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# Replacement of Halon In Aircraft Fire Suppression Systems

Outcome of the A39 Assembly

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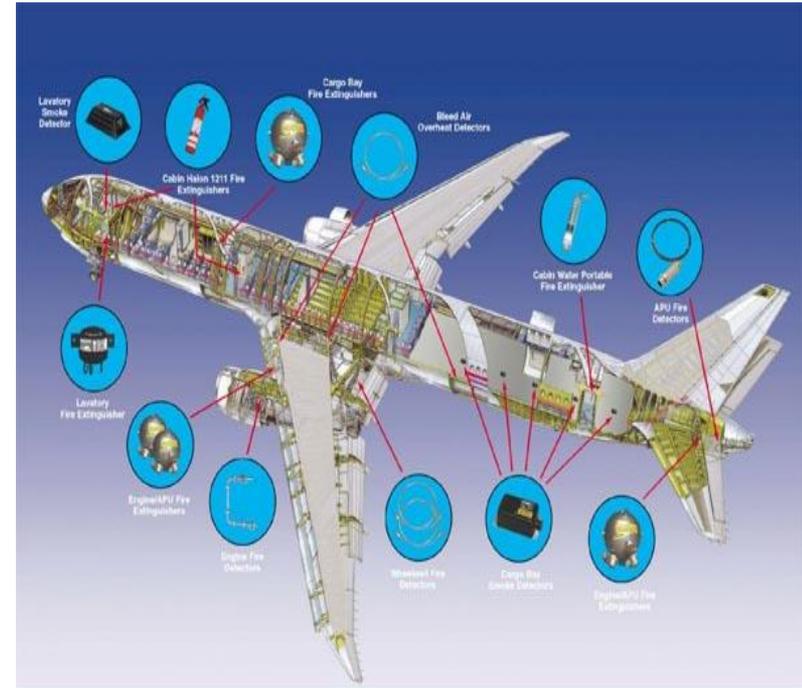
24 – 27 Oct 2016, USA





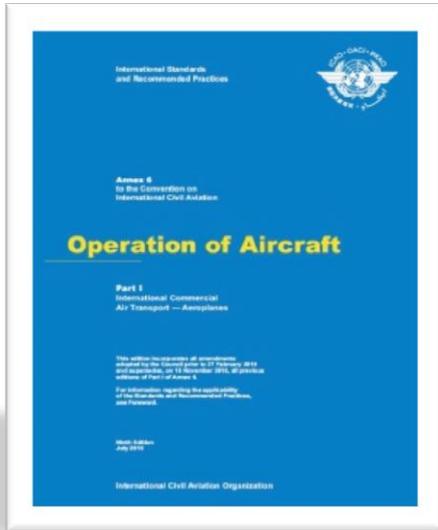
## INTRODUCTION

- ❑ *Outlining the issues*
- ❑ *Outcomes of the A39 Assembly and lessons learned*
- ❑ *Timeline for new Standards*
- ❑ *Summary*





## STATUS OF IMPLEMENTATION- LAVATORY

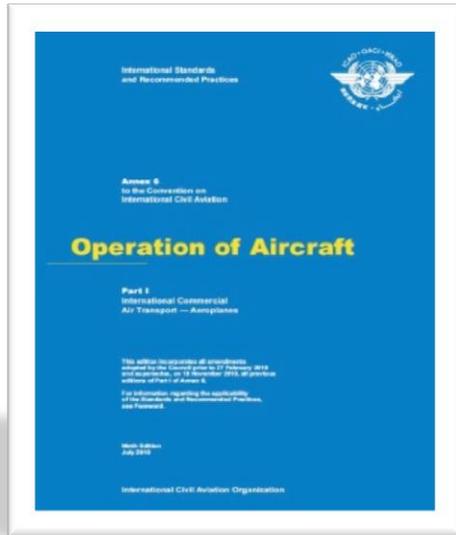


- *Standard is considered Implemented*
- ✓ *lavatory fire extinguishing systems used in aircraft produced on or after 31 December 2011*





## STATUS OF IMPLEMENTATION- PORTABLE



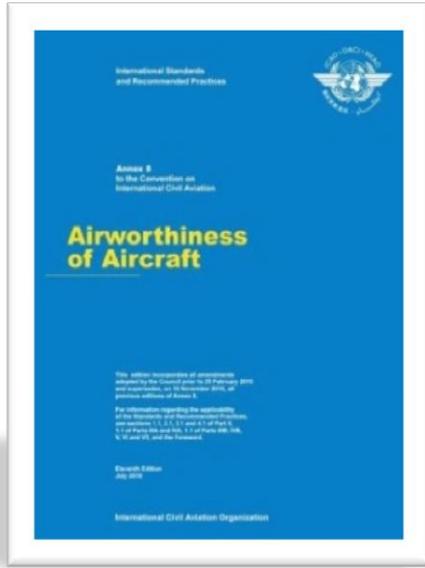
- ✓ Applicability date
- ✓ New aircraft delivery
- ✓ Agent approval delays
- ✓ ICAO actions

✓ **Portable fire extinguishers used in aircraft produced on or after 31 December 2016.**





