

Exemption No. 7891

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

In the matter of the petition of

Bombardier Aerospace

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

**Regulatory Docket No.
FAA-2002-12350**

PARTIAL GRANT OF EXEMPTION

By letter dated May 1, 2002, Mr. Rod Iverson, Director, Bombardier Aerospace Completion Center Airworthiness, Tucson Completion Center, P.O. Box 11186, Tucson, AZ 85734-1186, petitioned for an exemption from § 25.813(e) of Title 14, Code of Federal Regulations (14 CFR). The petitioner has requested the exemption in order to permit the installation of interior doors between passenger compartments on Bombardier BD-700-1A10 airplanes.

The petitioner requests relief from the following regulations:

Section 25.813(e) - prohibits the installation of doors in any partition that separates passenger compartments.

The petitioner's supportive information is as follows:

“The purpose of this letter is to request an exemption to FAR 25.813(e), Emergency Exit Access, on Bombardier Aerospace BD-700-1A10 aircraft. The request is to permit occupancy, during taxi, take-off, and landing, of the crew area located forward of the main cabin separation bulkhead and enclosed by a longitudinally installed pocket door.

“The BD-700-1A10 aircraft is designed to the requirements of FAR Part 25, for Transport Category. These rules are addressed basically to Transport Category airplanes that are used for the carriage of fare paying passengers from the general public, and also

must consider aircraft with passenger seating from less than 10 to many hundreds. The BD-700-1A10 on the other hand, is Type Certified for a maximum of 19 passengers and will be outfitted exclusively for corporate use. The differences between the commercial Transport Category aircraft used in airline operation and aircraft specifically used for corporate operations (whether private or non-scheduled commercial) are not segregated in the FAR Part 25 rules. Bombardier Completion Center contends that airplanes specifically designed for corporate service; whether private or commercial, should be eligible exemptions of cabin features and facilities which do not comply with the full requirements of FAR Part 25, provided a similar level of safety is provided and can be demonstrated. The corporate fleet utilizing aircraft certified in the Transport Category world wide has now grown to a point where it is contended that the certification agencies need to consider revised design rules for aircraft involved in this class of operation.

“Description of Exemption Request:

“Passenger occupancy of the BD-700-1A10 crew area compartment seat generally located on the left side of the aircraft, immediately aft of the main entry door and immediately adjacent to the aircraft galley is currently prohibited during taxi, take-off, and landing. Please note that due to customer interior requirements, a crew area seat may be installed on the right side of the aircraft and the galley installed on the left. This request for deviation to FAR 25.813(e) is for both aircraft configurations, however only one configuration is discussed in this FAR 25.813(e) exemption request.

“This Request for Exemption to FAR 25.813(e) is specifically to allow a passenger to occupy the BD-700-1A10 aircraft crew area seat during taxi, take-off, and landing operations.

“The crew area seat is located forward of a hinged door separating the main passenger cabin compartment from the galley compartment. Refer to attached, general layout drawing 900-4201, FS 420.00 with hinged door that opens adjacent to crew area pocket door. The crew area seat/compartment is located behind a longitudinally installed pocket door. The hinged door separating the galley compartment from the main passenger compartment, located approximately FS 420, provides in-flight privacy for passengers during galley operations. The longitudinally [sic] pocket door, when closed, provides privacy for the occupant of the crew area during long flights.

“Aircraft specifically designed and outfitted for corporate operation generally carry passengers familiar with flying and very familiar with the specific aircraft in which they travel. Also, unlike an airliner, the crew of a corporate aircraft has day-to-day contact with the people who are their passengers; thus safety communications is reinforced frequently. Additionally, the corporate aircraft are generally operated continuously by one crew who is intimately knowledgeable of the specific aircraft. Furthermore, when partitions are installed in the BD-700-1A10, it is not possible to install more than 15

passenger seats, which are certified for take-off and landing because of the limitations inherent in full compliance with FAR 25.562. This in itself is a compensating factor. Therefore, the combination of these facets of corporate operation provides an initial level of safety. This level of safety can never be achieved in an airliner, thus necessitating the later to require a more complete set of regulatory safety features to achieve the same result. Bombardier Aerospace will incorporate the following features in both doors plus limit the aircraft operation:

“Additional Safety Features in Support of the Request for Deviation:

“1. The aircraft will not be operated for hire, or offered for common carriage.

