



SUBJ: Equipment/Furnishings – Inflatable Airbag Assembly

SAIB: NM-17-15

Date: June 6, 2017

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin is to advise owners and operators, and the original equipment manufacturer of **The Boeing Company Model 777, 787-8 and 787-9 airplanes** of the potential for inadvertent airbag deployments on certain AmSafe Aviation, Inc., (AmSafe) NexGen systems installed in aircraft seatbelts.

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

Since November 2013, the FAA has been notified of nine inadvertent airbag deployments of the AmSafe NexGen system installed in aircraft seatbelts. One deployment resulted in the fatality of a mechanic servicing the seatbelt. In 2015, AmSafe conducted a fleet campaign to retrofit affected airplanes with improved components. AmSafe also provided revised Instructions for Continued Airworthiness (ICAs). Since that time, there have been no further incidents. While the 2015 fleet campaign did correct the identified causes of inadvertent airbag deployments, some faulty parts were not returned to AmSafe and may still be in the field.

The causes of the inadvertent airbag deployments include:

1. Unacceptable maintenance practices: Not properly following the ICAs; mishandling the device (e.g., dropping a seat or Electronic Module Assembly (EMA), resulting in inadvertent triggering of the EMA); or publishing abbreviated supplier ICAs in the Aircraft Maintenance Manual, which could result in misinterpretation of instructions and misinterpretation of the diagnostic test light emitting diode indicators, resulting in inadequate understanding of the EMA arming status.
2. Design deficiencies: Prior designs did not have adequate protection against electrical shorts. Incompatible components in the airbag system or foreign object debris may have contributed to electrical shorts, which could cause inadvertent airbag deployment.
3. Improper routing of the airbag wire harness in the seat assembly by seat manufacturers: Improper routing resulted in chafing and/or breaking of wire harnesses during seat movement leading to electrical shorts in the airbag system, which could cause inadvertent airbag deployment.

The FAA finds that the voluntary corrective actions taken to date on this issue have reduced the risk (likelihood) of inadvertent airbag deployments to an acceptable level, such that the potential for inadvertent airbag deployments is not an unsafe condition warranting AD action. The FAA recommends incorporation of the service information referenced below to further reduce the potential for inadvertent airbag deployments.

Recommendations

The FAA recommends incorporating the applicable accomplishment instructions and procedures outlined in the following service information to address corresponding issues on installed or spare seats for Boeing Model 777, 787-8, and 787-9 airplanes having any affected part. Any installation or maintenance of the airbag assembly or access to it should be done as specified in the applicable seat manufacturer's ICAs. Faulty parts or components should be returned to AmSafe to ensure configuration control.

EMA Replacement, Part Number (P/N) 511959-(-)-(-):

- AmSafe Service Bulletin 511959-25-01, Issue 1, dated August 28, 2015.
- Boeing Service Bulletin 777-25-0658, Revision 1, dated September 20, 2016.
- Boeing Service Bulletin 787-81205-SB250117-00, Issue 001, dated September 30, 2015.

Hi-Potential Testing of Cable Interface Assembly, P/N 511410-(-)-(-):

- AmSafe Service Bulletin 511410-25-01, Issue 3, dated February 25, 2015.
- Boeing Service Bulletin 777-25-0641, dated March 19, 2015.

Utilizing Latest ICA and EMA Pre-check Process:

Ensure the latest ICA revisions are incorporated using the following service information:

- AmSafe Installation Instructions E512756, Revision G, dated August 29, 2016.
- AmSafe Service Bulletin 511959-25-02, Issue 3, dated April 1, 2016.

The following earlier versions of applicable service information may also be used to address the actions recommended in this SAIB:

- Boeing Service Bulletin 777-25-0658, Original Issue, dated September 29, 2015.
(Note: See Revision 1 for action on spare parts.)
- AmSafe Installation Instructions E512756, Revision C, dated May 28, 2015.
- AmSafe Installation Instructions E512756, Revision D, dated August 10, 2015.
- AmSafe Installation Instructions E512756, Revision E, dated January 20, 2016.
- AmSafe Installation Instructions E512756, Revision F, dated March 17, 2016.
- AmSafe Service Bulletin 511959-25-02, Issue 1, dated December 21, 2015.
- AmSafe Service Bulletin 511959-25-02, Issue 2, dated January 4, 2016.

For Further Information Contact

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For Related Service Information Contact

Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740; telephone 562-797-1717.

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