



Cargo Compartment Halon Replacement Working Group (CCHRWG) Update

10 May 2017

*International Aircraft Systems Fire Protection Working Group Meeting
Cologne, Germany*

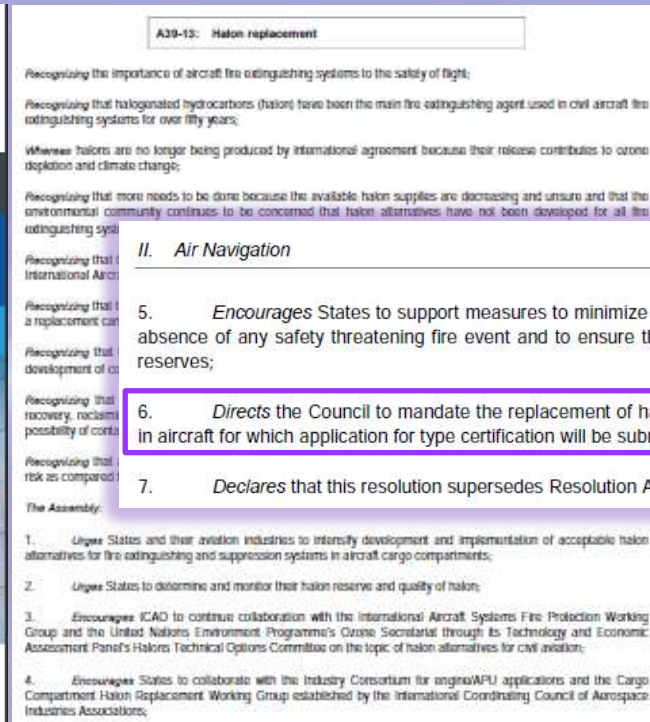
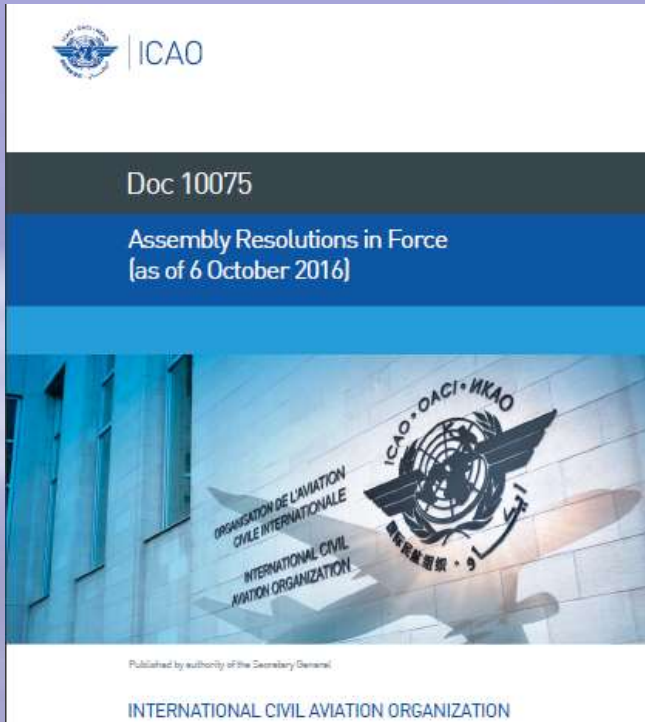
By

***Robin Bennett (Boeing, AIA), CCHRWG Chair
Rolf Greiner (Airbus, ASD), CCHRWG Co-Chair***



CCHRWG supported ICAO 39th Assembly

- ICCAIA working papers provided status on lavex, handheld, propulsion and cargo halon replacements
- ICAO General Assembly accepted resolution with recommended 2024 deadline
- Amendments to Annex 6 are in-work
- CCHRWG supported ICAO requests on impact assessment and SARP language



II-43

II. Air Navigation

5. *Encourages* States to support measures to minimize unnecessary halon emissions that occur when there is an absence of any safety threatening fire event and to ensure the better management and preservation of existing halon reserves;

6. *Directs* the Council to mandate the replacement of halon in cargo compartment fire suppression systems used in aircraft for which application for type certification will be submitted after a specified date in the 2024 timeframe; and

7. *Declares* that this resolution supersedes Resolution A38-9.



