Exemption No. 8057A

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

In the matter of the petition of **Pemco World Air Services** for an exemption from §§ 25.785(j), 25.855(a), 25.857(e), and 25.1447(c)(1) of Title 14, Code of Federal Regulations	**Regulatory Docket No. FAA-2003-14587**

AMENDED PARTIAL GRANT OF EXEMPTION

By letter no. PEMCO-01252016-00005, dated January 24, 2016, Mr. Victor Burnett, Director of Engineering, Pemco World Air Services, Inc., 4102 N. Westshore Blvd., Tampa, FL 33614, on behalf of Pemco World Air Services, Inc., petitioned the Federal Aviation Administration (FAA) for an amendment to exemption no. 8057 to permit carriage of two additional non-crewmembers (also known as supernumeraries) on all-freighter Boeing Model 737-200 and -300 airplanes, for a total of four supernumeraries. The amended exemption, if granted, would provide relief from the requirements of §§ 25.785(j), 25.855(a), 25.857(e), and 25.1447(c)(1) of Title 14, Code of Federal Regulations (14 CFR).

The petitioner requests relief from the following regulations:

> **Section 25.785(j),** at Amendment 25-88, requires, in pertinent part, that there be a firm handhold to enable occupants to steady themselves when moving through the aisles in moderately rough air.
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> **Section 25.855(a),** at Amendment 25-93, requires that each cargo and baggage compartment not occupied by crew or passengers meet one of the class requirements of § 25.857.
>
> **Section 25.857(e),** at Amendment 25-93 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.
>
> **Section 25.1447(c)(1),** at Amendment 25-87, requires, in pertinent part, that oxygen dispensing units must be automatically presented to the occupants before the cabin

altitude exceeds 15,000 feet. The total number of dispensing units and outlets must exceed the number of seats by at least 10 percent. The extra units must be uniformly distributed throughout the cabin as practicable.

Related Section of 14 CFR:

Section 121.583(a) contains, in pertinent part, a listing of categories of persons 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.

The following indented section quotes, in pertinent part, the petitioner's petition, with minor edits for clarity.

Pemco is requesting an amendment to the current exemption no. 8057 to permit carriage of 2 additional non-crewmembers on an all-freighter airplane. This request would change the current restriction of 2 non-crewmembers to 4 non-crewmembers.

Pemco notes that precautions and instructions for the current exemption no. 8057 has not changed for the existing 2 non-crewmembers. The oxygen supply and associated instructions and warning, including signs and notifications, are the same as described in exemption no. 8057 for 2 non-crewmembers.

For the 2 additional non-crewmembers in the vestibule, the associated instructions and warnings are identical to the B737-300. Oxygen supply in case of depressurization is ensured by portable oxygen bottles installed directly adjacent to the double flight-attendant seat (supernumerary). Portable oxygen masks are connected to the high-pressure outlet. When oxygen masks need to be used, occupants are notified by a chime and by lighted signs located within view. Activation of signs has not changed.

The original Supporting Argument of exemption no. 8057 also applies to the this petition for amendment.

The following indented section paraphrases supporting arguments from the petitioner's original petition letter dated February 12, 2003, as that letter resulted in the issuance of exemption no. 8057.

Description of the airplane

The Boeing Model 737 is a pressurized, low-wing, transport-category airplane powered by two engines. This jet airplane is designed for low fuel burn and short-to-medium range operations. Pemco owns supplemental type certificates (STCs) SA2968SO, SA2969SO, SA2970SO, and SA2971SO, that convert the passenger aircraft to Quick Change and to Pure Freighter. This exemption is being sought for the freighter configuration, which has a 9G bulkhead between fuselage station 349 and 353, that acts as both 9G cargo barrier and smoke barrier.

The cabin area between the 9G barrier and the cockpit bulkhead remains the same as the passenger configuration. That is to say that the dual flight attendants seat remains, along with all the standard Boeing features provided for the two flight attendants.

