

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

In the matter of the petition of

DASSAULT AVIATION

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

Regulatory Docket No. FAA-2007-27848

GRANT OF EXEMPTION

By letter dated March 12, 2012, Mr. Frederic Tardy, DASSAULT AVIATION, Certification Directorate, 78, quai Marcel Dassault, 92214 St Cloud Cédex - France, petitioned the Federal Aviation Administration (FAA) for an amendment to Exemption No. 9506, previously issued on September 27, 2007. That exemption permitted Dassault Aviation certain relief from the requirements of § 25.813(e) of Title 14, Code of Federal Regulations (14 CFR), to permit installation of a single-pocket interior door between passenger compartments on Dassault Aviation Model Falcon 7X airplanes that have been designated as not for hire, not for common carriage (commonly referred to as “private use”). The petitioner requests an amendment to Exemption No. 9506 to allow installation of a two-piece pocket door. The use of the two-piece pocket door will also be limited to those flights when the aircraft is not operated for hire or offered for common carriage. In addition, Dassault Aviation requests acceptance of a maintenance action to mechanically lock the pocket door(s) in the open position when the aircraft is operated for hire or offered for common carriage.

The petitioner requests relief from the following regulation:

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

The petitioner supports their request with the following information:

Summary of the Petition for Amendment of Exemption [as per Part 11.81 (b) and (f)]

DASSAULT AVIATION is officially applying on behalf of Falcon 7X Series owners/operators, for an amendment of the permanent Exemption n°9506 to 14 CFR Part 25.813(e) rule. Exemption n°9506 was granted to DASSAULT AVIATION in order to allow the installation on Falcon 7X airplane of a latchable sliding door which can be stored in a cabin partition during takeoffs, landings and emergency conditions.

This petition for amendment aims at making the Exemption n°9506 consistent with the recently granted FAA Exemption n°10396 applicable to Falcon 900 Series, as well as with EASA's CRI D-14 applicable to F7X series, in:

- Allowing the installation of mid cabin simple (or double) sliding door(s),
- Allowing their installation in Public Transportation pending they remain blocked in fully open position and require a maintenance operation to set them operational if the airplane has to be operated in Private Transportation,
- Taking into account the integration of the cockpit annunciator into EASy system (introduced per M0566 "EASy load 10")

Background / Extent of relief and reason [as per Part 11.81(c)]

Since DASSAULT AVIATION has more and more customers requesting to have an airplane capable of both private and public transportation we would like FAA to consider the possibility to allow the installation of a mid cabin partition, even for public operation, considering that the door must be inoperable and blocked in fully open position during all flight phases when operated in public transportation. In case the customer/operator wants to switch to private configuration, a maintenance operation (i.e. not possible to be executed by crew or passenger), will be necessary to unblock the door (of course, a reverse operation will be necessary to go back to public configuration). This will give to the customer a more flexible way to switch from private to public configuration without having to remove the door from the airplane.

Note that DA's proposition does not preclude the installation of a door only applicable to private use but prevents some operators from applying unpractical door removal procedure for the specific case of F7X operated under public operation.

Besides, for aesthetic reasons, double sliding doors are now often requested by customers in lieu of simple ones. Yet, these double doors are currently not addressed in the Exemption n°9506.

Consequently, the present petition for amendment is also requesting to include the possibility of installation of double sliding doors as well as simple ones on F7X airplanes.

As indicated above, these requests have already been found acceptable recently by FAA for Falcon 900 Series through Exemption n°10396 (see table in §5) which acknowledges the installation of single and double doors between passenger compartments (see § “Description of the partition and door” (1.)), as well as the possibility of installing such doors blocked fully open in Public Transportation (see special condition (8.)).

Besides, EASA’s CRI D-14 also allows the installation of simple and double doors for Falcon 7X Series (see special condition (d)) as well as their installation in Public Transportation pending the door(s) is (are) blocked in open position (see special condition (c)).

Description of the partition and door(s)

Impacts of those changes on this section [as compared to the original exemption no. 9506 petition] are highlighted in **bold**.

1. The cabin of the Falcon 7X Series is approximately 7 feet wide. Thus, some customers request to divide the cabin full width laterally, to produce a private area, because a side corridor is impractical. The doors to be installed would be single (**or dual**) pocket sliding door(s) retracting into the partition on one (**or both**) side(s) of the airplane. 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 in an emergency, in addition to having blow-out capability for decompression.
2. Only one partition of the passenger seating area with a door installed would be permitted. This 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 takeoff and landing. Any other partitions of the passenger area would be closed out with a curtain.
3. **Each** door would also be equipped with redundant 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 minimized. Either means will be capable of supporting the inertia loads specified in FAR 25.561.
4. By similarity to lavatory door, the door between passenger compartments will allow persons on either side of the door to unlock or unlatch the door without the use of tools (regardless of where it is located in relation to the emergency exits).
5. Moreover, lighted signs will be installed on the forward and aft face of the partition stating that the door must be open for takeoff and landing. An amber light will be installed in the cockpit (**or a white CAS message will be available in case of integration in EASy system**). The lighted signs and warning (**or CAS message**) will be controlled by the cockpit “No Smoking”

switch and will be “ON” whenever the “No Smoking” signs are “ON” and the the door(s) is (are) closed (**in case of EASy integration, it will be controlled according to the logic described in M0566**). The signs and warning (**or CAS message**) will remain illuminated until the door is secured in the open position at which time it will extinguish.