Industry coordination continues

- CCHRWG updated Terms of Reference require continued effort in support of 2024 deadline
 - Deliverable:
Continued ICCAIA representation to ICAO regarding a cargo compartment halon replacement and implementation status for new type certification aircraft applications.
- Two workstreams established
 - Regulatory:
Alignment of halon replacement deadlines across ICAO member states
 - Technical:
Assessment of halon replacements status for 2019 ICAO General Assembly



Technical Workstream Underway

- May 11th CCHRWG Meeting to engage stakeholders
 - 35 Organizations invited
 - Overview of Assessment Plan
 - Questionnaire to be previewed
- October progress report planned

DATE	DELIVERABLE	ASSIGNED TO:
17 April 2017	Confirm Technical Work Stream Plan Schedule	CCHRWG Core Group
5 May 2017	Finalize questionnaire format and ICAO coordination	CCHRWG Core Group
11 May 2017	Stakeholder meeting to invite halon replacement suppliers to participate in an assessment by CCHRWG to identify potential candidates in support of the ICAD 2024 deadline.	CCHRWG Core Group & Stakeholders
June - Sept 2017	CCHRWG finalizes and distributes questionnaire, logs responses and confirms participants, develop plan for information management, establishment of assessment criteria, and participant coordination schedule.	CCHRWG Core Group
Oct 2017	CCHRWG status report to ICAO	CCHRWG Core group
Oct 2017	Stakeholder meeting to confirm plan and commitment with participants.	CCHRWG Core Group & Stakeholders
Nov 2017 – April 2018	CCHRWG executes assessment plan including participant input and coordination.	CCHRWG Core Group & Stakeholders
May 2018	Stakeholder meeting to review progress to assessment plan and provide updates and/or feedback.	CCHRWG Core Group & Stakeholders
June- Sept 2018	CCHRWG to complete assessment	CCHRWG Core Group & Stakeholders
Oct 2018	CCHRWG status report to ICAO	CCHRWG Core Group
Oct 2018	Stakeholder meeting to review final assessment and confirm conclusions.	CCHRWG Core Group & Stakeholders
Nov 2018 – April 2019	CCHRWG to prepare final report (ICCAIA WP) for ICAO General Assembly	CCHRWG Core Group
May 2019	Stakeholder meeting to share final report and discuss next steps (if any).	CCHRWG Core Group & Stakeholders
June – Sept 2019	CCHRWG to prepare for ICAO General Assembly	CCHRWG Core Group
Oct 2019	ICAO General Assembly accepts ICCAIA WP and recommendations (if any).	CCHRWG Core Group
Oct 2019	Stakeholder meeting to share ICAO General Assembly outcome and potential next steps, if appropriate	CCHRWG Core Group & Stakeholders

DRAFT

Questionnaire for Stakeholders:
Fire Suppression/Extinguishing Systems based on Halon Replacement

Stakeholder Name & Contact Information:			
	Question	Answer (text)	No Answer (x)
1	Are you currently working on replacements for Halon1301 for aircraft cargo compartment fire suppression systems?		
2	ICAO is in the process of adopting Annex 8 2024 as a deadline for requiring Halon replacement for airplanes with new type certificates. What are the steps you will have to take to qualify a replacement technology to be ready for this deadline?		
3	If you are using the TRL (Technology Readiness Level) approach, at which TRL is your technology currently? Is your development schedule correlated to the 2024 deadline?		
4	If you are using a different technology development system, what is your development schedule with respect to the 2024 deadline?		
5	What is the basic technical approach of your technology (e.g. chemical, physical, reactive, single agent, multiple agents, blends, etc.)		
6	Does your replacement technology contain ODS, GHG or other regulated substance(s)?		
7	What specific aircraft architectures or provisions (e.g. bleed air, fuel tank inerting systems, etc.) does your technology use?		
8	What, if any, are the operational restrictions in using your technology in aircraft during flight (e.g. limitation of ETOPS diversion time)?		
9	What, if any, are the operational restrictions in using your technology in aircraft on-ground and during maintenance (e.g. cold weather operations)?		
10	What are the anticipated impacts of your technology on airlines and maintenance operations (e.g. spare parts management and agent availability)?		
11	Is your technology optimized for a particular aircraft size? If so, explain.		



Questions & Answers



Thank you!

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