Equivalent Level of Safety

Pemco considers that an equivalent level of safety to the parts of the requirements from which relief is sought is achieved by design precautions and by the introduction of airplane flight manual instructions for the Pemco freighter converted airplane that are identical to those for the B737-200/300 airplane.

The oxygen supply and associated instructions and warnings are identical to those for the B737-200/300 airplane. Oxygen supply in case of depressurization (as required in case of smoke warning in the main deck cargo compartment) is ensured by drop-down oxygen masks, which remains unchanged from the configuration delivered by Boeing. When oxygen masks need to be used, occupants are notified by a chime and by lighted signs located within view. These signs can be either manually activated by the flight crewmembers or automatically turned on by an altitude pressure switch. The masks automatically deploy as they would if the airplane remained in passenger configuration.

The crew-non-flight-crew two-way communication system remains the same as delivered with the airplane by Boeing. Two-way communication with the cockpit is possible through dedicated communication panels. Other emergency equipment, as required by the applicable Airworthiness Standards, is also provided. Pemco believes that an equivalent level of safety to the parts of the requirements from which relief is sought will be achieved by design precautions and by defining in the Pemco Flight Manual Supplement Limitations section the conditions under which non-flight crew persons may be carried.

Both L1 and R1 doors and their emergency slides remain installed and active.

Extent of the Requested Regulatory Relief

The main purpose of this request for exemption is to permit carriage of non-crew persons on an all-freighter airplane. This is the reason for requesting exemption from sections 25.855(a) and 25.857(e). Other sections from which exemption is sought are secondary to this one. Exemption from the aforesaid sections is sought to the following extent:

Section 25.857(e): Relief is sought to permit carriage of two non-crew persons on an all-freighter airplane, which has a class E cargo compartment.

Supporting Arguments

Cargo operators need a number of support personnel for safe loading and offloading of cargo. Such personnel are obviously needed both at departure and destination of a cargo flight. It is particularly important that the cargo handlers are present upon airplane arrival if perishable goods or live animals are carried. The most efficient, surest, and cheapest way to assure their attendance at the destination airport is to transport them aboard the cargo flight.

Cargo operators may have to carry cargo such as live animals, hazardous materials, or valuable or perishable goods, that cannot be left unattended, even for the duration of a flight, and the presence of personnel qualified in their handling is necessary on the airplane on which they are carried. Safety and efficiency of the operation will therefore be enhanced.

Cargo operators also need to have qualified personnel for operations and maintenance purposes at various locations. They will optimize their missions if they are permitted to carry their personnel aboard their cargo flights, thus saving travel on regular passenger flights.

The Airworthiness Standards applicable to the type certification of the B737-200/300, as well as the current Airworthiness Standards, do consider carriage aboard commercial flights of crewmembers, including flight crewmembers and cabin attendants, who are assigned duties associated with the operation of the airplane, and passengers who have no expected ability in the use of emergency provisions and therefore need to be attended.

The categories of occupants for which this exemption is sought are qualified aeronautical personnel. Furthermore, they are trained in the autonomous use of emergency equipment and emergency exit operation. The operator will also be required to allow access to these seats only to persons found able to perform these tasks on their own. Therefore, the assist space adjacent to the emergency exits required by Section 25.813(b), while available for assisting the passengers in evacuating, is not necessary, because the categories of personnel considered will be trained for door operation and autonomous evacuation. Both doors are equipped with self-deploying slides.

Public Interest

Pemco presents the argument that the granting of this exemption will be in the public interest by allowing US airlines to compete with other freighter operators with such a configuration. If allowed to carry non-flightcrew persons aboard their cargo flights, the operators of the Pemco converted 737-200/300 airplanes will be able to operate under optimal safety conditions, to render their operation more efficient, and to realize substantial savings in carrying their personnel from one place to another. The reasons for these benefits are developed in the arguments above.

