

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

In the matter of the petition of

Enflite, Inc.

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

Regulatory Docket No. FAA-2006-24000

GRANT OF EXEMPTION

By letter dated February 15, 2006, Mr. Ken Arnold, Enflite, Inc., 105 Cooperative Way, Georgetown, Texas 78626, 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 interior door on Dassault Aviation Mystere Falcon 900 and Falcon 900EX airplanes that have 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:

“EXTENT OF RELIEF AND REASON

“The purpose of this Petition is to request an exemption from 14 CFR FAR §25.813(e) in order to permit the installation of doors in partitions between passenger compartments of the Dassault- Aviation Mystere-Falcon 900 and Falcon 900EX aircraft which are registered in the USA and used for private/corporate transport. In support of this request, Enflite is proposing alternative design requirements to provide an equivalent level of safety appropriate to the operation of such aircraft equipped with doors in cabin partitions.

“Additionally, Enflite kindly requests relief from the standard public comment period, considering that a public comment period was applied for the Bombardier BD700-1A10, with no comments received. Enflite respectfully requests that this exemption be promulgated prior to March 31, 2006, which will enable Enflite to meet customer commitments related to aircraft delivery.

“The Mystere-Falcon 900 and the Falcon 900EX both have the same size and layout for the passenger cabin and have the same type of interior. The Falcon 900EX is a derivative of the Mystere-Falcon 900. Both have a common Type Certificate, No. A46EU.

“The Mystere-Falcon 900 and Falcon 900EX are designed to meet the requirements of 14 CFR FAR 25, Airworthiness Standards: Transport Category Airplanes. These rules were primarily written to cover Transport Category airplanes that are used for the carriage of fare paying passengers from the general public utilizing aircraft with seating configurations with capacities up to 500 passengers. The Falcon 900 and Falcon 900EX however, are Type Certified for a maximum of 19 passengers, and are outfitted exclusively for private/corporate use. The differences between the commercial Transport Category aircraft used in airline operation and those specifically used for corporate operations, whether private, or non-scheduled commercial, are not segregated in 14 CFR FAR 25. Enflite contends that airplanes specifically designed for corporate service, whether private or charter, should be eligible by exemption for certain cabin features and facilities which do not comply with the full requirements of 14 CFR FAR 25, provided an equivalent level of safety is provided, and can be demonstrated. Enflite believes that the corporate fleet utilizing aircraft certified as Transport Category aircraft world wide, has now grown to a point where certification agencies should consider new or revised rules designed specifically for aircraft involved in these types of operations.

“Aircraft specifically designed and outfitted for private/corporate operation generally carry passengers who are very familiar with the specific aircraft on which they travel. Also, unlike an air carrier crew, the crew of a corporate aircraft has day to day contact with their private/corporate passengers, thus simplifying and reinforcing communication about safety procedures and concerns. Add to this the fact that these aircraft are generally operated continuously by a limited number of crewmembers who are intimately familiar with the specific aircraft involved, further enhancing the safety environment. It follows then, that combinations of these factors provide a level of safety which is not easily achieved in air carrier aircraft. Because of this, it is Enflite’s contention that air carriers require a more complete set of regulatory safety features in order to achieve the same result. As outlined in this Petition, Enflite has incorporated mechanical features in our cabin door design which will enhance the safety of the Falcon 900/900EX aircraft equipped with a partition and door dividing the passenger seating area.

“DESCRIPTION OF THE AIRCRAFT, PARTITION AND DOOR

“1. The cabin of the Falcon 900 and Falcon 900EX is approximately 7 feet wide. At this narrow width, a side corridor is impractical; therefore, it is necessary to divide the cabin full width laterally to produce a private area. The doors to be installed would be sliding pocket doors which retract into the partition on one side of the aircraft. Attachment 3 of

this Petition contains an engineering drawing of a typical Falcon 900/900EX interior layout with one possible partition position. The doors will require a retracting footer because with a cabin head-room of 6 ft, the door must slide downward tangential to the fuselage contour. The door would be frangible to enable it to be broken open by a 5th percentile female in an emergency, in addition to having blow-out capability for decompression. Since it is possible for a partition and door to be installed such that passengers could be seated forward or aft of the door, the door is designed to be frangible in either direction, allowing for access to emergency exits in front of, or behind the partition and door. An engineering concept drawing depicting the partition and door is presented in Attachment 2 of this Petition.

“2. The partitioning of the passenger seating area with a door installed would will allow one section of the passenger seating area to be used as a private office or bedroom during long duration flights. The proposed door would have a placard requiring it to be open for take-off and landing.

