

**Exemption No. 8461**

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

In the matter of the petition of

**Jet Aviation Engineering Services L.P.**

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

**Regulatory Docket No.  
FAA-2004-18022**

**GRANT OF EXEMPTION**

By letter dated June 7, 2004, (Rev. A), Peter A. Schwartz, Jr., petitioned on behalf of Jet Aviation Engineering Services L.P., 116 Kestrel Drive, Spring Branch, TX 78070, for an exemption from the requirements of §§ 25.785(j) and 25.813(e) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would permit relief from the requirement for firm handholds along each aisle and additional passenger areas and prohibition of the installation of interior doors between passenger compartments in the executive interior of a Boeing Model 767-300ER airplane, having serial number 33425, in “private, not-for-hire” use.

The applicant petitioned for exemption from requirements that a “firm handhold” be provided along each aisle; this requirement is found in § 25.785(j), of the current regulations, Amendment 25-88. However, the certification basis of the airplane under going modification includes only Amendments 25-1 through 25-45, rather than Amendment 25-88. For § 25.785 the appropriate amendment level is Amendment 25-32. The requirement that a “firm handhold” be provided along each aisle is found in § 25.785(d) at Amendment 25-32.

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

**Section 25.785(d), Amendment 25-32** – Requires a “firm handhold” along each aisle.

**Section 25.813(e), Amendment 25-32** - Prohibits installation of interior doors between passenger compartments.

**ANM-04-454-E**

**The petitioner's supportive information is as follows:**

Jet Aviation Engineering Services has submitted a Petition for Exemption from the requirements of 14 CFR 25.785(j) and 25.813(e) for a Boeing Model 767-300ER airplane, having serial number 33425. Section 25.785(j) requires that a “firm handhold” be provided along each aisle and in additional passenger areas. Section 25.813(e) prohibits the installation of interior doors between passenger compartments in the airplane.

The petitioner requests exemption from these regulations, because the airplane will be configured for private use, rather than for commercial passenger operations. In support of the petition, the petitioner points out that 14 CFR part 25 governs design certification of transport category airplanes, that is, airplanes used for commercial carriage of passengers. The primary intent of part 25 is to require companies which manufacturer such airplanes to provide specified design features to protect the passengers. Some of the regulations in part 25 are of general application, regardless of the use of the airplane. Others, however, are specific to an airline or a “for hire” operation.

The petition submitted by Jet Aviation makes the following points:

- 1) Some of the regulations of 14 CFR part 25 are not compatible with private use of a transport category airplane.
- 2) Exemptions from those regulations are appropriate for transport category airplanes in “private, not-for-hire” use.
- 3) The FAA has previously granted such exemptions to Boeing Model 737-700IGW airplanes and a Boeing Model 757-200 airplane.
- 4) The airplane which Jet Aviation proposes to configure for “private, not-for-hire” use—a Boeing 767-300ER—is similar to airplanes for which the FAA has previously granted an exemption.
- 5) Therefore, an exemption is appropriate for the Boeing Model 767-300ER airplane.

The petitioner further states that, for the following reasons, the exemption would be in the public interest:

1. “There is no degradation of safety involved with this request and therefore no detrimental impact to the public at large; and
2. Given the proliferation of Executive Configured Transport Category Aircraft currently taking place, and anticipated in the near future, this type of exemption will enable US manufacturers of transport category aircraft greater flexibility to effectively compete in this expanding market; and

3. Additional sales of US manufactured transport aircraft outside the traditional airline market can only serve to increase profitability of US airframe manufacturers, giving greater job stability to the workers employed by those manufacturers; and
4. Greater stability of a work force as significant as the US aircraft manufacturers represent can only result in additional fuel to stabilize the economy of the US due to the normal household activity associated with stable workers; and
5. Stability and improved financial performance of the US airframe manufacturers translates into increased orders and stability in numerous other supporting manufacturing organizations; and
6. Increased sales of these executive configured transport aircraft will ultimately result in some portion of those aircraft being completed at US owned or operated or operated Aircraft Completion Facilities, providing improved financial performance and work force stability for those organizations as well; and
7. Improved financial performance of US owned or operated corporations, and increased work force stability translates into continued and improved tax revenues for all governmental organizations involved; and
8. Improved financial performance allows US corporations to continue to invest in new R & D research which will allow the US to maintain or improve it's competitive position in the world economy; and
9. A large number of these types of sales can be predicted to be to "offshore" clients, improving the US Balance of Trade Deficit significantly."

