Exemption No. 18706

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

In the matter of the petition of **Prime Airport Services** for an exemption from §§ 25.785(j), 25.812(e), and 25.857(e), and 25.1447(c)(1) of title 14, Code of Federal Regulations	**Regulatory Docket No. FAA-2020-0543**

GRANT OF EXEMPTION

By letter dated May 22, 2020, Nolan Fletcher, Sr. Engineering Project Manager, STS Engineering Solutions (STS), 2000 NE Jensen Beach Blvd., Jensen Beach, FL 34957, petitioned the Federal Aviation Administration (FAA) for an exemption, on behalf of Prime Airport Services (Prime), from the requirements of §§ 25.785(j), 25.812(e), and 25.857(e) of title 14, Code of Federal Regulations (14 CFR). In a letter dated September 10, 2020, STS submitted a revised petition which added an additional request for relief from § 25.1447(c)(1).

This exemption allows Prime to carry up to two supernumeraries in the crew rest module (CRM) which is located in the Class E compartment of the Boeing Model 767-300F and 300BCF freighter airplanes.

The petitioner requests relief from the following regulations:

Section 25.785(j) at amendment 25-88, requires, in pertinent part, a handgrip or rail along each aisle to enable persons to steady themselves.

Section 25.812(e) at amendment 25-128, prescribes, in pertinent part, that floor proximity emergency escape path markings must provide emergency evacuation guidance for passengers.

Section 25.857(e) at amendment 25-93, prescribes, in pertinent part, that a Class E cargo compartment is one on airplanes used only for the carriage of cargo.

Section 25.1447(c)(1) at amendment 25-116, requires, in pertinent part, that there must be an oxygen-dispensing unit connected to oxygen-supply terminals immediately available to each occupant, wherever seated.

The petitioner supports their request with the following information:

This section quotes the relevant information from the petitioner's September 10, 2020 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-2020-0543.

Sections that are affected:

Section 121.583(a) contains a listing of categories of people who may be carried aboard an airplane in part 121 services without complying with the entire passenger-carrying airplane requirements of part 121.

1. For Cargo-Only (TC Configuration):

   Exemption from 25.857(e) requires that when a class E cargo compartment is installed on the airplane, the airplane is used for the carriage of cargo only.

2. If Access to the Cargo is Permitted (Post TC Configuration):

   In addition,

   Exemption from 25.785(j) is necessary because firm handholds are not available inside the main deck cargo compartment and the distance between the CRM and the Rigid Cargo Barrier (RCB) is 19.5 inches see figure 1.

   Exemption from 25.812(e) is necessary since the cargo compartment does not have floor proximity emergency escape path markings installed.

   Exemption from 25.1447(c)(1) is necessary since the cargo compartment does not have an automatic system for dispensing units providing the require oxygen flow.

Petitioner's Description of the Airplane

The Boeing Model 767-300F was manufactured under Type Certificate (TC) A1NM. Boeing applied for an amended TC A1NM to derivate the Boeing Model 767-300ER passenger model into a freighter, the Boeing Model 767-300BCF (Boeing Converted Freighter). Both of these models include a Class E compartment in the main deck and a flight deck consisting of a supernumerary area, forward of the 9g barrier RCB/smoke curtain. The flight deck area can provide a maximum of six seats, of which four are for the supernumeraries and two are for the captain and the first officer. (Figure 2).

The flight deck of the Boeing Model 767 Freighters (-300F/-300BCF) are equipped with No. 2 left and right flight deck windows that can be opened from inside, and were previously certified as flight crew emergency exits under TC A1NM. The right hand window has the capability to be opened from the outside of the airplane, and its means of opening is marked on the exterior airplane fuselage.

Supernumeraries are trained persons and are briefed for the duty on board the airplane. The Airplane Flight Manual contains the definition and the conditions under which the supernumerary persons may be carried, and provide specific instruction for preflight briefing. Prime Airport Services believes that an equivalent level of safety with the parts of the requirements from which relief is sought will be achieved by the design features of the Crew Rest Module (CRM) installation on the Boeing Model 767 freighter airplanes (-300F/-300BCF).

