

Exemption No. 7029

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

In the matter of the petition of

Lufthansa Technik

for an exemption from § 25.815 of Title 14,
Code of Federal Regulations

Regulatory Docket No. 29801

PARTIAL GRANT OF EXEMPTION

By letter dated October 4, 1999, Mr. Bernard Conrad, Senior VP Project and Development Engineering, Head of the JAA Approved Design Organisation, Lufthansa Technik AG, Postfach 63 03 00, D-22313 Hamburg, Germany, petitioned for an exemption from the requirements of § 25.815 of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would permit a movement of passenger seats into the required aisle space under certain circumstances on a Boeing 737-700 Increased Gross Weight (IGW) airplane.

The petitioner requests relief from the following regulations:

Section 25.815 - Requires that minimum main aisle width in the passenger cabin be provided for all phases of airplane operation.

The petitioner's supportive information is as follows:

“Petition for Exemption under FAR 11.25 from 14 CFR 25.815 for the Boeing Model 737-700 IGW, configured as a Boeing Business Jet (BBJ), modified with an Executive Interior and for ‘Private, not-for-hire use’ and not offered for public conveyance.

“Reference is made to the Petition for Exemption submitted by Boeing (B-T113-98-3206, dated May 22, 1999), and the resultant FAA Grant of Partial Exemption No. 6820 and 6820A, which also addresses a number of reasons why certain exemptions from FAR 25 are considered to be reasonable for airplanes configured for private operation.

ANM-00-006-E

“General Background

“Lufthansa Technik (LHT) has been selected by ATLAS AIR to complete a Boeing Business Jet (BBJ), MSN 30076, they have purchased from Boeing. LHT has been doing this kind of installation for many years for large Head of State, VIP and Executive aircraft operated in Germany as well as in many foreign countries and is one of the completion centers recommended by Boeing for BBJ’s.

“The ATLAS AIR BBJ is the first project for this airplane model to be operated under US-registration and certification is processed in the form of a German Luftfahrt-Bundesamt (LBA) STC for which validation by the FAA is sought under the recently concluded ‘Implementation Procedures for Design Approval, Production Activities, Export Airworthiness Approval, Post Design Approval Activities, and Technical Assistance between Authorities’ in accordance with the Bilateral Aviation Safety Agreement between the U.S. and Germany (BASA IPA). The FAA has been shadowing the certification process since shortly after the application for an FAA STC on Feb. 18, 1999. The basic design was essentially frozen at the beginning of May 1999.

“On September 30, 1999 we were informed by the FAA of a decision regarding compliance with regard to FAR 25.815 (aisle widths) as it relates to passenger seating arrangements. This new interpretation would disallow the common practice applied for many years in the completion of Head of State, VIP and Executive type airplanes of installing passenger seats that rotate, translate and recline in such a manner that the aisle width requirements of 25.815 may not be fully met during all phases of flight.

“At the point in time LHT received notice of this development, the cabin installation of the ATLAS AIR BBJ project was already completed with only minor cabin refurbishment work and functional testing on ground and in flight remaining. Delivery to the customer is scheduled for October 8, 1999.

“Exemption requested:

“That the Boeing Model 737-700 IGW, configured as a Boeing Business Jet (BBJ) be exempted from that part of FAR 25.815 requiring minimum aisle width to be maintained during all phases of flight when completed with an executive interior in accordance with the layout attached. Compliance with the minimum aisle width for taxi, takeoff and landing will still be maintained.

“Further, because of the timing of the change in practice relative to the scheduled delivery, we request expedited handling of this request. Waiver of the public comment period per FAR 11.27 is requested.

“Justification:

“The special purpose of the Boeing Model 737-700 IGW is to ‘privately’ transport very low numbers of passengers in a very elegant and comfortable manner. In the case of the ATLAS AIR airplane the maximum number of passengers is 17. Typically these kinds of cabins include passenger seats that rotate, translate and offer extensive recline possibilities. Due to these features, and considering the worst case position, the aisle width requirements are not met during all phases of flight.

“The completion industry has been aware of this situation from the beginning and has developed alternate means of ensuring compliance for the critical case of a survivable accident. These alternate means of compliance consist of the following:

“For all seats that can be rotated, translated or reclined and thereby could cause partial or full blockage of the required aisles, suitable placarding and passenger briefing instructions are provided, prescribing in which position the seat and the backrest must be returned prior [to] taxi, takeoff and landing, which protects the passengers during the most critical phases of flight. This information is necessary not only for aisle width considerations but also to assure the seats are in the position certified for takeoff and landing, as 9 G or 16 G requirements are only shown to be complied with in certain seat configurations.

“We are convinced that the probability of a survivable accident in a cruise configuration is several magnitudes lower than that of one in the takeoff and landing configuration, thereby approaching or even going below the 10^{-9} probability figure of FAR 25.1309 associated with a complete loss of the airplane (as compared to a more difficult situation for emergency evacuation caused by a potential aisle width intrusion). However, that still leaves abuse of placards and in-flight emergencies as potential concerns to be considered.

