Overwing exits

Overwing exits

The Basics

The "legroom" in the overwing exit row on narrow body aircraft becomes an evacuation pathway that leads to a plug-type exit (see 14 CFR 25.807). The passengers that sit in these rows are instructed, in the event of an emergency, to remove the hatch manually, and either throw it onto the wing or lay it across the seat row inside the aircraft. However, documented difficulties in removing and stowing these hatches have slowed evacuations, costing lives. At issue is, what is the optimum pathway width and seating configuration that will best facilitate smooth and fast evacuations at the overwing?

The current federal aviation regulation (14 CFR 25.813) for three-abreast seating requires either: (1) a minimum 20" pathway leading to a single hatch; or (2) twin 6" pathways leading to a pair of hatches with the "outboard" seat removed. (The outboard seat is located adjacent to the fuselage.) A minimum 10" pathway is deemed acceptable for a two-seat row.

A 1995 paper published by the Civil Aeromedical Institute (CAMI) convinced the FAA to allow airlines to provide a 13" evacuation pathway at a three-seat row, even though the rule says 20". This reduction saves the airlines money because in some cases, it enables them to install another row of revenue-generating seats. However, it could also cost lives because it only leaves a narrow evacuation pathway.

The results of this CAMI research project should never have been applied to the real world because the test subjects – unlike airline passengers – did not have to open the overwing hatch and dispose of it; the researchers did it for them. In the real world, passengers sometimes drop the hatch on the floor of the aircraft, reducing the width of the evacuation pathway by at least 8", which can slow or stop an evacuation.

Nonetheless, in 1995, the FAA proposed that their 20" rule be amended down to 13". Then, in 2002, they withdrew that proposal.

From April 2000 until December 2002, a FAA working group, composed largely of industry members, deliberated on appropriate language for a new rule that would apply in the US, Europe, and Canada. AFA and other members representing unions and passengers, proposed that the regulators: (1) keep the 20" rule; (2) disallow the twin 6" pathway configuration; and (3) require easy-to-open hinged hatches at the overwing, as per the NTSB recommendation. These union and passenger groups would not object to a 13" pathway if and only if an outward opening, hinged hatch is required because it would no longer be necessary to provide floor space for the disposable hatch. In contrast, the airlines and manufacturers proposed that the regulators allow the current plug-type hatch in a 13" pathway or twin 6" pathways, even though this is not supported by any safety research.

We expected the regulators to rule on this issue in 2004, but so far, no news. Regulations must provide adequate evacuation space for realistic emergency conditions; to do otherwise jeopardizes the lives of people who may need to escape at the overwing.
AFA activity and hot topics

Dec 17, 2002 Final document submitted to FAA Cabin Safety Harmonization Working Group on behalf of members representing crewmembers and passenger groups Unified dissenting position statement on behalf of members representing the crewmember unions (AFA, APFA, ETF, IAM, IBT, and ITF) and passenger groups (SCISAFE).

Dec 17, 2002 Explanatory appendix to accompany position statement submitted by crewmember union and passenger members of the FAA Cabin Safety Harmonization Working Group.

Apr 2002 AFA Position on the Harmonization of FAR/JAR 25.813 (overwing seating and hatch configurations) Association of Flight Attendants, AFL-CIO


Dec 1, 1999 NTSB Safety Study: Emergency Evacuation of Commercial Airplanes NTSB/SS-00/01 Adopted June 27, 2000: US National Transportation Safety Board (See recommendation A-00-76)

References to news articles

Nov 5, 2001 Air Safety Week "Cramped seating can 'trap' and 'trip' passengers during emergency evacuation"

July 23, 2001 BBC Investigative News Program "4x4" Access to overwing exits (Series 1, Program 1)

Nov 1, 2000 Air Safety Online "Singapore Airlines crash survivors tried hatchets"

June 16, 1995 USAToday "Junk idea of narrowing airline exit passages"

More information
