

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

In the matter of the petition of

Asia Pacific Airlines

for an exemption from §§ 25.785(j),
25.813(b), 25.857(e) and 25.1447(c)(1) of
Title 14, Code of Federal Regulations

Regulatory Docket No. FAA-2002-12918

PARTIAL GRANT OF EXEMPTION

By letter dated April 1, 2003, Mr. Stephen L. LeaVell, Director of Operations, Asia Pacific Airlines (APA), 156 Diablo Road, Suite 203, Danville, CA 94526, petitioned for an amendment to Exemption No. 7965, previously issued on January 29, 2003. That exemption granted APA certain relief from the cargo-only provisions of § 25.857(e), and the passenger requirements of §§ 25.785(j), 25.813(b) and 25.1447(c)(1) for Boeing Model 727-200 airplanes to allow carriage of two non-crewmembers (commonly referred to as supernumeraries) when the flight deck door is latched open during taxi, takeoff and landing to provide supernumeraries access to the right flight deck window exit. The petitioner now requests that the Federal Aviation Administration (FAA) amend Exemption No. 7965 to allow carriage of two supernumeraries with the flight deck door closed during taxi, takeoff and landing and exits in the Class E compartment designated for supernumerary use in lieu of the right flight deck window exit.

The petitioner requests relief from the following regulations.

Section 25.785(j), at Amendments 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.

Section 25.813(b), at Amendment 25-88, requires, in pertinent part, that each passenger emergency floor level exit equipped with an assist means have an assist space next to it.

Section 25.857(e), at Amendment 25-60, 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), 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, and there must be two oxygen masks in each lavatory.

Related Sections of the FAR:

Section 25.812(e) at Amendment 25-88 requires floor proximity emergency escape path marking to provide emergency evacuation guidance when all sources of illumination more than 4 feet above the cabin aisle floor are totally obscured.

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 passenger-carrying airplane requirements of part 121.

The petitioner's supportive information is as follows:

“Aero Micronesia, Inc. (dba Asia Pacific Airlines) received a Partial Grant of Exemption No. 7965, dated 29 January 2003 (Regulatory Docket No. FAA-2002-12918) that allows vetted personnel to occupy the supernumerary area of B-727-200s during flight. The exemption is conditional. Asia Pacific Airlines (APA) can meet all but one condition; the cockpit door must be unlocked during takeoffs and landings in order to meet the requirement that supernumeraries have access to at least two exits (that are not locked) in the event of an emergency landing. To date the Transport Security Agency (TSA) has not agreed to the cockpit door being unlocked during flight. For all intents, the Partial Grant of Exemption gives APA no operational relief. APA believes that there are operations when it can meet all the conditions of the Partial Grant of Exemption and the requirement of the TSA if the Administrator accepts an amendment to the Partial Grant of Exemption. Therefore:

“Asia Pacific Airlines petitions the Administrator to amend Exemption No. 7965 to allow supernumeraries (typically animal handlers) to occupy the supernumerary area and E Cargo compartment during flights with the following conditions:

- "1) In addition to 1-Left, supernumeraries have access to one of the over-wing exits or the rear ventral stairs located in the Class E compartment.

- "2) An aisle that is no less than 20" wide be available to an over-wing exit or to the rear ventral stairs at all times in the Class E compartment.
- "3) Cargo in the Class E Compartment be restricted to non-combustion items.
- "4) Supernumeraries be briefed on how to use all available Emergency Exits.

“Public Interest will be served as stated in the original filing for the exemption.

“In the interest of the public, APA requests expedited handling of this petition. Further, APA requests that the 20-day public comment period be waived in accordance with similar practices in the past.”

Notice and Public Procedure Provided

On July 2, 2003, 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:

Exemption No. 7965 contains the following limitation:

The flight deck door must be latched open during taxi, takeoff and landing when supernumeraries are on board the airplane. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, listed in § 25.561(b). Appropriate procedures/limitations must be established to ensure that taxi, takeoff and landing is prohibited when the flight deck door is not latched open.

This limitation was required so that supernumeraries would have access, which would not be blocked by a closed door, to an exit on each side of the airplane in case there is a need to rapidly evacuate the airplane in an emergency. The FAA considers that it is essential to require an exit on each side of the airplane to address accident scenarios where an exit on one side of the airplane is not usable due to fire, extensive crash damage, or some obstruction outside of the airplane. The supernumerary seating area has an acceptable exit on the left side of the airplane, but does not have an exit on the right side of the airplane. Exemption No. 7965 was justified based on the right window exit in the flight deck being available to supernumeraries. The petitioner has requested that this limitation be removed and that one of the overwing exits or the rear ventral exit be designated for use by supernumeraries in lieu of the right flight deck window exit. The FAA concurs that an overwing exit on the right side of the airplane may be used in lieu of the right flight deck window exit; however, certain conditions must be met to provide an acceptable level of safety for the supernumeraries. Note that the acceptable exit is an overwing exit on the right side of the airplane and is not the rear ventral exit. The rear ventral exit is not sufficient because it is considered to be too far from the supernumerary seating area.

