

Exemption No. 8335B

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

In the matter of the petition of

Israel Aircraft Industries, Ltd.

for an exemption from §§ 25.785(j) and
25.1447(c)(1) of Title 14, Code of Federal
Regulations

**Regulatory Docket No.
FAA-2004-17212**

GRANT OF EXEMPTION

By letter dated July 3, 2006, Mr. Ami Rogev, Director, Certification, Aircraft Division, Bedek Group, Israel Aircraft Industries, Ltd., (IAI), LOD 70100, Israel, petitioned to amend Exemption 8335A, which was issued on June 15, 2006. That exemption granted IAI relief from §§ 25.785(j) and 25.1447(c)(1), allowing the carriage of two non-crewmembers (commonly referred to as supernumeraries) on Boeing Model 737-300 airplanes converted from a passenger to a freighter configuration. In support of its petition, IAI submitted addition information, clarifying the configuration and intended use of the freighter.

The petitioner requests relief from the following regulations:

Section 25.785(j), Amendment 25-72, requires that there be a firm handhold, handgrip, or rail “along each aisle to enable persons to steady themselves while using the aisles in moderately rough air.”

Section 25.1447(c)(1), Amendment 25-41, requires, in pertinent part, that oxygen masks be immediately available to each seated occupant, be automatically deployed with manual backup, and exceed the number of seats by ten percent, with the extra units distributed evenly throughout the cabin.

Related regulations:

Section 121.583(a) lists categories of people who may be carried aboard an airplane in part 121 service without complying with all the requirements of part 121 which pertain to carriage of passengers.

Background

On February 17, 2004, IAI submitted a Petition for Exemption from meeting certain requirements related to the carriage of two non-crewmembers in addition to two flight crewmembers and two observers on a freighter airplane. Non-crewmembers are persons not necessarily assigned some duty associated with operation of the airplane and are commonly referred to as supernumeraries. On June 3, 2004, the FAA issued a Grant of Exemption (Exemption No. 8335) which included a limitation prohibiting entry of the supernumeraries into the Class E cargo compartment during flight.

On January 24, 2006, IAI submitted a petition to amend Exemption No. 8335 to remove the limitation, so that supernumeraries could enter the Class E cargo compartment during flight to care for animals being carried in the compartment. On June 15, 2006, the FAA issued Exemption No. 8335A. The exemption was predicated on our understanding that the Class E cargo compartment was to be used solely for carriage of live animals and, therefore, that a change in the required fire fighting procedures was necessary in that compartment. Accordingly, Exemption No. 8335A was based on use of manual fire fighting equipment rather than decompression and oxygen starvation, and it prohibited entry into the class E compartment during flight.

IAI has now submitted a petition to amend Exemption No. 8335A, because the configuration of the freighter and its intended use are different from those upon which the exemption is predicated. As discussed below, IAI asks that—of the 13 limitations imposed in Exemption No. 8335A—3 be revised and 3 be deleted. No change is requested to the remaining 7 limitations. IAI also requests that one limitation be added.

The petitioner supports its request with the following information:

“Actually the airplane configuration of the IAI special freighter and the intended use are different than those assumed [in Exemption No. 8335A]. The purpose of this application is to present additional information in order to request modification of the exemption conditions as imposed in 8335A.

“The 737-300 Special Freighter with Solid 9g Barrier is a small cargo airplane with a main deck cargo compartment capable of carrying up to 9 containers or pallets. The airplane has a solid 9g barrier at Station 344 which serves also as a smoke barrier. The space between the flight deck and the smoke partition has been defined as a supernumerary compartment where two supernumerary persons as defined by FAR 121.583 may be carried.

“The airplane is being used for carriage of unified cargo only -Pallets or Containers. There is a need in the cargo operations market to enable carriage of live animals in some of the forward pallets in a mixed configuration with other normal cargo in containers/pallets aft of the animal container/pallet.

“The supernumerary persons would not have seats within the cargo compartment but would enter occasionally to check on condition of the live animals as needed.

“As the cargo loading system is certified for all flight load conditions, there is no hazard to persons in the compartment from cargo shifting during flight.