Request for Waiver of Publication

No new design feature is introduced and the reasons presented for exemption are similar to those for which an exemption has been previously granted for other aircraft types. [See exemption no. 5864 and 7799]. Therefore, this request will not set a precedent, therefore Pemco requests a waiver for the publication and comment period, so that operators of Pemco cargo-conversion [airplane] operators can rapidly begin to reap the benefits of a more efficient operation.

Pemco believes that good cause exists to waive the publication and comment requirements of §§ 11.85, 11.87, and 11.89. In particular, we feel that the main purpose

of this petition and the reasons presented in it are identical to those for exemptions previously granted by the FAA.

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 Pemco.

The FAA's analysis

The FAA agrees with the reasons the petitioner provides, and that the number of supernumeraries may be increased from two to four in certain circumstances. However, we have determined that additional limitations are necessary regarding the number of supernumeraries allowed to access the Class E cargo compartment for different types of operations.

The FAA has previously granted exemptions for supernumerary in-flight access to the Class E cargo compartment to other petitioners, provided that certain conditions are met. These conditions have varied, depending on the airplane design, the number of persons involved, and the type of cargo permitted to be transported in the main-deck Class E cargo compartment, and the number of persons needed in the cargo compartment for the type of operations. We have divided access to the cargo compartment into three different types of operations:

1. Carriage of live animals requiring care and attention during flight, and associated material only. No other cargo.

2. Cargo only. No live animals requiring care and attention during flight.

3. Carriage of live animals requiring care and attention during flight, and other cargo.

Animals shipped by air may need supernumeraries on board for their care and attention during flight. We have granted exemptions in the past for larger numbers of supernumeraries with access into the main-deck cargo compartment under certain conditions. These conditions have included limiting the permitted cargo to live animals and associated cargo only. We have considered that live animals are less flammable cargo than could be other cargo; therefore, we have allowed less-restrictive access for this type of cargo configuration.

Regarding the second type of operation (cargo only), we have limited access into the cargo compartment to a maximum of three supernumeraries only. This number of supernumeraries should be capable of addressing the access needs for the hazardous materials and valuable or perishable goods during flight. Therefore, the maximum number of supernumeraries allowed into the Class E cargo compartment to care/attend to hazardous cargo is three.

Concerning the third type of operation (live animals requiring care/attention during flight, and other cargo), we understand that this is a common operation. The addition of cargo to a live-animal carriage operation causes additional risk of exposure from the smoke and fumes of a fire. As the number of supernumeraries increases, and the duration of exposure increases, we must provide for a reasonable level of protection from smoke inhalation. Several factors are

considered when making a determination for the acceptable level of safety in this case. Past industry practice, the number of supernumeraries with access, the airplane configuration, cargo compartment size, limited egress paths, potential cargo present, and the duration of exposure are all relevant factors.

We have determined that a maximum of four supernumeraries may be allowed access into the main-deck Class E cargo compartment, in-flight, for operations types 1 and 3 (above) only. For type 2 operations, the maximum number of supernumeraries allowed access is three.

As compared to exemption no. 8057, and consistent with relief granted to similar petitioners, this amended exemption changes limitation no. 1 to allow up to four supernumeraries on the airplane, and adds limitation no. 10 to specify the number of supernumeraries who can access the Class E cargo compartment for different types of cargo operations.

