

FAA Cargo Safety Website

Hazards/Operational Risks/Mitigations/Task Group

Presented to: The Tenth Triennial International Fire & Cabin Safety
Research Conference

By: Dhaval Dadia

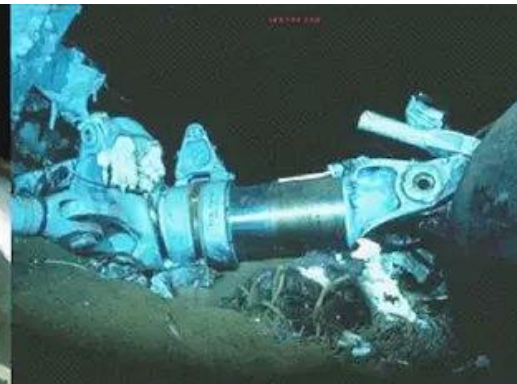
Date: Oct. 19, 2022



**Federal Aviation
Administration**



Background



*ValuJet DC-9
May 11, 1996
near Miami, FL*



Background

- Items in cargo compartments can introduce a **hazard** that exceeds the capabilities of the aircraft
- Operators comply with Title 49 of CFR (171-180) when transporting hazmat
 - Aircraft level **risk** is dependent on additional factors



Background

- Accidents and incidents involving lithium batteries pointed to a problem
- Testing at the FAA helped quantify the problem
- Multi-disciplinary meetings led to the assessment of aircraft's fire fighting limitations
- Need for mitigation methods arose



Resulting Measures

AC 120-121: Safety Risk Management Involving Items in Aircraft Cargo Compartments

- Guidance in performing a Safety Risk Assessment in the transport of hazardous materials



U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Safety Risk Management Involving
Items in Aircraft Cargo
Compartments

Date: 9/1/21
Initiated by: AFS-300

AC No: 120-121
Change:

1 PURPOSE OF THIS ADVISORY CIRCULAR (AC). This AC provides guidance in performing a safety risk assessment, as part of Safety Risk Management (SRM), associated with the transport of various types of items in the aircraft cargo compartment and the value of considering the inherent hazardous properties of these items. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies. This guidance is not legally binding in its own right and will not be relied upon by the Federal Aviation Administration (FAA) as a separate basis for affirmative enforcement action or other administrative penalty. Conformity with this guidance document is voluntary only and nonconformity will not affect rights and obligations under existing statutes and regulations.

Note: The terms “must” and “will” in this AC indicate a mandatory requirement established by regulation. The term “should” in this AC indicates a recommendation and not a requirement when using the guidance in this AC.

1.1 “Item” Categories. The use of the term “items” in this AC addresses the following categories:

- Cargo (including an operator’s Company Material (COMAT) or stores);
- Passenger and crew checked baggage;
- Mail; and
- Other equipment used in the transport of cargo, baggage, or mail (e.g., unit load devices (ULD), tracking devices, powered devices).

2 AUDIENCE. This AC provides guidance to all U.S. air carriers and U.S. commercial operators¹ that carry items in aircraft cargo compartments.

3 WHERE YOU CAN FIND THIS AC. You can find this AC on the FAA’s website at https://www.faa.gov/regulations_policies/advisory_circulars and the Dynamic Regulatory System (DRS) at <https://drs.faa.gov>.



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Resulting Measures

- ICAO amended its operational guidelines to include 3 cargo compartment safety standards (Ch. 15 and Annex 6)
 - Operators establish policy and procedures which include a specific safety risk assessment
 - Fire protection system documentation to be provided in flight manuals or other documentation
 - Operator establishes policy and procedure to establish that the airplane can detect and suppress fires involving any item carried on the airplane





Usage of the AC

- Safety Risk Management (SRM) can be used to mitigate the risks from transporting hazmat
- AC provides information relating to risk assessments and mitigation strategies specific to cargo compartments
 - Cargo Safety Website



FAA Website

 United States Department of Transportation

 Federal Aviation Administration

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Overview

Risk Management

Common Cargo Hazards

Risk Controls

Resources

Cargo Safety

The transportation of goods, people and property in an aircraft requires the movement of packaged items, airmail, company material and passenger or crew baggage. Entities involved in this transport move items from shipper to final destination, and include shippers, freight forwarders, aircraft operators, ground handlers and airplane manufacturers. They may use equipment in the transport of cargo, such as unit load devices, tracking devices, and powered devices to monitor and effectively transport the goods.

The cargo supply chain is complex, and risk can be introduced at any point along it. Entities in the transport chain that handle or process general cargo can play a role in preventing the introduction of risks and mitigate them to an acceptable level of safety. Each entity has an opportunity to apply a mitigation strategy.

Regulations are in place to mitigate transport risks. Compliance with regulations is always required and is the first line of defense in safety. There are regulations that address specific aspects of air cargo transport, such as the packaging of [hazardous materials](#) and the operating limitations of the aircraft. In addition, the utilization of [Safety Management System \(SMS\)](#) fundamentals is invaluable in aiding the safe carriage of cargo by supporting a robust safety culture. SMS does not alleviate the requirement to comply with the operating limitations of the aircraft.

An emphasis on Cargo Safety within an SMS framework will assist an operator holistically address risks resulting from the carriage of items in aircraft cargo compartments, especially those that may overwhelm the aircraft or aircraft systems during an event.

