



Federal Aviation Administration

Memorandum

Date: November 2, 2015

To: Manager, Fran Cox, Delegation Systems Certification Office, ASW-130

From: Manager, Transport Airplane Directorate, ANM-100

Prepared by: Doug Huntsman, ASW-130

Subject: INFORMATION: Equivalent Level of Safety (ELOS) Finding for Graphical/Symbolic Exit Signs on a Model A320-232 airplane, FAA Project # AAC-15-02-ODA

ELOS Memo #: AAC-15-02-ODA-C-1

Regulatory Ref: §§ 25.811 & 25.812

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 A320-232 airplane.

Background

Section 25.811 requires that each passenger emergency exit must be conspicuously marked. These markings or signs must be recognizable from a distance, visible in dense smoke, visible along the main aisle leading to the exit, and visible next to each exit and along bulkheads or dividers which impair the passenger vision of such exit signs. The signs may use the word exit or emergency exit. Section 25.812 requires the signs be illuminated with 1.5 inch red letters (text based) on a white background, 21 square inches in size, must have a certain contrast, letter height to stroke length ratio and be of a certain brightness.

This design proposes the use of graphical/symbolic exit signs rather than the conventional red text based signs. The design proposes the use of a green man running pictorial sign with an arrow indicating the direction to be followed to reach an emergency exit. This symbolic exit sign does not meet the text based requirements of §§ 25.811 & 25.812 as stated above.

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)

The compensating factors that provide an equivalent level of safety for the regulations not complied with are as follows:

- Incorporation of an FAA-accepted special emphasis briefing, to be included in the aircraft flight manual, along with the requirement that the briefing be given to the passengers prior to each flight and prior to each landing.
- Development of an FAA accepted implementation plan that will ensure incorporation of appropriate symbolic/graphical exit sign information in standard passenger information cards (such as those required by §§ 121.571(b), 135.117(e) and 91.1035(f)) at each passenger seat place that may be occupied for taxi, takeoff and landing).

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

The compensating factor(s) raise the level of safety to that required by §§ 25.811 & 25.812 by incorporating a special emphasis briefing in the flight manual, to be given to the passengers prior to each flight/landing, and incorporation of appropriate symbolic/graphical exit sign information in standard passenger information cards at each seat. These compensating features will raise the overall comprehension of the symbolic/graphical signs to the passengers and flying public. Details and location of the signs, and other signs/placards in the immediate area are all factors that must be considered in the use/placement of the symbolic exit signs. The symbolic green running man standard in GAMA Publication 15 is an acceptable symbol for the exit sign.

FAA approval and documentation of the ELOS finding

The FAA has approved the aforementioned ELOS finding in project Issue Paper C-1, titled Equivalent Level of Safety (ELOS) Finding for Graphical/Symbolic Exit Signs on Model A320-232. 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 Limitations and Conditions section of the supplemental type certificate in accordance with the statement below:

Equivalent Level of Safety Findings have been made for the following regulations and documented in TAD ELOS Memorandum AAC-15-02-ODA-C-1:

§ 25.811 Emergency Exit Marking
§ 25.812 Emergency Lighting

Suzanne Masterson

11/4/15

Transport Airplane Directorate,
Aircraft Certification Service

Date

ELOS Originated by ACO: Delegation Systems Certification Office	ACO Manager: Fran Cox	Routing Symbol: ASW-130
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