-road driving or in vehicles with modified suspensions.
- Some vehicles use the rear differential temperature sensor as part of the stability control system, so a fault here may also disable traction control and hill descent features without setting additional codes.
- Replacing the sensor without checking the differential fluid level and condition can lead to repeat failures if the fluid is contaminated or the differential is overheating due to a mechanical issue.
- The 4WD control module may store this code intermittently if the sensor signal is erratic, so a thorough wiggle test of the harness while monitoring live data is more reliable than a static resistance check.

Can I keep driving with C0094?

It is generally safe to continue driving with this code because the vehicle remains operational, but avoid heavy towing or off-road use that could overheat the differential until the fault is repaired. The 4WD or AWD system may be disabled, reducing traction in poor conditions, so exercise caution in rain, snow, or loose surfaces.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and basic hand tools
- Jack and jack stands or a lift for under-vehicle access



Reading C0094

- 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.
- 94** The exact fault within that area.

Often seen with

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 · **C0098** 4WD/AWD Rear Differential Unit Actuator B Data · **C0099** ABS Control Module Internal Fault

See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0094/>