Petitioner's Description of STC ST02372AT

STC ST02372AT was issued in August 2001 and consisted of a modified LD3 Container, containing two bunk beds for use in Boeing Model 767-300F airplanes. The unit contains occupant controlled lighting, air-conditioning and heating to allow the "off duty" crew to rest outside the cockpit environment. The container was located in the forward (#1) pallet position directly across from the cargo bay access door and within the Class E cargo compartment (Figure 1).

The STC was later amended in 2010 to replace the LD3 container with a purpose built honeycomb enclosure slightly enlarged from the LD3 container and which attached directly to the cargo floor.

Both installations position the CRM door directly across from the cargo bay access door with only approximately a 19.50" separation.

The CRM is equipped with both individual and area lighting, a smoke detector which provides both an audible alarm for the CRM occupants, and a cockpit warning light in case of smoke or fire. A cockpit operated "Fasten Seatbelt Sign", two oxygen bottles with masks, a halon fire extinguisher, flashlights, and a crash axe.

Communications between cockpit and the CRM consists of a cockpit operated audible alarm in the CRM, which notifies the resting crew to return to the cockpit. The CRM occupants can also activate a switch which illuminates a light in the cockpit which indicates to the cockpit crew that their assistance is needed in the CRM.

In October 2018, an application was made to amend STC ST02372AT to include the Boeing Model 767-300BCF in its effectivity.

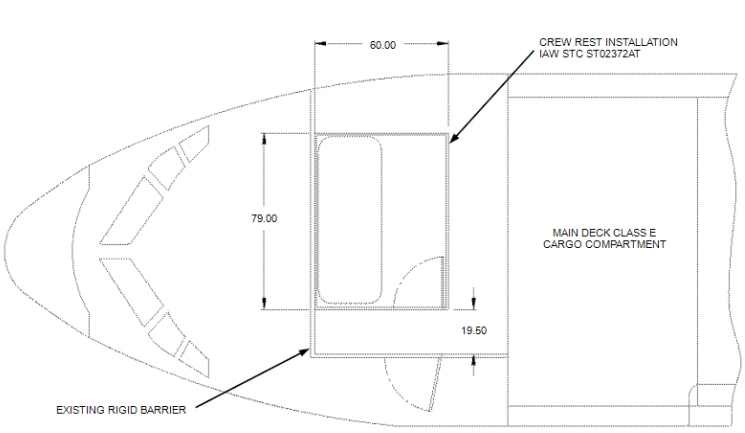

FIGURE 1. Crew Rest Module Installation STC ST02372AT

CRM Configuration

The initial type certificate configuration address the access during flight to the cargo compartment as described per the Boeing Model 767-300F flight manual for only one person. The Boeing Model 767-300BCF is allowed to have four persons per respective exemptions and flight manuals supplements. See Exemption 9696A for the Boeing Model 767-300BCF.

Prime, per STC ST02372AT, installs a CRM inside the Class E Compartment, in the forward pallet position for the purpose of providing a compartment for no more than two off duty crew members (pilot and first officer) to rest during cruising steady flights, not to be occupied for taxi, takeoff, climb, descent, and landing.

Petitioner's proposed modifications

Prime proposes several means and limitations to address the safety of the occupants in the class E compartment during flight as follows:

1. Smoke barrier installation (semi-rigid barrier at CRM entry door) (Figure 2)

The smoke barrier consists of panels that span the gap between the CRM entry door and the existing access door to the Class E compartment, thereby sealing the CRM from the Class E compartment. Two vertical panels will be installed, one located forward of the two entry doors and one aft of the doors with a horizontal panel closing off the top. Once installed, the added panels are sealed to both the CRM and the cargo bay access door.

The added aft panel will be fitted with a hinged door to allow entry into the Class E compartment.

