Exemption No. 8765

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98057-3356

In the matter of the petition of

DRB Aviation Consultants

for an exemption from §§ 25.785(h)(2), 25.813(e) and 25.853(d) of Title 14, Code of Federal Regulations

Regulatory Docket No. FAA-2006-25393

PARTIAL GRANT OF EXEMPTION

By letter dated July 11, 2006, Mr. Pat Anderson, DRB Aviation Consultants, 27326 Hwy 281 North, San Antonio, Texas 78260, petitioned the Federal Aviation Administration (FAA) for an exemption from the requirements of §§ 25.785(h)(2), 25.813(e) and 25.853(d) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would permit relief from the requirements that prohibit installation of interior doors between passenger compartments, require flight attendant seats to provide a direct view of the cabin area for which the flight attendant is responsible, and require interior materials to comply with heat release and smoke emissions requirements. The proposed exemption is specifically for a Boeing 737-400 airplane 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 25.785(h)(2) - Requires that flight attendant seats be,

> *to the extent possible, without compromising proximity to a required floor level emergency exit, located to provide a direct view of the cabin area for which the flight attendant is responsible.*

Section 25.813(e), - Requires that

> *No door may be installed between any passenger seat that is occupiable for takeoff and landing and any passenger emergency exit, such that the door crosses any egress path (including aisles, crossaisles and passageways).*

Section 25.853(d) - Limits maximum heat release and smoke emission rates for large panel cabin interior materials.

A summary of petitioner's supportive information:

The petitioner requests these exemptions because this 737-400 is configured and operated for private use. It suggests that private, not-for-hire airplanes were not considered when the rules prohibiting doors between passenger cabins were promulgated. The petitioner says that privacy areas are very important in private use airplanes because they allow private business meetings to be conducted during air travel. It says the only conceivable way to provide such privacy within the passenger cabin is through separate rooms constructed of walls and doors. For a room spanning the width of the airplane, doors would remain latched open during taxi, takeoff and landing whether the compartment is occupied or not. The latching system would also be redundant and designed for crash loads. This would allow the private room to be part of the evacuation route between different parts of the cabin.

The petitioner says that the smaller number of passengers and the familiarity of the flight and cabin crews with this specific airplane and its interior ensure that there is no degradation of safety. The petitioner's requests for exemptions from §§ 25.785(h)(2) and 25.853(d) were not necessary because the certification basis of this airplane is at an earlier amendment level than the ones at which those rules became effective.

In its list of reasons why this petition is in the public interest, DRB cited the economic benefits to the country in being better able to compete in the global market, increasing profitability of the manufacturing and supporting companies, providing stable employment, which in turn generates tax revenue, enabling investment in research and development, and increasing sales to foreign clients, thus improving the balance of trade. DRB also said that since the passengers aboard these airplanes will not be paying customers of the airlines, there can be no degradation of airline passenger safety. It suggests that granting this petition will allow the FAA to expend resources on this subject only once, not for each interior arrangement.

DRB Aviation Consultants' complete petition for exemption is available on the Department of Transportation's docket website. Go to http://dms.dot.gov . The docket number is FAA-2006-25393. The petitioner's complete supportive information is contained in its petition.

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 which were made available for public comment and for which no public comments were received.

The FAA's analysis/summary is as follows:

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, we have received a number of petitions for exemption from certain regulations. We have granted such exemptions when we find 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 FAA considers the petitioner's proposal to be in the public interest. The use of doors to create separate "rooms" within the passenger cabin allows sensitive and important meetings to be conducted during air travel in a manner that would not be possible without the placement of doors between passenger areas. Such rooms allow efficient and safe carriage of heads of state and executives in a sought-for environment that would not be possible otherwise. For these reasons, there is considerable demand for this configuration of the passenger cabin for private use airplanes.

The smaller number of passengers in a private use jet allows the cabin crew to be familiar with the passengers. Given that this circumstance, as well as the limitations stated below, will ensure a minimal reduction in the level of safety if this petition is granted, for the reasons stated above, we find that granting this petition is in the public interest.

Following is a discussion of each of the petitioner's requests in the order presented.

