

Update to “Options to the Use of Halons for Aircraft (Engine /APU) Fire Suppression Systems

Update progress status on **Engine/APU** section of Chapter 4 : “Applicability of Technologies to Aircraft Application”

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Update to “Options to the Use of Halons for Aircraft (Engine /APU) Fire Suppression Systems

- Current Report **DOT/FAA/AR-99/63 “Options to the Use of Halons for Aircraft Fire Suppression Systems - 2002 Update”** includes in Section 4.2
 - A description of airworthiness requirements related to the fire extinguishing system
 - A description of the typical environment encountered in a powerplant area
 - A description of typical root causes leading to a fire
 - A description of the typical process used to evaluate the compliance of the fire extinguishing system
 - An historical review of proposed agents (HFC-125, HFC-227ea, and FIC-13I1, then CF3I)
 - At the time of the report, a first MPSe draft was in preparation
 - A dedicated paragraph is related to HCFCs, HFCs, PFCs, and Blends described as physical action agent. HFC-227a and HFC-125 restricted to unoccupied areas are first choice in this type of agent. Two sources of design information are provided based on work performed for military aircrafts
 - A dedicated paragraph on Trifluoromethyl Iodide (FIC-13I1) and FIC-13I1 Blends describing OPD and GWP characteristics, dealing with potential toxicity concerns but counter balanced by reasonable low concerns in APU/engine areas and finally raising concern about agent spreading distribution at low temperature compare to Halon.
 - The last paragraph is related to Inert solid propellant gas generators used as direct fire extinguishing system but declared as not promising after some trilas in different military application even if it was too early to rule out this technology.

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- Plan for future Report (1)
 - Keep a description of airworthiness requirements related to the fire extinguishing system
 - Keep a description of the typical environment encountered in a powerplant area
 - Keep a description of typical root causes leading to a fire
 - Keep a description of the typical process used to evaluate the compliance of the fire extinguishing system, but establish that this process is not sufficient referring to discussions between FAA Transport Airplane Directorate and Airframers for last Boeing and Airbus civil transport aircrafts being under design.
 - Update the historical review of proposed agents (HFC-125, HFC-227ea, and FIC-13I1, then CF3I) and introduce new ones if any, providing their main characteristics
 - Replace this paragraph : “At the time of the report, a first MPSe draft was in preparation” by a Summary of the main events that have happened between 2002-2010 and a link to FAA website

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- Plan for future Report (2)
 - Recap the MPS rev 03 test protocol and the agents that went through that testing
 - Provide a table or summary of the MPS rev 03 equivalent concentration results for each agent that underwent testing when available publicly through different communications.
 - Introduce the MPS current standard rev 04 test protocol.
 - Need help to update the paragraphs dedicated to type of products :
 - A dedicated paragraph is related to HCFCs, HFCs, PFCs, and Blends
 - A dedicated paragraph on Trifluoromethyl Iodide (FIC-13I1) and FIC-13I1 Blends
 - A dedicated paragraph is related to Inert solid propellant gas generators
 - Eclipse 500 / Phostrex
 - Any other new ones ?
 - Include a section on considerations for an aircraft installation, including distribution, aircraft compatibility, agent suitability for the application, and certifiability

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- Plan is being circulated for members of this section update group for comments
 - Sham Hariram (Boeing)
 - Thomas Gehring (Eurocopter)
- and to any volunteers
 - Please, record your contact information in the form at the rear of the room