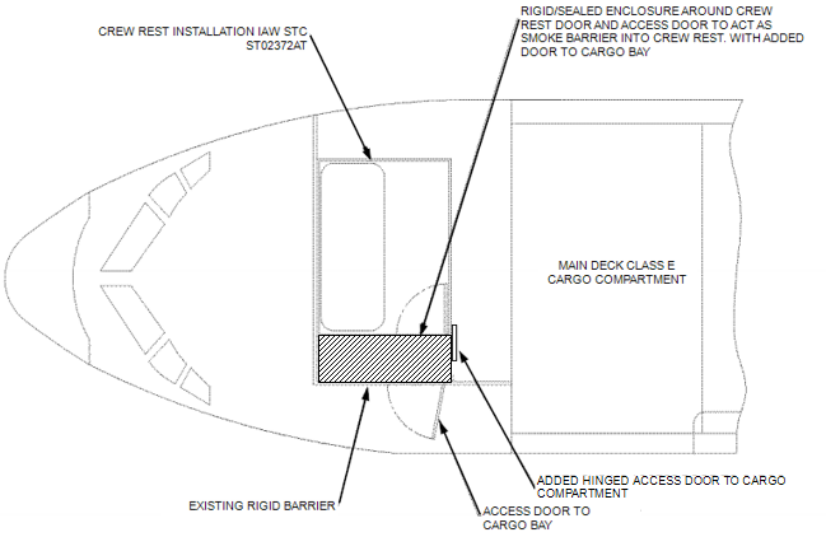

FIGURE 2. Proposed Rigid Enclosure/Smoke Barrier at CRM entry door Installation

2. Flight Crew Training

Flight crewmembers are currently trained as a part of the standard Boeing Model 767 crew training on the proper use and emergency procedures associated with the CRM.

Access to, or occupancy of the CRM and cargo areas is prohibited during taxi, take-off, climb, descent, and landing.

The existing AFM flight manual supplement for STC ST02372AT will be revised to include the following:

a. A maximum of two occupants are allowed to enter the CRM during cruising flight.

b. Each occupant entering the CRM is required to carry a flash light.

c. Prior to each flight, a flight crew member will brief each supernumerary on the following:

   i. The use of exits, including instructions to inspect the ground to determine whether a safe landing can be achieved before using an assists means, and emergency equipment.

   ii. The opening and closing procedure of the rigid cargo barrier door.

   iii. That access to the CRM and cargo areas is prohibited during taxi, takeoff, climb, descent, and landing.

   iv. That access to the CRM is limited to two off duty crew members.

v. The meaning of all required alerts.

3. Supernumerary Portable Oxygen

    a. There will be at least two portable oxygen units with a full face mask connected to it, provided for the Supernumeraries occupying the CRM during flight.

    b. The portable oxygen units will meet the performance requirements of 25.1443(a) or 25.1443(b), or the equipment will be shown to protect the supernumerary from hypoxia at an activity level required to return to his or her seat following a rapid decompression to 25,000 feet cabin altitude.

    c. The portable units are located inside the CRM. Readily available to the CRM occupants within arm's reach from the bunk beds. (Figure 5)

    d. The supernumeraries will be trained in the use of the oxygen units. The supernumeraries will also be trained in making the determination whether oxygen is being delivered.

    e. The oxygen units will be sized adequately for continuous and uninterrupted use during worst-case flight duration following smoke/decompression event, or must be of sufficient duration to allow the supernumeraries to return to their seats where additional oxygen is readily accessible for the remainder of the smoke/decompression event.

4. A Placard will be located in the supernumerary area, in a conspicuous location either on or adjacent to the RCB smoke barrier, to indicate the following for access to the Class E cargo compartment. The pre-flight briefing should inform supernumeraries of these requirements:

    a. Access to the CRM is limited to two off duty flight crew.

    b. Flashlights must be carried by each occupant when using the crew rest module

5. The CRM will have a fire extinguisher that meets the requirement of § 25.851. (existing per STC)

6. The smoke detector installed the CRM currently provides a warning light and aural alert to the occupants of the CRM. Additionally, the smoke detection system triggers the flight deck aural fire bell warning in addition to illuminating the CRM smoke annunciator, which will be relocated into the primary field of view of the flight crew. This ensures an immediate response by the flight crew.

