

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

In the matter of the petition of

Gore Design Completions, ltd.

for an exemption from § 25.813(e) of Title
14, Code of Federal Regulations

Regulatory Docket No. FAA-2005-22908

GRANT OF EXEMPTION

By letter dated October 19, 2005, Mr. Andrew Gfrerer, Gore Design Completions, ltd., 10100 Reunion Place, Suite Eight-Fifty, San Antonio, Texas 78216, petitioned the Federal Aviation Administration (FAA) for an exemption from the requirements of § 25.813(e) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would permit relief from the requirement that prohibits the installation of interior doors between passenger compartments. The proposed exemption is specifically for the installation of an executive interior on a Boeing Model 767-200 airplane, serial number 23896, that has been designated as not operated for hire or offered for common carriage (commonly referred to as "private use").

The petitioner requests relief from the following regulations:

Section 25.813(e), Amendment 25-46 - Prohibits installation of interior doors between passenger compartments.

The petitioner's supportive information is as follows:

"BACKGROUND

"Gore Design Completion, ltd. has been contracted for the completion of an executive business interior in a Boeing Model 767-200 airplane. The airplane is registered in the United States as N772WD. The FAA has accepted our STC application and assigned Project Number ST8184SC-T for this project.

“The initial familiarization meeting took place on June 2, 2005, and a technical meeting took place on August 10, 2005.

“The certification basis for the Boeing Model 767-200 is Part 25, Amendment 25-1 through 25-45 with portions of Amendment 25-46 plus Exemption Number 4725 and numerous Equivalent Safety Findings. There are good technical arguments to support special consideration for private use airplanes: the airplanes are not for public hire and they are configured to carry a fraction of the passengers carried in airline service. For these reasons, Gore Design Completion, Ltd. has prepared a petition for exemption to the following regulation:

“14 CFR 25.813(e) “No door may be installed in any partition between passenger compartments.”

“DISCUSSION:

“14 CFR Part 25 governs design certification of transport category airplanes. The primary intent of these regulations, as written, are to be certain that airplane manufacturers provide the appropriate design features to meet the standards necessary to protect the traveling public. Clearly, there is a requirement “in the public interest” and in the interest of safety to provide regulatory guidelines for certification. However, it is also very clear these regulations are intended to regulate the certification of “commercial” airplanes, which are “for hire” to the general public.

“While the greatest majority of these regulations represent a common sense inclusion for any aircraft regardless of its intended use, a few are obviously intended to regulate situations that are specific to an airline, or for hire operation. When a transport category airplane is operated under 14 CFR Part 91 or Part 125, some of the Part 25 rules have acceptance criteria that are inappropriate, or are not compatible with the type of operation and the intended use of this airplane.

“The FAA clearly recognizes these differences as evidenced by the issuance of Exemption numbers 6820 and 6820A which eliminate many of the more onerous regulations when applied to “private use, not-for-hire” operations under 14 CFR Part 91 and Part 125.

“BASIS FOR EXEMPTION:

“The airplane that is the subject of this petition is a Boeing Model 767-200. It is privately owned and will be operated under Part 125 regulations.

“The interior configuration being installed in this airplane will provide seating for forty two (42) passengers. The maximum certified passenger count for this airplane is 255. The passenger count of the subject airplane represents just 16% of the capacity allowed for this airplane.

“There are two “pocket” type doors that are installed at the both ends of a hallway on the left side of the airplane separating the forward and aft lounges from the bedrooms located towards the center of the airplane. Both lounges have access to an emergency exit within their respective cabins. However, it may be necessary to use an exit at the opposite end of the airplane and pass through these “pocket” doors. Both doors incorporate design features required by other similar exemption requests. They have dual latches (each of which are able to withstand the forces defined by 14 CFR 25.561) to secure them in the open position, cockpit indication annunciation has been included, and the doors are designed to be frangible in the event that they should become stuck in the closed position. In addition, a test of the critical doors design will be conducted to ensure frangibility.

“It has been acknowledged by the FAA, that the passengers on this type of airplane are typically the same people on most of the trips. Familiarity with the airplane layout and operation provides an addition benefit towards the level of safety.

“OCCUPANT SAFETY CONSIDERATIONS:

“The risk for occupants due to the use of “pocket” doors between passenger compartments should be considered acceptable for the following reasons:

- “The pocket doors will be frangible,
- “There will be a signal to the flight crew when the pocket doors are closed. The AFMS will provide procedures and limitations to ensure that the doors are in the proper position for takeoff and landing,
- “The pocket doors will have dual means to retain them in the open position, each of which will be capable of withstanding the inertia loads specified in 14 CFR 25.561,
- “The pocket doors are installed across a longitudinal aisle and translate laterally to open and close,
- “The airplane will be operated under 14 CFR Part 125 and will not be operated for hire or offered for common carriage.

