Exemption No. 10887

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98057-3356

In the matter of the petition of **L-3 Communications Integrated Systems, L.P.** for an exemption from §§ 25.562, 25.785(b), and 25.853(c) of Title 14, Code of Federal Regulations	**Regulatory Docket No. FAA-2013-0677**

PARTIAL GRANT OF EXEMPTION

By letter dated July 26, 2013, Mr. Phillip T. Crawford, ODA Administrator, L-3 Communication Integrated Systems, L.P., 7601 Maehr Road, P.O. Box 154580, Waco, Texas 76715-4580, petitioned the Federal Aviation Administration (FAA) for an exemption from the requirements of §§ 25.562 and 25.785(b) of Title 14, Code of Federal Regulations (14 CFR). In separate correspondence, dated September 3, 2013, Mr. Crawford also requested that 14 CFR 25.853(c) be added to the petition for exemption for the same reasons and on the same basis as the original petition for exemption. The proposed exemption, if granted, would permit a medical stretcher installation on a Boeing Model 747-8 series airplane, serial number 39749.

The petitioner requests relief from the following regulations:

> **Section 25.562, Amendment 25-64 –** "The seat and restraint system in the airplane must be designed as prescribed in this section to protect each occupant during an emergency landing when—…."
>
> **Section 25.785(b), Amendment 25-88 –** "Each seat, berth, safety belt, harness, and adjacent part of the airplane at each station designated as occupiable during takeoff and landing must be designed so that a person making proper use of these facilities will not suffer serious injury in an emergency landing as a result of the inertia forces specified in §§ 25.561 and 25.562."
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> **Section 25.853(c), Amendment 25-116 –** "In addition to meeting the requirements of paragraph (a) of this section, seat cushions, except those on flight crewmember seats,

must meet the test requirements of part II of appendix F of this part, or other equivalent methods, regardless of the passenger capacity of the airplane."

The petitioner supports the request with the following information:

This section quotes the information from the petitioner's request. The complete petition is available on the Internet in the Federal Docket Management System at http://www.regulations.gov/ in docket number FAA-2013-0677.

Background

L-3 Communications Integrated Systems has been contracted by a customer for interior completion of a VVIP/Government/Head-of-State business interior in a Boeing Model 747-8 airplane. The certification basis for the Boeing 747-8 is 14 CFR 25, Amendment 25-1 through 25-120 with reversions, later amendments, exemptions, and special conditions as shown in FAA Type Certificate Data Sheet A20WE. The airplane is to be completed under ODA-750154-SW project number P-12-001.

This relief is requested to permit the certification of a medical stretcher on Boeing Model 747-8 series airplanes.

References:

FAA Exemption No. 10457 (Boeing 737)
FAA Exemption No. 10197 (Dornier 328)
FAA Exemption No. 8832 (Boeing 737)
FAA Exemption No. 8602 (Boeing 777)
FAA Exemption No. 8601 (Airbus 340)
FAA Exemption No. 8600 (Airbus 318, 319, 320, 321)
FAA Exemption No. 8599 (Airbus 330)

14 CFR 25 governs Type Design certification requirements for transport category airplanes. The primary intent of the CFR, as applied to Transport Aircraft, is intended for US commercial or common-carriage applications. These regulations are to ensure that aircraft manufacturers provide the appropriate design features to meet the standards necessary to protect the traveling US public. These requirements define the normal public interest and safety level and provide regulatory guidelines to meet them.

Medical stretcher installations were not considered in the context of FAR 25.562 when the regulation was developed. As a result, criteria were established that are not directly applicable to this type of installation. L-3 Communications is not aware of a supplier that could produce a stretcher that meets the requirements. A review of this issue with vendors indicates that the costs associated with the dynamic testing are quite high. Further, no articles that have been tested have met the criteria. With this information, it was determined that the cost of developing a stretcher system that will meet the criteria is prohibitively high.

