Proposed Equivalent Safety Finding on JAR 25.813 (c)(2) Applicable to Dassault Aviation Falcon 7X

Introductory note:

The following Equivalent Safety Finding (ESF) has been classified as an important ESF and as such shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

Statement of issue:

Following issuance of explicit EASA rule clarification through publication of certification memorandum CM-CS-002 issue 1, dated 19 Sep 2011, EASA has clarified the intent of JAR 25.813(c)(2) and provided guidance to comply with it.

JAR 25.813 (c)(2) at Change 15 states:

(2) For aeroplanes that have a passenger seating configuration, excluding pilot's seats, of 19 or less, there may be minor obstructions in this region, if there are compensating factors to maintain the effectiveness of the exit.

As stated in CM-CS-002 issue 1:

Crew procedures or placards that specify a required taxi, take-off, and landing configuration are not sufficient to ensure access to, or openability of, Type III and IV exits in accordance with CS 25.813(c)(4)(ii) Amendment 9 (previous amendments – JAR/CS 25.813(c)(2)) on aeroplanes with 19 or fewer passenger seats. Compliance demonstration with this requirement (i.e. no more than "minor obstructions") should be made with interior features, such as seats, tables, foot/leg rests etc. placed in their most adverse configuration and location.

For seats that translate along a track or seat pan to detent or locked positions where the seat is secured, only the detent or locked positions need to be evaluated.

Similarly, for seats that swivel, only detent or locked positions need to be evaluated.

Applicant's proposal:

Dassault Aviation design proposal includes in Falcon 7X the installation of a console table in front of a Type III emergency exit, which can be set in stowed position or in deployed position.

When deployed, it constitutes an obstruction in the region of the mentioned exit that cannot be considered "minor" in respect of this term's usage in JAR25.813(c)(2).

Applicant Safety Equivalency Demonstration:

EASA is in agreement that it is possible to show an equivalent level of safety to direct compliance with 25.813 (c)(2), provided the effectiveness of the affected Type III exit is maintained by incorporating the following compensating factors into the design:

- 1. The remaining opening with a deployed table is at least as large as that provided by a Type IV emergency exit.
- 2. There is a cockpit alert that notifies flight crew when the table is not properly stowed prior to taxi, take-off and landing.
- 3. There is an aural cabin alarm that notifies passengers when the table is not properly stowed prior to taxi, take-off and landing, which sounds continuously in the passenger cabin.
- 4. There is an illuminated cabin alert sign that notifies passengers in the immediate proximity of the table that directs the table to be stowed when the table is not properly stowed prior to taxi, take-off and landing.
- 5. The cabin visual alert and aural alarm are sufficiently effective in flight, e.g. the alarm is loud enough to be clearly heard by occupants, but not so loud as to be an annoyance to the flight crew.
- 6. The monitoring and annunciation system is sufficiently reliable considering the risk of the table being left deployed at the start of an emergency evacuation.
- 7. There is an AFM supplement, which defines the appropriate crew action (flight/and or cabin) in response to the cockpit alert.
- 8. The AFM supplement requires a pre-flight briefing to explain the cabin annunciation system and the necessary response to be taken by the passengers.