7. In the event of smoke or fire in the cargo compartment, the flight crew must depress the Crew Rest Call (Pilots Call Panel) which alerts the CRM occupants

and then make a public address announcement stating the situation in order to alert CRM occupants to return to their seats.

8. There will be an airplane public address system capable of providing announcements from the cockpit to the CRM. This augments the current audible alarm system between the cockpit and the CRM. ARP4101/3A states that the crew rest facility shall incorporate a two-way communication system with the flight deck if the CRM is not on the main deck. Therefore, the CRM will be equipped with an interphone system for two-way communication with the flight deck.

9. In the event of a rapid decompression, the existing emergency horn in the CRM, which will be tied to the existing automatic aural alert system, will be activated in the CRM to alert the CRM occupants to activate and don their oxygen system.

10. In the event of turbulence, the flight crew must activate the fasten seat belt light in the CRM and then make a public address announcement stating the situation.

11. Installation of emergency lighting on the internal ceiling of the CRM in the event of a complete loss of power (Figure 6). Also, two flashlights will be installed such that they are accessible for the occupants to use when entering the CRM area.

12. Alerting Requirements

    a. Will be distinctive and effective. Alerts will distinctive between decompression, turbulence, and smoke or fire

        i. Decompression – aural horn located on inner aft wall of CRM will automatically sound upon rapid decompression.

        ii. Turbulence – flight crew depresses fasten seat belt which sounds a chime over our newly installed public address speaker. Then flight crew makes public address announcement *turbulence, fasten seat belt.*

        iii. Fire/Smoke – smoke detector in CRM (located directly above the top bunk of CRM) alarms. Annunciator in cockpit will be relocated to the primary field of view of the pilot. The CRM smoke detection system triggers the flight deck aural fire bell warning in addition to illuminating the CRM smoke annunciator.

    b. Visual alerts will be visible from all occupant locations and orientations during all expected operational conditions, including a rapid decompression where moisture in the air may condense.

    c. Aural alerts will be loud enough to be heard during all expected operational conditions, including a rapid decompression where the ambient noise level will increase.