“Regarding intentional or unintentional abuse of placards or passenger briefing information, we believe that operating practices will preclude problems in this area. Although compliance in actual operation is the responsibility of the operator, our experience is that the operators of executive airplanes and their passengers thoroughly understand the reasons for those instructions and accept the necessity to comply. Our level of confidence in operational compliance has grown during our many years of experience with this kind of airplane.

“Regarding in-flight emergencies, there may be a need for a crew member to quickly move from one end of the cabin to the other in order to address that emergency. However, whereas in a typical airline cabin there is no feasible alternate route to the main aisle, a typical executive arrangement offers various alternatives, e. g. jumping over or stepping on tables or credenzas, divans or beds with very little time lost. In addition, the probability of being hindered by a panicking crowd of passengers is much lower due to the low number of passengers compared to the airline configuration.

“In summary Lufthansa Technik is convinced, that for this type of operation the compensating measures provided will assure an adequate level of safety.

“On September 30, 1999 we were informed by the FAA of a decision regarding compliance with regard to FAR 25.815 (aisle widths) as it relates to passenger seating arrangements. This decision rescinds the common practice applied for many years in the completion of Head of State, VIP and Corporate type airplanes of installing passenger seats that rotate, translate and recline in such a manner that the aisle width requirements of 25.815 are not protected during all phases of flight.

“At the point in time we received notice of this development, the cabin installation of the ATLAS AIR BBJ project was already completed with only minor cabin refurbishment work and functional testing on ground and in flight remaining. Validation of the LBA STC by the FAA is scheduled by Oct. 07, 1999 and delivery to the customer on October 08, 1999. In view of this situation we feel that the principle of ‘Detrimental Reliance’ should apply.

“As an unsafe condition has not been established we therefore submit this petition for exemption in consideration of the alternate means of compliance we have provided and which are addressed under ‘Justification’ in the enclosure. We respectfully request that the petition be processed without further delay and in view of the imminent delivery we request that the publication and comment procedures as per FAR 11.27 be waived.

“Public Interest

“Granting this Petition for Exemption would be clearly in the public interest as it allows efficient and safe carriage of Heads of State and executives in the sought for environment which would otherwise not be possible.

“Without the granting of this exemption the sales opportunities for the Boeing 737-700 IGW as a narrow body airplane with a smaller diameter than that of competitive products would suffer, because the typical and highly desirable conference table arrangement with comfortable seats with a wide range of adjustment could no longer be realised.

“Granting the exemption furthermore would be in the interest of international harmonisation of the interpretation of FAR 25.815 which by the majority of authorities worldwide is accepted as proposed in this petition for exemption.”

FAA’s Determination as to Need for Public Process

In accordance with 14 CFR 11.27(j)(3), the FAA finds that action on this petition need not be delayed by Federal Register publication and comment procedures for the following reasons: (1) The notice and opportunity for prior public comment are impracticable because those procedures would significantly delay issuance of the approval design and the delivery of the affected aircraft, and (2) Issuance of the exemption would not set a precedent. It has been determined that for some time the FAA has approved transport category airplanes operated in private use that do not comply with the requirements of § 25.815.

The FAA's analysis/summary is as follows:

During the cabin safety workshop sponsored by the Transport Airplane Directorate (TAD) from August 25-28, 1998, it became clear that there has been a non-standardized approach to compliance with § 25.815. Some FAA offices permit seat backs to recline or break over into the required aisle in private use (business/executive) airplanes. Also, some FAA offices accept seats that translate, pivot, or track to positions that intrude into the aisle. In some FAA offices, acceptable interior arrangements have the entire aisle blocked when seats are not in the taxi, takeoff, and landing position. Some FAA offices require that the seats that recline or break over into the aisle have placarding on the seats requiring the seat backs to be in the upright position for taxi, takeoff, and landing. The placarding is in lieu of positive design features that prevent such movement. The seats that translate, pivot, or track into positions that encroach into the minimum required aisle are placarded to be in a specific position for taxi, takeoff and landing that provides the required aisle width. Encroachment into the aisle during flight is allowed for private use airplanes, and the aisle width requirements of § 25.815 are only applied to the taxi, takeoff, and landing position of the seats.

These findings of compliance are contrary to the requirements of § 25.815. The regulation for width of aisle does not specify that the requirement only applies to taxi, takeoff, and landing position of seats. Therefore, the specified aisle width is required to be maintained during all phases of airplane operation.

Aisles are required to allow for rapid egress from the airplane in an emergency. They also provide the means for crewmembers to access all parts of the cabin during airplane operations to address emergency conditions. Additionally, they allow passengers to return to their seats during turbulence. Not providing adequate aisles during flight may prevent the accomplishment of the latter needs.