## STATUS OF IMPLEMENTATION – ENGINE NACELLE / APU



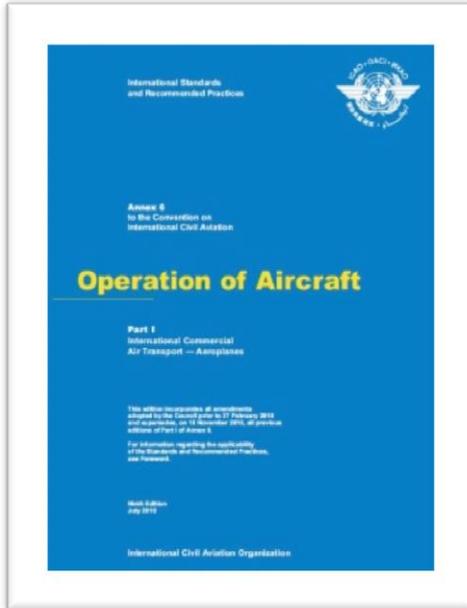
- Applicability date
- Replacement agent
- Set back with identified alternative
- HAAP consortium for common solution. Work to be completed by 2018



**✓ Engine nacelle and auxiliary power unit (APU) fire extinguishing systems used in aircraft for which application for type certification will be submitted on or after 31 December 2014.**



## A39 - PORTABLE EXTINGUISHERS



### 6.2 All aeroplanes on all flights

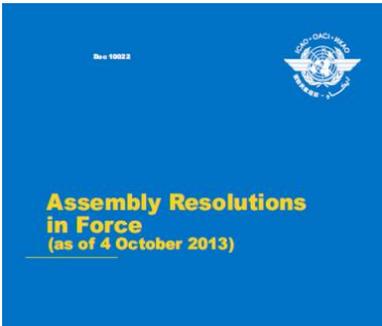
...

6.2.2.1 Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels, paper or waste in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December 2011 and any extinguishing agent used in a portable fire extinguisher in an aeroplane for which the individual certificate of airworthiness is first issued on or after ~~31 December 2016~~ 31 December 2018 shall:

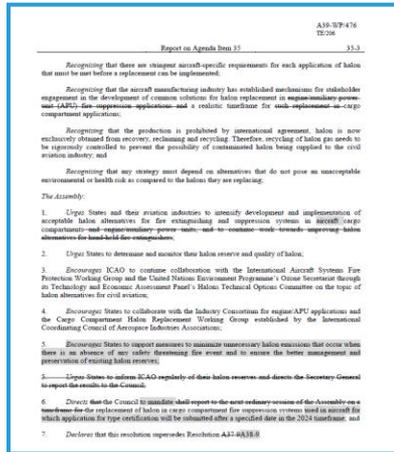
- Applicability date



# A39 - CARGO COMPARTMENT FIRE SUPPRESSION SYSTEMS



## Resolution 35/1: Halon replacement



## New Resolution:

- 2024 timeframe
- Minimizing of unnecessary halon emissions
- Industry Consortium for engine nacelle/APU
- IASFPWG & UNEP/HTOC
- Halon reserve and quality

A38.9

A39 Report



# PORTABLE EXTINGUISHER

39<sup>th</sup> Assembly  
A39-WP/235  
Sep/Oct  
2016

Council  
Adoption  
Nov 2016

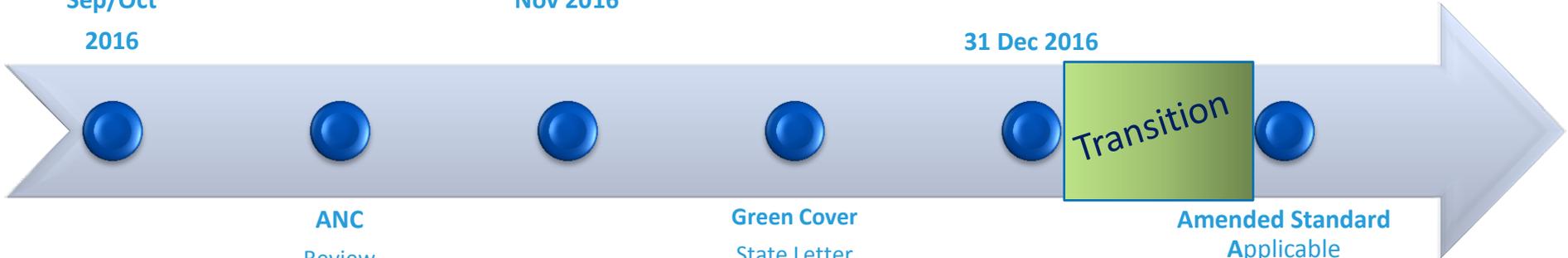
Current Standards  
Applicable  
31 Dec 2016

ANC  
Review  
Oct 2016

Green Cover  
State Letter  
Nov 2016

Transition

Amended Standard  
Applicable  
Feb 2017





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## CARGO COMPARTMENT

**39<sup>th</sup> Assembly**  
A39-WP/235  
10/2016

**ANC**  
Final Review  
9/2017

**Green Cover**  
State Letter  
3/2018

**Applicable**  
date  
1/2024

**ANC**  
Preliminary  
Review  
3/2017

**Council**  
Adoption  
2/2018

**Effective**  
date  
7/2018



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## APPLICABILITY DATE FOR CARGO

- ✓ Aircraft for which an application for Type Certificate is submitted to the State of Design on or after

**January 2024**

- ✓ shall use an alternative agent to halon in the aircraft fire suppression or extinguishing systems in the cargo compartment.



- ✓ Establishing a 2024 applicability date for the replacement of halon in cargo compartment fire suppression systems will
  - Drive the development of halon alternative for cargo
  - Accelerate the transition to non-halon alternative
  - Minimize waste of existing reserves
  - Raise awareness
  
- ✓ The challenges of timely compliance with Annex and 8 SARPs
  - Lessons learned from portable extinguisher SARPs implementation issues
  - Reporting to the 40<sup>th</sup> session of the Assembly.





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THANK YOU