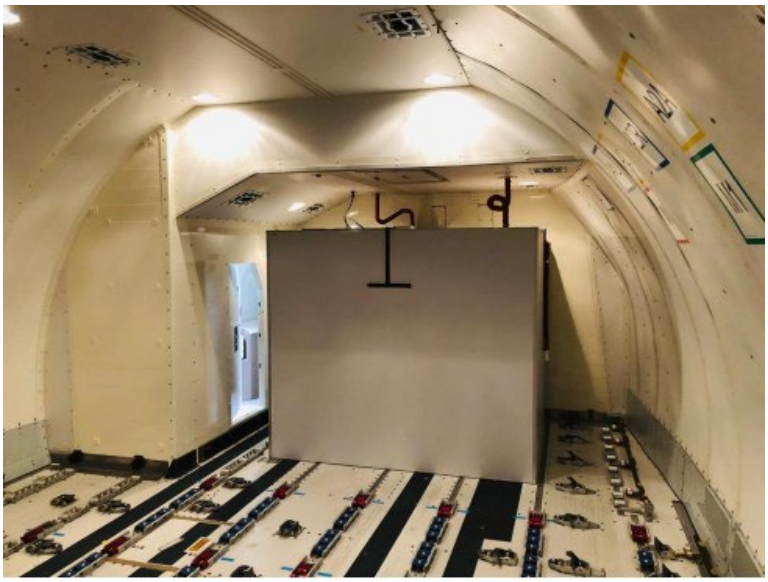

Figure 3. View of CRM Installation Looking Fwd

Figure 4. View of CRM Door from Inside RCB

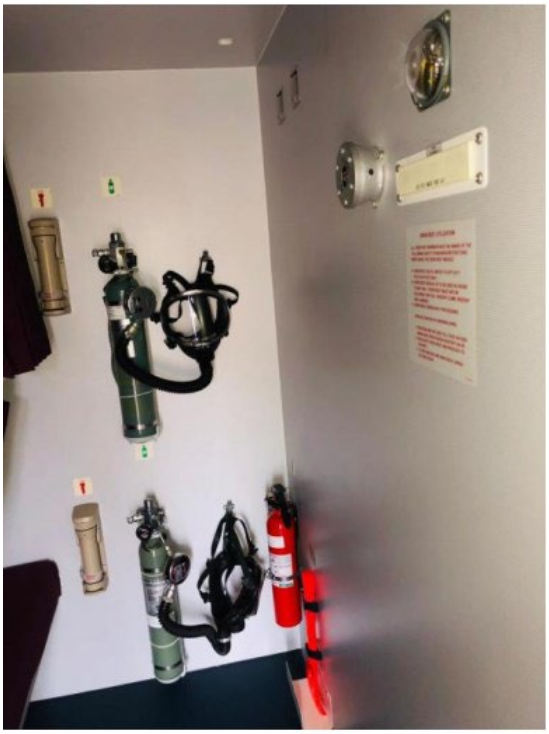

Figure 5. View Inside CRM Showing Fire Extinguisher and Flashlight Installation

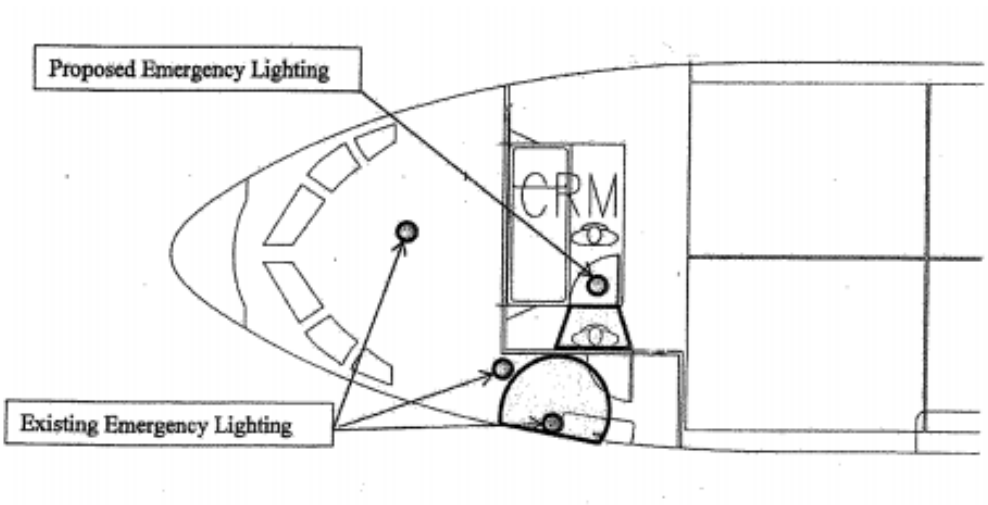

Figure 6. Addition of Emergency Lighting in Crew Rest

Petitioner's Supporting Arguments

Cargo operators need augmented flight crew onboard the aircraft for flights longer than 8 hours. Although the airplane has three supernumerary seats as shown in figure 1 they are not ideal for crew rest. The installation of the CRM in the Class E compartment provides

a class 1 crew rest facility which will allow Prime to support the flight crew rest requirements.

The CRM installation as approved per STC ST02372AT and as described in paragraph [*Petitioner's Description of STC ST02372AT]* of this letter with the changes/additions noted herein will provide adequate level of safety and comply with all [affected regulations] except for the sections that Prime seek for exemption.

Section 25.785(j):

The CRM is inside the class E compartment and the proximity of the CRM to the RCB wall/door is approximately 19.5 inches. See Figure 1. Prime believes that a firm handhold is not required to transition from the CRM to the RCB door. To transition from the CRM to the flight deck, the crew members inside the CRM must open the RCB access door which requires the occupants to hold and turn the door latching mechanism thus providing a firm hold.

Section 25.812(e):

The Crew Rest Module and the RCB access door are in such close proximity that floor lighting is not needed. Once the CRM door is open the proposed CRM emergency lighting will be sufficient to illuminate the area as described in Figure 6. Once the RCB door is open, additional illumination will be available from the existing airplane emergency lighting. In addition flight crews inside the CRM will be required to carry flashlights.