A copy of the entire petition submitted by Jet Aviation Engineering Services L.P. is available on the Internet in the Department of Transportation's Docket Management System (DMS). To view or print a copy, go to <http://dms.dot.gov/>. Select Simple Search, enter Docket Number 18022, and click on OK. This will bring up a list of documents. See the listing for a petition with a filing date shown as 08/03/2004. Click on TIF or PDF to view a copy of the petition.

### **Public Comment**

A summary of this petition was not published in the Federal Register for public comment, because this exemption is similar to previous petitions for which no public comments were received.

### **The Federal Aviation Administration's analysis/summary is as follows:**

As more and more transport category airplanes have been configured (or re-configured) for "private, not-for-hire" use, the FAA has given considerable attention to the issue of appropriate regulation of such airplanes. Some of the current regulations governing design certification of transport category airplanes are not compatible with private, not-for-hire use of such airplanes.

Given this situation, the FAA has received a number of petitions for exemption from certain regulations. The FAA has granted such exemptions when it finds that to do so is in the public interest and does not adversely affect the level of safety provided by the regulations. In the future, the FAA intends to propose regulations governing transport category airplanes in private use, obviating the need for case-by-case review of individual petitions for exemption.

### Firm Handhold

Specifically, the applicant petitioned for exemption from requirements that a “firm handhold” be provided along each aisle. This requirement is found in § 25.785(j), of the current regulations, Amendment 25-88. However, the certification basis of the airplane under going modification includes only Amendments 25-1 through 25-45, rather than Amendment 25-88. For § 25.785, the appropriate amendment level is Amendment 25-32. The requirements that a “firm handhold” be provided along each aisle are found in § 25.785(d) at Amendment 25-32.

The petitioner requests an exemption from the handhold requirements of § 25.785(d) for the dining room and the saloon. Review of the layout provided with the petition indicates that there are additional areas of concern within the airplane. These areas are the entrance hall, aft corridor, master bedroom, and master bathroom.

The FAA has considered the requirement for firm handholds in the context of private use airplanes. For the entrance hall, dining room, saloon, aft corridor, master bedroom, and master bathroom, the requirement to have a firm handhold would be impractical, given the proposed configuration. The proposed arrangement provides an acceptable level of safety for a private use airplane.

### Interior Doors

The placement of interior doors is clearly quite significant to the owner/operator of the airplane. The flexibility to partition the airplane into individual rooms, such as private meeting rooms or bedrooms, is paramount to an acceptable interior. The availability of private meeting rooms and bedrooms is essential. The FAA acknowledges the desirability of these features from the operator’s point of view.

When the regulations pertaining to interior doors were adopted, they did not necessarily consider “rooms.” They considered two possible types of interior doors in a passenger compartment. The first type is an interior door between passenger compartments. The second type is an interior door between the exit and the passenger compartment.

Until recently, only the first type of door was prohibited by § 25.813(e). However, Amendment 25-116, a recent amendment to the airworthiness standards for transport category airplanes, now prohibits interior doors between the exit and the passenger compartment. In addition, Amendment 121-306 will prohibit these doors in airplanes manufactured after November 27, 2006, operated under part 121. These amendments, entitled “Miscellaneous Cabin Safety Changes” were published in the *Federal Register* on October 27, 2004.

In terms of airplanes configured for “private, not-for-hire” use, there are three different categories of doors in the passenger cabins.

1. Category 1 is a door in a room which may be either the full width of the airplane or less than the full width. If it is less, there will be an aisle on the outside of the room. This type of room may be occupied during take-off and landing, and only the occupants of the room must use the door to reach an exit.
2. Category 2 is a door in a room which is less than the full width of the airplane. There is an aisle on the outside of the room. This type of room may be occupied during take-off and landing, and there is a single emergency exit or pair of emergency exits within the compartment.
3. Category 3 is a door in a room which is the full width of the airplane. Passengers are seated on both sides of the door, and there is a pair of emergency exits at one end.