The regulation requires minimum aisle widths and, in the absence of exceptions in the rule, applies to all phases of flight, including taxi, takeoff, and landing. At the time the policy was developed for this rule, this requirement applied to all phases of flight.

This position notwithstanding, it has been determined that for some time the FAA has approved transport category airplanes operated in private use that do not comply with the requirements of § 25.815. These certifications have been in the form of supplemental type certificates (STC) and field approvals. Based on these FAA approvals, the companies installing interiors in private use airplanes have continued to offer and sell more configurations that do not comply with the requirements of § 25.815.

The FAA is giving great attention to the issue of transport category airplanes operated in private use. There are several regulatory requirements, including those relating to aisle width, for which it may be in the public interest to develop new criteria that take into account the differences between private use and air carrier operations. The FAA intends to summarize its views on these regulations and, ultimately, propose revisions to the requirements, where appropriate. Section 25.815, the subject of this petition for

exemption, may be included in those proposed revisions. If revised aisle width regulations are adopted, this may allow additional design flexibility when certain conditions are met. This general issue is not resolved at this time, however, and the particular airplane in question must be addressed on its own merits.

The petitioner identifies an executive interior arrangement for a Boeing 737-700 IGW airplane, known in industry as the Boeing Business Jet (BBJ). This interior arrangement has only 17 taxi, takeoff, and landing seats for passengers, while the type and number of exits installed would allow a theoretical maximum of 149 passengers. The 17 passengers and six passenger exits result in a very conservative interior arrangement from an evacuation standpoint.

The petitioner identifies the purpose of this airplane as "private" not to be operated for hire, or offered for common carriage. In addition, the passengers on the airplane will be very familiar with the interior arrangement of the airplane.

The petitioner identifies detrimental reliance on previous FAA approvals in requesting exemption from the intent of § 25.815, stating the proposed placarding and briefings provide an acceptable method of compliance for this type of airplane operation.

In consideration of the foregoing, I find that a partial grant of time limited exemption until October 1, 2004, is in the public interest and will not adversely affect the level of safety provided by the regulations. It is anticipated that, by this date, any regulatory revisions described previously will have been adopted, and will address future operations of the subject airplane. Therefore, pursuant to the authority contained in 49 U.S.C. 40113 and 44701, delegated to me by the Administrator (14 CFR § 11.53), the petition for exemption from the requirements of § 25.815, to allow a movement of passenger seats into the required aisle space under certain circumstances on the Boeing Model 737-700 IGW airplane defined in the Lufthansa Technik Project OD-4303, is hereby granted until October 1, 2004, with the following provisions:

1. The required aisle dimensions of § 25.815 must be maintained during taxi, takeoff, and landing.
2. Each seat and combination of seats moved from the taxi, takeoff, and landing position that encroaches into the aisle space required by § 25.815 must be conspicuously placarded. The placards must clearly convey to the passengers how and when to return the seats to positions approved for taxi, takeoff, and landing, when instructed by the flightcrew in the event of an inflight emergency or turbulence, as well as during taxi, takeoff, and landing. The placards may convey the information in pictorial form or in English.
3. Each seat and combination of seats moved from the taxi, takeoff, and landing position that encroaches into the aisle space required by § 25.815 must be equipped with a readily accessible briefing card. The cards must pictorially convey to the passengers how to return the seats to positions approved for taxi, takeoff, and landing, when instructed by

the flightcrew in the event of an inflight emergency or turbulence, as well as during taxi, takeoff, and landing.

4. The applicant must demonstrate that the seat occupant is able to readily identify and comply with the proper taxi, takeoff, and landing position for the seat.

5. 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.) The following text must be incorporated into the supplemental type certificate (STC): “The interior configuration approved by this STC utilizes Exemption No. 7029, which prohibits the airplane from being operated for hire, or offered for common carriage.”

6. The airplane is operated with oral preflight and prelanding briefings of the passengers by a trained crewmember instructing them to return the movable tables and seats to their approved taxi, takeoff, and landing positions in the event of an inflight emergency or turbulence as well as during taxi, takeoff, and landing, as identified by the placards and briefing cards. This procedure must be incorporated into the normal procedures section of the Airplane Flight Manual (AFM).

7. When the flightcrew determines that transiting the aisle is necessary either to address an emergency or to enable passengers to return to their seats during turbulence, they shall instruct passengers to return their seats to the approved taxi, takeoff, and landing position. This procedure must be incorporated into the normal and emergency procedures sections of the Airplane Flight Manual (AFM).

8. The operator must implement a procedure to ensure that the seats are in their approved taxi, takeoff, and landing position prior to taxi and takeoff, prior to landing, and whenever the passengers are instructed to do so during the flight. This procedure must be incorporated into the normal and emergency procedures sections of the Airplane Flight Manual (AFM).

NOTE: This partial grant of exemption expires October 1, 2004.

Issued in Renton, Washington, on October 7, 1999.

/s/ John J. Hickey
Manager, Transport Airplane Directorate
Aircraft Certification Service, ANM-100