Section 25.1447(c)(1):

The oxygen units are installed on the wall inside the CRM and, as such, are easily accessible to the crew rest occupants at any time necessary. Additionally, the occupants are alerted by the emergency horn in the CRM which automatically sounds in the event of rapid depressurization. Therefore the function of the automatic deploying units is met due to the crew being alerted immediately of the situation by the emergency horn and the ease of access to the oxygen units.

The categories of the occupants for which this exemption is sought are qualified off-duty flight crew for the type of aircraft in this case the [Boeing Model] 767 which meet all the requirements of § 121.583 as well. Furthermore they are instructed in the autonomous use of emergency equipment and emergency exit operation.

Prime will optimize their missions if they are permitted to continue to have the CRM installed in the Class E and allow personnel aboard the CRM during cargo flights, thus ensuring availability of rested flight crew in flight.

Petitioner's Statement of Public Interest

Prime, subsidiary of LATAM Airlines Group, presents the argument that the granting of this exemption will be in the public interest by allowing Prime to continue to provide a Class 1 rest facility per Advisory Circular 117-1[, *Flightcrew Member Rest Facilities*,] for extended flights thus reducing the flight crew fatigue and improving flight safety. The granting of this exemption will allow LATAM Airlines to continue to compete with international freighter operators with similar configurations. If allowed to continue to carry a second set of flight crew members aboard cargo flights, LATAM Airlines will be able to operate under optimal safety conditions.

LATAM (Cargo) operates as a Part 129 operator out of Miami, Florida and supports many foreign countries with their cargo operations. These exemptions would need to be exercised outside of the United States in order for LATAM Airlines to continue their regular operations.

The reasons for these benefits are developed in the arguments above.

Petitioner's Request for Waiver of Publication

STS, on behalf of Prime, believes that good cause exists to waive the publication and comment requirements of 14 CFR 11.85, 11.87, and 11.89 for this petition.

STS Engineering Solutions and Prime Airport Services contend that the purpose of this petition for exemption, and the reasons presented in it, are comparable to the previous exemption requests which allowed for the publication and comment in accordance with the aforementioned requirements. This petition is comparable to the purposes and supporting arguments as provided in Exemptions No. 12805 and 17345. Additionally, delaying action on this petition would have a tremendous adverse impact on Prime Airport Services' cargo operations and ability operate under optimal safety conditions for their flight crew members.

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 Prime Airport Services.

The FAA's analysis is as follows:

The initial type certificate configuration of the Boeing Model 767-300F includes supernumerary access to the cargo compartment during flight in accordance with the limitations of exemption 9696. This exemption was revised to include the Boeing Model 767-300BCF and revise the limitations including allowing up to have four persons access to the cargo compartment, per exemption 9696A.

Granting of this exemption will have no effect on the limitations and conditions, associated with access to the cargo compartment, on the Boeing Models 767-300F and 767-300BCF airplanes. The requirements of Exemption 9696A for the Boeing Models 767-300F and 767-300BCF are applicable and remain in effect. The conditions and limitations of this granting of exemption are in addition to those found in exemption 9696A.

This grant of exemption will allow for the supernumeraries to use the crew rest module (CRM), installed in accordance with STC ST02372AT, during flight but not during taxi, takeoff, and landing. By allowing supernumeraries to use the CRM, operators will be able to optimize the utility of the airplanes and the airports. The FAA considers the petitioner's petition for exemption to be in the public interest for the following reasons:

1. These supernumeraries are seen as a benefit to airplane safety and efficient operations of air cargo. Supernumeraries receive special training that requires them to know about the specific airplane, operation of special equipment and how to deal with any problems that may arise.

2. A significant disruption of air commerce could occur if the petition was not granted. The CRM provides an area for the augmented flightcrew rest which benefits airplane safety. Operators can perform operations with longer flight segments with fewer, well rested crew.

