



Federal Aviation Administration

Memorandum

Date: August 14, 2012

To: Manager, International Branch, ANM-116

From: Manager, Transport Airplane Directorate, ANM-100

Prepared by: Dan Jacquet, ANM-115

Subject: INFORMATION: Equivalent Level of Safety Finding for emergency exit marking and emergency exits, Gulfstream Aerospace LP (GALP) G280 Type Validation Program (FAA Project Number AT0329IB-T)

ELOS Memo#: AT0329IB-T-CI-1R1

Regulatory Ref.: §§ 21.21(b), 25.811(d)(1), 25.812(a)(1)(b)(c)(d)(e)

The purpose of this memorandum is to inform the International Branch of an evaluation made by the Transport Airplane Directorate on the establishment of an equivalent level of safety (ELOS) finding for the GALP Model G280 series of aircraft.

Background

The Gulfstream Aerospace LP (GALP) applied for certification of Model G280 as a “green” aircraft. The aircraft does not comply with part of the airworthiness requirements of FAR §§ 25.811 and 25.812 regarding emergency exit marking and lighting.

Applicable regulation(s)

§§ 25.811, 25.812

Regulation(s) requiring an ELOS

§§ 25.811 (d)(1), 25.812 (a)(1), (b), (c), (d) & (e)

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

GALP Model G280 is delivered as a “green” aircraft without interiors. No seats are installed and carriage of passengers is not allowed. The only occupants are the 2 crewmembers. There are 2 emergency exits, a main entry door (MED) located on the left-hand side of the aircraft, aft of the

flight deck, and a right-hand overwing exit. Emergency equipment, including rafts, is installed on a pallet located near these exits. The applicant proposes to install simplified, unlighted emergency exit signs and emergency lighting that are not in full compliance with §§ 25.811(d)(1) and 25.812(a)(1), (b), (c), (d) and (e).

Explanation of how design features or alternative standards provide an equivalent level of safety to the level of safety intended by the regulation

§ 25.811 (d)(1): Since the size of the passenger cabin is small relative to regular transport category airplanes and there is no interior furnishing installed in the compartment, the emergency exits can be seen from any point in the cabin. In addition taking into account that the only occupants are trained flight crew, GALP believes that the current design provides an equivalent level of safety.

§ 25.812 (a)(1), (b), (c), (d) & (e): The G280 green aircraft will not have Illuminated Emergency exit marking and location signs. However, general illumination lights near the over wing emergency exit and MED will be installed, in order to let the flight crew locate the emergency equipment and exits. This illumination can be acceptable ELOS considering the small size of the cabin relative to regular transport category airplanes, and the fact that the only occupants are a trained flight crew. Lighting of 17 candlepower will be installed near the exits.

FAA approval and documentation of the ELOS

The FAA has approved the aforementioned Equivalent Level of Safety Finding in project issue paper CI-1. This Equivalent Level of Safety Finding was granted for the GALP G280 design. This memorandum provides standardized documentation of the ELOS that is non-proprietary and can be made available to the public. The Transport Directorate has assigned a unique ELOS Memorandum number (see front page) to facilitate archiving and retrieval of this ELOS. This ELOS Memorandum number should be listed in the Type Certificate Data Sheet under the Certification Basis section (TC's & ATC's) or in the Limitations and Conditions Section of the STC Certificate. An example of an appropriate statement is provided below.

Equivalent Safety Findings have been made for the following regulation(s): §§ 25.811(d)(1) "Emergency Exit Marking" and 25.812 (a)(1), (b), (c), (d) and (e) "Emergency Lighting" (documented in TAD ELOS Memo AT0329IB-T-CI-1R1).

Original Signed by

<i>Ian Won</i>		<i>August 14, 2012</i>
Manager, Transport Airplane Directorate, Aircraft Certification Service		Date

ELOS Originated by Transport Airplane Directorate International Branch:	Mike Borfitz	ANM-116
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