The petitioner was contacted and confirmed that the petition is to only address operations in regards to the carriage of supernumeraries to attend to live animals. Any operations that include the carriage of any cargo other than live animals, either exclusively or in combination with live animals, is beyond the scope of this evaluation and must be considered separately. However, cargo necessary for care of the animals may be carried. Additionally, supernumeraries may be on board the return flight to their initial departure location without live animals being carried. Limiting the cargo to live animals and the cargo needed for their care will minimize the risk of a fire in the Class E cargo compartment and provide an adequate level of safety, in conjunction with the other limitations, for the carriage of supernumeraries on the airplane.

The entrance (door and/or curtain) to the Class E compartment from the supernumerary seating area must be open during taxi, takeoff and landing when supernumeraries are on board the airplane and there is not a fire in the Class E compartment. If a door is installed, it must be latched open. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces corresponding to the emergency landing conditions specified in the airworthiness regulations. Appropriate procedures/limitations must be established to ensure that taxi, takeoff and landing is prohibited when the door and/or curtain is not open and a fire is not in the Class E compartment. Note that the door and/or curtain must be closed during other phases of flight when supernumeraries are not in the Class E compartment in order for the bulkhead to act as a smoke barrier.

Section 25.815 at Amendment 25-15 provides minimum passenger aisle widths based on typical passenger cabins and is not directly applicable to a Class E cargo compartment. An aisle between cargo and/or furnishings could be more difficult to pass through than a typical passenger aisle. In a Class E cargo compartment, cargo or furnishings may extend up to the ceiling in a non-uniform manner throughout the length of the aisle. Section 25.813(c) at Amendment 25-15 requires access from the aisle to the overwing exit. The petitioner has proposed a 20-inch aisle and passageway which leads to an overwing exit. The FAA considers that a 20-inch unobstructed aisle and passageway is acceptable. This 20-inch aisle must extend from the floor to a height adequate to support rapid egress by a 95th percentile male occupant. This height is typically considered to be approximately 73 inches, or the distance from the floor to the ceiling panels for airplanes that do not have 73 inches between the floor and the ceiling panels. Additionally, the Class E compartment must be designed to maintain this unobstructed aisle and passageway during flight load conditions, ground load conditions, and emergency landing conditions specified in the airworthiness regulations. That is, the design must prevent cargo and other items of mass from shifting or breaking loose so that they would obstruct the 20-inch aisle and/or passageway when subjected to these loads.

The certification regulations for transport category airplanes address airplane occupants as being either “crew” or “passengers.” Due to differences in the training, physical capabilities, and other considerations relevant to crewmembers and passengers, the means required by the airworthiness regulations to address emergency evacuation and emergency equipment requirements for passengers are different from those for

crewmembers. Because supernumeraries are not crewmembers, they must be considered passengers by default.

Note that this exemption does not provide relief, beyond that explicitly stated, from applicable airworthiness requirements. This exemption discusses specific regulations that must be met for approval of the proposed design, but does not discuss all the applicable regulations. As mentioned above, regulations that are applicable to passengers are applicable to supernumeraries. The following highlights some significant regulations which must be met:

- Section 25.803(e) at Amendment 25-15 requires that an escape route be established from the overwing emergency exit which is designated for supernumerary use, that the escape route be marked, and (except for flap surfaces suitable as slides) that it be covered with a slip resistant surface.
- Section 25.811 at Amendment 25-15 requires exit identifier signs, means for locating the overwing exit in dense smoke, and opening instructions marked on or near the overwing exit.
- Section 25.812 at Amendment 25-15 provides requirements for emergency lighting. Section 25.812(c) requires general illumination along the aisle that extends from the exit in the supernumerary seat area (the most forward passenger emergency exit) to the overwing exit which is designated for supernumerary use (the most rearward passenger emergency exit).

The FAA has found that smoke in a post-crash fire can obscure overhead emergency lighting, making cabin evacuation difficult. As a result, §§ 25.812 and 121.310 were amended to require floor proximity emergency escape path marking to provide emergency evacuation guidance when all sources of illumination more than 4 feet above the cabin aisle floor are totally obscured. In order to provide an adequate level of safety for supernumeraries, floor proximity emergency escape path marking, in accordance with § 25.812(e) at Amendment 25-88, must be provided.