The result of the high cost is that a person seeking travel for required medical care has only three alternatives. One is to charter an aircraft at a very significantly increased cost. Another is to simply forgo the treatment with possible fatal consequences. The last option is to seek travel on an aircraft with a pre Amendment 25-64 certification basis.

This stretcher installation will be used on an airplane to be used in private service (e.g., not for US hire or common carriage) as a VVIP/Government Use/Foreign Head of State airplane.

Historically, the FAA has made adjustments to specific requirements based upon specific design and operational factors. Numerous Exemptions and other regulatory changes have been granted to meet specific aircraft designs and applications. Examples include exemptions 6820/6820A and 9762. As with other exemptions, L-3 proposes to use mitigating design requirements and operational limitations to justify this exemption to our existing and future 747-8 aircraft modified for VVIP/Government/Head-of-State, not-for-hire or common-carriage service.

Justification

The estimated cost of demonstrating compliance of stretcher installations with dynamic test requirement is quite high. Since none have been shown to comply with the dynamic test criteria, stretchers cannot currently be used on airplanes whose type certification basis includes the dynamic requirements. The pass/fail criteria were designed to increase the level of safety for passengers seated in an upright position. L-3 feels that application of the existing pass/fail criteria for dynamic testing to stretcher installations is unreasonable and that the increase in the level of safety does not warrant the costs when compared with the level of safety afforded by an aircraft that does not include Amendment 25-64 in its certification basis.

Basis for Exemption

The airplane that is the subject of this petition is a Boeing Model 747-8 outfitted for non-commercial/non-common-carriage VVIP/Government use/Head-of-State service. These aircraft are typically in the service of foreign Heads-of-State friendly to US interests and will be operated under 14 CFR 91/14 CFR 125 regulations or equivalent foreign standard. For this reason the privileges of this proposed exemption will be exercised outside the United States.

The exemption proposed herein is justified based upon the following facts:

- These aircraft are intended for VVIP/Government/Head-of-State use and are not appropriately configured for or intended for use for hire or common carriage.
- The Petitioner proposes previously utilized and approved mitigating requirements and conditions that establish acceptable safety levels for the occupants consistent with previous grants.

Occupant Safety Considerations

- Stretcher installations for part 25, 25, 27 and 29 aircraft have not been shown to meet the dynamic criteria. However, they have demonstrated a good service history with no adverse experience.
- The use of the medical stretcher is limited, and on a cases-by-case basis.
- Occupancy for takeoff and landing is limited to non-ambulatory persons.
- The medical stretcher will comply with the requirements of 14 CFR 25.561.

Public Interest

As in the cases of numerous already established Exemptions, granting this petition for exemption would be clearly in the public interest of the people of the United States of America for the following reasons:

1. The level of safety that would be provided is an acceptable level of safety given the limited usage and exposure of the stretcher.
2. A person whose situation requires this type of travel arrangement can be transported on his own Head-of-State airplane instead of having to charter another airplane.
3. Compliance with 14 CFR 25.562 is difficult since that section applies to seats and not stretchers. The requirements for stretcher testing do not exist. Testing is expensive to conduct and would yield marginal safety benefit.
4. This aircraft is used by a Government friendly to the US government to transport their Head-of-State, Diplomatic Persons, other VIPs, and related staff. US Public interest is advanced by developing and maintaining positive influence with the country represented and governed by the aircraft's occupants. Ensuring this airplane perform its mission as originally intended and contracted by the operator achieves that goal.
5. The VVIP/Head-of-State configured interior of the style and quality intended for this STC is not suitable for charter operations or Common-Carriage operations. The aircraft will be restricted from use in for-hire or common carriage operations.
6. The population of people who use this aircraft is very small and restricted to personnel selected by the operator. Members of the flying public in the US and worldwide do not have access to this aircraft and therefore their Public Interest is not negatively impacted.
7. The use of US design and manufacture aircraft and interiors such as this one develops and maintains the worldwide positive image and influence currently enjoyed by the US Aerospace Industry. Without supporting cost-benefit data demonstrating a positive safety impact there can be no public benefit to applying this requirement, especially to a foreign aircraft.

