

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 and  
25.785(b) of Title 14, Code of Federal  
Regulations

**Regulatory Docket No. FAA-2015-5056**

**GRANT OF EXEMPTION**

By letter dated August 5, 2015, Mr. Phillip T. Crawford, P.E., ODA Administrator, L-3 Communications Integrated Systems, L.P. (L-3 Communications), 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) to the extent necessary to permit certification of a medical-stretcher carrier for transporting persons whose medical condition dictates such accommodation. The proposed exemption is applicable to Boeing Model 787-8 airplanes.

**The petitioner requests relief from the following regulation(s):**

**Section 25.562** specifies dynamic test conditions for qualification of occupant injury criteria, as well as structural retention criteria.

**Section 25.785(b)** requires that each seat, berth, safety belt, harness, and adjacent part of the airplane at each station, designated as occupiable during taxi, takeoff, and landing (TT&L), must be designed so that a person making proper use of those facilities will not suffer serious injury in an emergency landing as a result of inertia forces specified in §§ 25.561 and 25.562. Stretcher carriers are considered “berths” as far as compliance with this section is concerned.

**The petitioner supports its request with the following information:**

This section quotes the relevant information from the petitioner's request, with minor edits for clarity. The complete petition is available at the Department of Transportation's Federal Docket Management System, on the Internet at <http://regulations.gov>, in Docket No. FAA-2015-5056.

**Background**

Title 14 CFR part 25 governs type design certification requirements for transport category airplanes. Part 25 is primarily intended for 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 United States (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 § 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 Communications proposes to use mitigating design requirements and operational limitations to justify this exemption to our existing and future 787-8 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 requirements 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 Communications 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 787-8 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 part 91 and part 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 23, 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 case-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. This includes the weight of the occupant. An occupant weight of 170 pounds is being used.

## **Public Interest**

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 that this airplane performs 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 supplemental type certificate 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-designed and manufactured 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 787-8 interior programs by L-3 Communications.

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**

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 Communications.

## **The FAA's analysis**

Due to humanitarian considerations, the FAA considers the transportation of persons needing medical attention by air to be essential and in the public interest. In many instances, those persons can be transported only on stretchers.

L-3 Communications has requested relief from §§ 25.562 and 25.785(b), which contains the requirement for berths to provide adequate occupant protection under the inertia loads of §§ 25.561 and 25.562.

The FAA agrees that demonstrating compliance with the requirements of § 25.562 for a litter (stretcher) or berth would be very difficult and that applicability of the existing pass/fail criteria is questionable in that case. The FAA has also considered the cost implications and overall benefits resulting from the proposed use of stretchers. One possible alternative, in the absence of the relief L-3 Communications requested, would be to seek an airplane that is not required to comply with the dynamic-test requirements. That alternative, if available, would not offer any safety benefit because the stretcher carrier installation would still not be required to meet the dynamic-test criteria. Should that alternative not be available, a person would be forced to forego expedient air transport altogether, with potentially fatal consequences. Any safety benefit from requiring a stretcher carrier installation to meet the dynamic-test requirements would certainly be moot if the necessary medical attention were unavailable due to prohibitive costs. In any event, safe occupancy of litters or berths during taxi, takeoff, and landing (TT&L) is not considered feasible under the crash conditions described in § 25.562.

The need for passenger carriage on a stretcher in transport-category airplanes is very infrequent. The accident exposure of persons occupying stretchers is, therefore, considerably less than that for airline passengers in general. Because only those persons whose medical condition dictates travel on a stretcher can occupy the stretcher carrier during TT&L, granting the requested relief would not set a precedent for the traveling public in general.

## **The FAA's decision**

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not significantly affect the overall level of safety provided by the regulations. Therefore, pursuant to the authority contained in 49 U.S.C. 40113 and 44701 delegated to me by the Administrator, I grant L-3 Communications an exemption from the requirements of 14 CFR 25.562 and 25.785(b). The exemption is granted to the extent necessary to allow the installation of medical stretcher carriers on Boeing Model 787-8 airplanes, provided that

occupancy during TT&L is limited to non-ambulatory persons. 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 February 23, 2016.

/s/

Dionne Palermo  
Acting Manager, Transport Airplane Directorate  
Aircraft Certification Service