

**Exemption No. 9308**

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**Flight Structures Inc. (FSI)**

for an exemption from §§ 25.785(d),  
25.813(b), and 25.857(e) of Title 14, Code of  
Federal Regulations

**Regulatory Docket No. FAA-2006-  
25985**

**GRANT OF EXEMPTION**

By letter dated September 27, 2006, Dana Krueger, Director, Certification and Quality Assurance, Flight Structures Inc., 6330 31<sup>st</sup> Avenue NE, Marysville, Washington, petitioned for an exemption from §§ 25.785(d), 25.813(b), and 25.857(e) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would allow carriage of 5 non-crewmembers (commonly referred to as supernumeraries) located aft of the flight deck in addition to the maximum of 4 on the flight deck on Airbus Model A300B4-600/-600R airplanes which have been converted from a passenger to an all freighter configuration.

**The petitioner requests relief from the following regulations:**

**Section 25.785(d).** At Amendment 25-32, § 25.785(d) states, in pertinent part, that a firm handhold or rail along each aisle must be provided if the seatbacks do not allow a firm handhold.

**Section 25.813(b).** At Amendment 25-88, § 25.813(b) requires that each emergency exit addressed by § 25.810(a) have adjacent assist space.

**Section 25.857(e).** At Amendment 25-93, § 25.857(e) requires, in pertinent part, that when a Class E cargo compartment is

installed on the airplane, the airplane is used for carriage of cargo only.

### **Related sections of the regulations:**

**Section 121.583(a)** contains, in pertinent part, a listing of categories of people who may be carried aboard an airplane in part 121 service without complying with all the requirements of part 121 pertaining to carriage of passengers.

### **Summary of petitioner's supportive information:**

The following summarizes the petitioner's supportive information. The complete petition may be found in the Docket Management System, U.S. Department of Transportation, docket No. FAA-2006-25985. You may view dockets on the Internet at <http://dms.dot.gov>.

The Airbus A300B4-600/-600R model airplane is being converted to an all-freighter airplane under FAA Supplemental Type Certificate (STC) project no. ST7859SE-T. An all-cargo main deck will be installed.

To optimize cargo missions, accommodation for 5 people is provided between the flight deck and the main deck Class E cargo compartment, in the vicinity of the Door 1 exits. Except for sections from which the petitioner is requesting exemption, all design criteria applicable to the carriage of passengers have been taken into account for this seating arrangement design.

- A 9g cargo net and smoke-tight curtain, which isolate the main deck cargo compartment from the zone where the supernumeraries are seated, provides protection from injury and penetration of smoke and noxious gases.
- Two emergency exits at Door 1 left and right remain operable. Both are equipped with escape slide rafts.
- Fixed oxygen bottles and automatically deployed masks ensure an oxygen supply in the event of a planned or unplanned depressurization. They will supply oxygen for all seated occupants for the maximum possible event duration. A supplement to the airplane flight manual that defines flightcrew and supernumerary procedures during depressurization will be carried on board the airplane.

### **Extent of Relief Sought**

The main purpose for this request for exemption is to allow carriage of up to 5 supernumeraries besides the maximum 4 flight deck occupants on an all-freighter airplane. The limit on total occupancy for the airplane would be 9.

Section 25.785(d) Amendment 25-32 requires that handgrips be installed when seatbacks do not allow a firm handhold but the petitioner maintains that these are mainly intended for cabin attendants walking along the aisles. Occupants will be instructed to remain seated with seat belt fastened as far as practical. FSI says there should be limited movement of these personnel during turbulence.

Section 25.813(b) Amendment 25-88 requires that adequate assist space be provided next to each exit equipped with slides. Assist space is not provided next to the emergency exits in this airplane. It is not considered necessary because personnel will be trained for door operation and autonomous evacuation. Both doors have a power assist opening system and a self-deploying slide.

Section 25.857(e) Amendment 25-93 requires that an airplane with a Class E cargo compartment be used only for carriage of cargo. FSI is seeking relief to allow carriage of 5 non-crewmembers on an all freighter airplane with a Class E cargo compartment. FSI says that the cargo operators need support personnel for safe handling of cargo during loading or offloading of a cargo flight. Support personnel at arrival are especially important if the airplane is carrying perishable goods or live animals. Transporting support personnel is the lowest cost, most reliable method of ensuring their availability at the destination airport.

FSI says that cargo such as live animals, hazardous materials, valuable or perishable cargo cannot be left unattended, even for the duration of a flight. Personnel qualified in their handling are necessary on the airplane and increase the safety and efficiency of the operation. Cargo operators also need qualified personnel for operation and maintenance purposes at various locations. Carrying such personnel aboard their cargo flights means these personnel do not have to travel by regular passenger flights.

The airworthiness standards applicable to the FSI supplemental type certificate for the Airbus A300B4-600/-600R airplanes consider carriage aboard commercial passenger flights of:

- a.** Crewmembers, including flightcrew and cabin attendants, who are each assigned duties for the operation of the airplane.

- b.** Passengers, who have no expected ability in the use of emergency provisions and therefore need to be attended.

FSI seeks this exemption for qualified personnel trained in autonomous use of emergency equipment and emergency exit operation. Only personnel capable of performing these tasks on their own will be allowed access to these seats.

The FAA has previously granted exemptions to allow carriage of six non-crewmembers on Airbus Model A300-600/-600R airplanes with a full freighter configuration (Regulatory Docket No. F -2001-10136).

