



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

## ODI RESUME

**Investigation:** PE 21-010  
**Date Opened:** 04/09/2021  
**Investigator:** Sean Hays  
**Approver:** Tanya Topka  
**Subject:** Air Bag Malfunction

**Date Closed:** 08/24/2023  
**Reviewer:** Sharon Yukevich

### MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** General Motors, LLC  
**Products:** 2020-2021 Various General Motors Vehicles  
**Population:** 648,075  
**Problem Description:** Air bag malfunction indicator light (MIL) illumination accompanied by diagnostic trouble codes B0001-1B, B0002-1B, B0012-0D, or B0013-0D may result in a loss of frontal air bag protection for the driver.

### FAILURE REPORT SUMMARY

|                            | ODI | Manufacturer | Total        |
|----------------------------|-----|--------------|--------------|
| <b>Complaints:</b>         | 15  | 79           | 91**         |
| <b>Crashes/Fires:</b>      | 0   | 0            | 0            |
| <b>Injury Incidents:</b>   | 0   | 0            | 0            |
| <b>Fatality Incidents:</b> | 0   | 0            | 0            |
| <b>Other*:</b>             | 8   | Confidential | Confidential |

**\*Description of Other:** ODI: Early Warning Reporting (EWR) field reports / Manufacturer: General Motors warranty claims

\*\* Total eliminates duplicates received by ODI and manufacturer.

### ACTION / SUMMARY INFORMATION

**Action:** Close Preliminary Evaluation PE21-010.

**Summary:**

On April 9, 2021, the Office of Defects Investigations (ODI) opened PE21-010 to investigate instances of air bag malfunction indicator light (MIL) illumination and potential for frontal air bag non-deployment in several vehicles manufactured by General Motors (GM). The vehicles included model year (MY) 2020 through 2021 CT4 and CT5 passenger cars, Sierra and Silverado trucks (1500/2500/3500 models), XT4 and MY 2021 Escalade, Suburban, Tahoe, Yukon SUVs.

Technical Service Bulletin (TSB) 21-NA-005, issued in March 2021, addresses air bag MIL illumination with diagnostic trouble codes (DTCs) B0001-1B or B0012-0D. It cites rust particles in the connection terminal interface of the driver air bag inflator housing as the cause of the air bag MIL illumination. Illumination of the air bag MIL under these circumstances may result in a non-deployment of the frontal driver air bag during a frontal collision and increased risk of injury to the driver.

GM stated a correlation exists between production delays due to the pandemic shutdown and premature corrosion initiation on the surface of the air bag inflator housing, which, in some cases, caused rust development during a seven (7) month period of vehicle production. In the rare instance when a rust particle dislodges from the driver air bag inflator housing and enters the air bag connector prior to assembly, an intermittent resistance spike at the air bag connector may result. The condition generates excessive resistance in the air bag electrical system when the steering wheel horn cover is manipulated or the steering wheel is turned. This excessive resistance is momentary. A crash commanding air bag deployment would need to occur exactly when the momentary excessive resistance occurs.

Thus, there is a very low likelihood the hazard will present a risk during a crash of sufficient severity to warrant a commanded deployment. This failure mechanism occurs early in life and results in an air bag MIL illumination that corresponds to a DTC warning the driver that the vehicle requires service. The vehicle's air bag remains functional while the MIL is illuminated, and the DTC is present.

Once the connection of the driver air bag module to the clockspring is made at the plant, or at the dealership for service, there is no longer an opportunity for rust migration into the connection point. The connector is sealed and has gold terminals, eliminating the expectation of fretting corrosion. All subject vehicles passed standard corrosion validation testing for extensive corrosion with no issue of air bag non-deployment.

There is a low rate of occurrence: 1.41 incidents per thousand vehicles (IPTV) for all related occurrences, and 0.04 IPTV for occurrences with a mention of visible rust and/or corrosion on the air bag inflator housing. The average occurrence mileage for the subject vehicles is approximately 2,100. Every occurrence related to the alleged defect experienced an air bag MIL illumination and there are no verified allegations of air bag non-deployment within all data sources.

To date, there have been no reported fires, crashes, injuries, or fatalities related to this issue. In view of the low rate, and the nature of early-life failure, the high detectability of failures, and low potential hazard to drivers, this Preliminary Evaluation (PE) is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency reserves the right to take additional action if warranted by new circumstances.

Review the ODI reports cited above at [nhtsa.gov](https://www.nhtsa.gov) under the following identification numbers:

11537927, 11528888, 11525020, 11521401, 11506057, 11493107, 11486767, 11441525, 11433146, 11425658, 11423440, 11385267, 11376429, 11373466, 11366995.