“2. Both the hinged door and the longitudinal pocket door will be frangible.

“3. The hinged door separating the passenger compartment from the crew area compartment will be equipped with double means of being locked open during taxi, take-off and landing, such that the probability of unlocking due to distortion of the fuselage in an emergency landing would be minimal. Either means will be capable of supporting the inertial loads specified in FAR 25.561.

“4. The longitudinal pocket door installed in the crew area compartment will also be equipped with double means of being locked open during taxi, take-off and landing, such that the probability of unlocking due to distortion of the fuselage in an emergency landing would be minimal. Either means will be capable of supporting the inertial loads specified in FAR 25.

“5. Additionally, both the hinged door and the longitudinal pocket door will have amber ‘Door Closed’ caution indicator located in the flight deck. The appropriate procedures and limitations will be established that ensure taxi, takeoff and landing is prohibited, if the hinged or pocket door is closed.

“6. The emergency exit sign requirements will be addressed separately to ensure that the level of passenger guidance required to locate an exit will be provided. This would have to be accomplished for each aircraft since there are often differences between the individual aircraft interior arrangements.

“7. When the doors are installed in specified egress paths, each passenger will be informed that the aircraft does not comply with the occupant safety requirements. The notification will only be required the first time a person is a passenger on the aircraft.

“8. Both the hinged and longitudinal pocket doors will have unlock capabilities such that egress during an emergency situation is not impeded.

“9. The Passenger Information Cards will contain a section describing the action of both hinged and pocket doors, the emergency features they include, and instructions for latching the doors open during taxi, take-off and landing.

“Effect of the Exemption:

“Bombardier Aerospace contends that passenger safety is not adversely affected by the requested deviation to FAR 25.813(e), Emergency Exit Access, on Bombardier Aerospace BD-700-1A10 aircraft. In support of the request for deviation from FAR 25.813(e), Bombardier Aerospace can provide substantiation in the form of analysis to verify the egress capability of an occupied crew rest seat located forward of a hinged door and behind a longitudinally installed pocket door.

“Issue of Public Interest:

“Bombardier Aerospace is a major international corporation, which provides business aircraft to an international market. They manufacture principally in Canada and in the U.S.A. and therefore employ a large staff in both countries. The aircraft manufactured by Bombardier Aerospace are equipped with avionics and other specialized systems and equipment manufactured in North America. The business provides competition to manufacturers in Europe and elsewhere, and maintains a considerable employment in North America. With the growing numbers of Transport Category corporate aircraft predicted and the stabilizing effect their manufacture and support has on the job market, it is definitely in the public interest of both countries.”

Notice and Public Procedure Provided

On June 12, 2002 (67 FR 40374), the FAA published notice of the petition for exemption in the Federal Register and requested comments from the public. No comments were received in response to the notice.

FAA’s Analysis of the Petition

As noted by the petitioner, there are differences between commercial and private use operation (whether by an individual or a corporation) of transport category airplanes that warrant consideration of the appropriate level of safety that is warranted. The FAA is giving great attention to the issues raised when these airplanes are operated in private use. In recognizing the differences between commercial and private use operations, the FAA has identified several regulatory requirements, including the subject of this petition, that may need to be revised to address the safety issues revealed by these differences. The FAA is currently reviewing the adequacy of the current regulations and in the future may propose revisions to the requirements, where appropriate.

The current regulations allow the installation of interior doors, provided that passengers cannot be seated on both sides of the door during takeoff and landing. The FAA has

safety concerns regarding doors that are located between passengers and exits. The FAA has proposed to prohibit such installations in future designs, as detailed in Notice of Proposed Rulemaking 96-9 (61 FR 38551, July 24, 1996). However, until the regulations are revised, such doors may continue to be installed without the need to process a petition for exemption. Additionally, the FAA has recently issued exemptions for private use airplanes that would permit installation of doors between passenger compartments, provided that certain limitations are met. The petitioner has proposed most of these limitations as part of this petition.

