



Cargo Compartment Halon Replacement Working Group Overview

*For the
IAFPSWG Meeting
May 22, 2013*



ICAO November 2012 Meeting: ICAO Proposed Deadline for Cargo Halon Replacement

**PROVISIONAL AGENDA
FOR THE THIRD INTERNATIONAL HALON REPLACEMENT
COORDINATING MEETING (IHRCM/3)**

Long Beach, California, United States, 15 to 16 November 2012

Note:

The IHRCM/3 will be held in conjunction with the International Aircraft Systems Fire Protection Working Group (IASFPWG) meeting which will be held on 14 November and the morning of 15 November. The IHRCM/3 is scheduled to start in the afternoon of 15 November 2012. Participants are welcome to attend the morning session of the IASFPWG meeting on 15 November, which will focus on halon-related subjects.

Agenda Item 1: Opening of the meeting

- 1.1 Opening remarks
- 1.2 Administrative remarks
- 1.3 Introduction of participants
- 1.4 Adoption of agenda

Agenda Item 2: Status report

- 2.1 Status report on the development of potential halon alternatives to support the agreed upon implementation dates
- 2.2 Updates on the research and development made on halon alternatives for cargo compartment fire suppression systems

Agenda Item 3: Recycled halon

- 3.1 Updates on issues associated with the quality of recycled halon.

Agenda Item 4: Progress made since IHRCM/2

- 4.1 Presentations and discussions on alternatives to halon and progress of implementation of the requirements of Annex 6 — *Operation of Aircraft* and Annex 8 — *Airworthiness of Aircraft* for halon replacement
- 4.2 Report on halon reserves based on States' responses to the ICAO State questionnaire on halon reserves

Agenda Item 5: Timeframe for halon replacement in cargo compartments

- 5.1 Propose a tentative timeframe for replacement of halon in cargo compartments

Agenda Item 6: Any other business

Agenda Item 7: Closing

Established ICAO Replacement Dates

2011: Lavatory in production aircraft

2014: Engine/APU for Type Certificate application

2016: Handheld in production aircraft

Earliest Date for Cargo Compartment Halon Replacement



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

31 March 2018

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



Industry position @ ICAO Meeting:

More concerted engagement by all stakeholders is key

- Progress made . . .
 - Lavatory: implementation of replacements continues
 - Handheld alternative, BTP: testing and development with agency approvals continues in support of the 2016 timeframe
- Challenges remain . . .
 - Engine and APU alternatives: two promising agents did not meet expected performance requirements under additional FAA testing
 - Cargo alternatives: research continues for potential candidate
 - Industry's position continues to be that it is premature to establish halon replacement deadlines for cargo applications
- Success requires full cooperation of all stakeholders
 - Broader representation
 - More frequent engagement

“Roadmap to Success” is the Way Forward



ICAO Meeting Outcome:

Stakeholders to recommend a cargo replacement deadline

- As documented in ICAO meeting summary, ICCAIA will . . .
 - “create a working group of stakeholders that will . . .*
 - define the processes required . . .*
 - propose a plan that would lead to the establishment of a target date for the replacement of halon.”*
- ICCAIA Cargo Compartment Halon Replacement Working Group
 - Core Group: Airbus, Boeing, Bombardier, Embraer
 - Others interested: Suppliers, HARC, etc.
 - Officially established by the ICCAIA Airworthiness Committee on April 12th
- Terms of Reference (ToR) outline details



ToR Commit Industry to Broad Stakeholder Approach

Task:

ICCAIA shall establish a working group tasked to work on Halon Replacement issues for Cargo compartments.

Under the ICCAIA-AC authority, the working group shall establish and coordinate a process to:

- Develop an industry recommendation to ICAO for a cargo compartment halon replacement deadline for new design (new aircraft types) taking into account progress towards identification of an alternative agent and/or approach to fire suppression in cargo compartments, including the state of research (available agent, viability), supply chain readiness, testing, qualification, and certification.
- To enable this deliverable, the work group will encourage/support timely research, testing and approval of a halon alternative for cargo compartments, in coordination with the relevant industry and governmental/certification entities, including:
 - Inviting non-member industry associations to participate as appropriate.
 - Facilitating the exchange of non-proprietary research data.
 - Collecting information and reporting to the ICCAIA-AC.
 - Continuing dialogue with government/certification entities.

The CCHRWG shall work on commonly agreed follow-on activities with ICAO, other industry organisations and Authorities.



Working Group composition. . .

ICCAIA 6 member associations

- Aerospace Industries Association of America (AIA)
- AeroSpace and Defence Industries Association of Europe (ASD)
- Aerospace Industries Association of Canada (AIAC)
- Aerospace Industries Association of Brazil (AIAB)
- Society of Japanese Aerospace Companies (SJAC)
- Union of Aviation Industrialists (UAI), Russian Federation

Liaison may be maintained with all necessary stakeholders, including

- Commercial Aviation Corporation of China, Ltd. (COMAC) as a non-member industry entity
- Fire protection system manufacturers
- Fire extinguishing agent manufacturers
- International Air Transport Association (IATA), representing airline operators - passenger and cargo
- International Business Aviation Council (IBAC), representing general and business aviation aircraft operators
- Global Express Association (GEA), representing cargo carriers
- Academia and Research Institutions
- Authorities as advisors on regulatory and certification issues



The Working Group is committed to . . .

Deliverable:

The WG deliverable consists of comprehensive ICCAIA recommendation with supporting documentation to ICAO regarding a cargo compartment halon replacement deadline and implementation period for new type certification aircraft applications.

Timeframe:

The ICCAIA-AC shall establish the WG in 1st Qtr 2013.

The WG should finalize its deliverable by December 31st, 2015 to allow:

- ICAO to initiate internal processes to introduce a recommendation to the General Assembly in 2016, and
- ICCAIA airframe manufacturers to engage with the European Commission regarding existing European halon replacement requirements. On request, the ICCAIA-AC may decide to extend the WG activities after having received the WG recommendation for the purpose of overseeing follow-on activities as necessary.