After considerable deliberation, the FAA has concluded that—in regard to the installation of interior doors between passenger compartments—not all interior doors are equivalent. With respect to such interior doors, the FAA has determined that the following requirements will produce an adequate level of safety:

1. In order to maximize the level of safety, doors in Category 2 or 3—installed across the main cabin aisle—must open and close in a transverse direction. That is, the direction of motion of the door must be at a right angle to the longitudinal axis of the airplane. A “pocket door” is one example of such a design. This will tend to minimize the chance that the inertia forces of an accident could force the door closed.
2. Redundant means are necessary to latch doors open for takeoff and landing. Each latching means must have the capability of retaining the door in the takeoff and landing position under the inertia forces of § 25.561.
3. Each interior door must be frangible, in the event that it is jammed in the closed position in flight or during taxi, takeoff, or landing. Frangibility is intended to ensure that—if a door is jammed closed—occupants can escape in either direction and emergency equipment can be moved. Frangibility may be demonstrated in either of the following ways:
  - A 5<sup>th</sup> percentile female can break through the door, creating a large enough opening that a 95<sup>th</sup> percentile (or larger) male can pass through. (See Advisory Circular 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook, paragraph 43.b(2)).
  - A 5<sup>th</sup> percentile female can break a hinge on the door—or a hinge on a smaller door within the door—such that the door can swing, so as to allow a 95<sup>th</sup> (or larger) percentile male to pass through the opening with the door swung open. This evaluation must be made with any cabin furnishing or equipment that could limit the swing arc of the door installed and then placed in the most adverse position. In using

this approach, one must consider the possibility that the door is physically jammed in the closed position by distortion of the fuselage or furnishings. This possibility must be considered even if the door normally translates into the open and closed positions.

4. Doors which fall into Category 1 must be in the open position during taxi, take-off and landing only when the room is occupied.
5. Doors which fall into Categories 2 or 3 must be in the open position during taxi, take-off and landing, regardless of occupancy.
6. With respect to the possibility that a door will remain closed when it should not be, the FAA believes that a higher level of awareness is required to address this issue. Due to the relative complexity of the cabin interior, the FAA does not believe that inspection by flight attendants prior to takeoff and landing is sufficient to verify that interior doors are in their proper position. Consequently, some type of remote indication is considered necessary. The petitioner's proposal to provide remote indication to the flight crew is considered adequate.

The FAA has considered the petitioner's supporting information and finds that a grant of exemption is in the public interest and would not adversely affect safety. Therefore, pursuant to the authority contained in § 49 U.S.C. §§ 40113 and 44701, delegated to me by the Administrator, Jet Aviation Engineering Services L.P. is hereby granted an exemption from the requirements of §§ 25.785(d), Amendment 25-32, and 25.813(e), Amendment 25-32, for a Boeing Model 767-300ER airplane serial number 33425. Specifically, the exemption allows relief from the requirement to provide firm handholds in the aisle in the entrance hall, dining room, saloon, aft corridor, master bedroom, and master bathroom and permits doors between passenger compartments. This exemption is subject to the following conditions:

- 1) The airplane is not operated for hire or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR parts 125 and 91, subpart F, as applicable. The maximum passenger capacity is 34.
- 2) Each door between passenger compartments must be frangible.
- 3) Doors that fall into Category 1 must be in the open position during taxi, take-off and landing only when the room is occupied.
- 4) Doors that fall into Categories 2 or 3 must be in the open position during taxi, take-off and landing, regardless of occupancy.
- 5) Appropriate procedures must be established to signal the flightcrew that a door between passenger compartments is closed and to prohibit takeoff or landing when a door between passenger compartments is not in the proper position.
- 6) Doors between passenger compartments must have dual means to retain them in the open position, each of which means must be capable of withstanding the inertia loads specified in 14 CFR § 25.561.

7) Doors in Categories 2 or 3, which are installed across a longitudinal aisle, must translate laterally to open and close.

Issued in Renton Washington, on December 23, 2004.

/s/ Kevin Mullin  
Acting Manager  
Transport Airplane Directorate  
Aircraft Certification Service