Mitigation

- Occupancy of the stretcher during TT&L will be limited to non-ambulatory persons.

- An operating limitation will be added to the limitations section of the airplane flight manual supplement and stated on a conspicuously located placard: "Occupancy is limited to non-ambulatory persons."

Application of the Exemption

This Exemption is intended for application to existing and future Boeing 747-8 interior programs by L-3 Communications Integrated Systems L.P.

In accordance with 14 CFR 11.81(h), we request the privilege of this exemption outside of the United States since the operators are located in foreign countries.

Federal Register Publication

L-3 Communications requests that the requirement for Federal Register publication be waived. The exemption, if granted, would not set a precedent. This type of exemption has been granted before for other Large Transport Category Airplanes. The issue is non-controversial. Installations of this type are not new.

***Federal Register* publication**

The FAA has determined that good cause exists for waiving the requirement for *Federal Register* publication for public comment because the request is identical in all material respects to previously granted exemptions; the exemption, if granted, would not set a precedent; and any delay in acting on this petition would be detrimental to L-3 Communication Integrated Systems, L.P.

The FAA's analysis

The FAA agrees that granting this petition is in the public interest for the following reasons: Demonstrating compliance with the requirements of § 25.562 would be difficult, if not impossible, and applying the existing pass/fail criteria to these installations is questionable. The need for medically fragile people to receive necessary and potentially life-saving medical attention outweighs the increase in the level of safety gained by requiring medical stretchers to meet dynamic testing requirements. Also, this exemption would permit the transportation of medically fragile people, from countries lacking the medical expertise or equipment to address a certain medical condition, to a country with more advanced medical expertise and facilities.

The FAA agrees that stretchers for medical use were not considered in the context of the dynamic-test requirements of § 25.562 when that regulation was developed. Occupancy of other berths during takeoff and landing for ambulatory persons was not considered feasible under the conditions of § 25.562, and for the purposes of compliance, stretchers are considered "berths." The FAA acknowledges that part 25 differs from other aircraft regulatory standards in this regard.

With respect to the overall level of safety, the FAA notes that full compliance with the requirements of § 25.561 will be required for the medical stretcher. This is consistent with the standards for all seats prior to the adoption of § 25.562. Thus, as noted by the petitioner, an alternative to this exemption would be to seek transportation on an airplane that does not require dynamic testing as part of its certification basis (i.e., an airplane with an earlier certification basis). While this alternative is a viable option, the FAA does not consider this a desirable approach. Airplanes certificated with § 25.562 included in their certification basis have incorporated many safety advances not found on earlier-model airplanes. It would be counterproductive to restrict this type of transportation to those earlier models.

L-3 Communication Integrated Systems, L.P. also petitioned for exemption from the requirements of § 25.853(c) for the same reasons and on the same basis as the original petition for exemption. The justification provided to support issuance of an exemption to the requirements of §§ 25.562 and 25.785(b) do not justify the FAA granting an exemption to the requirements of § 25.853(c). Furthermore, a review of past exemptions granted to support medical stretcher installations resulted in no findings of the FAA granting an exemption to the requirements of § 25.853(c).

The FAA's decision

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. §§ 40113 and 44701 delegated to me by the Administrator, L-3 Communication Integrated Systems, L.P., Inc., is hereby granted an exemption from the requirements of 14 CFR 25.562 and 25.785(b) to the extent necessary to allow installation of a medical stretcher on a Boeing Model 747-8 series airplane, serial number 39749. The following operating limitation must be added to the limitations section of the airplane flight manual supplement and stated on a conspicuously located placard:

- Occupancy is limited to non-ambulatory persons.

Issued in Renton, Washington, on November 5, 2013.

/s/ by Jeffrey E. Duven

Jeffrey E. Duven
Acting Manager, Transport Airplane Directorate
Aircraft Certification Service