

GENERIC · BODY

B0004

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0004

Driver Frontal Deployment Loop Resistance High

B0004 means the airbag control module has measured excessive resistance in the driver's frontal airbag deployment loop, which is the circuit that fires the steering-wheel airbag. The module runs a small test current through the loop and flags the code when the return voltage indicates the circuit is too resistive to reliably deploy the bag.

SYSTEM

Body

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- Airbag warning light illuminated on the instrument cluster
- Often no symptoms besides the warning light, with the vehicle driving normally
- Airbag system disabled, so the driver's frontal bag will not deploy in a crash
- Intermittent warning light that comes and goes over bumps or when turning the steering wheel
- Related message on the driver information center stating the airbag system needs service

Common causes, most likely first

- 1 Damaged or partially broken clock spring (spiral cable) inside the steering column
- 2 Loose, corroded, or backed-out terminals at the driver airbag connector or the control module
- 3 Chafed or pinched wiring in the steering column or under the dash
- 4 Poor connection at the airbag squib connector caused by repeated steering wheel adjustment
- 5 Failed driver's frontal airbag module with an open internal squib circuit
- 6 Water intrusion or corrosion in a body harness connector on the deployment loop
- 7 Airbag control module internal fault falsely reporting high loop resistance



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm B0004 is current and not history
- 2 Inspect the driver airbag connector and clock spring connectors for corrosion, looseness, or terminal damage
- 3 Measure loop resistance at the airbag squib with the battery disconnected and the module isolated, comparing to specification
- 4 Perform a wiggle test on the steering column harness and clock spring while watching live resistance or the warning lamp
- 5 Check for continuity and short-to-ground on each leg of the deployment loop from the module to the airbag
- 6 Replace the clock spring if resistance changes with steering wheel rotation, then clear codes and verify
- 7 If the loop tests good, substitute a known-good airbag module only as a final step to rule out an internal module fault

Why the clock spring is the usual suspect

- The clock spring carries the deployment loop through the rotating steering wheel, so its internal ribbon flexes every time you turn and is the most common cause of high resistance on this circuit.
- A high-resistance code can be set by a connector that is merely loose or corroded, so a careful terminal and pin-drag inspection often fixes the fault without replacing any parts.
- Never measure airbag circuit resistance with a standard ohmmeter while the airbag is connected; the meter's test current can fire the squib, so always disconnect the battery and wait per service information first.
- B0004 does not always mean the airbag itself is bad; the module, clock spring, and harness all sit in the same loop and can each produce the same high-resistance reading.
- After any repair, clear the code and cycle the ignition several times, because some modules only re-test the loop at key-on and a stored code can persist until a clean self-test passes.

Can I keep driving with B0004?

The vehicle remains driveable, but the driver's frontal airbag is disabled while B0004 is current, so avoid any situation where a frontal impact is likely until the fault is repaired. Do not attempt to clear the code and assume the system is fixed without verifying the loop resistance.

Tools that help

- OBD-II scan tool with airbag module access and live data
- Digital multimeter with low-current resistance capability
- Terminal test kit and pin-drag gauges
- Trim removal tools for steering column and dash access
- Service information with airbag loop resistance specifications and disable procedure



Reading B0004

- B** Body: airbags, seats, doors, lights and comfort systems.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Airbags, seats, doors, lights and comfort systems.
- 04** The exact fault within that area.

Often seen with

B0001 Driver Frontal Stage 1 Deployment Control Circuit · **B0002** Driver Frontal Stage 2 Deployment Control · **B0005** Driver Frontal Deployment Loop Open · **B0012** Right Front/Passenger Frontal Stage 2 Deployment Control · **U0151** Lost Communication With Restraints Control Module

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0004/>