“PUBLIC INTEREST:

"As in the cases of numerous already established Exemptions, granting this petition for exemption would be clearly in the public interest for the following reasons:

- “It allows efficient and safe carriage of Head of State and executives in the sought for environment that would otherwise not be possible,

- “There is no degradation of safety involved with this request and therefore no detrimental impact to the public at large,
- “Given the proliferation of executive configured transport category airplanes currently taking place, and anticipated in the future, this type of exemption will enable US manufacturers of transport category airplanes greater flexibility to effectively complete in this expanding market,
- “Additional sales of US manufactured transport airplanes outside the traditional airline market can only serve to increase profitability of US airframe manufacturers, given greater stability to the workers employed by those manufacturers,
- “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 house hold activity associated with stable workers,
- “Stability and improved financial performance of the US airframe manufacturer translates into increased orders and stability in numerous supporting manufacturing organizations,
- “Increased sales of these executive configured transport airplanes will ultimately result in some portion of those airplanes being completed at US owned or operated aircraft completion facilities, providing improved financial performance and work force stability for those organizations as well,
- “Improved financial performance of US owned or operated corporations, and increased work force stability translates into continued and improved tax revenue for all governmental organization involved,
- “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,
- “A large number of these types of sales can be predicted to be to “offshore” clients, improving the US balance of trade deficit.

“PUBLIC COMMENT:

“In accordance with 14 CFR 11.87, Gore Design Completions, Ltd., requests that the period for public comment be waived because the numerous similar exemptions that have previously been granted.”

Public Comment

A summary of this petition was not published in the Federal Register. The nature of this exemption is effectively identical to those of previous petitions for which there were no public comments received.

The FAA's analysis/summary is as follows:

The FAA considers the petitioner's proposal to be in the public interest for the same reasons as those previously stated by the petitioner.

As more and more transport category airplanes have been configured (or re-configured) for private 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 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.

The petitioner requests an exemption from the interior doors between passenger compartments requirements of § 25.813(e) for the two pocket doors separating the forward and aft lounges from the two bedrooms located in the center of the airplane. Review of the layout provided with the petition indicates that there are additional interior doors of concern within the airplane. These doors are for the two bedrooms located in the center of the airplane.

The flexibility to partition the airplane into individual rooms, such as private meeting rooms or bedrooms is clearly quite significant to the owner/operator of the airplane. 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 an exit and the passenger compartment.

Until recently, only the first type of door was prohibited (reference § 25.813(e)). However, part 25, as amended by Amendment 25-116, now prohibits interior doors between an exit and the passenger compartment. In addition, Amendment 121-306 prohibits these doors in airplanes manufactured after November 27, 2006, operated under 14 CFR part 121. Amendments 25-116 and 121-306, titled "Miscellaneous Cabin Safety Changes," were published in the Federal Register on October 27, 2004 (69 FR 62778).

In terms of airplanes configured for private use, there are four different categories of doors in the passenger cabins.

1. Category 1 is a door in a room and the room is less than the full width of the airplane. There will be an aisle on the outside of the room. This type of room may be occupied during takeoff 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 and is the same as Category 1 except there is a single emergency exit or pair of emergency exits within the room.
3. Category 3 is a door or doors in a compartment and the compartment is the full width of the airplane. There are passengers seated on both sides of the door(s) and the main aisle leads out of or passes through the compartment. The compartment does not have any emergency exits. This type of compartment may be occupied during takeoff and landing.
4. Category 4 is a door in a room and the room 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 of the room. This type of room may be occupied during takeoff and landing.

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 maintain an acceptable level of safety, doors in Category 2, 3, or 4 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 5th percentile female can break through the door, creating a large enough opening that a 95th percentile (or larger) male can pass through. (See Advisory

Circular 25-17, “Transport Airplane Cabin Interiors Crashworthiness Handbook,” paragraph 43b(2)).

- A 5th 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 95th (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, takeoff and landing only when the room is occupied.
 5. Doors which fall into Categories 2, 3, or 4 must be in the open position during taxi, takeoff and landing, regardless of occupancy.
 6. With respect to the possibility that a door will remain closed when it should not be, the FAA has determined that a higher level of awareness is required to address this issue. Due to the relative complexity of the cabin interior, the FAA has determined that inspection by flight attendants prior to takeoff and landing is not sufficient to verify that interior doors are in the proper position. Consequently, some type of remote indication is considered necessary. The petitioner’s proposal to provide remote indication to the flightcrew is considered adequate.

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, Gore Design Completions Ltd., is hereby granted an exemption from 14 CFR 25.813(e), Amendment 25-46. The petition is granted to the extent necessary to allow Gore Design Completions Ltd., to install an executive interior on a private use Boeing Model 767-200 airplane, serial number 23896. Specifically, the exemption allows relief from the requirement to interior doors to be installed 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.
2. Each door between passenger compartments must be frangible.

3. Doors that fall into Category 1 must be in the open position during taxi, takeoff and landing only when the room is occupied or when passengers must pass through the room to reach an emergency exit.
4. Doors that fall into Categories 2, 3, or 4 must be in the open position during taxi, takeoff 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 § 25.561.
7. Doors in Categories 2, 3, or 4, which are installed across a longitudinal aisle, must translate laterally to open and close.

Issued in Renton Washington, on January 31, 2006.

/s/

Ali Bahrami
Manager, Transport Airplane Directorate
Aircraft Certification Service