

Safety Recommendation 2015-022

It is recommended that the European Aviation Safety Agency, in conjunction with the Federal Aviation Administration and other regulators, implement a standardised system of door and emergency exit designations to reduce potential misunderstanding between aircraft crews and airport emergency services in the event of an emergency evacuation.

Date Safety Recommendation made:

5 August 2015

LATEST RESPONSE

Response received:

13 November 2015

The Agency reviewed the ways large aeroplanes doors are designated by manufacturers, operators, Rescue and Fire Fighting Services (RFFS). It appears that there is indeed no full harmonization among the different documents used by the stakeholders, either in term of names or numbering designations. The Agency understands that the term 'standardised system of door and emergency exit designations' used in the investigation report and this safety recommendation refers to a designation based on numbering.

A survey conducted by EASA in September 2015 has been made among European airports RFFS in order to gather information on how they designate doors during an emergency intervention, what kind of crash cards they use (if any), what is the source of information they consider, and what are their in service experience in this domain. According to the 30 responses received, it appears that the majority of the RFFS use a clear and plain wording to designate the doors in their communications with aircraft crews (e.g. forward left door), as well as alternative modes of communication such as hand signals; a minority of them declared using a numbering (e.g. II, 2L, etc), and one RFFS explained that they stopped using the numbering designation because their experience has shown it was prone to errors.

Furthermore, not all RFFS have aircraft type specific crash cards (or equivalent document) in their vehicles. For some aircraft types, no information is available at all. During an RFFS emergency, very little or no time at all is available to consult a crash card or equivalent document. Finally, the 30 RFFS surveyed have not experienced any safety issue related to a confusion on doors designation during an event at their airport.

In view of the information gathered, the majority of stakeholders prefers to designate doors and emergency exits with a plain text designation. As no evidence of a safety case has been reported, the Agency will not impose a standard of doors numbering.

AAIB Assessment – Not Adequate - Closed

RESPONSE HISTORY

N/A

Safety Recommendation 2015-023

It is recommended that Boeing Commercial Airplanes amend the Quick Reference Handbook WING SLIDE alert procedures for Boeing 757-300 aircraft to make the instructions on the use of flaps 20 for landing applicable to all cases of WING SLIDE alerts.

Date Safety Recommendation made:

5 August 2015

LATEST RESPONSE

Response received:

3 November 2015

Boeing respectfully disagrees with Safety Recommendation 2015-023 based on the following:

Deployment of the slide in-flight was taken into consideration during the 757's design and certification process. During this process, it was determined that if a slide deployed in-flight and detached from the airplane, it would most likely pass underneath the empennage. It was also determined that if the slide did strike the horizontal stabilizer, moderate buffet might result. Additionally, the horizontal stabilizer's leading edge is capable of sustaining relatively severe damage across the major portion of its span without a significant reduction of controllability, as damage to the hydraulic system at the leading edge would only disable two of the six elevator actuators. In the unlikely event the horizontal stabilizer should become disabled, the 757 can be safely landed using elevator control only. During the design and certification process, it was also determined that should the slide not detach from the airplane, it would not constitute a controllability or performance problem.

Boeing has reviewed the FDR data from G-JMAB that was provided by the AAIB and found nothing suggesting any controllability issues. The control wheel input required to manage the lateral imbalance at Flaps 30 was roughly equivalent to the control wheel input required to manage the airplane in a 20 knot crosswind. That level of control wheel input represents approximately 10-12% of the maximum lateral control authority available at Flaps 30. Boeing believes that regardless of the flap detent selected for landing, the 757 has ample lateral control authority to manage the imbalance resulting from deployment of the off-wing escape slide.

Boeing believes the flight crew's report of the event flight provided in the AAIB report confirms sufficient lateral control is available to control the imbalance resulting from deployment of the off-wing escape slide with Flaps 30 selected. The report indicates that while on the base leg with Flaps 20 selected, after descending through 3000 feet, the crew was informed by the cabin manager that two passengers had seen something white detach from the airplane. The crew subsequently elected to set Flaps 30 and the report indicates the commander noted, "a "significant amount of left aileron" was required to maintain the centreline, although the aircraft remained fully controllable".

It is Boeing's opinion the AAIB recommendation to use Flaps 20 for all WING SLIDE alerts would limit the crew's discretion to react to varying conditions. The QRH for the scenario of a slide deployed and still attached to the aircraft currently recommends using Flaps 20 when performance allows. If the QRH is changed to always require Flaps 20, there may be a case where landing distance is critical and the crew wouldn't consider using normal landing flaps, even though the aircraft is proven to be fully controllable in this configuration.

With the above information in mind, Boeing cannot find any compelling information requiring a change to the 757-300 QRH that would potentially limit the options available to crews for their selection of flap configuration for landing.

AAIB Assessment – Not Adequate - Closed

RESPONSE HISTORY

N/A