

GENERIC · BODY

B0047

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0047

Left Curtain Deployment Loop Short to Ground

B0047 indicates that the restraint control module has detected a short to ground in the left curtain airbag deployment loop, meaning the circuit that fires the left-side roof-rail airbag is completing a path to chassis ground when it should remain isolated. The module monitors loop resistance and voltage and sets this code when the measured circuit behavior falls outside the expected range for an unfired squib.

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 steadily on the instrument cluster
- Often no symptoms besides the warning light, with the vehicle driving normally
- Supplemental restraint system disabled, so the left curtain airbag will not deploy in a crash
- Other airbag-related codes stored alongside B0047 in the restraint module
- In some vehicles, a chime or message center warning about the airbag system

Common causes, most likely first

- 1 Chafed or pinched left curtain airbag wiring harness shorting against body metal
- 2 Water intrusion or corrosion in a left-side connector or splice pack causing a ground path
- 3 Faulty left curtain airbag squib internally shorted to its metal housing
- 4 Damaged restraint control module connector pins or internal module fault
- 5 Aftermarket accessories or previous body repairs that disturbed the left roof-rail wiring
- 6 Loose or improperly seated left curtain airbag connector allowing intermittent contact with ground



How to diagnose and fix it

- 1 Scan all modules and record every stored code before clearing anything, since B0047 often appears with related loop codes
- 2 Inspect the left curtain airbag harness along the roof rail and A-pillar for chafing, pinches, or contact with sharp body edges
- 3 Disconnect the battery and wait the manufacturer-specified time, then check the left curtain airbag connector for corrosion, water intrusion, and proper seating
- 4 Measure resistance from the left curtain deployment loop terminals to chassis ground with the module disconnected, looking for unintended continuity
- 5 Isolate the fault by substituting a known-good squib simulator at the module side of the circuit and observing whether the code changes
- 6 Repair or replace the damaged section of harness, connector, or squib as indicated by the isolation test
- 7 Clear codes, verify the airbag light extinguishes, and confirm no codes return after a road test

What the short-to-ground code really tells you

- A short to ground in a deployment loop is often caused by harness chafing where the roof-rail wiring passes through body seams, not by a failed airbag itself.
- Water leaks from roof drains or sunroof channels commonly corrode left-side connectors and create a ground path that sets B0047 without any visible damage.
- The restraint module may set B0047 intermittently when a connector is loose, so a code that clears and returns after driving over bumps points to a connection problem rather than a failed squib.
- Never measure resistance directly across an airbag squib with a powered meter, because the meter's current can trigger deployment; always use a squib simulator or follow the manufacturer's isolation procedure.
- Previous bodywork or aftermarket audio and alarm installations that run wiring near the left roof rail are a frequently overlooked cause of this code.

Can I keep driving with B0047?

The vehicle remains driveable, but the left curtain airbag is disabled and will not protect occupants in a side impact, so have the fault repaired promptly. Avoid rough roads and any further disturbance of the left roof-rail area until the circuit is repaired.

Tools that help

- OBD-II scan tool with airbag/restraint module capability
- Digital multimeter with low-current resistance measurement
- Squib simulator or airbag load tool
- Trim removal tools for roof-rail and A-pillar panels
- Wiring diagram and connector pinout for the restraint system
- Battery disconnect tool and safety glasses



Reading B0047

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

Often seen with

B0046 Left Curtain Deployment Loop Open · **B0048** Third Row Right Side Airbag Deployment Control · **B0051** Driver Frontal Deployment Control Open · **B0052** Passenger Seat Belt Sensor · **B0053** Passenger Pretensioner Deployment Control

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/b0047/>