“The entry to the compartment will be forbidden during takeoff and landing. A pilot activated visual alert signal will warn the persons in the compartment to go back to their seats in the area FWD of the 9g barrier if turbulence is expected.

“The supernumerary persons are not regarded as fire fighters. They will be prohibited from entry into the cargo compartment in case of fire. A pilot activated visual alert signal will warn the persons in the compartment to exit and go back to their seats upon indication of smoke. Once they are out of the compartment, the pilot will activate the fire fighting procedure of decompression, regardless of the question if there are live animals on board. It is considered that the safety of the airplane comes first and that the potential harm to the live animals is improbable due to the remoteness of the fire probability and the reliability of the dual smoke detection system.

“In order to ensure the safety of the supernumerary persons in case of a cabin pressure loss the currently approved configuration already includes a fixed oxygen source for each supernumerary person located near the seat and an automatic alert signal when there is a need to use this oxygen. The size of the compartment is so small that as long as the supernumeraries stay within their compartment they are within the vicinity of the oxygen source and do not need an additional portable source. In the lavatory the passenger dropping mask oxygen generator is maintained.

“A portable oxygen bottle and mask is added for each supernumerary that is entering the cargo compartment in order to provide protection for a case of sudden decompression. The bottle must be carried by the supernumerary at all time within the cargo compartment. An audio alert signal in the cargo compartment which is activated automatically by cabin pressure and has a manual activation option, will alert any person in the cargo compartment of the need to don the oxygen mask and return to their seat.

Copies of the petitions submitted by IAI and the FAA’s Partial Grants of Exemption are available at <http://dms.dot.gov> (Select Simple Search and enter Docket Number 17212.)

Public Interest

The original petition for exemption from IAI, dated February 17, 2004, contained the following statement of public interest:

“The granting of the requested exemption will be in the public interest, as by allowing the carriage of the supernumerary persons aboard the cargo flights the operators will be able to optimize the safety conditions of the cargo operation, to make the operation more efficient and to improve the utility of the airplanes and the airports.”

Notice and Public Procedure

The FAA has determined that good cause exists for waiving the requirement for publication of a summary of the petition for public comment. No summary was published in the Federal Register, because a summary of the original petition was published in the Federal Register on March 19, 2004, and no public comments were received.

The FAA's analysis is as follows:

By allowing the carriage of supernumeraries aboard cargo flights, operators will be able to optimize the utility of the airplanes and the airports. The FAA considers the petitioner's proposal to be in the public interest for the following reasons:

The FAA has granted several exemptions for the carriage of supernumeraries on cargo airplanes;

The supernumeraries would benefit airplane safety and increase the efficiency of the petitioner's air cargo operations; and

A significant disruption of air commerce could occur if the petition were not granted.

The FAA considered IAI's petition for amendment with reference to the passenger safety requirements of part 25 but with due consideration of “persons” other than passengers. Such “persons” or “supernumeraries” are traditionally given special status because of (1) certain knowledge and abilities attributed to them as a result of training and (2) the imposition of requirements for special equipment to protect the “persons.”

There are differences between the cabin configurations envisioned by part 25 and the configuration proposed by the petitioner as well as differences between the normal activities of passengers and those of supernumeraries caring for live animals. The FAA has two safety concerns regarding the supernumeraries: having them move about during periods of turbulence and providing them with supplemental oxygen, as needed.

Section 25.785(j) requires handholds to enable passengers to steady themselves when moving about the cabin in moderate turbulence. If supernumeraries may enter the Class E cargo

compartment, this compartment must be considered in regards to this requirement. The FAA recognizes that it would be impractical to require handholds in the Class E cargo compartment. We find that an acceptable level of safety would be provided without handholds, if a aural or visual annunciation in the Class E cargo compartment, operated by the flightcrew, indicates at the onset of turbulence that persons must return to their seats.

