



Federal Aviation Administration

Memorandum

Date: August 26, 2014

To: Manager, Transport Standards Staff, International Branch, ANM-116

From: Manager, Transport Airplane Directorate, ANM-100

Prepared by: Jeff Gardlin, ANM-115

Subject: INFORMATION: Equivalent Level of Safety (ELOS) Finding for the Airbus Model A350-900 Airplane (FAA Project Number TC0544IB-T)

ELOS Memo #: TC0544IB-T-CS-12

Reg. Ref: § 25.811(e)(4)

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 Airbus Model A350-900 airplane.

Background

Title 14, Code of Federal Regulations (14 CFR) section 25.811(e)(4) states:

- 4) Each Type A, Type B, Type C, Type I, or Type II passenger emergency exit with a locking mechanism released by rotary motion of the handle must be marked—
- (i) With a red arrow, with a shaft at least three-fourths of an inch wide and a head twice the width of the shaft, extending along at least 70 degrees of arc at a radius approximately equal to three-fourths of the handle length.
 - [...]
 - (iii) With the word “open” in red letters 1 inch high, placed horizontally near the head of the arrow.

Airbus has proposed to use a green arrow and a green word “OPEN” on the Model A350-900 series aircraft, instead of the traditional red arrow and word “OPEN” as required by § 25.811(e)(4) “Emergency Exit Marking.”

Applicable regulation(s)

§ 25.811(e)(4)

Regulation(s) requiring an ELOS finding

§ 25.811(e)(4)

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)

Airbus has substituted the color green, for the color red. The green arrow and green word “OPEN” on the door are consistent with the color code used for symbolic exit signs on the Model A350-900 compared to the red ones. The green color code used on A350-900 denotes “positive” actions (e.g. correct/ ready).

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

The intent of the regulation is to conspicuously mark the operating handle for emergency exits, as well as the general motion it makes. The regulation is prescriptive in specifying the color, size and location of the marking. The Airbus markings satisfy all the requirements except color. In this case, green has been shown to be at least as conspicuous as red in marking exit operation and, as noted above, is consistent with the exit signs and color coding used on the A350.

FAA approval and documentation of the ELOS finding

The FAA has approved the aforementioned ELOS finding in the Model A350-900 issue paper CS-12, titled “Green Arrow and "OPEN" Placard for Emergency Exit Marking.” In addition, because the issue paper follows the corresponding European Aviation Safety Agency (EASA) certification review item (CRI) D-28, the FAA has accepted this CRI as the basis for a finding of an ELOS.

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.

ELOS Findings have been made for the following regulations:
§ 25.811(e)(4) Emergency Exit Marking (documented in ELOS Memo TC0544IB-T-CS-12)

Suzan Masterson

Transport Airplane Directorate,
Aircraft Certification Service

August 26, 2014

Date

ELOS Originated by: Airframe & Cabin Safety Branch	Project Engineer: Jeff Gardlin	Routing Symbol: ANM-115
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