Direct View

The applicant petitioned for exemption from requirements that flight attendant seats be located to provide a direct view of the passenger cabin for which the flight attendant is responsible. These requirements are contained in § 25.785 (h)(2) of the regulations, Amendment 25-51. However, the certification basis of the airplane being modified is Amendment 25-20, which was in effect prior to Amendment 25-51. At Amendment level 25-20, the requirement that flight attendant seats be located to provide a direct view of the passenger cabin did not exist. The requirement does not apply to airplanes with a certification basis of Amendment 25-20. Therefore, for the Boeing 737-400 airplane, there is no need for an exemption from the requirements for direct view.

Interior Doors

The petitioner requests an exemption from the § 25.813(e) prohibition against interior doors between passenger compartments in order to install pocket doors separating the forward and aft cabin.

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" other than the standard passenger compartments. 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.

Prior to Amendment 25-116, only the first type of door was prohibited. Amendment 25-116 now prohibits interior doors between an exit and the passenger compartment. In addition, § 121.310(f)(6) prohibits these doors in airplanes operated under 14 CFR part 121 that were manufactured after November 27, 2006.

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

> **Category 1** — A door in a room that 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.
>
> **Category 2** — A door in a room less than the full width of the airplane and the same as a Category 1 door except there is a single emergency exit or pair of emergency exits within the room.
>
> **Category 3** — A door or doors in a room that 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 room. The room does not have any emergency exits. This type of room may be occupied during takeoff and landing.
>
> **Category 4** — A door in a room the full width of the airplane and the same as a Category 3 door except 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, we have determined that the following requirements will produce an adequate level of safety:

1. Doors in Categories 2, 3, or 4 installed across the main cabin aisle must open and close in a transverse direction. That means the direction of motion of the door must be at a right angle to the longitudinal axis of the airplane. This will tend to minimize the chance that the inertia forces of an accident could force the door closed. A "pocket door" is one example of such a design.

2. Redundant means are necessary to latch doors open for takeoff and landing. Each latching means must be capable of retaining the door in the takeoff and landing position under the inertia forces of § 25.561.

3. Each interior door must be frangible, or easily broken, in case 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 break it open and 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 so that the door can swing enough 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 furnishings 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. The FAA has determined that a higher level of awareness is required to address the possibility that a door could remain closed when it should not be. Due to the relative complexity of the cabin interior, we have determined that inspection by flight attendants prior to takeoff and landing is not sufficient to verify that interior doors are in the proper position. Some type of remote indication is considered necessary.

Interior Materials

The applicant petitioned for exemption from requirements that interior material meet § 25.853(d) of the regulations, Amendment 25-61. However, the certification basis of the airplane to be modified is Amendment 25-15, which was effective prior to Amendment 25-61. At Amendment 25-15, the requirement that interior materials meet smoke and heat release limits did not exist. Therefore, there is no need for an exemption to be granted for interior materials.

In consideration of the foregoing, I find that a partial 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, DRB Aviation Consultants is hereby granted an exemption from the requirements of § 25.813(e) to allow installation of interior doors between passenger compartments on private use Boeing model 737-400 airplanes. The FAA has determined that an exemption from the requirements of §§ 25.785(h)(2) and 25.853(d) is not necessary. This

exemption is subject to the following conditions. Provisions 1 and 5 must be documented as operating limitations in the limitations section of the Airplane Flight Manual.

1. The airplane must not be 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 part 125 and part 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 August 9, 2006.

/s/Ali Bahrami

Ali Bahrami
Manager
Transport Airplane Directorate
Aircraft Certification Service

exemption from the requirements of §§ 25.785(h)(2) and 25.853(d) is not necessary. This exemption is subject to the following conditions. Provisions 1 and 5 must be documented as operating limitations in the limitations section of the Airplane Flight Manual.

8. The airplane must not be 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 part 125 and part 91, subpart F, as applicable.

9. Each door between passenger compartments must be frangible.

10. 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.

11. Doors that fall into Categories 2, 3, or 4 must be in the open position during taxi, takeoff, and landing, regardless of occupancy.

12. 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.

13. 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.

14. 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

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