### **Public Interest**

Flight Structures, Inc. maintains that granting this exemption is in the public interest because operators will be able to operate more efficiently and economically under optimal safety conditions if they can carry their personnel from one place to another. Support people are needed at departure and arrival for loading and unloading of many kinds of cargo such as live animals or perishable goods. Many kinds of cargo cannot be left unattended, even during the flight, and need personnel qualified in their handling. Transporting them with the cargo ensures they will be available when needed and is more economical. Transporting personnel needed for operation and maintenance at various locations is also more economical than flying them on regular passenger flights.

### **Notice and Public Procedure Provided**

On October 19, 2006, the FAA published notice of the petition for exemption in the Federal Register and requested comments from the public. No comments have been received.

### **The FAA's analysis/summary is as follows:**

The FAA considers that it is in the public interest to issue an exemption for the following reasons:

- These supernumeraries are seen as a benefit to airplane safety and efficient operations of air cargo.
- A significant disruption of air commerce could occur if the petition were not granted.
- We have granted several previous exemptions for the carriage of supernumeraries on cargo airplanes.

The certification regulations for transport category airplanes address airplane occupants as being either “crew” or “passengers.” Because of differences in training, physical capabilities, and other factors (such as familiarity with the airplane), the means required by part 25 to address emergency evacuation and emergency equipment differ for passengers and crewmembers.

Because supernumeraries are not crewmembers with respect to part 25, they must be considered “passengers” by default. But supernumeraries do hold a special status because of their training and other factors. The FAA, therefore, has granted certain exemptions to allow carriage of supernumeraries on cargo airplanes without compliance with all of the part 25 standards for passengers, provided that certain other conditions are met. Those conditions have varied depending on the airplane design, the nature of the proposal under consideration, and the number and location of persons to be carried.

The requirement of § 25.785(d) Amendment 25-32 for handholds is to ensure that occupants have a means to steady themselves in moderately rough air while traversing the main aisles of typical passenger airplanes. On the proposed airplane, the occupied area is very small, with no aisles and nowhere to go, and it is possible to return to each seat very quickly. Therefore, we concur with the petitioner that it is not necessary to provide dedicated handholds beyond those that may be already incidentally available. Accordingly, the petition in this regard is granted.

With respect to the lack of an assist space adjacent to each exit as required by § 25.813(b) Amendment 25-88, the FAA has determined that the five non-crewmembers will have a higher level of training than would a typical passenger, and will, therefore, have less need for crew assistance. Additionally, the flightcrew can easily provide instructions and some physical assistance to non-crewmembers, if needed, because the non-crewmembers would be seated in relatively small confines within easy access of the flight deck.

The petitioner has requested relief from requirements of § 25.857(e) Amendment 25-93, which permits carriage of only cargo when a Class E cargo compartment is installed on the airplane. Class E cargo compartments are usually remote from the flightdeck and encompass the entire interior of the airplane. The means of controlling fires that might occur in the cargo compartment is to starve the fire of oxygen. This is accomplished by depressurizing the airplane and maintaining an altitude that will not support combustion. For this reason, only crewmembers are permitted on board such airplanes. The supernumeraries will be located just aft of the flightdeck.

The FAA has determined that, due to the way that fire in the cargo compartment is to be controlled, supernumeraries on board the airplane must have been found physically fit by the operator. Supernumeraries must also have been briefed on

use of emergency equipment. These limitations are consistent with previous approvals and will be included in this approval. Also, there must be suitable means of preventing smoke penetration into occupied areas. The petitioner's design accounts for this by providing a smoke barrier for the supernumeraries located aft of the flightdeck, which must comply with smoke penetration requirements.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not affect the 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, Flight Structures Inc., is hereby granted an exemption from §§ 25.785(d), at Amendment 25-32, 25.813(b), at Amendment 25-88, and 25.857(e), at Amendment 25-93. The petition is granted to the extent required to permit type certification of Airbus Model A300B4-600/-600R airplanes which have been converted from a passenger to a freighter configuration with provisions for the carriage of supernumeraries. The following limitations apply and these limitations must be documented in the Limitations Section of the airplane flight manual (AFM):

- 1.** A maximum of 5 supernumeraries may occupy the area just aft of the flight deck. The total maximum occupancy of the airplane is limited to 9 persons, including the occupants of the flight deck.
- 2.** Supernumeraries are limited to the categories specified in § 121.583(a)(1) through (a)(7).
- 3.** Prior to each flight, a flightcrew member must brief each supernumerary on the use of the exits, including instructions to inspect the ground to determine whether a safe landing can be achieved before using an assist means and emergency equipment. This briefing must also include an explanation of all the alert signals, their meaning, and the required supernumerary response.
- 4.** The operator must determine that each supernumerary is physically able to accomplish the necessary emergency procedures.
- 5.** A standard airplane public address (PA) system must be installed. It must be audible throughout the supernumeraries' seating area.
- 6.** A flightcrew-operated aural or visual annunciation which is recognized throughout the supernumeraries' seating area must be installed to indicate during turbulence or the presence of smoke in the class E cargo compartment that persons must return to their seats.

7. An automatically activated aural and visual decompression signal immediately recognizable throughout the cabin area must be provided to notify supernumeraries when to don oxygen masks.
8. An FAA-approved training plan must be developed by the applicant to instruct the supernumeraries about procedures and use of equipment related to ditching and emergency evacuation.

Issued in Renton, Washington, on June 6, 2007.

/s/Stephen P. Boyd \_\_\_\_\_  
Stephen P. Boyd  
Acting Manager, Transport Airplane  
Directorate  
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