Exemption No. 7965 is not superseded by this exemption. Either this exemption or Exemption No. 7965 may be used independently for the purpose of certification. Note that the FAA discusses in this document only the additional relief to Exemption No. 7965 that is addressed in the current petition. Other discussion on issues not affected by this relief, such as a discussion on firm handholds, is provided in the original Exemption No. 7965. However, all the limitations applicable to this exemption, including those restated from Exemption No. 7965, are provided below.

In consideration of the foregoing, I find that a partial 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, Asia Pacific Airlines is hereby granted a partial exemption from 14 CFR 25.785(j), 25.813(b), 25.857(e) and 25.1447(c)(1). The petition is granted to the extent required to permit type certification of Boeing Model 727-200 series airplanes, with provisions for the carriage of supernumeraries. The following limitations apply and

limitations 1 through 12 must be documented in the limitations section of the Airplane Flight Manual:

1. Occupancy outside of the flight deck is restricted to a maximum of two persons.
2. Occupants are limited to the categories specified in §§ 121.583(a)(1) through (7).
3. Each occupant 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 occupant is physically able to accomplish the necessary emergency procedures.
5. The entrance (door and/or curtain) to the Class E compartment from the supernumerary seating area must be open during taxi, takeoff and landing when supernumeraries are on board the airplane and there is not a fire in the Class E compartment. If a door is installed, it must be latched open. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces corresponding to the emergency landing conditions specified in the airworthiness regulations. Appropriate procedures/limitations must be established to ensure that taxi, takeoff and landing is prohibited when the door is not latched open and/or the curtain is not open. An exception to this door/curtain position requirement is when there is a fire in the Class E compartment. In that situation, the door/curtain must be closed, as indicated in Special Condition No. 10 of this document.
6. A supplemental oxygen bottle with a mask connected to it must be mounted on or immediately next to each supernumerary seat and be located so that each occupant can don the mask and activate oxygen flow while seated. The supernumeraries must be trained in the use of these oxygen units.
7. Each supernumerary must be provided with a portable oxygen source with the mask connected to it that must be carried whenever the supernumerary is not in the vicinity of his/her seat. The portable oxygen units may be located in a common area or may be the same units installed at the supernumerary seats. The supernumeraries must be trained in the use of these oxygen units.
8. An automatically activated aural and visual decompression signal immediately recognizable throughout the supernumerary seating area and any accessible area in the Class E cargo compartment must be provided to notify supernumeraries when to don oxygen masks. This signal and the accompanying procedures for donning a mask and activating oxygen flow must be included in the pre-flight briefing.

9. A flightcrew-operated aural or visual annunciation that would be recognized in the supernumerary seating area and accessible areas in the Class E compartment must be installed to indicate during turbulence that persons must return to their seats. Appropriate procedures/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.
10. A flightcrew-operated aural or visual annunciation that would be recognized in the Class E cargo compartment must be installed to indicate during a fire in the Class E compartment that persons must return to their seats and that they must ensure that the smoke barrier is secured (make sure that the door or curtain is closed). Appropriate procedures/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.
11. A placard must indicate that the smoke barrier must be secured (the door or curtain must be closed) during flight other than during taxi, takeoff and landing when occupants are not in the Class E cargo compartment. It must be located in a conspicuous place either on or next to the smoke barrier. The pre-flight briefing must inform supernumeraries of this requirement.
12. Operations are limited to the carriage of live animal cargo and cargo which is needed to care for the animals. Supernumeraries may be on board the return flight to their initial departure location without live animal cargo provided no other cargo is being carried; however, the other conditions of this exemption are still applicable to this flight.
13. An overwing exit on the right side of the airplane must be activated to serve as an emergency exit and meet the applicable airworthiness requirements.
14. A 20-inch unobstructed aisle and passageway which leads to the overwing exit, which is designated for supernumerary use and is on the right side of the airplane, must be provided. The aisle and passageway must be of a height that is adequate to support rapid egress by a 95th percentile male occupant. This height is typically considered to be approximately 73 inches or the distance from the floor to the ceiling panels. The Class E compartment must be designed to maintain this unobstructed aisle and passageway when cargo and other items of mass are subjected to the flight and ground load conditions and emergency landing conditions specified in the airworthiness regulations.

15. Floor proximity emergency escape path marking must provide emergency evacuation guidance for supernumeraries in accordance with § 25.812(e) at Amendment 25-88.

Issued in Renton Washington, on September 10, 2003.

/s/Ali Bahrami

Ali Bahrami

Acting Manager

Transport Airplane Directorate

Aircraft Certification Service