The FAA's decision

In consideration of the foregoing, I find that a partial grant of amended 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, Pemco World Air Services is hereby granted a partial amendment to exemption no. 8057 to provide relief from the requirements of Title 14, Code of Federal Regulations (14 CFR) 25.785(j), 25.855(a), 25.857(e) and 25.1447(c)(1). The petition is granted to the extent required to permit type certification of Boeing Model 737-200 and 737-300 airplanes that have been converted from a passenger to a freighter configuration, with provisions for the carriage of up to 4 supernumeraries with limited in-flight access to the cargo compartment. The following limitations apply and must be documented in the limitations section of the airplane flight manual (AFM):

1. Occupancy outside the flightdeck is restricted to a maximum of four persons.
2. Supernumeraries are limited to the categories specified in 14 CFR 121.583(a)(1) through (7).
3. Each supernumerary must be briefed by a flightcrew member on the use of the exits and emergency equipment prior to each flight.
4. The operator must determine that each supernumerary is physically able to accomplish the necessary emergency procedures.
5. Each supernumerary must be provided with a portable oxygen source with a mask connected to it. The supernumerary must carry this portable oxygen source whenever they enter the Class E cargo compartment. When not in use, the portable oxygen units may be located in a common area. The supernumeraries must be trained in the use of these oxygen units. This portable oxygen equipment is not required if a limitation is placed in the AFM that prohibits the supernumeraries from being in the Class E cargo compartment during flight.
6. An aural and visual decompression signal must be provided to notify supernumeraries when to don oxygen masks. This signal must be automatically activated and be immediately recognizable throughout the supernumerary seating area and in any

accessible area in the Class E cargo compartment. This signal is not required to be recognizable in the Class E cargo compartment if a limitation is placed in the AFM that prohibits supernumeraries from being in the Class E cargo compartment during flight. The existence of this signal, and the accompanying procedures for donning a mask and activating oxygen flow, must be included in a pre-flight briefing.

7. An aural or visual annunciation must be installed to indicate that, during turbulence, persons must return to their seats. This signal must be operated by the flightcrew and be recognized in the supernumerary seating area and accessible areas in the Class E cargo compartment. This annunciation is not required to be recognizable in the Class E cargo compartment if a limitation is placed in the AFM that prohibits supernumeraries from being in the Class E cargo compartment during flight. 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 and for landing.

8. An aural or visual annunciation must be installed to indicate that, during a fire in the Class E cargo compartment, persons must return to their seats and ensure that the smoke barrier is secured (i.e., the door or curtain is closed). The annunciation must be operated by the flightcrew and must be recognized in the Class E cargo compartment. Appropriate procedures and limitations must be established to ensure that the flightcrew signals the supernumeraries to return to their seats and secure the smoke barrier at the onset of a fire. The pre-flight briefing must explain this annunciation to the supernumeraries. The pre-flight briefing, annunciation, and associated procedures and limitations to signal the supernumeraries are not required if a limitation is placed in the AFM that prohibits supernumeraries from being in the Class E cargo compartment during flight.

9. There must be a placard which indicates that the smoke barrier must be secured (i.e., the door or curtain must be closed) when no one is in the Class E cargo compartment. The placard must be located in a conspicuous place in the supernumerary seating area, either on or next to the smoke barrier. The pre-flight briefing must inform supernumeraries of this requirement and whether or not they may enter the Class E cargo compartment.

10. Main-deck Class E cargo-compartment access limitations:

    a. Supernumeraries are prohibited from being in the cargo area behind the smoke barrier during taxi, takeoff, and landing. The pre-flight briefing must inform supernumeraries of this requirement. Access to cargo compartments is limited to the main-deck Class E cargo compartment.

    b. Access into the main-deck Class E cargo compartment in-flight is allowed for only three types of operation:

        i. Carriage of live animals requiring care or attention during flight, and associated material only, no other cargo. The maximum number of supernumeraries allowed in the cargo compartment in-flight is four.

        ii. Operations for cargo only. No live animals requiring care and attention during flight. The maximum number of supernumeraries allowed in the cargo compartment in-flight is limited to three.

iii. Carriage of live animals, requiring care and attention during flight, and other cargo. The maximum number of supernumeraries allowed in the cargo compartment is four.

This exemption supersedes exemption no. 8057.

Issued in Renton Washington, on July 8, 2016.

/s/

Michael Kaszycki
Acting Manager, Transport Airplane Directorate
Aircraft Certification Service