6. 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 airplane since there are often differences between the individual airplane interior arrangements.

Public Interest [as per Part 11.81(d)]

DASSAULT AVIATION believes that the installation of the combination latched 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 business 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 (*Business Aircraft Utilization Strategy - NBAA*).

For example, business aircraft reduce not only flight time but also total travel time by providing point to point service and their ability to utilize smaller airports closer to final destinations. In addition, the "office" environment which exists within the business aircraft allows travel time of busy executives and their guests, to become productive time. Business aviation enables a company to maximize its two most important assets: people and time.

Very often, conversations conducted on business aircraft are confidential and deal with commercially sensitive matters. Accordingly, owners of business aircraft strongly prefer to configure their cabins in such a way that special requirements of their operation can be met. One of the most popular configurations requested by a wide array of business and public sector customers is a split cabin configuration where one sector is devoted to club seating used for individual work areas and dining areas while the second sector is devoted to private meetings and/or a rest area set off from the remainder of the cabin.

Moreover, the installation of a mid cabin door in both private and public airplanes, pending specific means are provided to make the door inoperable and blocked in open position during all flight phases when operated in public operation, will prevent some operators from applying unpractical door removal procedure for the specific case of F7X operated under public operation. This will increase the flexibility of customers to use their airplanes either in Public or in Private Transportation.

The granting of this amendment for exemption will permit the most efficient use of the airplane cabin which will significantly enhance the value of the airplane to its owner/operator.

Further, the granting of the petition will allow better and more comfortable rest area accommodations for busy executives and physically challenged passengers.

For these reasons, we believe the exemption requested is clearly warranted. In addition, note that sick or infirmed passengers could be more comfortably transported with the divided cabin configuration.

Reasons why granting the exemption will not adversely affect safety [as per Part 11.81(e)]

The effect of the updated safety features described above (cf. §2) will ensure that there is always a clear path through the partition to an emergency exit. However even if some extreme condition should result in the door being closed or partially closed after an accident there are still simple, failsafe means to get through the door to reach an exit. The frangibility feature will be tested using a 5th percentile female, and the resulting aperture demonstrated to be large enough to allow for a 95th percentile male to escape.

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, it is our position that the **amendment for** exemption as requested, would provide a level of safety for the passengers in a Falcon 7X equivalent to that required for commercial carrier airplane.

Additional information [as per Part 11.81(g)]

As reminded in § 1. FAA has previously granted an exemption n°10396 Falcon 900 Series allowing:

- Applicability to dual doors designs,
- Authorization to allow the installation of a mid cabin partition, even for public operation, considering that the door will be blocked open by a maintenance operation in this case.

Integration of the cockpit annunciator has been approved in January 2010 by EASA and FAA through M0566 “*EASy load 10*” Major Level 1 modification.

Operation outside US [as per Part 11.81(h)]

Considering the multitude of countries in which Falcon 7X Series are sold and operated, it is very likely that this Amendment for exemption should be recognized by some other countries usually agreeing with FAA position.

Based on the information provided above, we request an official FAA position regarding our petition for amendment for exemption n°9506.

Federal Register publication

The FAA has determined that good cause exists for waiving the requirement for Federal Register publication and comment because the exemption, if granted, would not set a precedent and any delay in acting on this petition would be detrimental to Dassault Aviation.

The FAA's analysis

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

Exemption No. 9506 was granted to permit installation of a single-pocket interior door between passenger compartments on Dassault Model Falcon 7X airplanes that have been designated as private use, not for hire, not for common carriage. The petitioner requests an amendment to Exemption No. 9506 to allow installation of a two-piece pocket door. The use of the two-piece pocket door would also be limited to those flights when the aircraft is operated in private use, not operated for hire or offered for common carriage. In addition, Dassault Aviation requests acceptance of a maintenance action to mechanically lock the pocket door(s) in the open position when the aircraft is operated for hire or offered for common carriage.

As more transport-category airplanes have been configured (or re-configured) for private-use operation, not for hire, not for common carriage, 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 operations of such airplanes. Because of this, 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.

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 FAA acknowledges the desirability of these features from the operator's point of view. Additionally, the convertible feature of these interior doors, whereby a maintenance procedure locks the doors in the open position, provides an equivalent level of safety, to the regulations, for any Falcon 7X series airplane operated for hire or offered for common carriage.