Section 25.1447(c)(1) requires that oxygen dispensing units be immediately available and automatically presented to seated passengers, with extra units uniformly distributed throughout the cabin. The FAA is concerned that supplemental oxygen be provided to supernumeraries as safely as it is to passengers. To that end, we compared the likely response of normally seated passengers observing the automatic presentation of masks throughout the cabin with that of supernumeraries who may or may not notice a "decompression signal." We concluded that requiring supernumeraries who leave the vicinity of the seats to carry portable oxygen generation devices provides a level of safety equivalent to that provided by § 25.1447(c)(1).

In terms of the limitations imposed in Exemption No. 8335A, we have made the following determinations:

Limitation 1 is deleted. This limitation specified that the class E cargo compartment be used solely for the carriage of live animals. This limitation is not required, because the supernumeraries will be seated outside the class E cargo compartment, and the methods of extinguishing an in-flight fire will be decompression and oxygen starvation, as required by the regulations. The Class E cargo compartments in the airplanes that will be covered by this exemption will sometimes be used for the carriage of cargo other than animals.

Limitations 7 and 8 are deleted, because they specify certain fire fighting equipment and protective breathing equipment. Since IAI has proposed to use decompression and oxygen starvation as the sole means of fire fighting—in compliance with FAA approved flight operational procedures—there is no need for those limitations.

Limitation 9 is deleted, because it duplicates part of limitation 3 in Exemption No. 8335B.

Limitations 10 and 11 have been revised to define the cabin area as the seating area for the supernumeraries and are renumbered as Limitations 6 and 7.

In conclusion, the FAA has determined that existing regulations for type certification do not address occupants who are neither crew nor passengers, and thus an exemption is warranted to permit carriage of these occupants.

FAA's decision

In consideration of the foregoing, I find that a 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, Bedek Group, Israel Aircraft Industries, Ltd., is hereby granted an exemption from 14 CFR 25.785(j) and 25.1447(c)(1). The amended petition is granted to the

extent required to permit type certification of Boeing Model 737-300 series airplanes with provisions for the carriage of supernumeraries. Exemption 8335A is superseded by the current Grant of Exemption.

The current Grant of Exemption provides that supernumeraries may enter the Class E cargo compartment during flight, subject to the following limitations, which must be included in the limitations section of the Airplane Flight Manual:

1. Entrance to the Class E cargo compartment may not be allowed during takeoff or landing.
2. The door to the Class E compartment must be closed at all times, except for entry and exit. The Class E compartment may not be entered in case of fire in the compartment. A placard—located on a partition in a conspicuous place adjacent to the door which is visible from the entrance side—must include these instructions.
3. Each supernumerary entering the Class E compartment in flight must be provided with a portable oxygen bottle and mask which must be stored in a common area. The amount of oxygen must be sized adequately for continuous and uninterrupted use during worst case flight duration following decompression. The bottle and mask must be carried at all times by the supernumeraries entering the compartment. The supernumeraries must be trained to use this equipment.

In addition to the portable oxygen units, there must be a fixed oxygen source available at each supernumerary seat.

4. The pre-flight briefing must include an explanation of all the alert signals, their meaning, and the required supernumerary response.
5. In addition, the Airplane Flight Manual must instruct the flight crew to brief the supernumeraries before each flight about the limitations and procedures in case of entry into the Class E compartment in flight.
6. An evacuation signaling system must be installed throughout the supernumeraries' seating area to provide the emergency egress notification to the occupants of the supernumeraries seating area.
7. A standard airplane public address (PA) system must be installed. It must be audible throughout the supernumeraries' seating area and must be activated either from the flightdeck or from the supernumerary seating area.
8. An FAA-approved training plan must be developed by the applicant to instruct the supernumeraries about the prohibition against smoking as well as about procedures and use of equipment, related to ditching, fire fighting, and emergency evacuation.

9. A flightcrew operated aural or visual annunciation which is recognized in accessible areas in the Class E compartment 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. Appropriate procedures and limitations must be established to ensure that the flightcrew signals the supernumeraries to return to their seats at the onset of turbulence or the presence of smoke in the class E cargo compartment and prior to landing.

This exemption will remain in effect until it is superseded or rescinded.

Issued in Renton, Washington, on November 2, 2006.

/s/ Ali Bahrami
Manager
Transport Airplane Directorate
Aircraft Certification Service