Top Tasks

- [View maintenance alerts](#)
- [Search for SAIBs](#)
- [Find an AD](#)
- [Read Unapproved Parts Notifications \(UPNs\)](#)

Last updated: Wednesday, August 18, 2021



Cargo Safety Website



Federal Aviation Administration
Cargo Fire Safety

[Hazards](#) [Task Group](#) [FAA Fire Safety Website](#)

Cargo Fire Safety

Cargo Hazards, Risks, and Mitigations

The vast majority of cargo can be safely carried in accordance with published regulatory requirements, guidance, and standards. However, certain cargo can introduce risks (for example, fire) that, under certain conditions, may cause the limitations of an operator's aircraft to be exceeded and overwhelm its crew. It is important for operators to identify their hazards related to cargo and manage the risk that those hazards pose to the safe operations of aircraft.

Select a hazard below for more information:

Lithium Metal
Batteries Shipped In
Bulk
UN 3090

Lithium Metal
Batteries Shipped In
Or With Equipment
UN 3091

Lithium Ion
Batteries Shipped In
Bulk
UN 3480

Lithium-Ion
Batteries Shipped In
Or With Equipment
UN 3481

Passenger Baggage



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Cargo Safety Website

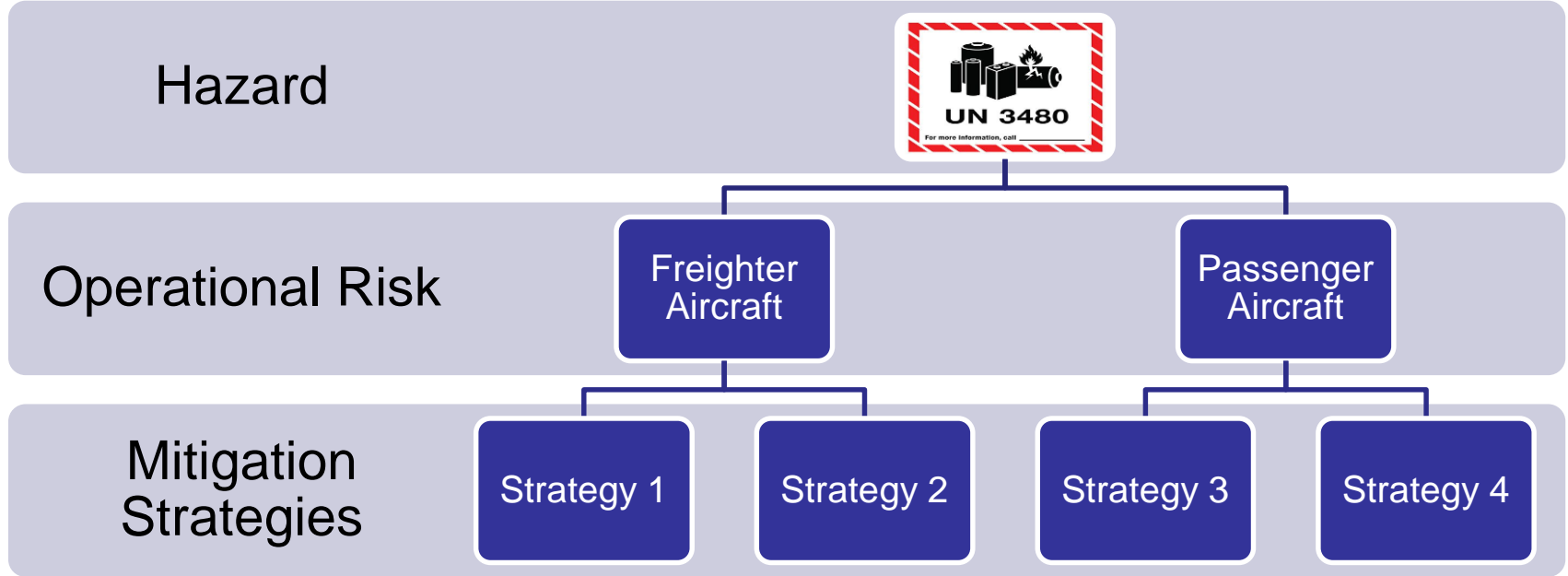


Passenger
Baggage



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Cargo Safety Website Layout



Task Group

- Kickoff meeting on Oct. 18
- Gain industry feedback on content
- Optimize the delivery of important information in a concise manner
- Optimize the ease of use of the website



FEDERAL REGISTER

The Daily Journal of the United States Government



Notice

Cargo Fire Safety website Updates; Notice of Meeting

A Notice by the [Federal Aviation Administration](#) on 09/30/2022

PUBLISHED DOCUMENT

AGENCY:
Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION:
Notice of meeting.

SUMMARY:
The Federal Aviation Administration (FAA) is announcing a notice to form a task group to make input to any future edits to the Cargo Fire Safety website at the upcoming meetings of the International Aircraft Systems Fire Protection (IASFP) Forum (83 FR39149). Topics are related to cargo fire safety and include website architecture, hazards, operational risks, and mitigations. This notification provides details of where to find the date and location for the upcoming meeting.

DATES:

DOCUMENT DETAILS

Printed version:
[PDF](#)

Publication Date:
09/30/2022

Agencies:
[Federal Aviation Administration](#)

Dates:
The kickoff meeting will be held on Tuesday, October 18, 2022. Cargo Safety website Task Group: 12 p.m.--1:30 p.m.; Point of Contact: Dhaval Dadia.

Document Type:
Notice

Document Citation:
87 FR 59485

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2022-21189



**Federal Aviation
Administration**

Summary

Key Websites

<https://www.fire.tc.faa.gov/cargosafety>

<https://www.fire.tc.faa.gov/CargoSafety/TaskGroup>



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