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 by 14 CFR 25.813(e). However, part 25, as amended by Amendment 25-116, prohibits interior doors between the 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).

Airplanes configured for private-use, not-for-hire, not-for-common carriage typically use any of five different categories of door in the passenger cabins. A fifth category has been added, since the prior issuance of this exemption, consistent with exemption no. 10396, which is applicable to Dassault Model Falcon 900 series airplanes.

Category 1 – A door in a room and the room is less than the full width of the airplane. An aisle is outside the room. This type of room may be occupied during taxi, 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 and that is the same as Category 1, except a single emergency exit or pair of emergency exits is within the room.

Category 3 – A door or doors in a room and the room is the full width of the airplane. Passengers are seated on both sides (fore and aft) of the door(s), and the main aisle leads out of, or passes through, the room. The room does not have emergency exits. This type of room may be occupied during taxi, takeoff, and landing with doors in the proper configuration.

Category 4 – A door in a room and the room is the full width of the airplane. Passengers are seated on both sides (fore and aft) of the door, and a pair of emergency exits is at one end of the room. This type of room may be occupied during taxi, takeoff, and landing with doors in the proper configuration.

Category 5 – A door in a room that may be the full width of the airplane. This type of room is not occupied during taxi, takeoff, and landing. This room is only occupied during flight. Passengers seated in taxi, takeoff, and landing seats must not need to pass through this door to get to any emergency exits.

Because not all interior doors between passenger compartments are equivalent, the FAA has determined that the following requirements will produce an adequate level of safety:

1. To maximize the 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 taxi, takeoff, and landing. Each latching means must have the capability of retaining the door in the taxi, 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 25-17A, *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 open, allowing a 95th percentile (or larger) male to pass through the opening with the door swung open. This evaluation must be made with any cabin furnishing or equipment installed that could limit the swing-arc of the door with furnishing or equipment 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 that fall into Category 1 must be in the open position during taxi, takeoff, and landing only when the room is occupied.
5. Doors that 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.

The FAA's decision

In consideration of the foregoing, I find that an amendment to Exemption No. 9506 is in the public interest and will not adversely affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in 49 U.S.C. §§ 40113 and 44701, delegated to me by the Administrator, I hereby grant Dassault Aviation an amendment to Exemption No. 9506. The amendment is granted to the extent necessary to allow Dassault Aviation to install a single or two-piece pocket door on Dassault Model Falcon 7X airplanes not operated for hire or offered for common carriage. In addition, the FAA also accepts Dassault Aviation's proposal to mechanically lock the interior door(s) in the open position, via a means that requires a tool and a maintenance action, when the airplane is operated for hire or offered for common carriage.

This exemption is subject to the following conditions and limitations. Limitations 1, 6 and 9 must be documented as operating limitations in the Limitations section of the Airplane Flight Manual (AFM). These limitations have been changed, since the prior issuance of this exemption, consistent with exemption no. 10396, which is applicable to Dassault Model Falcon 900 series airplanes.

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 parts 125 and 91, subpart F, as applicable.
2. Each door between passenger compartments must be frangible from both sides. A placard describing the frangibility procedure must be installed in a conspicuous location on both sides of the door.
3. Doors that fall into Category 1 must be latched in the open position during taxi, takeoff, and landing when the room is occupied. A placard requiring the door to be in the open position, when the room is occupied during taxi, takeoff, and landing, must be installed in a conspicuous location on both sides of the door.
4. Doors that fall into Categories 2, 3, or 4 must be latched in the open position during taxi, takeoff, and landing, regardless of occupancy of the room. A placard indicating the requirement that the door be in the open position during taxi, takeoff, and landing must be installed in a conspicuous location on both sides of the door.
5. Doors that fall into Category 5 must be in the closed position during taxi, takeoff, and landing. A placard indicating the requirement that the door be in the closed position during taxi, takeoff, and landing, and requiring the room to be vacant, must be installed in a conspicuous location on both sides of the door.
6. Appropriate procedures must be established to both signal the flight crew in the event a door between passenger compartments is not in the proper position, and prohibit taxi, takeoff or landing. Doors in Category 5 do not need to comply with this requirement. For Category 5 doors, placards located on or near the door, and indicating that the door must be closed for takeoff and landing, is acceptable.
7. Doors between passenger compartments must have dual means to retain them in the open position. Each means must be capable of withstanding the inertia loads specified in § 25.561. Doors in Category 5 do not need to comply with this requirement because they are required to be closed for taxi, takeoff, and landing.
8. Doors in Categories 2, 3 or 4, which are installed across a longitudinal aisle, must translate laterally to open and close.

9. Before the airplane can be operated in part 121 or 135 service, the door(s) must be mechanically locked in the open position, via a means that requires a tool and a maintenance action.

Issued in Renton Washington, on

/s/ Michael Kaszycki

Michael Kaszycki
Acting Manager, Transport Airplane Directorate
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