

GENERIC · BODY

B0051

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0051

Driver Frontal Deployment Control Open

B0051 indicates the supplemental restraint system (SRS) control module has detected an open circuit in the driver's frontal airbag deployment loop, meaning the electrical path to the inflator is broken or has excessive resistance. The computer monitors loop resistance and sets this code when the measured value falls outside the expected range, disabling the driver's frontal airbag as a precaution.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Body	Generic (all makes)	High	Professional	Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- Airbag warning light illuminated on the instrument cluster
- SRS warning message displayed on the driver information center
- Often no symptoms besides the warning light, with the airbag simply disabled
- Driver's frontal airbag may not deploy in a collision
- In some vehicles, other SRS functions or seat belt pretensioners may be affected
- Intermittent warning light that comes and goes with steering wheel movement or temperature changes

Common causes, most likely first

- Failed clock spring (spiral cable) in the steering wheel, the most common cause due to flexing and wear
- Loose, corroded, or disconnected electrical connector at the driver's airbag inflator
- Damaged or pinched wiring harness between the SRS module and the driver's airbag
- Open squib (inflator) inside the driver's airbag module
- Poor terminal tension or corrosion at the SRS control module connector
- Aftermarket steering wheel or airbag work that disturbed the circuit
- Water intrusion or rodent damage to the SRS wiring



How to diagnose and fix it

- 1 Connect a scan tool capable of reading SRS codes and record all stored and pending codes before clearing anything
- 2 Inspect the driver's airbag connector under the steering wheel horn pad for looseness, corrosion, or backed-out terminals
- 3 Check the clock spring connector and wiring for continuity and damage while turning the steering wheel through its range
- 4 Measure resistance across the driver's airbag squib with a proper airbag-safe ohmmeter after disconnecting the battery and waiting the specified time
- 5 Perform a wiggle test on the SRS harness and connectors while monitoring live resistance data to locate intermittent opens
- 6 Repair or replace the faulty clock spring, connector, or wiring section as indicated by test results
- 7 Clear codes, verify the warning light goes out, and confirm the loop resistance is within specification

Clock spring failures and other hidden causes

- The clock spring is the most frequently replaced part for this code, but technicians who skip resistance testing often replace a good clock spring when the real fault is a loose connector at the airbag inflator.
- An open circuit can be intermittent and only appear when the steering wheel is turned to a specific angle, so a static resistance check may pass while the code still sets during driving.
- Some vehicles set B0051 when the battery is disconnected or the airbag connector is unplugged with the key on, and the code will not clear until the fault is repaired and the module re-learns the loop.
- Aftermarket steering wheel installations or airbag removal for other repairs are common triggers, and the code may be stored simply because a connector was not fully seated.
- A shorted or open squib inside the airbag module itself is possible but far less common than wiring and clock spring issues, so always rule out the harness before condemning the airbag.

Can I keep driving with B0051?

The vehicle is safe to drive mechanically, but the driver's frontal airbag is disabled and will not deploy in a crash, so avoid collisions and have the fault repaired promptly. Do not attempt to measure resistance at the airbag connector with a standard multimeter unless the battery is disconnected and the system is properly depowered.

Tools that help

- SRS-capable scan tool
- Digital multimeter with airbag-safe resistance measurement
- Battery disconnect tool and wait time per manufacturer
- Trim removal tools for steering wheel and column covers
- Wiring diagram for the SRS circuit



Reading B0051

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

Often seen with

B0001 Driver Frontal Stage 1 Deployment Control Circuit · **B0012** Right Front/Passenger Frontal Stage 2 Deployment Control · **B0052** Passenger Seat Belt Sensor · **B0053** Passenger Pretensioner Deployment Control · **B0054** Second Row Center Seat Belt Sensor

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/b0051/>