The petitioner specifically requests exemption from § 25.813(e) in order to allow a passenger to occupy a crew compartment seat forward of a hinged door at approximately station 420 on BD-700-1A10 airplanes. It has been noted that the petitioner requests that an exemption be applicable to a crew compartment on either the right or left side of the airplane. The hinged door is compliant with part 25 when the crew compartment seat is not certified for occupancy during takeoff and landing since it would not separate passenger compartments with this limitation. However, if occupancy during takeoff and landing is allowed, the hinged door would separate passenger compartments and not comply with § 25.813(e). The FAA finds that an acceptable level of safety can be provided based on specific limitations associated with a grant of exemption. In order to maintain an acceptable level of safety, the FAA has concluded that the installation of an interior door that spans the main cabin aisle can only be allowed if it opens and closes 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. This determination is consistent with previous responses to similar petitions.

Although the crew compartment door opens and closes in the direction of the longitudinal axis of the airplane, the FAA finds it acceptable provided it meets the limitations of this exemption. The crew compartment door would not have as significant an impact on an evacuation if it became jammed closed as the proposed hinged door would have if it became jammed closed. The crew compartment door could affect evacuation of one passenger, whereas the hinged door could affect evacuation of many passengers on the airplane. The FAA finds that the proposed limitations would provide an acceptable level of safety for the crew compartment door.

With regard to the consideration of public use vs. private use operations, it is understood that although some persons may be frequent passengers on private-use airplanes, some of these passengers will be unfamiliar with their operation and with differences from commercial passenger operations. These persons will not ordinarily be aware of any grants of exemption issued by the FAA, and might assume that these private-use airplanes are effectively equivalent to airplanes used by a commercial operator. For this reason, the FAA considers that it is necessary for each passenger to be made aware that

the particular airplane differs from the occupant safety standards mandated for the airplane type in general. The FAA will allow each operator to determine how best to accomplish this notification but will require as a condition of this exemption that procedures be developed whereby each passenger is so informed prior to flying on the airplane for the first time. The notification to any individual need only be accomplished once.

Although a grant of exemption benefits the petitioner as a private entity, with the traveling public excluded from any apparent direct benefit, the FAA considers that the public at large does have a potential to benefit because it is inherently in the public interest to allow unencumbered commerce and freedom of choice between buyers and sellers unless this results in an overriding, unacceptable degradation of safety. Since a grant of exemption will not have detrimental safety implications on the public at large, and since the limitations associated with this exemption minimize the reduction in the level of safety, the FAA finds that permitting the desired marketplace flexibility constitutes sufficient public interest for private use operations.

While this grant of exemption cannot be said to provide the same level of safety that would be afforded were there strict compliance with the regulations, the resultant level of safety is consistent with other private use airplanes. In addition, the level of safety that results from this exemption is specifically requested and desired by that segment of the public, namely the owners, that will fly on these airplanes. The FAA also notes that no other parties have expressed an interest in this petition.

Finally, regarding the type of operation permitted under the terms of this exemption, it should be noted that, whether or not operations are scheduled, this exemption does not permit fares to be collected in exchange for transportation. It is also the intent of this exemption that the airplane is not used to transport the general public (common carriage) even if fares are not collected. This exemption does not restrict one party from collecting fees from another party, as long as the airplane is operated for private use. That is, the airplane's owner may lease the airplane to another party, who in turn operates the airplane.

The Partial Grant of Exemption

In consideration of the foregoing, I find that a partial grant of exemption 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, Bombardier Aerospace is hereby granted a partial grant of exemption from § 25.813(e). This partial exemption is granted to the extent necessary to allow installation of interior doors between passenger compartments on the BD-700-1A10 airplane, and is subject to the below provisions. Provisions 1, 3 and 6 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 14 CFR part 91, subpart F, as applicable.
2. Each door between passenger compartments must be frangible.
3. Each door between passenger compartments must have a means to signal to the flightcrew when the door is closed. Appropriate procedures/limitations must be established to ensure that takeoff and landing is prohibited when any such door is not in the proper takeoff and landing configuration.
4. Each door between passenger compartments must have dual means to retain it in the open position, each of which must be capable of reacting the inertia loads specified in 14 CFR 25.561.
5. Doors installed across a longitudinal aisle must translate laterally to open and close.
6. Each passenger must be informed that the airplane does not comply with the occupant safety requirements mandated for the airplane type in general. This notification is only required the first time that a person is a passenger on the airplane.
7. When doors are installed between passenger compartments, it must be possible for persons on either side of the door to unlock or unlatch the door without the use of tools.

Issued in Renton, Washington, on September 18, 2002.

/s/ Ali Bahrami
Acting Manager
Transport Airplane Directorate
Aircraft Certification Service