“3. The doors would also be equipped with double means of locking the door in the open position, such that the probability of unlocking due to distortion of the fuselage in an emergency landing would be remote. Either locking feature of the double locking means alone will be capable of supporting the inertia loads specified in 14 CFR FAR §25.561.

“4. Furthermore, an amber annunciator light will be installed in the cockpit for the purpose of alerting the crew when the doors are not open. The lighted annunciator will be controlled by the cockpit “No Smoking” switch and will be on whenever the “No Smoking” signs are on and a door is closed. In this condition, the annunciator will remain illuminated until the doors are all secured in the open position, at which time it will extinguish.

“5. The emergency exit sign requirements will be addressed separately to ensure that the level of passenger guidance required to find an exit will be provided. This will be customized on each aircraft since there are often differences between the individual aircraft interior arrangements.

“6. The Passenger Information Card will contain a section describing the action of the door, the emergency features it includes, and instructions for latching the door open for take-off and landing.

“REASONS WHY GRANTING THE EXEMPTION WILL NOT ADVERSELY AFFECT SAFETY

The effect of the safety features described above will be to ensure that there is always a clear path through any partition to an emergency exit. However, even if some extreme condition should result in a door being closed or partially closed after an accident, there are still simple, failsafe means to get through the door and reach an exit. The frangibility feature will be tested using a 5th percentile female, with the resulting aperture demonstrated to be large enough to allow for a 95th percentile male to pass through.

“Because the basic issues concerning a passenger finding and reaching an exit in an emergency are addressed by the above features, as well as the previously described safety parameters inherent in corporate operation, it is our position that the exemption as requested would provide a level of safety for the passengers in a Falcon 900 or Falcon 900EX, which is equal to that required for commercial carrier aircraft.

“PUBLIC INTEREST

“As previously noted, Enflite firmly believes that the design of the Falcon 900/900EX pocket door with its combination dual latchable sliding door and cabin partition, meets or exceeds the level of safety required by 14 CFR FAR §25.813 (e) in that it permits absolute access to all of the aircraft’s normal and emergency exits by all passengers. It is Enflite’s opinion and belief that the restriction contained in 14 CFR FAR §25.813 (e) was primarily aimed at the large commercial transport category aircraft used in Part 121 operations. Unlike those larger aircraft, all Falcon 900/900EX passengers are only steps away from the nearest emergency exit, thus permitting ready access to those emergency exits, should the need for emergency evacuation arise.

“Also, it is Enflite’s firm belief that the installation of the combination dual latchable sliding door and cabin partition is in the public’s best interest. It will permit the conduct of important business meetings which because of their sensitivity, require an atmosphere of complete privacy. It is a well established fact that an enormous amount of commercial activity occurs on board the United States general aviation fleet. Such commercial activity, including private business meetings where important commercial decisions are made, are vital to maintaining the competitiveness and overall strength of the U.S. economy. For these reasons, we believe the exemption requested is clearly warranted. In addition, sick or infirmed passengers can be more comfortably transported with the divided cabin configuration.

“MEETING COMPETITION

“It is Enflite’s understanding that Bombardier’s Global Express has previously received an exemption for their corporate aircraft (BD700-1A10 REF. Docket 29819, see attachment). The Falcon 900/900EX aircraft with the Enflite pocket door installation is a direct competitor with Bombardier’s Global Express. Denial of Enflite’s Petition For Exemption to 14 CFR FAR §25.813(e) as set forth in this petition, would place Enflite and its customer Dassault Falcon Jet in a distinct disadvantage in the competitive general aviation marketplace for executive aircraft sales. Such a turn of events would not only be unfair but would have a detrimental effect on the welfare of our Georgetown, Texas and Woodland, Washington workforce, (almost 150 strong) as well as the welfare of our customer Dassault Falcon Jet (almost 2000 strong) in Little Rock, Arkansas, and Teterboro, New Jersey; as well as the hundreds of vendors across the country who supply parts and labor in connection with the sales of our products and Falcon Jet’s products.”

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 a pocket door separating the forward and aft cabin 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 operated under 14 CFR part 121 that were manufactured after November 27, 2006. 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.

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, 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 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 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, Enflite Inc., is hereby granted an exemption from 14 CFR 25.813(e), Amendment 25-46. The petition is granted to the extent necessary to allow Enflite Inc., to install an interior door on private use Dassault Aviation Mystere Falcon 900 and Falcon 900EX airplanes. Specifically, the exemption allows relief from the requirement to allow interior doors to be installed between passenger compartments. 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 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 May 17, 2006.

/s/Kevin M. Mullin

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Acting Manager

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Aircraft Certification Service