



Federal Aviation Administration

Memorandum

Date: April 4, 2016

To: Manager, International Branch, ANM-116

From: Manager, Transport Airplane Directorate, ANM-100

Prepared by: Daniel Jacquet, ANM-115

Subject: INFORMATION: Equivalent Level of Safety (ELOS) Finding for Graphical Exit Signs on the Dassault Aviation Model Falcon 5X, FAA Project #TC00952IB-T

ELOS Memo #: TC00952IB-T-CI-03

Regulatory Ref: §§ 21.21(b)(1), 25.841(a) and (b)(6)

This memorandum informs the certificate management aircraft certification office of an evaluation made by the Transport Airplane Directorate (TAD) on the establishment of an equivalent level of safety (ELOS) finding for the Model Falcon 5X airplanes.

Background

Title 14, Code of Federal Regulations (14 CFR) sections 25.811 and 25.812 requires text-based emergency exit signs with specific size, color and intensity. Dassault Aviation proposes to install graphical exit signs in lieu of the conventional text-based exit signs. The European Aviation Safety Agency (EASA) permits graphical exit signs, but FAA research has shown that the U.S. flying public has low comprehension of graphical exit signs when compared to text-based signs.

Applicable regulation(s)

§§ 25.811, 25.812

Regulation(s) requiring an ELOS finding

§§ 25.811, 25.812

Description of compensating design features or alternative standards which allow the granting of the ELOS finding (including design changes, limitations or equipment need for equivalency)

In lieu of strict compliance to §§ 25.811 and 25.812, Dassault Aviation proposes to use a graphical exit sign that has a comparable level of visibility to the text-based sign. Dassault Aviation will provide operators with briefing cards with the graphical exit signs. In addition, the airplane flight manual (AFM) has a requirement to provide a special emphasis briefing prior to takeoff and landing to ensure passenger comprehension of the graphical sign and exit locations.

Explanation of how design features or alternative standards provide an ELOS to that intended by the regulation

Accomplishing the following actions establishes an acceptable overall comprehension of the proposed graphical exit signs by the flying public:

- (a) Dassault Aviation will incorporate an FAA-accepted special emphasis briefing in the airplane flight manual along with the requirement that the briefing be given to the passengers prior to each flight and prior to each landing.
- (b) Dassault Aviation will also provide briefing cards to the customer, when the aircraft is delivered, containing the safety features the passengers should be aware of including the graphical exit signs. The briefing card indicates that it may not be removed from the aircraft. Furthermore, the Falcon operational manual indicates that during the preflight inspection, the crew must check these briefing card are on board and properly stowed.

The FAA conducted research to determine an acceptable sign size and features to provide comparable visibility to traditional text-based signs in a cabin the size of the Model Falcon 5X airplane. The FAA provided guidance on sign size and spacing of graphical features, which Dassault Aviation will meet in their final design.

FAA approval and documentation of the ELOS finding

The FAA has approved the aforementioned ELOS finding in project Issue Paper CI-03, titled Graphical Exit Signs. This memorandum provides standardized documentation of the ELOS finding that is non-proprietary and can be made available to the public. The TAD has assigned a unique ELOS memorandum number (see front page) to facilitate archiving and retrieval of this ELOS finding. This ELOS memorandum number should be listed in the Type Certificate Data Sheet under the Certification Basis section in accordance with the statement below.

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Equivalent Level of Safety Findings have been made for the following regulation(s):
§§ 25.811, Emergency Exit Marking, and 25.812 Emergency Lighting (documented in TAD
ELOS Memo TC00952IB-T-CI-03)

Original signed by Suzanne Masterson

Transport Airplane Directorate
Aircraft Certification

April 4, 2016

Date

ELOS Originated by Airframe and Cabin Safety Branch	Project Engineer Dan Jacquet	Routing Symbol: ANM-115
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