The handhold requirement of § 25.785(j), amendment 25-88, ensures that occupants have a means to steady themselves in moderately rough air while traversing the main aisles of typical passenger airplanes. On the modified airplane, the FAA finds that an acceptable level of safety will be provided by the flightcrew-operated visual and aural alerting system (which is a condition and limitation of the other exemptions noted above). These alerting systems enable the crew to indicate, at the onset of turbulence, that supernumeraries in the Class E cargo compartment must return to their seats. The alerts must be recognized in accessible areas of the CRM and indicate, during turbulence, that persons must return to their seats and secure the Rigid Cargo Barrier (RCB) door.

The intent of § 25.812(e) is to provide floor-proximity, emergency escape path markings in the passenger areas of the airplane. Because of the close proximity between the RCB door and the CRM door, the lack of the floor-proximity, emergency escape path markings will not adversely impact the safety of the supernumeraries.

The petitioner provided an email stating a protective breathing equipment (PBE) apparatus will be provided in the CRM. This is in accordance with § 25.1439(a) which requires a portable PBE be installed for the use of appropriate crewmembers for fighting fires in compartments accessible in flight other than the flight deck.

Section 25.1447(c)(1) requires automatic presentation of the oxygen dispensing units. For seated passengers in typical passenger airplanes, the automatic presentation of masks throughout the cabin indicates the need to don an oxygen mask. However, the supernumeraries in the CRM would not have this indication. The petitioner has proposed an automatically activated aural decompression alert system to notify the CRM occupants to don the oxygen mask in the event of a cabin decompression. There will be at least two portable oxygen units, with a full face mask, readily

available to the occupants. The FAA finds that the proposed system provides an acceptable level of safety.

Configurations may be approved for carrying cargo that would not require supernumeraries to access the CRM in the Class E cargo compartment. For these configurations, an aural decompression alert is not required to be recognizable in the Class E cargo compartment if an airplane flight manual (AFM) limitation is established to prohibit supernumeraries from being in the Class E cargo compartment during flight. Placards and procedures must also be changed to be consistent with the AFM limitation.

The 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(f) delegated to me by the Administrator, I grant Prime Airport Services an exemption from 14 CFR 25.785(j), 25.812(e), 25.857(e), and 25.1447(c)(1) to the extent necessary to allow type certification of Boeing Model 767-300F and 767-300BCF airplanes with provisions for the carriage of up to two supernumeraries in a crew rest module, forward of the smoke barrier, in the Class E cargo compartment during flight for the purpose of resting.

Conditions and Limitations

This exemption is subject to the following conditions and limitations:

1. There must be at least two portable oxygen units with a full-face mask connected to it, provided for the supernumeraries occupying the CRM during flight.

2. The portable oxygen units must meet the performance requirements of 25.1443(a) or 25.1443(b), or the equipment must be shown to protect the supernumeraries from hypoxia at an activity level required to return to his or her seat following a rapid decompression to 25,000 feet cabin altitude.

3. The portable oxygen units must be readily available to the CRM occupants while occupying the bunk beds.

4. The supernumeraries must be briefed in the use of the oxygen units including how to determine if oxygen is being delivered.

5. The CRM must be installed in accordance with STC ST02372AT.

6. Flight crewmembers must be trained as a part of the Boeing Model 767 crew training on the proper use of, and emergency procedures associated with, the crew rest module.

7. The following must be documented in the Procedures section of the airplane flight manual supplement (AFMS):

    a. Prior to each flight, brief each supernumerary on the following:

i. The meaning of all alerts, placards and safety equipment required by this exemption.

ii. The use of onboard oxygen units including how to determine if oxygen is being delivered.

8. The following must be documented in the Severe Turbulent Air Penetration procedure section of the AFMS:

    a. Activate aural/visual crew alerting system to notify the crew-rest module occupants to return to their seats.

9. The following placards must be conspicuously located on or adjacent to the cargo compartment access door that must be opened to access the crew rest module:

    a. Maximum Occupancy of the crew rest module is limited to two (2) persons.

    b. Occupancy of the crew rest module is prohibited during taxi, take-off and landing.

Issued in Washington, DC on February 4, 2021.

DANIEL J. ELGAS

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